

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Airites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (214)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	21:06 (B12) 22:08	04:30 21:28 (B12)	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	21:06 (B12) 22:08	04:31 21:28 (B12)	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:50	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	21:05 (B12) 22:07	04:32 21:28 (B12)	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	21:05 (B12) 22:07	04:33 21:27 (B12)	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	21:06 (B12) 22:06	04:33 21:27 (B12)	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	21:05 (B12) 22:05	04:35 21:26 (B12)	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	21:05 (B12) 22:05	04:36 21:26 (B12)	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	21:06 (B12) 22:04	04:37 21:25 (B12)	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	21:05 (B12) 22:03	04:38 21:24 (B12)	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	21:06 (B12) 22:02	04:39 21:23 (B12)	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	21:06 (B12) 22:01	04:41 21:23 (B12)	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	21:06 (B12) 22:00	04:42 21:25 (B12)	05:37 21:01	06:39 19:42	07:39 18:22	07:46 16:11	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	21:07 (B12) 21:59	04:43 21:25 (B12)	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	21:06 (B12) 21:57	04:45 21:19 (B12)	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	21:06 (B12) 21:56	04:46 21:18 (B12)	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	21:07 (B12) 21:55	04:48 21:25 (B12)	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	21:07 (B12) 21:53	04:49 21:26 (B12)	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:15	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	21:07 (B12) 21:52	04:51 21:26 (B12)	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	21:07 (B12) 21:50	04:52 21:26 (B12)	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	21:07 (B12) 21:49	04:54 21:26 (B12)	05:53 20:44	06:55 19:23	07:56 18:04	08:03 16:00	08:47 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	21:08 (B12) 21:47	04:56 21:26 (B12)	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	21:09 (B12) 21:46	04:57 21:27 (B12)	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	21:08 (B12) 21:49	04:59 21:27 (B12)	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	21:08 (B12) 21:42	05:01 21:27 (B12)	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:38	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	21:09 (B12) 21:41	05:03 21:28 (B12)	06:03 20:32	07:05 19:09	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	21:09 (B12) 21:39	05:04 21:27 (B12)	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	21:10 (B12) 21:37	05:06 21:28 (B12)	06:07 20:27	07:09 19:04	08:11 17:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	21:09 (B12) 21:35	05:08 21:28 (B12)	06:09 20:24	07:11 19:01	08:13 17:43	08:18 15:48	08:50 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	21:07 (B12) 21:33	05:10 21:28 (B12)	06:11 20:21	07:13 18:59	08:16 17:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	21:07 (B12) 21:31	05:12 21:29 (B12)	06:13 20:19	07:15 18:56	08:18 17:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51	05:37 21:51	04:37 21:13 (B12)	04:37 21:13 (B12)	21:06 (B12)	05:14 21:29	06:15 20:16	07:20 16:38	08:20 15:47	08:50 15:47	
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216	
Total, worst case					15	505	174						
Sun reduction					0.57	0.56	0.49						
Oper. time red.					0.98	0.98	0.98						
Wind dir. red.					0.61	0.61	0.61						
Total reduction					0.34	0.33	0.29						
Total, real					5	168	51						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Aizveji (kad. apz. 56960040532) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (170)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	08:58 (B14) 09:16 (B14)	07:11 17:48	06:49 19:53	05:33 20:56
2	08:51 15:49	08:13 16:48	08:58 (B14) 09:16 (B14)	07:08 17:50	06:46 19:55	05:30 20:58
3	08:50 15:51	08:11 16:50	09:00 (B14) 09:16 (B14)	07:06 17:52	06:44 19:57	05:28 21:00
4	08:50 15:52	08:09 16:52	09:01 (B14) 09:15 (B14)	07:03 17:54	06:41 19:59	05:26 21:02
5	08:49 15:53	08:07 16:54	09:03 (B14) 09:14 (B14)	07:01 17:56	06:38 20:01	05:24 21:04
6	08:49 15:55	08:05 16:56	09:06 (B14) 09:10 (B14)	06:58 17:58	06:36 20:03	05:21 21:06
7	08:48 15:56	08:03 16:59	09:10 (B14)	06:55 18:01	06:33 20:06	05:19 21:08
8	08:48 15:58	08:01 17:01		06:53 18:03	06:30 20:08	05:17 21:10
9	08:47 16:00	07:58 17:03		06:50 18:05	05:15 20:10	04:29 21:12
10	08:46 16:01	07:56 17:05		06:48 18:07	05:13 20:12	04:28 22:03
11	08:45 16:03	07:54 17:08		06:45 18:09	05:11 20:14	04:27 22:04
12	08:44 16:05	07:52 17:10		06:42 18:11	05:09 20:16	04:27 22:05
13	08:43 16:06	07:50 17:12		06:40 18:13	05:07 20:18	04:26 22:06
14	08:42 16:08	07:47 17:14		06:37 18:15	05:05 20:20	04:26 22:07
15	08:41 16:10	07:45 17:17		06:34 18:18	05:03 20:22	04:26 22:07
16	08:40 16:12	07:43 17:19		06:32 18:20	05:01 20:24	04:26 22:08
17	08:39 16:14	07:40 17:21		06:29 18:22	04:59 20:26	04:25 22:09
18	08:38 16:16	07:38 17:23		06:26 18:24	04:57 20:28	04:25 22:09
19	08:36 16:18	07:36 17:26		06:24 18:26	04:55 20:31	04:25 22:09
20	08:35 16:20	09:09 (B14) 09:10 (B14)	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33
21	08:33 16:22	09:07 (B14) 09:11 (B14)	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35
22	08:32 16:24	09:05 (B14) 09:12 (B14)	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37
23	08:30 16:26	09:03 (B14) 09:13 (B14)	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38
24	08:29 16:28	09:02 (B14) 09:15 (B14)	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40
25	08:27 16:30	09:00 (B14) 09:16 (B14)	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42
26	08:26 16:32	08:58 (B14) 09:16 (B14)	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43
27	08:24 16:34	08:57 (B14) 09:17 (B14)	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45
28	08:22 16:37	08:57 (B14) 09:17 (B14)	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47
29	08:20 16:39	08:57 (B14) 09:17 (B14)		06:57 19:47	05:37 20:51	04:40 21:48
30	08:19 16:41	08:57 (B14) 09:18 (B14)		06:54 19:49	05:35 20:53	04:38 21:50
31	08:17 16:43	08:58 (B14) 09:18 (B14)		06:52 19:51		04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	170	81	134			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.59	0.59	0.63			
Total reduction	0.08	0.11	0.25			
Total, real	13	9	33			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Aizveji (kad. apz. 56960040532) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (170)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:46 (B22)	07:23
	22:09	21:28	20:14	18:54	14 08:00 (B22)	16:36
2	04:31	05:18	06:19	07:19	07:48 (B22)	07:25
	22:09	21:26	20:11	18:51	11 07:59 (B22)	16:34
3	04:32	05:20	06:21	07:21	07:50 (B22)	07:27
	22:08	21:24	20:09	18:48	7 07:57 (B22)	16:32
4	04:33	05:22	06:23	07:23	07:52 (B22)	07:29
	22:07	21:22	20:06	18:46	3 07:55 (B22)	16:29
5	04:34	05:23	06:25	07:26		07:31
	22:07	21:20	20:04	18:43		16:27
6	04:35	05:25	06:27	07:28		07:34
	22:06	21:17	20:01	18:40		16:25
7	04:36	05:27	06:29	07:30		07:36
	22:05	21:15	19:58	18:38		16:23
8	04:37	05:29	06:31	07:32		07:38
	22:04	21:13	19:56	18:35		16:21
9	04:38	05:31	06:33	07:34		07:40
	22:03	21:11	19:53	18:33		16:19
10	04:39	05:33	06:35	07:36		07:42
	22:02	21:09	19:50	18:30		16:17
11	04:41	05:35	06:37	07:38		07:44
	22:01	21:06	19:48	18:27		16:15
12	04:42	05:37	06:39	07:40		07:47
	22:00	21:04	19:45	18:25		16:13
13	04:43	05:39	06:41	07:42		07:49
	21:59	21:02	19:42	18:22		16:11
14	04:45	05:41	06:43	07:44		07:51
	21:58	20:59	19:39	18:20		16:09
15	04:46	05:43	06:45	07:46		07:53
	21:57	20:57	19:37	18:17		16:08
16	04:48	05:45	06:47	07:48		07:55
	21:55	20:54	19:34	18:15		16:06
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	19:31	18:12		16:04
18	04:51	05:49	06:51	07:53		07:59
	21:53	20:50	19:29	18:09		16:03
19	04:53	05:51	06:53	07:55		08:01
	21:51	20:47	19:26	18:07		16:01
20	04:54	05:53	06:55	07:57		08:03
	21:50	20:45	19:23	18:04		15:59
21	04:56	05:55	06:57	07:59		08:05
	21:48	20:42	19:21	18:02		15:58
22	04:58	05:57	06:59	08:01		08:07
	21:46	20:40	19:18	18:00		15:56
23	04:59	05:59	07:01	08:03		08:09
	21:45	20:37	19:15	17:57		15:55
24	05:01	06:01	07:03	08:05		08:11
	21:43	20:35	19:12	7 07:57 (B22)		15:53
25	05:03	06:03	07:05	07:47 (B22)		08:13
	21:41	20:32	19:10	12 07:59 (B22)		15:52
26	05:05	06:05	07:07	07:46 (B22)		08:15
	21:39	20:30	19:07	14 08:00 (B22)		15:51
27	05:06	06:07	07:09	07:44 (B22)		08:17
	21:38	20:27	19:04	17 08:01 (B22)		15:50
28	05:08	06:09	07:11	07:43 (B22)		08:19
	21:36	20:24	19:02	18 08:01 (B22)		15:48
29	05:10	06:11	07:13	07:43 (B22)		08:21
	21:34	20:22	18:59	18 08:01 (B22)		15:47
30	05:12	06:13	07:15	07:44 (B22)		08:23
	21:32	20:19	18:56	16 08:00 (B22)		15:46
31	05:14	06:15		07:20		08:51
	21:30	20:17		16:38		15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			102	35	253	
Sun reduction			0.43	0.26	0.08	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.63	0.63	0.59	
Total reduction			0.26	0.16	0.05	
Total, real			26	5	12	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Aizveji (kad. apz. 76860060094) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (201)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	21:21 (B12) 21:28 (B12)	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	21:22 (B12) 21:28 (B12)	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	21:22 (B12) 21:28 (B12)	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	21:23 (B12) 21:27 (B12)	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	21:24 (B12) 21:27 (B12)	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	21:18 (B12) 21:20 (B12)	04:35 22:05	21:25 (B12) 21:26 (B12)	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	21:18 (B12) 21:20 (B12)	04:36 22:05	21:25 (B12) 21:26 (B12)	06:29 19:59	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	21:18 (B12) 21:22 (B12)	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	21:17 (B12) 21:22 (B12)	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	21:17 (B12) 21:23 (B12)	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	21:17 (B12) 21:24 (B12)	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	21:17 (B12) 21:25 (B12)	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	21:17 (B12) 21:26 (B12)	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	21:17 (B12) 21:26 (B12)	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	21:17 (B12) 21:26 (B12)	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	21:17 (B12) 21:27 (B12)	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	21:17 (B12) 21:28 (B12)	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:15	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	21:17 (B12) 21:28 (B12)	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	21:17 (B12) 21:28 (B12)	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	21:18 (B12) 21:29 (B12)	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	21:18 (B12) 21:29 (B12)	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	21:19 (B12) 21:30 (B12)	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	21:18 (B12) 21:29 (B12)	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	21:18 (B12) 21:29 (B12)	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	21:19 (B12) 21:30 (B12)	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	21:19 (B12) 21:29 (B12)	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	21:20 (B12) 21:30 (B12)	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	21:20 (B12) 21:29 (B12)	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	21:20 (B12) 21:29 (B12)	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	21:21 (B12) 21:29 (B12)	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51			05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216	
Total, worst case						216							
Sun reduction						0.56							
Oper. time red.						0.98							
Wind dir. red.						0.60							
Total reduction						0.33							
Total, real						71							
							28						
							0.49						
							0.98						
							0.60						
							0.29						
							8						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Akoti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (173)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:16	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:44 15:37
17	08:39 16:13	07:40 17:21	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:41
27	08:24 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:21	07:13 18:59	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Alinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (33)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:56	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:19	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:36 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:41 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:25 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:50 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Amati - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (164)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	08:46 (B14) 17:48	07:11 19:53	06:49 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	08:43 (B14) 17:50	07:08 19:55	06:46 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:21	07:19 18:51	07:25 16:34	08:14 (B14) 15:44
3	08:50 15:51	08:11 16:50	08:41 (B14) 17:52	07:06 19:57	06:44 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:13 (B14) 15:43
4	08:50 15:52	08:09 16:52	08:40 (B14) 17:54	07:03 19:59	06:41 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:12 (B14) 15:42
5	08:49 15:53	08:07 16:54	08:57 (B14) 17:56	07:01 20:01	06:38 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:12 (B14) 15:42
6	08:49 15:55	08:05 16:57	08:41 (B14) 17:58	06:58 20:04	06:36 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:11 (B14) 15:41
7	08:48 15:56	08:03 16:59	08:42 (B14) 18:01	06:55 20:06	06:33 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:10 (B14) 15:40
8	08:48 15:58	08:01 17:01	08:44 (B14) 18:03	06:53 20:08	06:30 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:12 (B14) 15:40
9	08:47 16:00	07:58 17:03	08:45 (B14) 18:05	06:50 20:10	06:28 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:14 (B14) 15:39
10	08:46 16:01	07:56 17:05	08:52 (B14) 18:05	06:48 20:12	06:25 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:17 (B14) 15:39
11	08:45 16:03	07:54 17:08	08:52 (B14) 18:09	06:45 20:14	06:22 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:19 (B14) 15:39
12	08:44 16:05	07:52 17:10	08:52 (B14) 18:11	06:42 20:16	06:20 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:21 (B14) 15:38
13	08:43 16:06	07:50 17:12	08:52 (B14) 18:13	06:40 20:18	06:17 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:24 (B14) 15:38
14	08:42 16:08	07:47 17:14	08:52 (B14) 18:16	06:37 20:20	06:15 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:25 (B14) 15:38
15	08:41 16:10	07:45 17:17	08:52 (B14) 18:17	06:34 20:22	06:12 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:26 (B14) 15:38
16	08:40 16:12	07:43 17:19	08:52 (B14) 18:18	06:32 20:24	06:09 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:27 (B14) 15:38
17	08:39 16:14	07:40 17:21	08:52 (B14) 18:19	06:29 20:26	06:07 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:28 (B14) 15:38
18	08:38 16:16	07:38 17:23	08:52 (B14) 18:20	06:26 20:28	06:04 21:29	04:25 22:10	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:29 (B14) 15:38
19	08:36 16:18	07:36 17:26	08:52 (B14) 18:21	06:24 20:30	06:02 21:31	04:25 22:11	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:30 (B14) 15:38
20	08:35 16:20	07:33 17:28	08:52 (B14) 18:22	06:21 20:33	05:59 21:33	04:25 22:12	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:31 (B14) 15:39
21	08:33 16:22	07:31 17:30	08:52 (B14) 18:23	06:18 20:35	05:57 21:35	04:25 22:13	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:32 (B14) 15:39
22	08:32 16:24	07:28 17:32	08:52 (B14) 18:24	06:16 20:37	05:54 21:37	04:26 22:14	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:33 (B14) 15:40
23	08:30 16:26	07:26 17:35	08:52 (B14) 18:25	06:13 20:39	05:52 21:38	04:26 22:15	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:34 (B14) 15:40
24	08:29 16:28	07:23 17:37	08:52 (B14) 18:26	06:10 20:41	05:49 21:40	04:26 22:16	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:35 (B14) 15:41
25	08:27 16:30	07:21 17:39	08:52 (B14) 18:27	06:08 20:43	05:47 21:42	04:27 22:17	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:36 (B14) 15:41
26	08:26 16:32	07:18 17:41	08:52 (B14) 18:28	06:05 20:45	05:45 21:43	04:27 22:18	05:05 21:39	06:05 20:30	07:07 19:07	08:09 16:50	08:15 15:51	08:37 (B14) 15:42
27	08:24 16:34	07:16 17:43	08:52 (B14) 18:29	06:02 20:47	05:42 21:45	04:27 22:19	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:17 15:50	08:38 (B14) 15:43
28	08:22 16:37	07:13 17:45	08:52 (B14) 18:30	06:00 20:49	05:40 21:47	04:28 22:20	05:08 21:36	06:09 20:25	07:11 19:02	08:14 16:45	08:19 15:48	08:39 (B14) 15:44
29	08:20 16:39	08:52 (B14) 17:45	08:52 (B14) 18:31	06:57 20:51	05:37 21:48	04:29 22:21	05:10 21:34	06:11 20:22	07:13 18:59	08:21 16:43	08:26 15:47	08:40 (B14) 15:45
30	08:19 16:41	08:50 (B14) 17:45	08:52 (B14) 18:32	06:54 20:53	05:35 21:50	04:29 22:22	05:12 21:32	06:13 20:19	07:15 18:56	08:23 16:41	08:28 15:46	08:41 (B14) 15:46
31	08:17 16:43	08:48 (B14) 17:45	08:52 (B14) 18:33	06:52 20:51	05:33 21:51	04:30 22:23	05:14 21:30	06:15 20:17	07:21 16:38	08:24 16:38	08:29 15:47	08:42 (B14) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	12	118									131	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.98	0.98									0.98	
Wind dir. red.	0.61	0.61									0.61	
Total reduction	0.08	0.12									0.05	
Total, real	1	14									6	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Aparnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (60)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March	April	May	June
1	08:51		09:41 (B14)	08:15			07:11	06:49	05:33	04:36
	15:48	17	09:58 (B14)	16:45			17:48	19:53	20:56	21:53
2	08:51		09:42 (B14)	08:13			07:08	06:46	05:30	04:35
	15:49	17	09:59 (B14)	16:48			17:50	19:55	20:58	21:54
3	08:50		09:42 (B14)	08:11			07:06	06:43	05:28	04:34
	15:51	16	09:58 (B14)	16:50			17:52	19:57	21:00	21:55
4	08:50		09:43 (B14)	08:09			07:03	06:41	05:26	04:33
	15:52	15	09:58 (B14)	16:52			17:54	19:59	21:02	21:57
5	08:49		09:44 (B14)	08:07			07:01	06:38	05:23	04:32
	15:53	15	09:59 (B14)	16:54			17:56	20:01	21:04	21:58
6	08:49		09:44 (B14)	08:05			06:58	06:36	05:21	04:31
	15:55	15	09:59 (B14)	16:56			17:58	20:03	21:06	21:59
7	08:48		09:45 (B14)	08:03			06:55	06:33	05:19	04:30
	15:56	14	09:59 (B14)	16:59			18:01	20:06	21:08	22:00
8	08:48		09:46 (B14)	08:01			06:53	06:30	05:17	04:29
	15:58	13	09:59 (B14)	17:01			18:03	20:08	21:10	22:01
9	08:47		09:47 (B14)	07:58			06:50	06:28	05:15	04:29
	16:00	12	09:59 (B14)	17:03			18:05	20:10	21:12	22:02
10	08:46		09:48 (B14)	07:56			06:48	06:25	05:13	04:28
	16:01	10	09:58 (B14)	17:05			18:07	20:12	21:14	22:03
11	08:45		09:50 (B14)	07:54			06:45	06:22	05:11	04:27
	16:03	8	09:58 (B14)	17:08			18:09	20:14	21:16	22:04
12	08:44		09:53 (B14)	07:52			06:42	06:20	05:09	04:27
	16:05	3	09:56 (B14)	17:10			18:11	20:16	21:18	22:05
13	08:43			07:50			06:40	06:17	05:07	04:26
	16:06			17:12			18:13	20:18	21:20	22:06
14	08:42			07:47		08:15 (B22)	06:37	06:15	05:05	04:26
	16:08			17:14	3	08:18 (B22)	18:15	20:20	21:22	22:07
15	08:41			07:45		08:13 (B22)	06:34	06:12	05:03	04:26
	16:10			17:17	7	08:20 (B22)	18:18	20:22	21:24	22:07
16	08:40			07:43		08:10 (B22)	06:32	06:09	05:01	04:26
	16:12			17:19	11	08:21 (B22)	18:20	20:24	21:26	22:08
17	08:39			07:40		08:08 (B22)	06:29	06:07	04:59	04:25
	16:14			17:21	14	08:22 (B22)	18:22	20:26	21:27	22:09
18	08:38			07:38		08:06 (B22)	06:26	06:04	04:57	04:25
	16:16			17:23	17	08:23 (B22)	18:24	20:28	21:29	22:09
19	08:36			07:36		08:04 (B22)	06:24	06:02	04:55	04:25
	16:18			17:26	18	08:22 (B22)	18:26	20:31	21:31	22:09
20	08:35			07:33		08:04 (B22)	06:21	05:59	04:53	04:25
	16:20			17:28	17	08:21 (B22)	18:28	20:33	21:33	22:10
21	08:33			07:31		08:05 (B22)	06:18	05:57	04:52	04:25
	16:22			17:30	16	08:21 (B22)	18:30	20:35	21:35	22:10
22	08:32			07:28		08:05 (B22)	06:16	05:54	04:50	04:26
	16:24			17:32	15	08:20 (B22)	18:32	20:37	21:37	22:10
23	08:30			07:26		08:06 (B22)	06:13	05:52	04:48	04:26
	16:26			17:34	14	08:20 (B22)	18:34	20:39	21:38	22:10
24	08:29			07:23		08:07 (B22)	06:10	05:49	04:47	04:26
	16:28			17:37	10	08:17 (B22)	18:36	20:41	21:40	22:11
25	08:27			07:21			06:08	05:47	04:45	04:26
	16:30			17:39			18:39	20:43	21:42	22:11
26	08:26			07:18			06:05	05:44	04:44	04:27
	16:32			17:41			18:41	20:45	21:43	22:10
27	08:24			07:16			06:02	05:42	04:42	04:27
	16:34			17:43			18:43	20:47	21:45	22:10
28	08:22			07:13			06:00	05:40	04:41	04:28
	16:37			17:45			18:45	20:49	21:47	22:10
29	08:20						06:57	05:37	04:40	04:29
	16:39						19:47	20:51	21:48	22:10
30	08:19						06:54	05:35	04:38	04:29
	16:41						19:49	20:53	21:50	22:10
31	08:17						06:51		04:37	
	16:43						19:51		21:51	
Potential sun hours	235			266			366	426	508	529
Total, worst case		155			142					
Sun reduction		0.13			0.20					
Oper. time red.		0.98			0.98					
Wind dir. red.		0.61			0.62					
Total reduction		0.08			0.12					
Total, real		12			17					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Aparnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (60)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45 8 09:40 (B14)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44 9 09:41 (B14)
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43 12 09:43 (B14)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42 13 09:43 (B14)
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42 14 09:44 (B14)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41 14 09:45 (B14)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40 15 09:45 (B14)
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40 15 09:46 (B14)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39 16 09:47 (B14)
10	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39 17 09:48 (B14)
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39 17 09:48 (B14)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38 17 09:49 (B14)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38 17 09:49 (B14)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38 18 09:50 (B14)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38 17 09:50 (B14)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38 18 09:51 (B14)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:41 (B22) 08:47 (B22)	07:57 16:04 6 08:47 (B22)
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	08:38 (B22) 08:49 (B22)	07:59 16:02 11 08:49 (B22)
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:37 (B22) 08:51 (B22)	08:01 16:01 14 08:51 (B22)
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:36 (B22) 08:52 (B22)	08:03 15:59 16 08:52 (B22)
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:35 (B22) 08:52 (B22)	08:05 15:58 17 08:52 (B22)
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:35 (B22) 08:53 (B22)	08:07 15:56 18 08:53 (B22)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:34 (B22) 08:52 (B22)	08:09 15:55 18 08:52 (B22)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:36 (B22) 08:52 (B22)	08:11 15:53 16 08:52 (B22)
25	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	07:38 (B22) 07:51 (B22)	08:13 15:52 13 07:51 (B22)
26	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	07:41 (B22) 07:51 (B22)	08:15 15:51 10 07:51 (B22)
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	07:43 (B22) 07:49 (B22)	08:17 15:49 6 07:49 (B22)
28	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	07:45 (B22) 07:47 (B22)	08:19 15:48 2 07:47 (B22)
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:21 15:45 18 09:35 (B14)
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46 1 09:36 (B14)
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47 17 09:58 (B14)
Potential sun hours	529	469	385	324	247	216
Total, worst case				147	1	497
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.62	0.61	0.61
Total reduction				0.16	0.05	0.04
Total, real				23	0	21

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Aramsala - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (212)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:47	08:14 16:45	07:10 17:47	06:48 19:52	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:13	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:12 16:47	07:08 17:49	06:45 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11	07:19 18:50	07:24 16:33	08:25 15:43
3	08:50 15:50	08:10 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:51	08:08 16:51	07:03 17:53	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:57	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	08:30 15:41
6	08:48 15:54	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:33 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:09	04:29 22:01	04:36 22:04	05:29 21:12	06:31 19:55	07:31 18:34	07:37 16:20	08:35 15:39
9	08:46 15:59	07:58 17:02	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:13	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:08	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:15	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:12	08:40 15:37
13	08:43 16:06	07:49 17:11	06:39 18:13	06:16 20:17	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:41 18:21	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:44 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:16	07:52 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:33	07:48 18:14	07:54 16:05	08:44 15:37
17	08:38 16:13	07:40 17:20	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:37 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:34 16:19	07:33 17:27	06:20 18:27	05:59 20:32	04:53 21:33	04:24 22:09	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:10	04:55 21:47	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:31 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:00 17:59	08:07 15:55	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	04:58 21:44	05:59 20:37	07:01 19:15	08:03 17:56	08:09 15:54	08:49 15:39
24	08:28 16:27	07:23 17:36	06:10 18:36	05:49 20:40	04:46 21:40	04:25 22:10	05:00 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:42	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:31	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:06	07:09 16:49	08:15 15:50	08:50 15:41
27	08:23 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:26	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:07 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:09 21:33	06:11 20:21	07:13 18:58	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:50		04:36 21:51		05:13 21:29			07:20 16:38		08:50 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Araji - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (205)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:50	08:14	07:10		06:48	05:32	04:35	04:29	05:15	06:17		07:17		17:48 (B3)	07:22	08:24
	15:48	16:45	17:47		19:53	20:55	21:52	22:09	21:27	20:14		18:53	24	18:12 (B3)	16:35	15:44
2	08:50	08:12	07:08		06:46	05:30	04:34	04:30	05:17	06:19		07:19		17:48 (B3)	07:24	08:26
	15:49	16:47	17:49		19:55	20:57	21:54	22:08	21:25	20:11		18:50	24	18:12 (B3)	16:33	15:43
3	08:50	08:10	07:05		06:43	05:27	04:33	04:31	05:19	06:21		07:21		17:48 (B3)	07:27	08:27
	15:50	16:49	17:51		19:57	20:59	21:55	22:08	21:23	20:08		18:48	23	18:11 (B3)	16:31	15:43
4	08:49	08:08	07:03		06:40	05:25	04:32	04:32	05:21	06:23		07:23		17:49 (B3)	07:29	08:29
	15:51	16:51	17:54		19:59	21:01	21:56	22:07	21:21	20:06		18:45	22	18:11 (B3)	16:29	15:42
5	08:49	08:06	07:00		17:19 (B3)	06:38	05:23	04:31	04:33	05:23	06:25	07:25		17:49 (B3)	07:31	08:30
	15:53	16:54	17:56	8	17:27 (B3)	20:01	21:03	21:58	22:06	21:19	20:03	18:42	21	18:10 (B3)	16:27	15:41
6	08:48	08:04	06:57		17:16 (B3)	06:35	05:21	04:30	04:34	05:25	06:27	07:27		17:50 (B3)	07:33	08:32
	15:54	16:56	17:58	13	17:29 (B3)	20:03	21:05	21:59	22:06	21:17	20:00	18:40	19	18:09 (B3)	16:25	15:40
7	08:48	08:02	06:55		17:14 (B3)	06:32	05:18	04:29	04:35	05:27	06:29	07:29		17:51 (B3)	07:35	08:33
	15:56	16:58	18:00	18	17:32 (B3)	20:05	21:07	22:00	22:05	21:15	19:58	18:37	15	18:06 (B3)	16:23	15:40
8	08:47	08:00	06:52		17:12 (B3)	06:30	05:16	04:29	04:36	05:29	06:31	07:31		17:53 (B3)	07:37	08:35
	15:57	17:00	18:02	21	17:33 (B3)	20:07	21:09	22:01	22:04	21:13	19:55	18:35	10	18:03 (B3)	16:20	15:39
9	08:46	07:58	06:50		17:11 (B3)	06:27	05:14	04:28	04:37	05:31	06:33	07:33			07:40	08:36
	15:59	17:03	18:04	22	17:33 (B3)	20:09	21:11	22:02	22:03	21:10	19:52	18:32			16:18	15:39
10	08:46	07:56	06:47		17:11 (B3)	06:24	05:12	04:27	04:39	05:33	06:35	07:35			07:42	08:38
	16:00	17:05	18:06	23	17:34 (B3)	20:11	21:13	22:03	22:02	21:08	19:50	18:29			16:16	15:38
11	08:45	07:54	06:44		17:10 (B3)	06:22	05:10	04:27	04:40	05:35	06:37	07:37			07:44	08:39
	16:02	17:07	18:09	24	17:34 (B3)	20:13	21:15	22:04	22:01	21:06	19:47	18:27			16:14	15:38
12	08:44	07:51	06:42		17:09 (B3)	06:19	05:08	04:26	04:41	05:37	06:39	07:39			07:46	08:40
	16:04	17:09	18:11	24	17:33 (B3)	20:15	21:17	22:05	22:00	21:03	19:44	18:24			16:13	15:38
13	08:43	07:49	06:39		17:09 (B3)	06:17	05:06	04:26	04:43	05:39	06:41	07:41			07:48	08:41
	16:06	17:12	18:13	24	17:33 (B3)	20:18	21:19	22:06	21:59	21:01	19:42	18:22			16:11	15:37
14	08:42	07:47	06:36		17:09 (B3)	06:14	05:04	04:25	04:44	05:41	06:43	07:44			07:50	08:42
	16:07	17:14	18:15	24	17:33 (B3)	20:20	21:21	22:06	21:58	20:59	19:39	18:19			16:09	15:37
15	08:41	07:45	06:34		17:09 (B3)	06:11	05:02	04:25	04:46	05:43	06:45	07:46			07:52	08:43
	16:09	17:16	18:17	23	17:32 (B3)	20:22	21:23	22:07	21:56	20:56	19:36	18:16			16:07	15:37
16	08:40	07:42	06:31		17:09 (B3)	06:09	05:00	04:25	04:47	05:45	06:47	07:48			07:55	08:44
	16:11	17:18	18:19	22	17:31 (B3)	20:24	21:25	22:08	21:55	20:54	19:34	18:14			16:05	15:37
17	08:38	07:40	06:28		17:11 (B3)	06:06	04:58	04:25	04:49	05:47	06:49	07:50			07:57	08:45
	16:13	17:21	18:21	19	17:30 (B3)	20:26	21:27	22:08	21:54	20:52	19:31	18:11			16:04	15:37
18	08:37	07:37	06:26		17:12 (B3)	06:04	04:56	04:25	04:50	05:49	06:51	07:52			07:59	08:46
	16:15	17:23	18:23	16	17:28 (B3)	20:28	21:29	22:09	21:52	20:49	19:28	18:09			16:02	15:37
19	08:36	07:35	06:23		17:13 (B3)	06:01	04:55	04:25	04:52	05:51	06:53	07:54			08:01	08:47
	16:17	17:25	18:25	12	17:25 (B3)	20:30	21:31	22:09	21:51	20:47	19:25	18:06			16:00	15:38
20	08:34	07:33	06:20			05:59	04:53	04:25	04:54	05:53	06:55	07:56			08:03	08:48
	16:19	17:27	18:28			20:32	21:33	22:09	21:49	20:44	19:23	18:04			15:59	15:38
21	08:33	07:30	06:18			05:56	04:51	04:25	04:55	05:55	06:57	07:58			08:05	08:48
	16:21	17:29	18:30			20:34	21:34	22:10	21:48	20:42	19:20	18:01			15:57	15:38
22	08:32	07:28	06:15			05:54	04:49	04:25	04:57	05:57	06:59	08:01			08:07	08:49
	16:23	17:32	18:32			20:36	21:36	22:10	21:46	20:39	19:17	17:59			15:56	15:39
23	08:30	07:25	06:12			05:51	04:48	04:25	04:59	05:59	07:01	08:03			08:09	08:49
	16:25	17:34	18:34			20:38	21:38	22:10	21:44	20:37	19:15	17:56			15:54	15:39
24	08:28	07:23	06:10			05:49	04:46	04:25	05:00	06:01	07:03			17:58 (B3)	08:05	08:11
	16:27	17:36	18:36			20:40	21:40	22:10	21:43	20:34	19:12	10		18:08 (B3)	17:54	15:53
25	08:27	07:20	06:07			05:46	04:45	04:26	05:02	06:03	07:05			17:55 (B3)	07:07	08:13
	16:29	17:38	18:38			20:43	21:41	22:10	21:41	20:32	19:09	15		18:10 (B3)	16:52	15:51
26	08:25	07:18	06:04			05:44	04:43	04:26	05:04	06:05	07:07			17:53 (B3)	07:09	08:15
	16:32	17:40	18:40			20:45	21:43	22:10	21:39	20:29	19:07	18		18:11 (B3)	16:49	15:50
27	08:23	07:15	06:02			05:41	04:42	04:27	05:06	06:07	07:09			17:52 (B3)	07:11	08:17
	16:34	17:43	18:42			20:47	21:45	22:10	21:37	20:27	19:04	20		18:12 (B3)	16:47	15:49
28	08:22	07:13	05:59			05:39	04:40	04:27	05:08	06:09	07:11			17:50 (B3)	07:13	08:18
	16:36	17:45	18:44			20:49	21:46	22:10	21:35	20:24	19:01	23		18:13 (B3)	16:45	15:48
29	08:20		06:56			05:37	04:39	04:28	05:09	06:11	07:13			17:49 (B3)	07:16	08:20
	16:38		19:46			20:51	21:48	22:09	21:33	20:21	18:58	24		18:13 (B3)	16:42	15:47
30	08:18		06:54			05:34	04:38	04:29	05:11	06:13	07:15			17:49 (B3)	07:18	08:22
	16:40		19:48			20:53	21:49	22:09	21:31	20:19	18:56	24		18:13 (B3)	16:40	15:45
31	08:16		06:51				04:36		05:13	06:15					07:20	08:51
	16:42		19:50				21:51		21:29	20:16					16:38	15:46
Potential sun hours	235	266	366		426	508	529	529	469	385		324		247	216	
Total, worst case				293							134		158			
Sun reduction				0.41							0.43		0.26			
Oper. time red.				0.98							0.98		0.98			
Wind dir. red.				0.65							0.65		0.65			
Total reduction				0.26							0.27		0.16			
Total, real				77							36		26			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Atvari - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (95)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	08:46 (B14) 17:48	07:11 19:53	05:33 20:56	04:36 21:53
2	08:51 15:49	08:13 16:48	08:43 (B14) 17:50	07:08 19:55	05:30 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	08:41 (B14) 17:52	07:06 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	08:39 (B14) 17:54	07:03 19:59	05:26 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	08:37 (B14) 17:56	07:01 20:01	05:24 21:04	04:32 21:58
6	08:49 15:55	08:05 16:57	08:36 (B14) 17:58	06:58 20:04	05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	08:37 (B14) 18:01	06:55 20:06	05:19 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	08:38 (B14) 18:03	06:53 20:08	05:17 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	08:38 (B14) 18:05	06:50 20:10	05:15 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05	08:39 (B14) 18:07	06:48 20:12	05:13 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	08:41 (B14) 18:09	06:45 20:14	05:11 21:16	04:27 22:04
12	08:44 16:05	07:52 17:10	08:50 (B14) 18:09	3 07:10 (B22) 20:14	05:09 21:18	04:27 22:05
13	08:43 16:06	07:50 17:12	06:42 18:11	6 07:08 (B22) 20:16	05:09 21:18	04:27 22:05
14	08:42 16:08	07:47 17:14	06:37 18:16	9 07:14 (B22) 20:18	05:05 21:20	04:26 22:06
15	08:41 16:10	07:45 17:17	06:34 18:18	12 07:02 (B22) 20:20	05:03 21:22	04:26 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	14 07:00 (B22) 20:22	05:01 21:24	04:26 22:07
17	08:39 16:14	07:40 17:21	06:29 18:22	14 06:59 (B22) 20:24	05:01 21:26	04:26 22:08
18	08:38 16:16	07:38 17:23	06:26 18:24	13 07:12 (B22) 20:26	04:59 21:27	04:25 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	10 07:01 (B22) 20:28	04:57 21:29	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	3 07:11 (B22) 20:28	04:55 21:29	04:25 22:09
21	08:33 16:22	07:31 17:30	06:18 18:30	3 07:07 (B22) 20:31	04:53 21:31	04:25 22:09
22	08:32 16:24	07:28 17:32	06:16 18:32	05:59 20:33	04:53 21:33	04:25 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:57 20:35	04:52 21:35	04:25 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:52 20:37	04:48 21:37	04:26 22:10
25	08:27 16:30	07:21 17:39	06:08 18:39	05:49 20:39	04:47 21:38	04:26 22:10
26	08:26 16:32	07:18 17:41	06:05 18:41	05:47 20:41	04:45 21:40	04:27 22:11
27	08:24 16:34	07:16 17:43	06:02 18:43	05:44 20:43	04:44 21:42	04:27 22:11
28	08:22 16:37	07:13 17:45	06:00 18:45	05:45 20:45	04:44 21:43	04:27 22:10
29	08:20 16:39		06:57 19:47	05:42 20:47	04:42 21:45	04:27 22:10
30	08:19 16:41		06:54 19:49	05:40 20:49	04:41 21:47	04:28 22:10
31	08:17 16:43	08:48 (B14) 08:50 (B14)	06:52 19:51	05:37 20:53	04:40 21:50	04:29 22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case	2	145	84			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.61	0.61	0.63			
Total reduction	0.08	0.12	0.25			
Total, real	0	17	21			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Atvari - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (95)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:46 (B22) 07:54 (B22)	08:09 (B14) 08:21 (B14)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:48 (B22) 07:52 (B22)	08:07 (B14) 08:22 (B14)
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48		08:07 (B14) 08:23 (B14)
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46		08:06 (B14) 08:23 (B14)
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43		08:07 (B14) 08:24 (B14)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40		08:07 (B14) 08:24 (B14)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38		08:09 (B14) 08:23 (B14)
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35		08:12 (B14) 08:24 (B14)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33		08:14 (B14) 08:23 (B14)
10	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30		08:17 (B14) 08:23 (B14)
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27		08:19 (B14) 08:21 (B14)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25		08:21 (B14) 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22		08:24 (B14) 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20		08:26 (B14) 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17		08:28 (B14) 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15		08:30 (B14) 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12		08:32 (B14) 16:04
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09		08:34 (B14) 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07		08:36 (B14) 16:01
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04		08:38 (B14) 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02		08:40 (B14) 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00		08:42 (B14) 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57		08:44 (B14) 15:55
24	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55		08:46 (B14) 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:53 (B22)		08:48 (B14) 15:52
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:52 (B22)		08:50 (B14) 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:51 (B22)		08:52 (B14) 15:50
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:50 (B22)		08:54 (B14) 15:49
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:49 (B22)		08:56 (B14) 15:48
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:48 (B22)		08:58 (B14) 15:47
31	05:14 21:30	06:15 20:17		08:19 17:47 (B22)		09:00 (B14) 15:46
Potential sun hours	529	469	385	324	247	216
Total, worst case			72	26	137	
Sun reduction			0.43	0.26	0.08	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.63	0.62	0.61	
Total reduction			0.26	0.16	0.05	
Total, real			19	4	7	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ausekli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (109)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ausmas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (158)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:49 (B14)	06:49	05:33
	15:48	16:45	17:48	23 08:12 (B14)	19:53	20:55
2	08:51	08:13	07:08	07:50 (B14)	06:46	05:30
	15:50	16:48	17:50	21 08:11 (B14)	19:55	20:58
3	08:50	08:11	07:06	07:51 (B14)	06:44	05:28
	15:51	16:50	17:52	19 08:10 (B14)	19:57	21:00
4	08:50	08:09	07:03	07:52 (B14)	06:41	05:26
	15:52	16:52	17:54	16 08:08 (B14)	19:59	21:02
5	08:49	08:07	07:01	07:53 (B14)	06:38	05:24
	15:54	16:54	17:56	13 08:06 (B14)	20:01	21:04
6	08:49	08:05	06:58	07:57 (B14)	06:36	05:21
	15:55	16:57	17:58	6 08:03 (B14)	20:03	21:06
7	08:48	08:03	06:55		06:33	05:19
	15:56	16:59	18:01		20:06	21:08
8	08:48	08:01	06:53		06:30	05:17
	15:58	17:01	18:03		20:08	21:10
9	08:47	07:58	06:50		06:28	05:15
	16:00	17:03	18:05		20:10	21:12
10	08:46	07:56	06:48		06:25	05:13
	16:01	17:05	18:07		20:12	21:14
11	08:45	07:54	06:45		06:22	05:11
	16:03	17:08	18:09		20:14	21:16
12	08:44	07:52	06:42		06:20	05:09
	16:05	17:10	18:11		20:16	21:18
13	08:43	07:50	06:40		06:17	05:07
	16:06	17:12	18:13		20:18	21:20
14	08:42	07:47	06:37		06:15	05:05
	16:08	17:14	18:16		20:20	21:22
15	08:41	07:45	06:34		06:12	05:03
	16:10	17:17	18:18		20:22	21:24
16	08:40	07:43	06:32		06:09	05:01
	16:12	17:19	18:20		20:24	21:26
17	08:39	07:40	06:29		06:07	04:59
	16:14	17:21	18:22		20:26	21:27
18	08:38	07:38	06:26		06:04	04:57
	16:16	17:23	18:24		20:28	21:29
19	08:36	07:36	06:24		06:02	04:55
	16:18	17:26	18:26		20:31	21:31
20	08:35	07:33	06:21		05:59	04:53
	16:20	17:28	18:28		20:33	21:33
21	08:33	07:31	06:18		05:57	04:52
	16:22	17:30	18:30		20:35	21:35
22	08:32	07:28	06:16		05:54	04:50
	16:24	17:32	18:32		20:37	21:37
23	08:30	07:26	06:13		05:52	04:48
	16:26	17:34	18:34		20:39	21:38
24	08:29	07:23	06:10		05:49	04:47
	16:28	17:37	18:36		20:41	21:40
25	08:27	07:21	06:08		05:47	04:45
	16:30	17:39	18:39		20:43	21:42
26	08:26	07:18	06:05		05:45	04:44
	16:32	17:41	18:41		20:45	21:43
27	08:24	07:16	06:02		05:42	04:42
	16:34	17:43	18:43		20:47	21:45
28	08:22	07:13	06:00		05:40	04:41
	16:37	17:45	18:45		20:49	21:47
29	08:20		06:57		05:37	04:40
	16:39		19:47		20:51	21:48
30	08:19		06:54		05:35	04:38
	16:41		19:49		20:53	21:50
31	08:17		06:52			04:37
	16:43		19:51			21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		181	98		135	
Sun reduction		0.20	0.41		0.50	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.63	0.63		0.66	
Total reduction		0.12	0.25		0.32	
Total, real		22	24	43		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ausmas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (158)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	06:50 (B22) 07:07 (B22)	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	06:49 (B22) 07:07 (B22)	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:51 (B22) 07:07 (B22)	07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (B22) 07:07 (B22)	07:23 18:46	07:29 16:30
5	04:34 22:07	05:24 21:20	06:25 20:04	06:55 (B22) 07:06 (B22)	07:26 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	06:57 (B22) 07:05 (B22)	07:28 18:40	07:34 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	06:58 (B22) 07:03 (B22)	07:30 18:38	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:00 (B22) 07:01 (B22)	07:32 18:35	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:01 (B22) 18:33	10 08:30 (B14)	07:38 16:19
10	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	15 08:43 (B14)	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	18 08:44 (B14)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	21 08:45 (B14)	07:46 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	22 08:45 (B14)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	23 08:45 (B14)	07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	24 08:45 (B14)	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	24 08:46 (B14)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	23 08:45 (B14)	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	24 08:45 (B14)	07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	22 08:44 (B14)	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	19 08:44 (B14)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	15 08:42 (B14)	08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	12 08:41 (B14)	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	8 08:39 (B14)	08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	3 08:37 (B24)	08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52		08:13 15:52
26	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50		08:15 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48		08:17 15:50
28	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45		08:19 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43		08:21 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41		08:22 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	07:20 16:38		08:24 15:45
Potential sun hours	529	469	385	324	247	216
Total, worst case		48	90	283		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.66	0.63		
Total reduction		0.32	0.27	0.16		
Total, real		15	25	45		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Auzani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (107)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:56	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:19	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:41 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Avenes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (132)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:47 (B14)	06:49	05:33
	15:48	16:45	17:48	24 08:11 (B14)	19:53	20:55
2	08:51	08:13	07:08	07:47 (B14)	06:46	05:30
	15:50	16:48	17:50	23 08:10 (B14)	19:55	20:58
3	08:50	08:11	07:06	07:48 (B14)	06:44	05:28
	15:51	16:50	17:52	22 08:10 (B14)	19:57	21:00
4	08:50	08:09	07:03	07:49 (B14)	06:41	05:26
	15:52	16:52	17:54	19 08:08 (B14)	19:59	21:02
5	08:49	08:07	07:01	07:50 (B14)	06:38	05:24
	15:54	16:54	17:56	16 08:06 (B14)	20:01	21:04
6	08:49	08:05	06:58	07:52 (B14)	06:36	05:21
	15:55	16:57	17:58	13 08:05 (B14)	20:03	21:06
7	08:48	08:03	06:55	07:55 (B14)	06:33	05:19
	15:56	16:59	18:01	5 08:00 (B14)	20:06	21:08
8	08:48	08:01	06:53		06:30	05:17
	15:58	17:01	18:03		20:08	21:10
9	08:47	07:58	06:50		06:28	05:15
	16:00	17:03	18:05		20:10	21:12
10	08:46	07:56	06:48		06:25	05:13
	16:01	17:05	18:07		20:12	21:14
11	08:45	07:54	06:45		06:22	05:11
	16:03	17:08	18:09		20:14	21:16
12	08:44	07:52	06:42		06:20	05:09
	16:05	17:10	18:11		20:16	21:18
13	08:43	07:50	06:40		06:17	05:07
	16:06	17:12	18:13		20:18	21:20
14	08:42	07:47	06:37		06:15	05:05
	16:08	17:14	18:16		20:20	21:22
15	08:41	07:45	06:34		06:12	05:03
	16:10	17:17	18:18		20:22	21:24
16	08:40	07:43	06:32		06:09	05:01
	16:12	17:19	18:20		20:24	21:26
17	08:39	07:40	06:29		06:07	04:59
	16:14	17:21	18:22		20:26	21:27
18	08:38	07:38	06:26		06:04	04:57
	16:16	17:23	18:24		20:28	21:29
19	08:36	07:36	06:24		06:02	04:55
	16:18	2 08:05 (B24)	18:26		20:31	21:31
20	08:35	07:33	06:21		05:59	04:53
	16:20	6 08:06 (B14)	18:28		20:33	21:33
21	08:33	07:31	06:18		05:57	04:52
	16:22	10 08:08 (B14)	18:30		20:35	21:35
22	08:32	07:28	06:16		05:54	04:50
	16:24	14 08:09 (B14)	18:32		20:37	21:37
23	08:30	07:26	06:13		05:52	04:48
	16:26	18 08:11 (B14)	18:34		20:39	21:38
24	08:29	07:23	06:10		05:49	04:47
	16:28	21 08:11 (B14)	18:36		20:41	21:40
25	08:27	07:21	06:08		05:47	04:45
	16:30	23 08:12 (B14)	18:39		20:43	21:42
26	08:26	07:18	06:05		05:45	04:44
	16:32	24 08:12 (B14)	18:41		20:45	21:43
27	08:24	07:16	06:02		05:42	04:42
	16:34	24 08:11 (B14)	18:43		20:47	21:45
28	08:22	07:13	06:00		05:40	04:41
	16:37	24 08:12 (B14)	18:45		20:49	21:47
29	08:20		06:57		05:37	04:40
	16:39		19:47		20:51	21:48
30	08:19		06:54		05:35	04:38
	16:41		19:49		20:53	21:50
31	08:17		06:52			04:37
	16:43		19:51			21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		166	122		139	
Sun reduction		0.20	0.41		0.50	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.63	0.63		0.66	
Total reduction		0.12	0.25		0.32	
Total, real		20	31	44		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Avenes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (132)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	06:47 (B22) 07:05 (B22)	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	06:49 (B22) 07:05 (B22)	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:51 (B22) 07:05 (B22)	07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (B22) 07:04 (B22)	07:23 18:46	07:29 16:30
5	04:34 22:07	05:24 21:20	06:25 20:04	06:55 (B22) 07:03 (B22)	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	06:57 (B22) 07:02 (B22)	07:28 18:40	07:34 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	06:58 (B22) 06:59 (B22)	07:30 18:38	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:29 (B14) 08:38 (B14)	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:25 (B14) 08:43 (B14)	07:40 16:19
10	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	08:23 (B14) 08:44 (B14)	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:22 (B14) 08:44 (B14)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:21 (B14) 08:44 (B14)	07:46 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:20 (B14) 08:44 (B14)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:20 (B14) 08:44 (B14)	07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:20 (B14) 08:44 (B14)	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:20 (B14) 08:44 (B14)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:20 (B14) 08:43 (B14)	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	08:22 (B14) 08:42 (B14)	07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:25 (B14) 08:42 (B14)	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:27 (B14) 08:40 (B14)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:29 (B14) 08:38 (B14)	08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:31 (B14) 08:36 (B24)	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:34 (B24) 08:35 (B24)	08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:51 15:40
26	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	07:20 16:38	08:24 15:45	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		69	73	292		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.66	0.63		
Total reduction		0.32	0.27	0.16		
Total, real		22	20	46		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Avoti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (2)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:56	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:36 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:49 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:41 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:23	04:26 22:07	04:47 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:25 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:50 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Avotini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (114)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:47	08:07 (B1) 08:13 (B1)	06:49 19:53	05:32 20:55
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	21:53 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	21:54 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:06 (B17) 07:07 (B17)	05:26 21:02
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	07:03 (B17) 07:08 (B17)	05:23 21:04
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	07:01 (B17) 07:09 (B17)	05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:00	06:33 20:05	06:58 (B17) 07:10 (B17)	05:19 21:08
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	06:55 (B17) 07:09 (B17)	05:17 21:10
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	06:53 (B17) 07:10 (B17)	05:15 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	06:52 (B17) 07:09 (B17)	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	06:53 (B17) 07:09 (B17)	05:10 21:16
12	08:44 16:04	07:52 17:10	06:42 18:11	06:20 20:16	06:53 (B17) 07:07 (B17)	05:08 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	06:54 (B17) 07:06 (B17)	05:06 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	06:55 (B17) 07:03 (B17)	05:04 21:22
15	08:41 16:10	07:45 17:17	08:13 (B1) 08:14 (B1)	06:34 18:17	05:02 21:24	04:26 22:07
16	08:40 16:12	07:43 17:19	08:10 (B1) 08:17 (B1)	06:32 18:20	05:01 21:26	04:25 22:08
17	08:39 16:14	07:40 17:21	08:08 (B1) 08:19 (B1)	06:29 18:22	04:59 21:27	04:25 22:09
18	08:38 16:16	07:38 17:23	08:05 (B1) 08:20 (B1)	06:26 18:24	04:57 21:29	04:25 22:09
19	08:36 16:18	07:36 17:25	08:03 (B1) 08:21 (B1)	06:24 18:26	04:55 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	08:01 (B1) 08:21 (B1)	06:21 18:28	04:53 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	08:01 (B1) 08:22 (B1)	06:18 18:30	04:52 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	08:00 (B1) 08:22 (B1)	06:15 18:32	04:50 21:37	04:25 22:10
23	08:30 16:26	07:26 17:34	08:00 (B1) 08:22 (B1)	06:13 18:34	04:48 21:38	04:26 22:10
24	08:29 16:28	07:23 17:37	08:00 (B1) 08:21 (B1)	06:10 18:36	04:47 21:40	04:26 22:11
25	08:27 16:30	07:21 17:39	08:01 (B1) 08:21 (B1)	06:07 18:38	04:45 21:42	04:26 22:11
26	08:26 16:32	07:18 17:41	08:01 (B1) 08:20 (B1)	06:05 18:41	04:44 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	08:02 (B1) 08:18 (B1)	06:02 18:43	04:42 21:45	04:27 22:10
28	08:22 16:36	07:13 17:45	08:04 (B1) 08:17 (B1)	05:59 18:45	04:41 21:47	04:28 22:10
29	08:20 16:39		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10
31	08:17 16:43		06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case		226	6	124		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.62	0.62	0.66		
Total reduction		0.12	0.25	0.32		
Total, real		28	1	40		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Avotini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (114)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	06:52 (B17) 18:54	07:17 18:54	07:23 16:36
2	04:31 22:09	05:17 21:26	06:19 20:11	06:51 (B17) 18:51	07:19 18:51	07:25 16:34
3	04:32 22:08	05:19 21:24	06:21 20:09	06:51 (B17) 18:48	07:21 18:48	07:27 16:31
4	04:32 22:07	05:21 21:22	06:23 20:06	06:53 (B17) 18:46	07:23 18:46	07:29 16:29
5	04:33 22:07	05:23 21:20	06:25 20:03	06:55 (B17) 18:43	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	06:56 (B17) 18:40	07:27 18:40	07:33 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	06:58 (B17) 18:38	07:30 18:38	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:55	07:00 (B17) 18:35	07:32 18:35	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:01 (B17) 18:32	07:34 18:32	07:40 16:19
10	04:39 22:02	05:33 21:08	06:35 19:50	07:03 (B17) 18:30	07:36 18:30	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:47	07:05 (B17) 18:27	07:38 18:27	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:07 (B17) 18:25	07:40 18:25	07:46 16:13
13	04:43 21:59	05:39 21:02	06:41 19:42	07:09 (B17) 18:22	07:42 18:22	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:11 (B17) 18:19	07:44 18:19	07:51 16:09
15	04:46 21:57	05:43 20:57	06:45 19:37	07:13 (B17) 18:17	07:46 18:17	07:53 16:07
16	04:48 21:55	05:45 20:54	06:47 19:34	07:15 (B17) 18:14	07:48 18:14	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:17 (B17) 18:12	07:50 18:12	07:57 16:04
18	04:51 21:53	05:49 20:50	06:51 19:29	07:19 (B17) 18:09	07:52 18:09	07:59 16:02
19	04:52 21:51	05:51 20:47	06:53 19:26	07:21 (B17) 18:07	07:54 18:07	08:01 16:01
20	04:54 21:50	05:53 20:45	06:55 19:23	07:23 (B17) 18:04	07:56 18:04	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:20	07:25 (B17) 18:02	07:58 18:02	08:05 15:58
22	04:57 21:46	05:57 20:40	06:59 19:18	07:27 (B17) 17:59	07:59 17:59	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	07:29 (B17) 17:57	08:01 17:57	08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	07:31 (B17) 17:55	08:03 17:55	08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	07:33 (B17) 17:52	08:05 17:52	08:13 15:52
26	05:04 21:39	06:05 20:30	07:07 19:07	07:35 (B17) 17:50	08:07 17:50	08:15 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	07:37 (B17) 17:47	08:09 17:47	08:17 15:49
28	05:08 21:36	06:09 20:24	07:11 19:02	07:39 (B17) 17:45	08:11 17:45	08:19 15:48
29	05:10 21:34	06:11 20:22	06:56 (B17) 07:04 (B17)	07:13 18:59	07:16 16:43	08:21 15:47
30	05:12 21:32	06:13 20:19	06:54 (B17) 07:06 (B17)	07:15 18:56	07:18 16:40	08:23 15:46
31	05:14 21:30	06:15 20:17	06:52 (B17) 07:07 (B17)	07:19 16:38	07:20 16:38	08:25 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		35	91	233		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.66	0.62		
Total reduction		0.32	0.27	0.16		
Total, real		11	25	37		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Bajari - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (22)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:11	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Biksti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (38)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	06:49	07:14 (B17)	05:32
	15:48	16:45	17:47	19:53	16 07:30 (B17)	20:55
2	08:51	08:13	08:43 (B1)	06:46	07:11 (B17)	05:30
	15:49	16:47	2 08:45 (B1)	19:55	19 07:30 (B17)	20:58
3	08:50	08:11	08:41 (B1)	06:43	07:11 (B17)	05:28
	15:50	16:50	7 08:48 (B1)	19:57	18 07:29 (B17)	21:00
4	08:50	08:09	08:39 (B1)	06:41	07:11 (B17)	05:26
	15:52	16:52	11 08:50 (B1)	19:59	18 07:29 (B17)	21:02
5	08:49	08:07	08:37 (B1)	06:38	07:11 (B17)	05:23
	15:53	16:54	14 08:51 (B1)	20:01	17 07:28 (B17)	21:04
6	08:49	08:05	08:34 (B1)	06:35	07:12 (B17)	05:21
	15:55	16:56	17 08:51 (B1)	20:03	15 07:27 (B17)	21:06
7	08:48	08:03	08:32 (B1)	06:33	07:13 (B17)	05:19
	15:56	16:59	20 08:52 (B1)	20:05	12 07:25 (B17)	21:08
8	08:48	08:01	08:32 (B1)	06:30	07:15 (B17)	05:17
	15:58	17:01	21 08:53 (B1)	20:08	7 07:22 (B17)	21:10
9	08:47	07:58	08:31 (B1)	06:27		05:15
	15:59	17:03	22 08:53 (B1)	20:10		21:12
10	08:46	07:56	08:31 (B1)	06:25		05:12
	16:01	17:05	23 08:54 (B1)	20:12		21:14
11	08:45	07:54	08:32 (B1)	06:22		05:10
	16:03	17:08	22 08:54 (B1)	20:14		21:16
12	08:44	07:52	08:31 (B1)	06:20		05:08
	16:04	17:10	22 08:53 (B1)	20:16		21:18
13	08:43	07:50	08:32 (B1)	06:17		05:06
	16:06	17:12	21 08:53 (B1)	20:18		21:20
14	08:42	07:47	08:32 (B1)	06:14		05:04
	16:08	17:14	20 08:52 (B1)	20:20		21:22
15	08:41	07:45	08:33 (B1)	06:12		05:02
	16:10	17:17	19 08:52 (B1)	20:22		21:24
16	08:40	07:43	08:34 (B1)	06:09		05:00
	16:12	17:19	16 08:50 (B1)	20:24		21:26
17	08:39	07:40	08:36 (B1)	06:07		04:59
	16:14	17:21	13 08:49 (B1)	20:26		21:27
18	08:38	07:38	08:38 (B1)	06:04		04:57
	16:16	17:23	7 08:45 (B1)	20:28		21:29
19	08:36	07:36		06:02		04:55
	16:18	17:25		20:30		21:31
20	08:35	07:33		05:59		04:53
	16:20	17:28		20:33		21:33
21	08:33	07:31		05:57		04:51
	16:22	17:30		20:35		21:35
22	08:32	07:28		05:54		04:50
	16:24	17:32		20:37		21:37
23	08:30	07:26		05:52		04:48
	16:26	17:34		20:39		21:38
24	08:29	07:23		05:49		04:47
	16:28	17:37		20:41		21:40
25	08:27	07:21		05:47		04:45
	16:30	17:39		20:43		21:42
26	08:26	07:18		05:44		04:44
	16:32	17:41		20:45		21:43
27	08:24	07:16		05:42		04:42
	16:34	17:43		20:47		21:45
28	08:22	07:13		05:39		04:41
	16:36	17:45		20:49		21:47
29	08:20			05:37		04:39
	16:39			20:51		21:48
30	08:19			05:35		04:38
	16:41			20:53		21:50
31	08:17			05:37		04:37
	16:43			21:51		22:10
Potential sun hours	235	266	366	426	508	529
Total, worst case		277	32	122		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.61	0.66	0.66		
Total reduction		0.12	0.26	0.32		
Total, real		33	8	39		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Biksti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (38)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:01 (B1) 15:45
2	04:31 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:01 (B1) 15:44
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:01 (B1) 15:43
4	04:32 22:07	05:21 21:22	06:23 20:06	07:23 (B17) 18:46	07:29 16:29	08:02 (B1) 15:42
5	04:33 22:07	05:23 21:20	06:25 20:03	07:25 (B17) 18:43	07:31 16:27	08:05 (B1) 15:41
6	04:34 22:06	05:25 21:17	06:27 20:01	07:27 (B17) 18:40	07:33 16:25	08:07 (B1) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 (B17) 18:38	07:36 16:23	08:09 (B1) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 (B17) 18:35	07:38 16:21	08:12 (B1) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 (B17) 18:32	07:40 16:19	08:14 (B1) 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 (B17) 18:30	07:42 16:17	08:15 (B1) 15:39
11	04:40 22:01	05:35 21:06	06:37 19:47	07:38 (B17) 18:27	07:44 16:15	08:16 (B1) 15:38
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 (B17) 18:25	07:46 16:13	08:17 (B1) 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 (B17) 18:22	07:49 16:11	08:18 (B1) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 (B17) 18:19	07:51 16:09	08:19 (B1) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 (B17) 18:17	07:53 16:07	08:20 (B1) 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:21 (B1) 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:22 (B1) 15:38
18	04:51 21:53	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:23 (B1) 15:38
19	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:24 (B1) 15:38
20	04:54 21:50	05:53 20:45	06:55 19:23	07:56 18:04	08:03 15:59	08:25 (B1) 15:38
21	04:56 21:48	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:58	08:26 (B1) 15:39
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:27 (B1) 15:39
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:28 (B1) 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	09:08 (B1) 15:53	08:11 15:40
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	09:17 (B1) 15:52	08:13 15:41
26	05:04 21:39	06:05 20:30	07:07 19:07	08:09 16:50	08:19 (B1) 15:51	08:15 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 16:47	08:21 (B1) 15:49	08:17 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 16:45	08:22 (B1) 15:48	08:19 15:43
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 16:43	08:23 (B1) 15:47	08:21 15:44
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:40	08:24 (B1) 15:46	08:23 15:45
31	05:14 21:30	06:15 20:17		08:19 16:38	08:25 (B1) 15:45	08:24 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			157	147	134	
Sun reduction			0.43	0.26	0.08	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.66	0.61	0.61	
Total reduction			0.27	0.15	0.05	
Total, real			42	22	7	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Birzes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (4)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Birzmaliešis - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (70)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45		07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:24 16:36
2	08:51 15:49	08:13 16:47		07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	08:26 16:34
3	08:50 15:51	08:11 16:50		07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:28 16:32
4	08:50 15:52	08:09 16:52		07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	08:29 16:29
5	08:49 15:53	08:07 16:54		07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:25 18:43	08:31 16:27
6	08:49 15:55	08:05 16:56		06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:32 16:25
7	08:48 15:56	08:03 16:59		06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:34 16:23
8	08:48 15:58	08:01 17:01		06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:35 16:21
9	08:47 15:59	07:58 17:03	08:27 (B22)	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:37 16:19
10	08:46 16:01	07:56 17:05	08:32 (B22)	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	08:38 16:17
11	08:45 16:03	07:54 17:08	08:34 (B22)	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:39 16:15
12	08:44 16:05	07:52 17:10	08:36 (B22)	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:40 16:13
13	08:43 16:06	07:50 17:12	08:38 (B22)	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:42 16:11
14	08:42 16:08	07:47 17:14	08:37 (B22)	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:43 16:09
15	08:41 16:10	07:45 17:17	08:37 (B22)	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:44 16:08
16	08:40 16:12	07:43 17:19	08:37 (B22)	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	08:45 16:06
17	08:39 16:14	07:40 17:21	08:37 (B22)	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:46 16:04
18	08:38 16:16	07:38 17:23	08:37 (B22)	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	08:46 16:02
19	08:36 16:18	07:36 17:26	08:36 (B22)	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:47 16:01
20	08:35 16:20	07:33 17:28	08:36 (B22)	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:48 16:00
21	08:33 16:22	07:31 17:30	08:35 (B22)	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:49 15:58
22	08:32 16:24	07:28 17:32	08:33 (B22)	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:49 15:56
23	08:30 16:26	07:26 17:34	08:30 (B22)	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:50 15:55
24	08:29 16:28	07:23 17:37		06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:51 15:53
25	08:27 16:30	07:21 17:39		06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:50 15:52
26	08:26 16:32	07:18 17:41		06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:51 15:51
27	08:24 16:34	07:16 17:43		06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:51 15:49
28	08:22 16:36	07:13 17:45		05:59 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:45	08:51 15:44
29	08:20 16:39			06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:51 15:45
30	08:19 16:41			06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:51 15:46
31	08:17 16:43			06:51 19:51	05:32 21:51	04:37 21:51	04:29 21:30	05:14 20:17	06:15 20:17	07:20 16:38	08:23 16:12	08:51 15:47
Potential sun hours	235	266		366	426	508	529	529	469	385	324	216
Total, worst case		215									206	150
Sun reduction		0.20									0.26	0.07
Oper. time red.		0.98									0.98	0.98
Wind dir. red.		0.62									0.62	0.61
Total reduction		0.12									0.16	0.04
Total, real		26									32	6

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Birznieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (176)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:00 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Birztalas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (15)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:20 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:22 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:26 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:28 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:09	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:24	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:06 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:05	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:25	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Bisenieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (183)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45 60	08:49 (B24) 10:11 (B14) 17:48	07:11 19:53	05:33 20:55	04:36 21:53
2	08:50 15:49	08:13 16:48 60	08:49 (B24) 10:11 (B14) 17:50	07:08 19:55	05:30 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50 62	08:41 (B25) 10:11 (B14) 17:52	07:06 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52 63	08:39 (B25) 10:11 (B14) 17:54	07:03 19:59	05:26 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54 65	08:37 (B25) 10:11 (B14) 17:56	07:01 20:01	05:23 21:04	04:32 21:58
6	08:49 15:55 3	09:43 (B14) 09:46 (B14) 16:56 65	08:34 (B25) 10:09 (B14) 17:58	06:58 20:03	05:21 21:06	04:31 21:59
7	08:48 15:56 10	09:40 (B14) 09:50 (B14) 16:59 66	08:32 (B25) 10:09 (B14) 18:01	06:55 20:06	05:19 21:08	04:30 22:00
8	08:48 15:58 13	09:39 (B14) 09:52 (B14) 17:01 63	08:30 (B25) 10:08 (B14) 18:03	06:53 20:08	05:17 21:10	04:29 22:01
9	08:47 16:00 17	09:37 (B14) 09:54 (B14) 17:03 58	08:29 (B25) 10:06 (B14) 18:05	06:50 20:10	05:15 21:12	04:29 22:02
10	08:46 16:01 18	09:37 (B14) 09:55 (B14) 17:05 51	08:30 (B25) 10:05 (B14) 18:07	06:47 20:12	05:13 21:14	04:28 22:03
11	08:45 16:03 21	09:36 (B14) 09:57 (B14) 17:08 40	08:31 (B25) 10:03 (B14) 18:09	06:45 20:14	05:11 21:16	04:27 22:04
12	08:44 16:05 23	09:36 (B14) 09:59 (B14) 17:10 25	08:32 (B25) 10:00 (B14) 18:11	06:42 20:16	05:09 21:18	04:27 22:05
13	08:43 16:06 25	09:34 (B14) 09:59 (B14) 17:12 7	08:34 (B25) 08:41 (B25) 18:13	06:40 20:18	05:07 21:20	04:26 22:06
14	08:42 16:08 27	09:34 (B14) 10:01 (B14) 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07
15	08:41 16:10 28	09:33 (B14) 10:01 (B14) 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07
16	08:40 16:12 30	09:33 (B14) 10:03 (B14) 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 22:08
17	08:39 16:14 30	09:34 (B14) 10:04 (B14) 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08
18	08:37 16:16 32	09:33 (B14) 10:05 (B14) 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18 33	09:32 (B14) 10:05 (B14) 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09
20	08:35 16:20 34	09:33 (B14) 10:07 (B14) 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10
21	08:33 16:22 35	09:32 (B14) 10:07 (B14) 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24 36	09:32 (B14) 10:08 (B14) 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10
23	08:30 16:26 36	09:32 (B14) 10:08 (B14) 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28 38	09:32 (B14) 10:10 (B14) 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 16:30 42	09:00 (B24) 10:10 (B14) 17:39	06:08 18:38	05:47 20:43	04:45 21:42	04:26 22:10
26	08:26 16:32 47	08:58 (B24) 10:11 (B14) 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34 50	08:56 (B24) 10:11 (B14) 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 16:37 53	08:54 (B24) 10:11 (B14) 17:45	05:59 18:45	05:40 20:49	04:41 21:47	04:28 22:10
29	08:20 16:39 55	08:52 (B24) 10:11 (B14)	06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:18 16:41 59	08:50 (B24) 10:12 (B14)	06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09
31	08:17 16:43 60	08:50 (B24) 10:12 (B14)	06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case	855	685		500		
Sun reduction	0.13	0.20		0.50		
Oper. time red.	0.98	0.98		0.98		
Wind dir. red.	0.60	0.60		0.66		
Total reduction	0.08	0.12		0.31		
Total, real	66	79		157		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Bisenieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (183)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	04:30 22:09	05:16 21:28	06:17 20:14	06:58 (B22) 18:54	07:17 16:36	08:00 (B25) 15:45	09:18 (B14) 21
2	04:31 22:09	05:18 21:26	06:19 20:11	06:58 (B22) 18:51	07:19 16:34	08:26 15:44	09:20 (B14) 19
3	04:32 22:08	05:20 21:24	06:21 20:09	06:58 (B22) 18:48	07:21 16:32	08:28 15:43	09:20 (B14) 17
4	04:33 22:07	05:21 21:22	06:23 20:06	06:59 (B22) 18:46	07:23 16:29	08:29 15:42	09:23 (B14) 13
5	04:34 22:07	05:23 21:20	06:25 20:03	06:59 (B22) 18:43	07:25 16:27	08:31 15:42	09:25 (B14) 10
6	04:35 22:06	05:25 21:17	06:27 20:01	07:00 (B22) 18:40	07:27 16:25	08:32 15:41	09:28 (B14) 5
7	04:36 22:05	05:27 21:15	06:29 19:58	07:01 (B22) 18:38	07:30 16:23	08:34 15:40	
8	04:37 22:04	05:29 21:13	06:31 19:55	07:03 (B22) 18:35	07:32 16:21	08:35 15:40	
9	04:38 22:03	05:31 21:11	06:33 19:53	07:07 (B22) 18:32	07:34 16:19	08:37 15:39	
10	04:39 22:02	05:33 21:08	06:35 19:50	07:12 (B22) 18:30	07:36 16:17	08:38 15:39	
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39	
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38	
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38	
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:26 (B24) 15:38	08:43
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:28 (B24) 15:38	08:44
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:31 (B24) 15:38	08:45
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:33 (B24) 15:38	08:46
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:34 (B14) 15:38	08:46
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:35 (B14) 15:38	08:47
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:36 (B14) 15:39	08:48
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:37 (B14) 15:39	08:48
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:38 (B14) 15:40	08:49
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:39 (B14) 15:40	08:50
24	05:01 21:43	06:01 20:35	07:02 (B22) 19:12	07:03 17:55	08:11 15:53	08:40 (B14) 15:41	08:50
25	05:03 21:41	06:03 20:32	07:01 (B22) 19:10	07:05 16:52	08:13 15:52	08:41 (B14) 15:41	08:50
26	05:05 21:39	06:05 20:30	07:01 (B22) 19:07	07:07 16:50	08:15 15:51	08:42 (B14) 15:42	08:51
27	05:06 21:38	06:07 20:27	06:59 (B22) 19:04	07:09 16:48	08:17 15:49	08:43 (B14) 15:43	08:51
28	05:08 21:36	06:09 20:24	06:58 (B22) 19:02	07:11 16:45	08:19 15:48	08:44 (B14) 15:44	08:51
29	05:10 21:34	06:11 20:22	06:58 (B22) 18:59	07:13 16:43	08:21 15:47	08:45 (B14) 15:45	08:51
30	05:12 21:32	06:13 20:19	06:58 (B22) 18:56	07:15 16:41	08:23 15:46	08:46 (B14) 15:46	08:51
31	05:14 21:30	06:15 20:17	06:58 (B22) 18:53	07:17 16:38	08:25 15:45	08:47 (B14) 15:47	08:51
Potential sun hours	529	469	385	324	247	216	
Total, worst case		315	199	81	1385	85	
Sun reduction		0.50	0.43	0.26	0.08	0.07	
Oper. time red.		0.98	0.98	0.98	0.98	0.98	
Wind dir. red.		0.66	0.66	0.61	0.60	0.61	
Total reduction		0.31	0.27	0.15	0.05	0.04	
Total, real		98	53	12	66	3	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

## SHADOW - Calendar

Shadow receptor: Bisenieki 3 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (137)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

January		February		March		April		May		June	
1	08:51		08:15	08:45 (B24)	07:11	06:49		05:33	04:36		
	15:48		16:45	56 10:00 (B14)	17:48	19:53		20:55	21:53		
2	08:50		08:13	08:43 (B24)	07:08	06:46		05:30	04:35		
	15:49		16:48	60 10:01 (B14)	17:50	19:55		20:57	21:54		
3	08:50		08:11	08:42 (B24)	07:06	06:43		05:28	04:34		
	15:51		16:50	62 10:01 (B14)	17:52	19:57		21:00	21:55		
4	08:50		08:09	08:42 (B24)	07:03	06:41		05:26	04:33		
	15:52		16:52	62 10:01 (B14)	17:54	19:59		21:02	21:57		
5	08:49		08:07	08:42 (B24)	07:01	06:38		05:23	04:32		
	15:53		16:54	64 10:02 (B14)	17:56	20:01		21:04	21:58		
6	08:49		08:05	08:34 (B25)	06:58	06:35		05:21	04:31		
	15:55		16:56	66 10:01 (B14)	17:58	20:03		21:06	21:59		
7	08:48		08:03	08:32 (B25)	06:55	06:33		05:19	04:30		
	15:56		16:59	69 10:01 (B14)	18:01	20:06		21:08	22:00		
8	08:48		08:01	08:30 (B25)	06:53	06:30	06:59 (B22)	05:17	04:29		
	15:58		17:01	72 10:01 (B14)	18:03	20:08	8 07:07 (B22)	21:10	22:01		
9	08:47		07:58	08:27 (B25)	06:50	06:28	06:55 (B22)	05:15	04:29		
	16:00		17:03	72 10:00 (B14)	18:05	20:10	15 07:10 (B22)	21:12	22:02		
10	08:46		07:56	08:25 (B25)	06:47	06:25	06:52 (B22)	05:13	04:28		
	16:01		17:05	72 10:00 (B14)	18:07	20:12	19 07:11 (B22)	21:14	22:03		
11	08:45		07:54	08:24 (B25)	06:45	06:22	06:51 (B22)	05:11	04:27		
	16:03		17:08	70 09:59 (B14)	18:09	20:14	22 07:13 (B22)	21:16	22:04		
12	08:44		07:52	08:24 (B25)	06:42	06:20	06:49 (B22)	05:09	04:27		
	16:05		17:10	65 09:58 (B14)	18:11	20:16	25 07:14 (B22)	21:18	22:05		
13	08:43		07:50	08:25 (B25)	06:40	06:17	06:48 (B22)	05:07	04:26		
	16:06		17:12	58 09:57 (B14)	18:13	20:18	27 07:15 (B22)	21:20	22:06		
14	08:42		07:47	08:25 (B25)	06:37	06:15	06:47 (B22)	05:05	04:26		
	16:08		17:14	48 09:55 (B14)	18:15	20:20	28 07:15 (B22)	21:22	22:07		
15	08:41	09:31 (B14)	07:45	08:27 (B25)	06:34	06:12	06:46 (B22)	05:03	04:26		
	16:10	9 09:40 (B14)	17:17	34 09:54 (B14)	18:18	20:22	30 07:16 (B22)	21:24	22:07		
16	08:40	09:29 (B14)	07:43	09:30 (B14)	06:32	06:09	06:45 (B22)	05:01	04:26		
	16:12	14 09:43 (B14)	17:19	21 09:51 (B14)	18:20	20:24	30 07:15 (B22)	21:25	22:08		
17	08:39	09:27 (B14)	07:40	09:33 (B14)	06:29	06:07	06:45 (B22)	04:59	04:25		
	16:14	18 09:45 (B14)	17:21	16 09:49 (B14)	18:22	20:26	31 07:16 (B22)	21:27	22:08		
18	08:37	09:27 (B14)	07:38	09:39 (B14)	06:26	06:04	06:44 (B22)	04:57	04:25		
	16:16	21 09:48 (B14)	17:23	3 09:42 (B14)	18:24	20:28	31 07:15 (B22)	21:29	22:09		
19	08:36	09:25 (B14)	07:36		06:24	06:02	06:45 (B22)	04:55	04:25		
	16:18	24 09:49 (B14)	17:26		18:26	20:30	30 07:15 (B22)	21:31	22:09		
20	08:35	09:25 (B14)	07:33		06:21	05:59	06:45 (B22)	04:53	04:25		
	16:20	26 09:51 (B14)	17:28		18:28	20:33	30 07:15 (B22)	21:33	22:10		
21	08:33	09:24 (B14)	07:31		06:18	05:57	06:44 (B22)	04:52	04:25		
	16:22	28 09:52 (B14)	17:30		18:30	20:35	30 07:14 (B22)	21:35	22:10		
22	08:32	09:23 (B14)	07:28		06:16	05:54	06:45 (B22)	04:50	04:26		
	16:24	30 09:53 (B14)	17:32		18:32	20:37	28 07:13 (B22)	21:37	22:10		
23	08:30	09:22 (B14)	07:26		06:13	05:52	06:45 (B22)	04:48	04:26		
	16:26	32 09:54 (B14)	17:34		18:34	20:39	27 07:12 (B22)	21:38	22:10		
24	08:29	09:23 (B14)	07:23		06:10	05:49	06:46 (B22)	04:47	04:26		
	16:28	33 09:56 (B14)	17:37		18:36	20:41	25 07:11 (B22)	21:40	22:10		
25	08:27	09:22 (B14)	07:21		06:08	05:47	06:47 (B22)	04:45	04:26		
	16:30	35 09:57 (B14)	17:39		18:38	20:43	23 07:10 (B22)	21:42	22:10		
26	08:26	09:22 (B14)	07:18		06:05	05:44	06:47 (B22)	04:44	04:27		
	16:32	35 09:57 (B14)	17:41		18:41	20:45	21 07:08 (B22)	21:43	22:10		
27	08:24	09:21 (B14)	07:16		06:02	05:42	06:49 (B22)	04:42	04:27		
	16:34	37 09:58 (B14)	17:43		18:43	20:47	17 07:06 (B22)	21:45	22:10		
28	08:22	08:54 (B24)	07:13		05:59	05:40	06:51 (B22)	04:41	04:28		
	16:37	39 09:59 (B14)	17:45		18:45	20:49	13 07:04 (B22)	21:47	22:10		
29	08:20	08:52 (B24)			06:57	05:37	06:55 (B22)	04:40	04:29		
	16:39	44 09:59 (B14)			19:47	20:51	6 07:01 (B22)	21:48	22:10		
30	08:18	08:50 (B24)			06:54	05:35		04:38	04:29		
	16:41	49 10:00 (B14)			19:49	20:53		21:50	22:09		
31	08:17	08:48 (B24)			06:51			04:37			
	16:43	53 10:01 (B14)			19:51			21:51			
Potential sun hours	235		266		366	426		508	529		
Total, worst case	527		970			516					
Sun reduction	0.13		0.20			0.50					
Oper. time red.	0.98		0.98			0.98					
Wind dir. red.	0.60		0.60			0.66					
Total reduction	0.08		0.12			0.31					
Total, real	40		112			162					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Bisenieki 3 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (137)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	06:50 (B22) 18:54	07:17 16:36	07:55 (B25) 15:45
2	04:31 22:08	05:18 21:26	06:19 20:11	06:51 (B22) 18:51	07:19 16:34	07:57 (B25) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	06:53 (B22) 18:48	07:21 16:32	08:00 (B25) 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	06:56 (B22) 18:46	07:23 16:29	08:02 (B25) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:25 16:27	08:04 (B25) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:27 16:25	08:12 (B24) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:12 (B24) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:13 (B24) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:14 (B24) 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:31 (B14) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:19 (B24) 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:21 (B24) 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:24 (B24) 15:38
14	04:45 21:58	05:41 20:59	07:01 (B22) 07:09 (B22)	06:43 19:39	07:44 16:09	08:53 (B14) 15:38
15	04:46 21:57	05:43 20:57	06:58 (B22) 07:12 (B22)	06:45 19:37	07:46 16:08	08:53 (B14) 15:38
16	04:48 21:55	05:45 20:54	06:56 (B22) 07:14 (B22)	06:47 19:34	07:48 16:06	08:55 (B14) 15:38
17	04:49 21:54	05:47 20:52	06:54 (B22) 07:16 (B22)	06:49 19:31	07:50 16:04	08:55 (B14) 15:38
18	04:51 21:52	05:49 20:50	06:52 (B22) 07:16 (B22)	06:51 19:29	07:52 16:02	08:57 (B14) 15:38
19	04:53 21:51	05:51 20:47	06:51 (B22) 07:17 (B22)	06:53 19:26	07:55 16:01	08:57 (B14) 15:38
20	04:54 21:49	05:53 20:45	06:50 (B22) 07:18 (B22)	06:55 19:23	07:57 15:59	08:58 (B14) 15:39
21	04:56 21:48	05:55 20:42	06:50 (B22) 07:18 (B22)	06:57 19:21	07:59 15:58	08:59 (B14) 15:39
22	04:58 21:46	05:57 20:40	06:49 (B22) 07:18 (B22)	06:59 19:18	08:01 15:56	09:01 (B14) 15:40
23	04:59 21:45	05:59 20:37	06:49 (B22) 07:19 (B22)	07:01 19:15	08:09 15:55	09:02 (B14) 15:40
24	05:01 21:43	06:01 20:35	06:48 (B22) 07:19 (B22)	07:03 19:12	08:11 15:53	09:04 (B14) 15:41
25	05:03 21:41	06:03 20:32	06:48 (B22) 07:19 (B22)	07:05 19:10	09:02 (B14) 15:52	09:05 (B14) 15:41
26	05:05 21:39	06:05 20:30	06:48 (B22) 07:18 (B22)	07:07 19:07	07:59 (B25) 15:51	09:07 (B14) 15:42
27	05:06 21:38	06:07 20:27	06:47 (B22) 07:17 (B22)	07:09 19:04	09:22 (B14) 15:49	09:11 (B14) 15:43
28	05:08 21:36	06:09 20:24	06:47 (B22) 07:16 (B22)	07:11 19:02	09:24 (B14) 15:48	09:20 (B14) 15:43
29	05:10 21:34	06:11 20:22	06:48 (B22) 07:16 (B22)	07:13 18:59	07:54 (B25) 15:47	08:21 15:45
30	05:12 21:32	06:13 20:19	06:48 (B22) 07:15 (B22)	07:15 18:56	07:53 (B25) 15:46	08:22 15:46
31	05:14 21:30	06:15 20:17	06:49 (B22) 07:14 (B22)	07:20 16:38	07:52 (B25) 09:28 (B14)	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		458	64	338	1167	
Sun reduction		0.50	0.43	0.26	0.08	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.66	0.66	0.60	0.60	
Total reduction		0.31	0.27	0.15	0.05	
Total, real		143	17	50	55	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Bites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (73)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	06:49	05:33	04:36
	15:48	16:45	17:48	19:53	20:56	21:53
2	08:51	08:13	07:08	06:46	05:30	04:35
	15:50	16:48	17:50	19:55	20:58	21:54
3	08:50	08:11	08:41 (B14)	07:06	06:44	05:28
	15:51	16:50	3 08:44 (B14)	17:52	19:57	21:00
4	08:50	08:09	08:39 (B14)	07:03	06:41	05:26
	15:52	16:52	6 08:45 (B14)	17:54	19:59	21:02
5	08:49	08:07	08:37 (B14)	07:01	06:38	05:24
	15:53	16:54	10 08:47 (B14)	17:56	20:01	21:04
6	08:49	08:05	08:34 (B14)	06:58	06:36	05:21
	15:55	16:57	13 08:47 (B14)	17:58	20:03	21:06
7	08:48	08:03	08:32 (B14)	06:55	06:33	05:19
	15:56	16:59	15 08:47 (B14)	18:01	20:06	21:08
8	08:48	08:01	08:30 (B14)	06:53	06:30	05:17
	15:58	17:01	18 08:48 (B14)	18:03	20:08	21:10
9	08:47	07:58	08:29 (B14)	06:50	06:28	05:15
	16:00	17:03	19 08:48 (B14)	18:05	20:10	21:12
10	08:46	07:56	08:30 (B14)	06:48	06:25	05:13
	16:01	17:05	18 08:48 (B14)	18:07	20:12	21:14
11	08:45	07:54	08:30 (B14)	06:45	06:22	05:11
	16:03	17:08	18 08:48 (B14)	18:09	20:14	21:16
12	08:44	07:52	08:30 (B14)	06:42	06:20	05:09
	16:05	17:10	17 08:47 (B14)	18:11	20:16	21:18
13	08:43	07:50	08:32 (B14)	06:40	06:17	05:07
	16:06	17:12	14 08:46 (B14)	18:13	20:18	21:20
14	08:42	07:47	08:32 (B14)	06:37	06:15	05:05
	16:08	17:14	12 08:44 (B14)	18:16	20:20	21:22
15	08:41	07:45	08:35 (B14)	06:34	07:00 (B22)	06:12
	16:10	17:17	8 08:43 (B14)	18:18	1 07:01 (B22)	20:22
16	08:40	07:43	06:32	06:57 (B22)	06:09	05:01
	16:12	17:19	18:20	5 07:02 (B22)	20:24	21:26
17	08:39	07:40	06:29	06:54 (B22)	06:07	04:59
	16:14	17:21	18:22	8 07:02 (B22)	20:26	21:27
18	08:38	07:38	06:26	06:52 (B22)	06:04	04:57
	16:16	17:23	18:24	11 07:03 (B22)	20:28	21:29
19	08:36	07:36	06:24	06:49 (B22)	06:02	04:55
	16:18	17:26	18:26	14 07:03 (B22)	20:31	21:31
20	08:35	07:33	06:21	06:46 (B22)	05:59	04:53
	16:20	17:28	18:28	16 07:02 (B22)	20:33	21:33
21	08:33	07:31	06:18	06:46 (B22)	05:57	04:52
	16:22	17:30	18:30	15 07:01 (B22)	20:35	21:35
22	08:32	07:28	06:16	06:47 (B22)	05:54	04:50
	16:24	17:32	18:32	13 07:00 (B22)	20:37	21:37
23	08:30	07:26	06:13	06:48 (B22)	05:52	04:48
	16:26	17:34	18:34	10 06:58 (B22)	20:39	21:38
24	08:29	07:23	06:10	06:51 (B22)	05:49	04:47
	16:28	17:37	18:36	3 06:54 (B22)	20:41	21:40
25	08:27	07:21	06:08	05:47	04:45	04:27
	16:30	17:39	18:39	20:43	21:42	22:10
26	08:26	07:18	06:05	05:45	04:44	04:27
	16:32	17:41	18:41	20:45	21:43	22:10
27	08:24	07:16	06:02	05:42	04:42	04:27
	16:34	17:43	18:43	20:47	21:45	22:10
28	08:22	07:13	06:00	05:40	04:41	04:28
	16:37	17:45	18:45	20:49	21:47	22:10
29	08:20		06:57	05:37	04:40	04:29
	16:39		19:47	20:51	21:48	22:10
30	08:19		06:54	05:35	04:38	04:29
	16:41		19:49	20:53	21:50	22:09
31	08:17		06:52		04:37	
	16:43		19:51		21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case		171	96			
Sun reduction		0.20	0.41			
Oper. time red.		0.98	0.98			
Wind dir. red.		0.61	0.64			
Total reduction		0.12	0.26			
Total, real		20	25			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Bites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (73)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36 18 08:17 (B14)	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34 18 08:17 (B14)	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32 18 08:18 (B14)	08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30 15 08:17 (B14)	08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27 12 08:17 (B14)	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25 9 08:16 (B14)	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23 6 08:15 (B14)	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21 2 08:14 (B14)	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	04:54 21:50	05:53 20:45	06:55 19:23 9	07:57 18:04 07:35 (B22) 07:44 (B22)	08:03 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21 12	07:59 18:02 07:33 (B22) 07:45 (B22)	08:05 15:58	08:49 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18 14	08:01 18:00 07:32 (B22) 07:46 (B22)	08:07 15:56	08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15 15	08:03 17:57 07:31 (B22) 07:46 (B22)	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12 14	08:05 17:55 07:32 (B22) 07:46 (B22)	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10 12	08:07 17:52 07:34 (B22) 07:46 (B22)	08:13 15:52	08:50 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07 9	08:09 17:50 07:36 (B22) 07:45 (B22)	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04 6	08:11 17:48 07:38 (B22) 07:44 (B22)	08:17 15:50 08:04 (B14) 08:13 (B14)	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02 2	08:13 17:46 07:40 (B22) 07:42 (B22)	08:19 15:48 08:02 (B14) 08:14 (B14)	08:53 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:45 12 08:01 (B14)	08:21 15:47 08:01 (B14)	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:43 15 08:16 (B14)	08:23 15:46 08:00 (B14)	08:51 15:46
31	05:14 21:30	06:15 20:17		08:19 17:41 16 08:16 (B14)	08:25 15:46 08:00 (B14)	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			93	70		98
Sun reduction			0.43	0.26		0.08
Oper. time red.			0.98	0.98		0.98
Wind dir. red.			0.64	0.61		0.61
Total reduction			0.27	0.15		0.05
Total, real			25	11	5	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Brivares - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (21)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:24 18:46	07:29 16:29	08:29 15:42
5	08:50 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:04	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:08	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Berzkalnes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (195)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:49 19:53	05:32 20:55	04:36 21:52	04:30 22:09	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:13 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:20 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:18 15:48	08:50 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Caunes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (119)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 18:05	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	06:33 (B22) 20:43	05:47 21:42	04:45 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	07:38 (B14) 15:52	08:13 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	06:30 (B22) 20:45	05:45 21:43	04:44 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	07:41 (B14) 15:51	08:15 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	06:27 (B22) 20:47	05:42 21:45	04:42 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	07:43 (B14) 15:50	08:17 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	06:25 (B22) 20:49	05:40 21:47	04:41 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	07:45 (B14) 15:48	08:19 15:44
29	08:20 16:39		06:57 19:47	06:57 (B22) 20:51	05:37 21:48	04:40 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	07:48 (B14) 15:47	08:21 15:45
30	08:19 16:41		06:54 19:49	07:25 (B22) 20:53	05:35 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51	07:27 (B22) 20:53	05:33 21:51	04:37 21:51	05:14 21:30	06:15 20:17		07:20 16:38	08:24 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	529	469	385	324	247	216
Total, worst case		155		82					87	160		
Sun reduction		0.20		0.41					0.43	0.26		
Oper. time red.		0.98		0.98					0.98	0.98		
Wind dir. red.		0.62		0.65					0.65	0.62		
Total reduction		0.12		0.26					0.27	0.16		
Total, real		19		21					24	25		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Cerini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (69)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	06:50 (B14) 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	06:50 (B14) 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	06:51 (B14) 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (B14) 18:46	07:23 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	06:55 (B14) 18:43	07:26 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	06:57 (B14) 18:40	07:28 16:25	07:33 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	06:58 (B14) 18:38	07:30 16:23	07:36 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:04 (B14) 18:35	07:32 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:23 (B24) 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:22 (B24) 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:20 (B24) 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:20 (B24) 18:10	07:53 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:22 (B24) 18:07	07:55 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:24 (B24) 18:05	07:57 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	06:43 (B24) 20:35	05:57 21:35	04:52 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:26 (B24) 18:02	07:59 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	06:41 (B24) 20:37	05:54 21:37	04:50 22:10	04:58 21:46	05:57 20:40	06:59 19:18	07:28 (B24) 18:00	08:01 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	06:38 (B24) 20:39	05:52 21:38	04:49 22:10	04:59 21:45	05:59 20:37	07:01 19:15	07:32 (B24) 18:03	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	06:35 (B24) 20:41	05:49 21:40	04:47 22:10	05:01 21:43	06:01 20:35	07:03 19:12	07:09 (B14) 18:05	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	06:33 (B24) 20:43	05:47 21:42	04:45 22:10	05:03 21:41	06:03 20:32	07:05 19:10	06:57 (B14) 18:02	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	06:32 (B24) 20:45	05:45 21:43	04:44 22:10	05:05 21:39	06:05 20:30	07:07 19:07	06:55 (B14) 18:00	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	06:32 (B24) 20:47	05:42 21:45	04:42 22:10	05:07 21:38	06:07 20:27	07:09 19:04	06:54 (B14) 18:04	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	06:34 (B24) 20:49	05:40 21:47	04:41 22:10	05:08 21:36	06:09 20:24	07:11 19:02	06:52 (B14) 18:02	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47	07:36 (B24) 20:51	05:37 21:48	04:40 22:10	05:10 21:34	06:11 20:22	07:13 18:59	06:51 (B14) 18:00	08:21 15:47	08:51 15:45
30	08:19 16:41	07:04 17:49	05:54 18:49	07:41 (B24) 20:53	05:35 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:15 18:56	06:51 (B14) 18:00	08:22 15:46	08:51 15:46
31	08:17 16:43	07:02 17:51	05:52 18:51	07:42 (B24) 20:55	05:34 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:13 (B14) 18:00	06:51 (B14) 18:00	08:23 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case												
Sun reduction			0.41	0.50				147	205			
Oper. time red.			0.98	0.98				0.50	0.43			
Wind dir. red.			0.65	0.66				0.98	0.98			
Total reduction			0.26	0.32				0.66	0.66			
Total, real			24	83				47	56			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Cuculi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (169)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January				February				March				April				May				June			
1	08:51		09:57 (B14)	08:15	07:11				06:49		07:57 (B22)	05:33	04:36											
	15:48	31	10:28 (B14)	16:45	17:48				19:53	14	08:11 (B22)	20:55	21:53											
2	08:50		09:58 (B14)	08:13	07:08				06:46		08:01 (B22)	05:30	04:35											
	15:49	31	10:29 (B14)	16:48	17:50				19:55	5	08:06 (B22)	20:58	21:54											
3	08:50		09:58 (B14)	08:11	07:06				06:43			05:28	04:34											
	15:51	31	10:29 (B14)	16:50	17:52				19:57			21:00	21:55											
4	08:50		09:58 (B14)	08:09	07:03				06:41			05:26	04:33											
	15:52	31	10:29 (B14)	16:52	17:54				19:59			21:02	21:57											
5	08:49		09:59 (B14)	08:07	07:01				06:38			05:23	04:32											
	15:53	31	10:30 (B14)	16:54	17:56				20:01			21:04	21:58											
6	08:49		09:59 (B14)	08:05	06:58				06:35			05:21	04:31											
	15:55	32	10:31 (B14)	16:56	17:58				20:03			21:06	21:59											
7	08:48		10:00 (B14)	08:03	06:55				06:33			05:19	04:30											
	15:56	31	10:31 (B14)	16:59	18:01				20:06			21:08	22:00											
8	08:48		10:00 (B14)	08:01	06:53				06:30			05:17	04:29											
	15:58	32	10:32 (B14)	17:01	18:03				20:08			21:10	22:01											
9	08:47		10:00 (B14)	07:58	06:50				06:28			05:15	04:29											
	16:00	32	10:32 (B14)	17:03	18:05				20:10			21:12	22:02											
10	08:46		10:01 (B14)	07:56	06:47				06:25			05:13	04:28											
	16:01	31	10:32 (B14)	17:05	18:07				20:12			21:14	22:03											
11	08:45		09:22 (B24)	07:54	06:45				06:22			05:11	04:27											
	16:03	34	10:33 (B14)	17:08	18:09				20:14			21:16	22:04											
12	08:44		09:21 (B24)	07:52	06:42				06:20			05:09	04:27											
	16:05	36	10:33 (B14)	17:10	18:11				20:16			21:18	22:05											
13	08:43		09:19 (B24)	07:50	06:40				06:17			05:07	04:26											
	16:06	38	10:33 (B14)	17:12	18:13				20:18			21:20	22:06											
14	08:42		09:18 (B24)	07:47	06:37				06:15			05:05	04:26											
	16:08	41	10:34 (B14)	17:14	18:15				20:20			21:22	22:07											
15	08:41		09:16 (B24)	07:45	06:34			07:04 (B22)	06:12			05:03	04:26											
	16:10	42	10:33 (B14)	17:17	18:18	13	07:17 (B22)	20:22				21:24	22:07											
16	08:40		09:15 (B24)	07:43	06:32		07:01 (B22)	06:09				05:01	04:26											
	16:12	44	10:34 (B14)	17:19	18:20	18	07:19 (B22)	20:24				21:25	22:08											
17	08:39		09:14 (B24)	07:40	06:29		06:58 (B22)	06:07				04:59	04:25											
	16:14	46	10:34 (B14)	17:21	18:22	22	07:20 (B22)	20:26				21:27	22:08											
18	08:38		09:12 (B24)	07:38	06:26		06:56 (B22)	06:04				04:57	04:25											
	16:16	48	10:34 (B14)	17:23	18:24	25	07:21 (B22)	20:28				21:29	22:09											
19	08:36		09:12 (B24)	07:36	06:24		06:56 (B22)	06:02				04:55	04:25											
	16:18	46	10:33 (B14)	17:26	18:26	26	07:22 (B22)	20:30				21:31	22:09											
20	08:35		09:12 (B24)	07:33	06:21		06:54 (B22)	05:59				04:53	04:25											
	16:20	47	10:34 (B14)	17:28	18:28	28	07:22 (B22)	20:33				21:33	22:10											
21	08:33		09:12 (B24)	07:31	06:18		06:53 (B22)	05:57				04:52	04:25											
	16:22	45	10:33 (B14)	17:30	18:30	29	07:22 (B22)	20:35				21:35	22:10											
22	08:32		09:12 (B24)	07:28	06:16		06:53 (B22)	05:54				04:50	04:26											
	16:24	43	10:32 (B14)	17:32	18:32	30	07:23 (B22)	20:37				21:37	22:10											
23	08:30		09:12 (B24)	07:26	06:13		06:53 (B22)	05:52				04:48	04:26											
	16:26	41	10:31 (B14)	17:34	18:34	29	07:22 (B22)	20:39				21:38	22:10											
24	08:29		09:14 (B24)	07:23	06:10		06:52 (B22)	05:49				04:47	04:26											
	16:28	38	10:31 (B14)	17:37	18:36	30	07:22 (B22)	20:41				21:40	22:10											
25	08:27		09:14 (B24)	07:21	06:08		06:52 (B22)	05:47				04:45	04:26											
	16:30	35	10:30 (B14)	17:39	18:38	30	07:22 (B22)	20:43				21:42	22:10											
26	08:26		09:15 (B24)	07:18	06:05		06:52 (B22)	05:44				04:44	04:27											
	16:32	30	10:28 (B14)	17:41	18:41	29	07:21 (B22)	20:45				21:43	22:10											
27	08:24		09:16 (B24)	07:16	06:02		06:52 (B22)	05:42				04:42	04:27											
	16:34	20	10:24 (B14)	17:43	18:43	28	07:20 (B22)	20:47				21:45	22:10											
28	08:22		09:17 (B24)	07:13	05:59		06:53 (B22)	05:40				04:41	04:28											
	16:37	15	09:32 (B24)	17:45	18:45	27	07:20 (B22)	20:49				21:47	22:10											
29	08:20		09:18 (B24)		06:57		07:53 (B22)	05:37				04:40	04:29											
	16:39	13	09:31 (B24)		19:47	25	08:18 (B22)	20:51				21:48	22:10											
30	08:19		09:20 (B24)		06:54		07:54 (B22)	05:35				04:38	04:29											
	16:41	9	09:29 (B24)		19:49	22	08:16 (B22)	20:53				21:50	22:09											
31	08:17				06:51		07:56 (B22)					04:37												
	16:43				19:51	19	08:15 (B22)					21:51												
Potential sun hours	235			266	366			426				508	529											
Total, worst case		1024				430		19																
Sun reduction		0.13				0.41		0.50																
Oper. time red.		0.98				0.98		0.98																
Wind dir. red.		0.61				0.64		0.64																
Total reduction		0.08				0.25		0.31																
Total, real		80				109		6																

Table layout: For each day in each month the following matrix apply

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Cuculi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (169)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45 33
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44 32
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43 32
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42 32
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42 31
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41 32
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40 32
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40 31
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39 31
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39 31
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39 31
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38 30
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38 30
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38 30
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38 30
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38 30
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38 30
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:10	07:59 16:02	08:47 15:38 29
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38 30
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39 30
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39 30
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39 30
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40 30
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41 30
25	05:03 21:41	06:03 20:32	07:05 19:10	08:13 16:52	08:19 15:52	08:51 15:41 30
26	05:05 21:39	06:05 20:30	07:07 19:07	08:15 16:50	08:21 15:51	08:51 15:42 29
27	05:06 21:38	06:07 20:27	07:09 19:04	08:17 16:48	08:23 15:49	08:51 15:43 30
28	05:08 21:36	06:09 20:24	07:11 19:02	08:19 16:45	08:25 15:48	08:51 15:44 30
29	05:10 21:34	06:11 20:22	07:13 18:59	08:21 16:43	08:27 15:47	08:51 15:45 30
30	05:12 21:32	06:13 20:19	07:15 18:56	08:23 16:41	08:29 15:46	08:51 15:46 30
31	05:14 21:30	06:15 20:17		08:25 16:38		08:51 15:47 31
Potential sun hours	529	469	385	324	247	216
Total, worst case			453		682	947
Sun reduction			0.43		0.08	0.07
Oper. time red.			0.98		0.98	0.98
Wind dir. red.			0.64		0.60	0.61
Total reduction			0.26		0.05	0.04
Total, real			119		33	39

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Daugavas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (30)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:12	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Dimanti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (145)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45		07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:24 15:45
2	08:51 15:50	08:13 16:48	08:43 (B14)	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	08:26 15:44
3	08:50 15:51	08:11 16:50	08:41 (B14)	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:28 15:43
4	08:50 15:52	08:09 16:52	08:39 (B14)	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	08:29 15:42
5	08:49 15:53	08:07 16:54	08:37 (B14)	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	08:31 15:42
6	08:49 15:55	08:05 16:57	08:34 (B14)	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:32 15:41
7	08:48 15:56	08:03 16:59	08:33 (B14)	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:19	06:29 20:05	07:30 18:38	08:34 15:40
8	08:48 15:58	08:01 17:01	08:34 (B14)	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:25 21:13	06:31 20:05	07:32 18:35	08:35 15:40
9	08:47 16:00	07:58 17:03	08:33 (B14)	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 20:05	07:34 18:33	08:37 15:39
10	08:46 16:01	07:56 17:05	08:34 (B14)	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 20:05	07:36 18:30	08:38 15:39
11	08:45 16:03	07:54 17:08	08:36 (B14)	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 20:05	07:38 18:27	08:39 15:39
12	08:44 16:05	07:52 17:10	08:37 (B14)	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 20:05	07:40 18:25	08:41 15:38
13	08:43 16:06	07:50 17:12	08:46 (B14)	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:44 21:59	05:39 21:02	06:41 20:05	07:42 18:22	08:42 15:38
14	08:42 16:08	07:47 17:14		06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 20:05	07:44 18:20	08:43 15:38
15	08:41 16:10	07:45 17:17		06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 20:05	07:46 18:17	08:44 15:38
16	08:40 16:12	07:43 17:19		06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 20:05	07:48 18:15	08:45 15:38
17	08:39 16:14	07:40 17:21		06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 20:05	07:50 18:12	08:46 15:38
18	08:38 16:16	07:38 17:23		06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 20:05	07:53 18:09	08:47 15:38
19	08:36 16:18	07:36 17:26		06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 20:05	07:55 18:07	08:47 15:38
20	08:35 16:20	07:33 17:28		06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 20:05	07:57 18:05	08:48 15:39
21	08:33 16:22	07:31 17:30		06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 20:05	07:59 18:02	08:49 15:39
22	08:32 16:24	07:28 17:32		06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 20:05	08:01 18:00	08:49 15:40
23	08:30 16:26	07:26 17:35		06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 20:05	08:03 17:57	08:50 15:40
24	08:29 16:28	07:23 17:37		06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 20:05	08:05 17:55	08:50 15:41
25	08:27 16:30	07:21 17:39		06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 20:05	08:07 17:52	08:50 15:41
26	08:26 16:32	07:18 17:41		06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 20:05	08:10 17:50	08:51 15:42
27	08:24 16:34	07:16 17:43		06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 20:04	08:12 17:48	08:51 15:43
28	08:22 16:37	07:13 17:45		06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 20:05	08:14 17:45	08:51 15:44
29	08:20 16:39			06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 20:05	08:16 17:43	08:51 15:45
30	08:19 16:41			06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 20:05	08:18 17:41	08:51 15:46
31	08:17 16:43			06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17	07:21 20:05	08:19 17:38	08:51 15:47
Potential sun hours	235	266		366	426	508	529	529	469	385	324	216
Total, worst case			134								25	110
Sun reduction			0.20								0.26	0.08
Oper. time red.			0.98								0.98	0.08
Wind dir. red.			0.61								0.61	0.01
Total reduction			0.12								0.15	0.05
Total, real			16								4	5

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Dravnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (104)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:51 15:48 8	14:08 (B17) 14:16 (B17)	08:15 16:45 17:47	07:11 19:53	06:48 20:55	05:32 21:53	04:35 22:09	04:30 21:28	05:15 20:14	06:17 18:53	07:17 16:36	07:22 15:45	
2	08:50 15:49 5	14:10 (B17) 14:15 (B17)	08:13 16:47 17:49	07:08 19:55	06:46 20:57	05:30 21:54	04:34 22:09	04:30 21:26	05:17 20:11	06:19 18:51	07:19 16:33	07:25 15:44	
3	08:50 15:50		08:11 16:49 17:52	07:05 19:57	06:43 20:59	05:28 21:55	04:33 22:08	04:31 21:24	05:19 20:09	06:21 18:48	07:21 16:31	07:27 15:43	
4	08:50 15:52		08:09 16:52 17:54	07:03 19:59	06:40 21:02	05:25 21:57	04:32 22:07	04:32 21:22	05:21 20:06	06:23 18:45	07:23 16:29	07:29 15:42	
5	08:49 15:53		08:07 16:54 17:56	07:00 19:59	06:38 21:04	05:23 21:58	04:31 22:07	04:33 21:19	05:23 20:03	06:25 18:43	07:25 16:27	07:31 15:41	
6	08:49 15:54		08:05 16:56 17:58	06:58 19:59	06:35 21:06	05:21 21:59	04:30 22:06	04:34 21:17	05:25 20:01	06:27 18:40	07:27 16:25	07:33 15:40	
7	08:48 15:56		08:03 16:58 18:00	06:55 19:59	06:33 21:08	05:19 22:00	04:30 22:05	04:35 21:15	05:27 19:58	06:29 18:37	07:29 16:23	07:36 15:40	
8	08:48 15:57		08:00 17:01 18:02	06:53 19:59	06:30 21:10	05:16 22:01	04:29 22:04	04:36 21:13	05:29 19:55	06:31 18:35	07:31 16:21	07:38 15:39	
9	08:47 15:59		07:58 17:03 18:05	06:50 19:59	06:27 21:12	05:14 22:02	04:28 22:03	04:38 21:11	05:31 19:53	06:33 18:32	07:33 16:19	07:40 15:39	
10	08:46 16:01		07:56 17:05 18:07	06:47 19:59	06:25 21:12	05:12 22:03	04:27 22:02	04:39 21:08	05:33 19:50	06:35 18:30	07:36 16:17	07:42 15:38	13:59 (B17)
11	08:45 16:02		07:54 17:07 18:09	06:45 19:59	06:22 21:14	05:10 22:03	04:27 22:02	04:40 21:08	05:35 19:50	06:37 18:30	07:38 16:17	07:44 15:38	5 14:04 (B17)
12	08:44 16:04		07:52 17:10 18:11	06:42 19:59	06:19 21:16	05:08 22:04	04:26 22:01	04:42 21:06	05:37 19:47	06:39 18:27	07:40 16:15	07:46 15:38	8 14:06 (B17)
13	08:43 16:06		07:50 17:12 18:13	06:39 19:59	06:17 21:18	05:06 22:05	04:26 22:00	04:43 21:04	05:39 19:45	06:41 18:24	07:42 16:13	07:49 15:38	10 14:08 (B17)
14	08:42 16:08		07:47 17:14 18:15	06:37 19:59	06:14 21:20	05:04 22:06	04:26 22:01	04:44 21:59	05:41 19:42	06:43 18:22	07:44 16:11	07:51 15:38	10 14:08 (B17)
15	08:41 16:10		07:45 17:16 18:17	06:34 19:59	06:12 21:22	05:02 22:07	04:25 22:07	04:46 21:57	05:43 19:36	06:45 18:17	07:46 16:07	07:53 15:37	11 14:09 (B17)
16	08:40 16:11		07:42 17:19 18:19	06:31 19:59	06:09 21:24	05:00 22:08	04:25 21:55	04:47 20:54	05:45 19:34	06:47 18:14	07:48 16:05	07:55 15:37	12 14:10 (B17)
17	08:39 16:13		07:40 17:21 18:22	06:29 19:59	06:06 21:26	04:58 22:09	04:25 21:54	04:49 20:52	05:47 19:31	06:49 18:12	07:50 16:04	07:57 15:37	13 14:11 (B17)
18	08:37 16:15		07:38 17:23 18:24	06:26 19:59	06:04 21:28	04:56 22:09	04:25 21:52	04:50 20:49	05:49 19:28	06:51 18:09	07:52 16:02	07:59 15:38	13 14:12 (B17)
19	08:36 16:17		07:35 17:25 18:26	06:23 19:59	06:01 21:30	04:55 22:09	04:25 21:51	04:52 20:47	05:51 19:26	06:53 18:07	07:54 16:00	08:01 15:38	14 14:13 (B17)
20	08:35 16:19		07:33 17:27 18:28	06:21 19:59	05:59 21:33	04:53 22:10	04:25 21:49	04:54 20:45	05:53 19:23	06:55 18:04	07:57 15:59	08:03 15:38	14 14:13 (B17)
21	08:33 16:21		07:31 17:30 18:30	06:18 19:59	05:56 21:35	04:51 22:10	04:25 21:48	04:55 20:42	05:55 19:20	06:57 18:02	07:59 15:57	08:05 15:39	14 14:14 (B17)
22	08:32 16:23		07:28 17:32 18:32	06:15 19:59	05:54 21:37	04:50 22:10	04:25 21:46	05:57 20:40	06:59 19:18	07:59 17:59	08:07 15:56	08:13 15:39	14 14:14 (B17)
23	08:30 16:25		07:26 17:34 18:34	06:13 19:59	05:51 21:39	04:48 22:10	04:25 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:15 15:39	14 14:15 (B17)
24	08:29 16:27		07:23 17:36 18:36	06:10 19:59	05:49 21:40	04:46 22:10	04:26 21:43	05:00 20:34	06:01 19:12	07:03 17:54	08:05 15:53	08:11 15:40	14 14:15 (B17)
25	08:27 16:30		07:21 17:38 18:38	06:07 19:59	05:46 21:42	04:45 22:10	04:26 21:41	05:02 20:32	06:03 19:09	07:05 16:52	08:07 15:52	08:13 15:41	14 14:15 (B17)
26	08:25 16:32		07:18 17:41 18:40	06:05 19:59	05:44 21:43	04:43 22:10	04:26 21:39	05:04 20:29	06:05 19:07	07:07 16:50	08:09 15:50	08:15 15:41	13 14:15 (B17)
27	08:24 16:34		07:16 17:43 18:42	06:02 19:59	05:42 21:45	04:42 22:10	04:27 21:38	05:06 21:07	06:07 19:04	07:09 16:47	08:12 15:49	08:17 15:42	13 14:16 (B17)
28	08:22 16:36		07:13 17:45 18:44	05:59 19:59	05:39 21:47	04:40 22:10	04:27 21:36	05:08 20:24	06:09 19:01	07:11 16:45	08:19 15:48	08:21 15:43	13 14:16 (B17)
29	08:20 16:38		07:11 19:47 20:51	05:57 19:59	05:37 21:48	04:39 22:10	04:28 21:34	05:10 20:22	06:11 18:59	07:13 16:42	08:21 15:47	08:21 15:44	12 14:16 (B17)
30	08:18 16:40		07:09 19:49 20:53	05:54 19:59	05:34 21:50	04:38 22:09	04:29 21:32	05:11 20:19	06:13 18:56	07:15 16:40	08:22 15:46	08:22 15:45	11 14:16 (B17)
31	08:17 16:43		07:08 19:51 21:51	05:51 19:59	05:37 21:51	04:37 22:10	04:29 21:30	05:13 20:16	06:15 16:38	07:20 16:38	08:23 15:46	08:23 15:46	9 14:16 (B17)
Potential sun hours	235		266	366	426	508	529	529	469	385	324	247	216
Total, worst case		13											264
Sun reduction		0.13											0.07
Oper. time red.		0.98											0.98
Wind dir. red.		0.66											0.66
Total reduction		0.09											0.05
Total, real		1											12

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Druvas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (47)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April		May		June
1	08:51 15:48	08:15 16:45	07:11 17:47		06:49 19:53		05:32 20:55		04:36 21:53
2	08:50 15:49	08:13 16:47	07:08 17:50		06:46 19:55		05:30 20:57	16	05:26 (B17) 05:09 (B17)
3	08:50 15:51	08:11 16:50	07:06 17:52		06:43 19:57		05:28 21:00	17	05:26 (B17) 05:08 (B17)
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	07:20 (B1)	05:26 21:02	19	05:27 (B17) 05:07 (B17)
5	08:49 15:53	08:07 16:54	07:00 17:56		06:38 20:01	07:33 (B1) 07:03 (B2)	05:23 21:04	20	05:27 (B17) 05:08 (B17)
6	08:49 15:55	08:05 16:56	06:58 17:58		06:35 20:03	07:35 (B1) 07:01 (B2)	05:21 21:06	20	05:28 (B17) 05:08 (B17)
7	08:48 15:56	08:03 16:59	06:55 18:00		06:33 20:05	07:38 (B1) 06:58 (B2)	05:19 21:08	20	05:28 (B17) 05:08 (B17)
8	08:48 15:58	08:00 17:01	06:53 18:03	6	07:18 (B4) 07:24 (B4)	06:30 20:08	05:17 21:10	21	05:28 (B17) 05:29 (B17)
9	08:47 15:59	07:58 17:03	06:50 18:05	11	07:16 (B4) 07:27 (B4)	06:27 20:10	05:15 21:12	20	05:08 (B17) 05:28 (B17)
10	08:46 16:01	07:56 17:05	06:47 18:07	15	07:13 (B4) 07:28 (B4)	06:25 20:12	05:12 21:14	21	05:28 (B17) 05:29 (B17)
11	08:45 16:03	07:54 17:08	06:45 18:09	18	07:10 (B4) 07:28 (B4)	06:22 20:14	05:10 21:16	21	05:29 (B17) 05:29 (B17)
12	08:44 16:04	07:52 17:10	06:42 18:11	20	07:09 (B4) 07:29 (B4)	06:20 20:16	05:08 21:18	20	05:09 (B17) 05:29 (B17)
13	08:43 16:06	07:49 17:12	06:39 18:13	21	07:08 (B4) 07:29 (B4)	06:17 20:18	05:06 21:20	21	05:09 (B17) 05:30 (B17)
14	08:42 16:08	07:47 17:14	06:37 18:15	20	07:08 (B4) 07:28 (B4)	06:14 20:20	05:04 21:22	21	05:08 (B17) 05:29 (B17)
15	08:41 16:10	07:45 17:17	06:34 18:17	20	07:07 (B4) 07:27 (B4)	06:12 20:22	05:02 21:24	21	05:09 (B17) 05:30 (B17)
16	08:40 16:12	07:43 17:19	06:32 18:20	19	07:08 (B4) 07:27 (B4)	06:09 20:24	05:01 21:25	21	05:09 (B17) 05:30 (B17)
17	08:39 16:14	07:40 17:21	06:29 18:22	17	07:09 (B4) 07:26 (B4)	06:07 20:26	04:59 21:27	21	05:09 (B17) 05:30 (B17)
18	08:37 16:16	07:38 17:23	06:26 18:24	15	07:09 (B4) 07:24 (B4)	06:04 20:28	04:57 21:29	20	05:10 (B17) 05:30 (B17)
19	08:36 16:18	07:35 17:25	06:23 18:26	10	07:12 (B4) 07:22 (B4)	06:02 20:30	04:55 21:31	21	05:10 (B17) 05:31 (B17)
20	08:35 16:20	07:33 17:28	06:21 18:28		05:59 20:33	07:03 (B1) 07:40 (B1)	04:53 21:33	21	05:10 (B17) 05:31 (B17)
21	08:33 16:22	07:31 17:30	06:18 18:30		05:57 20:35	07:03 (B1) 07:40 (B1)	04:52 21:35	21	05:10 (B17) 05:31 (B17)
22	08:32 16:24	07:28 17:32	06:15 18:32		05:54 20:37	07:04 (B1) 07:39 (B1)	04:50 21:37	21	05:11 (B17) 05:32 (B17)
23	08:30 16:26	07:26 17:34	06:13 18:34		05:52 20:39	07:04 (B1) 07:38 (B1)	04:48 21:38	21	05:11 (B17) 05:32 (B17)
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	07:05 (B1) 07:37 (B1)	04:47 21:40	21	05:11 (B17) 05:32 (B17)
25	08:27 16:30	07:21 17:39	06:07 18:38		05:47 20:43	07:06 (B1) 07:36 (B1)	04:45 21:42	20	05:12 (B17) 05:32 (B17)
26	08:26 16:32	07:18 17:41	06:05 18:40		05:44 20:45	07:06 (B1) 07:34 (B1)	04:44 21:43	21	05:11 (B17) 05:32 (B17)
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	07:08 (B1) 07:32 (B1)	04:42 21:45	21	05:12 (B17) 05:33 (B17)
28	08:22 16:36	07:13 17:45	05:59 18:45		05:39 20:49	07:09 (B1) 07:31 (B1)	04:41 21:47	20	05:12 (B17) 05:32 (B17)
29	08:20 16:39		06:57 19:47		05:37 20:51	07:12 (B1) 07:28 (B1)	04:39 21:48	21	05:12 (B17) 05:33 (B17)
30	08:18 16:41		06:54 19:49		05:35 20:53	07:14 (B1) 07:24 (B1)	04:38 21:50	21	05:13 (B17) 05:34 (B17)
31	08:17 16:43		06:51 19:51				04:37 21:51	15	05:11 (B17) 05:26 (B17)
Potential sun hours	235	266	366		426		508		529
Total, worst case			192		966		61		610
Sun reduction			0.41		0.50		0.57		0.56
Oper. time red.			0.98		0.98		0.98		0.98
Wind dir. red.			0.62		0.66		0.67		0.67
Total reduction			0.25		0.32		0.37		0.37
Total, real			48		310		23		223

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Druvas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (47)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December		
1	04:30		05:12 (B17)	05:16			06:17		06:50 (B2)	07:17		07:48 (B4)	07:23		08:24			
	22:09	21	05:33 (B17)	21:28			20:14	51	07:41 (B1)	18:54	20	08:08 (B4)	16:36		15:45			
2	04:31		05:13 (B17)	05:17			06:19		06:50 (B2)	07:19		07:48 (B4)	07:25		08:26			
	22:09	20	05:33 (B17)	21:26			20:11	50	07:40 (B1)	18:51	19	08:07 (B4)	16:34		15:44			
3	04:32		05:13 (B17)	05:19			06:21		06:51 (B2)	07:21		07:50 (B4)	07:27		08:28			
	22:08	21	05:34 (B17)	21:24			20:09	48	07:39 (B1)	18:48	16	08:06 (B4)	16:31		15:43			
4	04:33		05:13 (B17)	05:21			06:23		06:53 (B2)	07:23		07:52 (B4)	07:29		08:29			
	22:07	21	05:34 (B17)	21:22			20:06	43	07:38 (B1)	18:46	13	08:05 (B4)	16:29		15:42			
5	04:33		05:14 (B17)	05:23			06:25		06:54 (B2)	07:25		07:54 (B4)	07:31		08:31			
	22:07	20	05:34 (B17)	21:19			20:03	37	07:35 (B1)	18:43	8	08:02 (B4)	16:27		15:41			
6	04:35		05:14 (B17)	05:25			06:27		06:56 (B2)	07:27		07:56 (B4)	07:33		08:32			
	22:06	20	05:34 (B17)	21:17			20:01	31	07:33 (B1)	18:40	3	07:59 (B4)	16:25		15:41			
7	04:36		05:14 (B17)	05:27			06:29		06:58 (B2)	07:29			07:36		08:34			
	22:05	20	05:34 (B17)	21:15			19:58	22	07:31 (B1)	18:38			16:23		15:40			
8	04:37		05:15 (B17)	05:29			06:31		07:14 (B1)	07:32			07:38		08:35			
	22:04	19	05:34 (B17)	21:13			19:55	13	07:27 (B1)	18:35			16:21		15:40			
9	04:38		05:15 (B17)	05:31			06:33			07:34			07:40		08:37			
	22:03	19	05:34 (B17)	21:11			19:53			18:32			16:19		15:39			
10	04:39		05:16 (B17)	05:33			06:35			07:36			07:42		08:38			
	22:02	18	05:34 (B17)	21:08			19:50			18:30			16:17		15:39			
11	04:41		05:17 (B17)	05:35			06:37			07:38			07:44		08:39			
	22:01	17	05:34 (B17)	21:06			19:47			18:27			16:15		15:38			
12	04:42		05:19 (B17)	05:37			06:39			07:40			07:46		08:40			
	22:00	15	05:34 (B17)	21:04			19:45			18:25			16:13		15:38			
13	04:43		05:20 (B17)	05:39		07:21 (B1)	06:41			07:42			07:49		08:42			
	21:59	14	05:34 (B17)	21:01	13	07:34 (B1)	19:42			18:22			16:11		15:38			
14	04:45		05:21 (B17)	05:41		07:18 (B1)	06:43			07:44			07:51		08:43			
	21:58	12	05:33 (B17)	20:59	18	07:36 (B1)	19:39			18:19			16:09		15:38			
15	04:46		05:22 (B17)	05:43		07:16 (B1)	06:45			07:46			07:53		08:44			
	21:57	10	05:32 (B17)	20:57	23	07:39 (B1)	19:37			18:17			16:07		15:38			
16	04:48		05:24 (B17)	05:45		07:15 (B1)	06:47			07:48			07:55		08:45			
	21:55	8	05:32 (B17)	20:54	25	07:40 (B1)	19:34			18:14			16:06		15:38			
17	04:49		05:25 (B17)	05:47		07:12 (B1)	06:49			07:50			07:57		08:46			
	21:54	6	05:31 (B17)	20:52	29	07:41 (B1)	19:31			18:12			16:04		15:38			
18	04:51		05:27 (B17)	05:49		07:11 (B1)	06:51			07:52			07:59		08:46			
	21:52	3	05:30 (B17)	20:50	31	07:42 (B1)	19:29			18:09			16:02		15:38			
19	04:52			05:51		07:10 (B1)	06:53			07:55			08:01		08:47			
	21:51			20:47	33	07:43 (B1)	19:26			18:07			16:01		15:38			
20	04:54			05:53		07:09 (B1)	06:55			07:57			08:03		08:48			
	21:49			20:45	34	07:43 (B1)	19:23			18:04			15:59		15:38			
21	04:56			05:55		07:09 (B1)	06:57			07:59			08:05		08:48			
	21:48			20:42	35	07:44 (B1)	19:20			18:02			15:58		15:39			
22	04:57			05:57		07:08 (B1)	06:59			08:01			08:07		08:49			
	21:46			20:40	36	07:44 (B1)	19:18			17:59			15:56		15:39			
23	04:59			05:59		07:07 (B1)	07:01			08:03			08:09		08:50			
	21:45			20:37	38	07:45 (B1)	19:15			17:57			15:55		15:40			
24	05:01			06:01		07:07 (B1)	07:03		07:55 (B4)	08:05			08:11		08:50			
	21:43			20:35	38	07:45 (B1)	19:12	9	08:04 (B4)	17:55			15:53		15:40			
25	05:03			06:03		07:07 (B1)	07:05		07:53 (B4)	07:07			08:13		08:50			
	21:41			20:32	38	07:45 (B1)	19:10	13	08:06 (B4)	16:52			15:52		15:41			
26	05:04			06:05		07:05 (B1)	07:07		07:52 (B4)	07:10			08:15		08:51			
	21:39			20:29	39	07:44 (B1)	19:07	16	08:08 (B4)	16:50			15:51		15:42			
27	05:06			06:07		06:55 (B2)	07:09		07:50 (B4)	07:12			08:17		08:51			
	21:38			20:27	49	07:44 (B1)	19:04	19	08:09 (B4)	16:47			15:49		15:43			
28	05:08			06:09		06:53 (B2)	07:11		07:50 (B4)	07:14			08:19		08:51			
	21:36			20:24	51	07:44 (B1)	19:02	19	08:09 (B4)	16:45			15:48		15:44			
29	05:10			06:11		06:52 (B2)	07:13		07:49 (B4)	07:16			08:21		08:51			
	21:34			20:22	51	07:43 (B1)	18:59	20	08:09 (B4)	16:43			15:47		15:44			
30	05:12			06:13		06:51 (B2)	07:15		07:48 (B4)	07:18			08:22		08:51			
	21:32			20:19	52	07:43 (B1)	18:56	21	08:09 (B4)	16:40			15:46		15:45			
31	05:14			06:15		06:50 (B2)				07:20					08:51			
	21:30			20:17	52	07:42 (B1)				16:38					15:47			
Potential sun hours	529			469			385			324			247		216			
Total, worst case	284			685			412			79								
Sun reduction	0.49			0.50			0.43			0.26								
Oper. time red.	0.98			0.98			0.98			0.98								
Wind dir. red.	0.67			0.66			0.65			0.62								
Total reduction	0.32			0.32			0.27			0.16								
Total, real	91			219			111			12								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Dzelmēs - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (129)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45		07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:24 15:45
2	08:51 15:50	08:13 16:48		07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	08:26 15:44
3	08:50 15:51	08:11 16:50		07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:28 15:43
4	08:50 15:52	08:09 16:52		07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	08:29 15:43
5	08:49 15:54	08:07 16:54		07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	08:31 15:42
6	08:49 15:55	08:05 16:57		06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:32 15:41
7	08:48 15:56	08:03 16:59	08:32 (B14)	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:34 15:40
8	08:48 15:58	08:01 17:01	08:30 (B14)	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:35 15:40
9	08:47 16:00	07:58 17:03	08:25 (B14)	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:37 15:39
10	08:46 16:01	07:56 17:06	08:25 (B14)	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	08:38 15:39
11	08:45 16:03	07:54 17:08	08:23 (B14)	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:39 15:39
12	08:44 16:05	07:52 17:10	08:20 (B14)	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:40 15:38
13	08:43 16:06	07:50 17:12	08:17 (B14)	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:42 15:38
14	08:42 16:08	07:47 17:14	08:17 (B14)	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:43 15:38
15	08:41 16:10	07:45 17:17	08:15 (B14)	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:44 15:38
16	08:40 16:12	07:43 17:19	08:13 (B14)	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:45 15:38
17	08:39 16:14	07:40 17:21	08:11 (B14)	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:46 15:38
18	08:38 16:16	07:38 17:23	08:09 (B14)	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	08:47 15:38
19	08:36 16:18	07:36 17:26	08:07 (B14)	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:47 15:38
20	08:35 16:20	07:33 17:28	08:05 (B14)	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:48 15:39
21	08:33 16:22	07:31 17:30	08:03 (B14)	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:49 15:39
22	08:32 16:24	07:28 17:32	08:01 (B14)	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:49 15:40
23	08:30 16:26	07:26 17:35	07:59 (B14)	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:50 15:40
24	08:29 16:28	07:23 17:37	07:57 (B14)	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:51 15:41
25	08:27 16:30	07:21 17:39	07:55 (B14)	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:50 15:41
26	08:26 16:32	07:18 17:41	07:53 (B14)	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 16:50	08:51 15:42
27	08:24 16:34	07:16 17:43	07:51 (B14)	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:51 15:43
28	08:22 16:37	07:13 17:45	07:49 (B14)	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 16:45	08:51 15:44
29	08:20 16:39	07:11 17:47	07:47 (B14)	06:57 18:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:51 15:45
30	08:19 16:41	07:10 17:48	07:45 (B14)	06:54 18:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41	08:51 15:46
31	08:17 16:43	07:09 17:50	07:43 (B14)	06:52 19:51	05:33 21:51	04:37 21:51	04:29 22:09	05:14 21:30	06:15 20:17	07:20 16:38	08:20 14:07	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		133								112	24	
Sun reduction		0.20								0.26	0.08	
Oper. time red.		0.98								0.98	0.98	
Wind dir. red.		0.62								0.62	0.62	
Total reduction		0.12								0.16	0.05	
Total, real		16								18	1	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Dzintari - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (62)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45		07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:24 15:45
2	08:51 15:50	08:13 16:48		07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	08:26 15:44
3	08:50 15:51	08:11 16:50		07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:28 15:43
4	08:50 15:52	08:09 16:52		07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	08:29 15:43
5	08:49 15:54	08:07 16:54		07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	08:31 15:42
6	08:49 15:55	08:05 16:57		06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:32 15:41
7	08:48 15:56	08:03 16:59	08:32 (B14)	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:34 15:40
8	08:48 15:58	08:01 17:01	08:30 (B14)	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:35 15:40
9	08:47 16:00	07:58 17:03	08:25 (B14)	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:37 15:39
10	08:46 16:01	07:56 17:06	08:23 (B14)	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	08:38 15:39
11	08:45 16:03	07:54 17:08	08:21 (B14)	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:39 15:39
12	08:44 16:05	07:52 17:10	08:20 (B14)	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:41 15:38
13	08:43 16:06	07:50 17:12	08:18 (B14)	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:42 15:38
14	08:42 16:08	07:47 17:14	08:16 (B14)	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:43 15:38
15	08:41 16:10	07:45 17:17	08:14 (B14)	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:44 15:38
16	08:40 16:12	07:43 17:19	08:12 (B14)	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	08:45 15:38
17	08:39 16:14	07:40 17:21	08:10 (B14)	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:46 15:38
18	08:38 16:16	07:38 17:23	08:08 (B14)	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	08:47 15:38
19	08:36 16:18	07:36 17:26		06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:49 15:38
20	08:35 16:20	07:33 17:28		06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:48 15:39
21	08:33 16:22	07:31 17:30		06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:49 15:39
22	08:32 16:24	07:28 17:32		06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:49 15:40
23	08:30 16:26	07:26 17:35		06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:50 15:40
24	08:29 16:28	07:23 17:37		06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:51 15:41
25	08:27 16:30	07:21 17:39		06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 16:52	08:50 15:41
26	08:26 16:32	07:18 17:41		06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:51 15:42
27	08:24 16:34	07:16 17:43		06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:51 15:43
28	08:22 16:37	07:13 17:45		06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 16:45	08:51 15:44
29	08:20 16:39			06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:51 15:45
30	08:19 16:41			06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41	08:51 15:46
31	08:17 16:43			06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17	07:21 16:38	08:23 14	08:51 15:47
Potential sun hours	235	266		366	426	508	529	529	469	385	324	216
Total, worst case												
Sun reduction		125								100		
Oper. time red.		0.20								0.26		
Wind dir. red.		0.98								0.98		
Total reduction		0.62								0.62		
Total, real		0.12								0.16		
		15								16		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Dzervites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (204)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:04	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:58	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:45
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Darzupites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (58)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	09:38 (B22)	07:11	06:49	05:33
	15:48	16:45	39 10:17 (B22)	17:48	19:53	20:55
2	08:50	08:13	09:39 (B22)	07:08	06:46	05:30
	15:49	16:47	38 10:17 (B22)	17:50	19:55	20:57
3	08:50	08:11	09:39 (B22)	07:06	06:43	05:28
	15:51	16:50	38 10:17 (B22)	17:52	19:57	21:00
4	08:50	08:09	09:40 (B22)	07:03	06:41	05:26
	15:52	16:52	37 10:17 (B22)	17:54	19:59	21:02
5	08:49	08:07	09:41 (B22)	07:00	06:38	05:23
	15:53	16:54	36 10:17 (B22)	17:56	20:01	21:04
6	08:49	08:05	09:41 (B22)	06:58	06:35	05:21
	15:55	16:56	34 10:15 (B22)	17:58	20:03	21:06
7	08:48	08:03	09:42 (B22)	06:55	06:33	05:19
	15:56	16:59	33 10:15 (B22)	18:00	20:05	21:08
8	08:48	09:47 (B22)	08:01	09:43 (B22)	06:53	06:30
	15:58	7 17:01	32 10:15 (B22)	18:03	20:08	21:10
9	08:47	09:45 (B22)	07:58	09:44 (B22)	06:50	06:28
	15:59	12 17:03	29 10:13 (B22)	18:05	20:10	21:12
10	08:46	09:44 (B22)	07:56	09:45 (B22)	06:47	06:25
	16:01	15 17:05	27 10:12 (B22)	18:07	20:12	21:14
11	08:45	09:43 (B22)	07:54	09:47 (B22)	06:45	06:22
	16:03	18 17:08	24 10:11 (B22)	18:09	20:14	21:16
12	08:44	09:42 (B22)	07:52	09:49 (B22)	06:42	06:20
	16:04	21 17:10	19 10:08 (B22)	18:11	20:16	21:18
13	08:43	09:41 (B22)	07:50	09:52 (B22)	06:40	06:17
	16:06	23 17:12	13 10:05 (B22)	18:13	20:18	21:20
14	08:42	09:41 (B22)	07:47	06:37	06:14	05:04
	16:08	24 17:14	18:15	20:20	21:22	22:01
15	08:41	09:40 (B22)	07:45	06:34	06:12	05:03
	16:10	26 17:17	18:18	20:22	21:24	22:03
16	08:40	09:40 (B22)	07:43	06:32	06:09	05:01
	16:12	28 17:19	18:20	20:24	21:25	22:04
17	08:39	09:40 (B22)	07:40	06:29	06:07	04:59
	16:14	29 17:21	18:22	20:26	21:27	22:05
18	08:37	09:39 (B22)	07:38	06:26	06:04	04:57
	16:16	31 17:23	18:24	20:28	21:29	22:06
19	08:36	09:38 (B22)	07:36	06:24	06:02	04:55
	16:18	32 17:26	18:26	20:30	21:31	22:07
20	08:35	09:39 (B22)	07:33	06:21	05:59	04:53
	16:20	33 17:28	18:28	20:33	21:33	22:08
21	08:33	09:38 (B22)	07:31	06:18	05:57	04:52
	16:22	35 17:30	18:30	20:35	21:35	22:09
22	08:32	09:38 (B22)	07:28	06:16	05:54	04:50
	16:24	35 17:32	18:32	20:37	21:37	22:10
23	08:30	09:37 (B22)	07:26	06:13	05:52	04:48
	16:26	37 17:34	18:34	20:39	21:38	22:11
24	08:29	09:38 (B22)	07:23	06:10	05:49	04:47
	16:28	37 17:37	18:36	20:41	21:40	22:12
25	08:27	09:38 (B22)	07:21	06:07	05:47	04:45
	16:30	38 17:39	18:38	20:43	21:42	22:13
26	08:26	09:38 (B22)	07:18	06:05	05:44	04:44
	16:32	38 17:41	18:41	20:45	21:43	22:14
27	08:24	09:38 (B22)	07:16	06:02	05:42	04:42
	16:34	38 17:43	18:43	20:47	21:45	22:15
28	08:22	09:38 (B22)	07:13	05:59	05:40	04:41
	16:36	39 17:45	18:45	20:49	21:47	22:16
29	08:20	09:38 (B22)		06:57	05:37	04:40
	16:39	39 17:47	19:47	20:51	21:48	22:17
30	08:18	09:38 (B22)		06:54	05:35	04:38
	16:41	39 17:49	19:49	20:53	21:50	22:18
31	08:17	09:39 (B22)		06:51		04:37
	16:43	39 17:51	19:51		21:51	22:19
Potential sun hours	235	266	366	426	508	529
Total, worst case	713	399			245	
Sun reduction	0.13	0.20			0.57	
Oper. time red.	0.98	0.98			0.98	
Wind dir. red.	0.61	0.61			0.67	
Total reduction	0.08	0.12			0.36	
Total, real	55	46			88	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Darzupites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (58)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:16	06:00 (B1)	06:17	07:17			07:23	09:15 (B22)	08:24	09:25 (B22)
	22:09	21:28	18 06:18 (B1)	20:14	18:54			16:36	27 09:42 (B22)	15:45	18 09:43 (B22)
2	04:31	05:18	06:00 (B1)	06:19	07:19			07:25	09:13 (B22)	08:26	09:27 (B22)
	22:09	21:26	18 06:18 (B1)	20:11	18:51			16:34	30 09:43 (B22)	15:44	15 09:42 (B22)
3	04:32	05:19	06:00 (B1)	06:21	07:21			07:27	09:13 (B22)	08:28	09:28 (B22)
	22:08	21:24	19 06:19 (B1)	20:09	18:48			16:32	31 09:44 (B22)	15:43	12 09:40 (B22)
4	04:33	05:21	06:00 (B1)	06:23	07:23			07:29	09:11 (B22)	08:29	09:31 (B22)
	22:07	21:22	19 06:19 (B1)	20:06	18:46			16:29	34 09:45 (B22)	15:42	8 09:39 (B22)
5	04:34	05:23	05:59 (B1)	06:25	07:25			07:31	09:10 (B22)	08:31	
	22:07	21:20	19 06:18 (B1)	20:03	18:43			16:27	35 09:45 (B22)	15:42	
6	04:35	05:25	05:59 (B1)	06:27	07:27			07:33	09:10 (B22)	08:32	
	22:06	21:17	19 06:18 (B1)	20:01	18:40			16:25	36 09:46 (B22)	15:41	
7	04:36	05:27	06:00 (B1)	06:29	07:30			07:36	09:10 (B22)	08:34	
	22:05	21:15	18 06:18 (B1)	19:58	18:38			16:23	37 09:47 (B22)	15:40	
8	04:37	05:29	06:02 (B1)	06:31	07:32			07:38	09:10 (B22)	08:35	
	22:04	21:13	16 06:18 (B1)	19:55	18:35			16:21	38 09:48 (B22)	15:40	
9	04:38	05:31	06:04 (B1)	06:33	07:34			07:40	09:09 (B22)	08:37	
	22:03	21:11	13 06:17 (B1)	19:53	18:32			16:19	39 09:48 (B22)	15:39	
10	04:39	05:33	06:06 (B1)	06:35	07:36			07:42	09:10 (B22)	08:38	
	22:02	21:08	10 06:16 (B1)	19:50	18:30			16:17	39 09:49 (B22)	15:39	
11	04:41	05:35	06:07 (B1)	06:37	07:38			07:44	09:09 (B22)	08:39	
	22:01	21:06	7 06:14 (B1)	19:47	18:27			16:15	39 09:48 (B22)	15:38	
12	04:42	05:37	06:09 (B1)	06:39	07:40			07:46	09:09 (B22)	08:40	
	22:00	21:04	3 06:12 (B1)	19:45	18:25			16:13	39 09:48 (B22)	15:38	
13	04:43	05:39		06:41	07:42			07:49	09:10 (B22)	08:42	
	21:59	21:02		19:42	18:22			16:11	39 09:49 (B22)	15:38	
14	04:45	05:41		06:43	07:44			07:51	09:10 (B22)	08:43	
	21:58	20:59		19:39	18:19			16:09	39 09:49 (B22)	15:38	
15	04:46	05:43		06:45	07:46			07:53	09:10 (B22)	08:44	
	21:57	20:57		19:37	18:17			16:08	38 09:48 (B22)	15:38	
16	04:48	05:45		06:47	07:48			07:55	09:11 (B22)	08:45	
	21:55	20:54		19:34	18:14			16:06	38 09:49 (B22)	15:38	
17	04:49	05:47		06:49	07:50			07:57	09:11 (B22)	08:46	
	21:54	20:52		19:31	18:12			16:04	37 09:48 (B22)	15:38	
18	04:51	05:49		06:51	07:52			07:59	09:12 (B22)	08:46	
	21:52	20:50		19:29	18:09			16:02	37 09:49 (B22)	15:38	
19	04:52	05:51		06:53	07:55			08:01	09:12 (B22)	08:47	
	21:51	20:47		19:26	18:07			16:01	37 09:49 (B22)	15:38	
20	04:54	05:53		06:55	07:57			08:03	09:13 (B22)	08:48	
	21:49	20:45		19:23	18:04			15:59	35 09:48 (B22)	15:39	
21	04:56	05:55		06:57	07:59			08:05	09:13 (B22)	08:48	
	21:48	20:42		19:20	18:02			15:58	35 09:48 (B22)	15:39	
22	04:57	05:57		06:59	08:01			08:07	09:15 (B22)	08:49	
	21:46	20:40		19:18	17:59			15:56	33 09:48 (B22)	15:39	
23	04:59	05:59		07:01	08:03			08:09	09:15 (B22)	08:50	
	21:45	20:37		19:15	17:57			15:55	33 09:48 (B22)	15:40	
24	05:01	06:01		07:03	08:05			08:11	09:16 (B22)	08:50	
	21:43	20:35		19:12	17:55			15:53	31 09:47 (B22)	15:41	
25	05:03	06:03		07:05	07:07			08:13	09:17 (B22)	08:50	
	21:41	20:32		19:10	16:52			15:52	29 09:46 (B22)	15:41	
26	05:04	06:05		07:07	07:10			08:15	09:18 (B22)	08:51	
	21:39	20:30		19:07	16:50			15:51	28 09:46 (B22)	15:42	
27	05:06	06:05 (B1)	06:07	07:09	07:12			08:17	09:20 (B22)	08:51	
	21:38	8 06:13 (B1)	20:27	19:04	16:47			15:49	26 09:46 (B22)	15:43	
28	05:08	06:03 (B1)	06:09	07:11	07:14			08:19	09:21 (B22)	08:51	
	21:36	11 06:14 (B1)	20:24	19:02	16:45			15:48	24 09:45 (B22)	15:44	
29	05:10	06:02 (B1)	06:11	07:13	07:16		09:21 (B22)	08:21	09:22 (B22)	08:51	
	21:34	14 06:16 (B1)	20:22	18:59	16:43	14	09:35 (B22)	15:47	23 09:45 (B22)	15:45	
30	05:12	06:02 (B1)	06:13	07:15	07:18		09:18 (B22)	08:22	09:23 (B22)	08:51	
	21:32	15 06:17 (B1)	20:19	18:56	16:40	20	09:38 (B22)	15:46	21 09:44 (B22)	15:46	
31	05:14	06:01 (B1)	06:15		07:20		09:15 (B22)			08:51	
	21:30	17 06:18 (B1)	20:17		16:38	24	09:39 (B22)			15:47	
Potential sun hours	529		469		385	324		247		216	
Total, worst case	65		179			58		1007		53	
Sun reduction	0.49		0.50			0.26		0.08		0.07	
Oper. time red.	0.98		0.98			0.98		0.98		0.98	
Wind dir. red.	0.67		0.67			0.61		0.61		0.61	
Total reduction	0.31		0.32			0.15		0.05		0.04	
Total, real	20		57			9		48		2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Elkš ni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (77)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:09	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ezeravoti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (50)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:40	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ezerkrasts - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (202)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:51 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:05	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:05 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:52 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	07:14 16:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ezermali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (26)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	05:49 (B12) 20:14	06:17 18:54	07:17 16:36	07:22 15:45
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	05:51 (B12) 20:11	06:19 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	05:53 (B12) 20:09	06:21 18:48	07:21 16:32	07:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	05:55 (B12) 20:06	06:23 18:46	07:23 16:29	07:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:58	04:34 22:06	05:23 21:19	05:56 (B12) 20:03	06:25 18:43	07:25 16:27	07:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	05:58 (B12) 20:01	06:27 18:40	07:27 16:25	07:33 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	05:48 (B12) 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	07:38 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:10	05:46 (B12) 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:12	05:44 (B12) 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:34 18:32	07:40 16:19	07:40 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	05:42 (B12) 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	05:40 (B12) 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	07:44 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	05:38 (B12) 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	07:46 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	05:36 (B12) 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	07:48 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:05 21:21	05:36 (B12) 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	07:50 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	05:36 (B12) 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	07:53 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	05:36 (B12) 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	07:55 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	05:38 (B12) 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	07:57 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	05:38 (B12) 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	07:59 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	05:38 (B12) 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:01 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	05:40 (B12) 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:57 18:04	08:03 15:59	08:03 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:34	04:52 21:34	05:42 (B12) 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:05 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	05:46 (B12) 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:07 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	05:51 (B12) 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:09 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	05:50 (B12) 22:10	06:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:11 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	05:49 (B12) 22:10	06:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:13 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	05:48 (B12) 22:10	06:05 21:39	06:05 20:29	07:07 19:07	08:09 16:50	08:15 15:51	08:15 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	05:48 (B12) 22:10	06:07 21:37	06:07 20:27	07:09 19:04	08:12 16:47	08:17 15:49	08:17 15:43
28	08:22 16:36	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	05:48 (B12) 22:10	06:09 21:35	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	08:19 15:44
29	08:20 16:39	07:07 17:57	05:57 18:57	05:37 20:51	04:40 21:48	05:47 (B12) 22:09	06:11 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:20 15:47	08:20 15:45
30	08:18 16:41	06:54 17:59	05:35 18:59	05:35 20:53	04:38 21:49	05:47 (B12) 22:09	06:13 21:32	06:13 20:19	07:15 18:56	08:18 16:40	08:22 15:46	08:22 15:46
31	08:16 16:43	06:51 17:51	05:37 18:51	05:37 20:51	04:37 21:51	05:48 (B12) 22:10	06:15 21:30	06:15 20:16	07:20 16:38	08:20 16:38	08:25 15:47	08:25 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case					167							
Sun reduction					0.57							
Oper. time red.					0.98							
Wind dir. red.					0.67							
Total reduction					0.37							
Total, real					62							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ezermuiža - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (221)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:43
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:24 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:28 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:05	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:54 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:26 22:10	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ezerkikaukas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (110)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Galvani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (105)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April	May	June
1	08:51		10:18 (B1)	08:15			07:11			06:49	05:32	04:36
	15:48	19	10:37 (B1)	16:45			17:47			19:53	20:55	21:53
2	08:51		10:19 (B1)	08:13			07:08			06:46	05:30	04:34
	15:49	19	10:38 (B1)	16:47			17:50			19:55	20:57	21:54
3	08:50		10:19 (B1)	08:11		08:41 (B2)	07:06		07:33 (B17)	06:43	05:28	04:33
	15:50	18	10:37 (B1)	16:50	4	08:45 (B2)	17:52	12	07:45 (B17)	19:57	21:00	21:55
4	08:50		10:20 (B1)	08:09		08:39 (B2)	07:03		07:30 (B17)	06:41	05:25	04:32
	15:52	17	10:37 (B1)	16:52	7	08:46 (B2)	17:54	17	07:47 (B17)	19:59	21:02	21:57
5	08:49		10:22 (B1)	08:07		08:37 (B2)	07:00		07:28 (B17)	06:38	05:23	04:31
	15:53	15	10:37 (B1)	16:54	11	08:48 (B2)	17:56	20	07:48 (B17)	20:01	21:04	21:58
6	08:49		10:23 (B1)	08:05		08:34 (B2)	06:58		07:27 (B17)	06:35	05:21	04:31
	15:55	14	10:37 (B1)	16:56	13	08:47 (B2)	17:58	23	07:50 (B17)	20:03	21:06	21:59
7	08:48		10:24 (B1)	08:03		08:32 (B2)	06:55		07:26 (B17)	06:33	05:19	04:30
	15:56	12	10:36 (B1)	16:58	16	08:48 (B2)	18:00	24	07:50 (B17)	20:05	21:08	22:00
8	08:48		10:25 (B1)	08:01		08:31 (B2)	06:53		07:25 (B17)	06:30	05:17	04:29
	15:58	11	10:36 (B1)	17:01	18	08:49 (B2)	18:03	26	07:51 (B17)	20:08	21:10	22:01
9	08:47		10:27 (B1)	07:58		08:30 (B2)	06:50		07:25 (B17)	06:27	05:15	04:28
	15:59	7	10:34 (B1)	17:03	18	08:48 (B2)	18:05	26	07:51 (B17)	20:10	21:12	22:02
10	08:46			07:56		08:31 (B2)	06:47		07:24 (B17)	06:25	05:12	04:28
	16:01			17:05	17	08:48 (B2)	18:07	27	07:51 (B17)	20:12	21:14	22:03
11	08:45			07:54		08:32 (B2)	06:45		07:23 (B17)	06:22	05:10	04:27
	16:03			17:07	16	08:48 (B2)	18:09	28	07:51 (B17)	20:14	21:16	22:04
12	08:44			07:52		08:32 (B2)	06:42		07:24 (B17)	06:20	05:08	04:27
	16:04			17:10	14	08:46 (B2)	18:11	27	07:51 (B17)	20:16	21:18	22:05
13	08:43			07:49		08:34 (B2)	06:39		07:24 (B17)	06:17	05:06	04:26
	16:06			17:12	11	08:45 (B2)	18:13	26	07:50 (B17)	20:18	21:20	22:06
14	08:42			07:47		08:36 (B2)	06:37		07:24 (B17)	06:14	05:04	04:26
	16:08			17:14	6	08:42 (B2)	18:15	25	07:49 (B17)	20:20	21:22	22:07
15	08:41			07:45		06:34			07:24 (B17)	06:12	05:02	04:25
	16:10			17:16		18:17	24	07:48 (B17)	20:22	21:24	22:07	
16	08:40			07:43		06:31			07:25 (B17)	06:09	05:00	04:25
	16:12			17:19		18:20	22	07:47 (B17)	20:24	21:26	22:08	
17	08:39			07:40		06:29			07:26 (B17)	06:07	04:59	04:25
	16:14			17:21		18:22	19	07:45 (B17)	20:26	21:27	22:09	
18	08:38			07:38		06:26			07:27 (B17)	06:04	04:57	04:25
	16:15			17:23		18:24	15	07:42 (B17)	20:28	21:29	22:09	
19	08:36			07:35		06:23			07:31 (B17)	06:02	04:55	04:25
	16:17			17:25		18:26	8	07:39 (B17)	20:30	21:31	22:09	
20	08:35			07:33		06:21			05:59	04:53	04:25	
	16:19			17:28		18:28			20:33	21:33	22:10	
21	08:33			07:31		06:18			05:57	04:51	04:25	
	16:21			17:30		18:30			20:35	21:35	22:10	
22	08:32			07:28		06:15			05:54	04:50	04:25	
	16:24			17:32		18:32			20:37	21:37	22:10	
23	08:30			07:26		06:13			05:52	04:48	04:25	
	16:26			17:34		18:34			20:39	21:38	22:10	
24	08:29			07:23		06:10			05:49	04:47	04:26	
	16:28			17:36		18:36			20:41	21:40	22:11	
25	08:27			07:21		06:07			05:47	04:45	04:26	
	16:30			17:39		18:38			20:43	21:42	22:11	
26	08:26			07:18		06:05			05:44	04:43	04:27	
	16:32			17:41		18:40			20:45	21:43	22:10	
27	08:24			07:16		06:02			05:42	04:42	04:27	
	16:34			17:43		18:43			20:47	21:45	22:10	
28	08:22			07:13		05:59			05:39	04:41	04:28	
	16:36			17:45		18:45			20:49	21:47	22:10	
29	08:20					06:57			05:37	04:39	04:28	
	16:38					19:47			20:51	21:48	22:10	
30	08:19					06:54			05:35	04:38	04:29	
	16:41					19:49			20:53	21:50	22:09	
31	08:17					06:51				04:37		
	16:43					19:51				21:51		
Potential sun hours	235			266		366			426	508	529	
Total, worst case		132			151		369					
Sun reduction		0.13			0.20		0.41					
Oper. time red.		0.98			0.98		0.98					
Wind dir. red.		0.61			0.61		0.62					
Total reduction		0.08			0.12		0.25					
Total, real		10			18		92					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Galvani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (105)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:15	06:17	07:17	08:03 (B17)	08:24
	22:09	21:28	20:14	18:54	27 08:30 (B17)	16:36 17 08:18 (B2)
2	04:31	05:17	06:19	07:19	08:02 (B17)	07:25 08:00 (B2)
	22:09	21:26	20:11	18:51	28 08:30 (B17)	16:34 17 08:17 (B2)
3	04:31	05:19	06:21	07:21	08:02 (B17)	07:27 08:00 (B2)
	22:08	21:24	20:09	18:48	27 08:29 (B17)	16:31 18 08:18 (B2)
4	04:32	05:21	06:23	07:23	08:02 (B17)	07:29 08:02 (B2)
	22:07	21:22	20:06	18:46	27 08:29 (B17)	16:29 16 08:18 (B2)
5	04:33	05:23	06:25	07:25	08:02 (B17)	07:31 08:05 (B2)
	22:07	21:20	20:03	18:43	26 08:28 (B17)	16:27 13 08:18 (B2)
6	04:34	05:25	06:27	07:27	08:02 (B17)	07:33 08:07 (B2)
	22:06	21:17	20:01	18:40	25 08:27 (B17)	16:25 10 08:17 (B2)
7	04:36	05:27	06:29	07:29	08:02 (B17)	07:36 08:09 (B2)
	22:05	21:15	19:58	18:38	24 08:26 (B17)	16:23 7 08:16 (B2)
8	04:37	05:29	06:31	07:32	08:03 (B17)	07:38 08:12 (B2)
	22:04	21:13	19:55	18:35	21 08:24 (B17)	16:21 4 08:16 (B2)
9	04:38	05:31	06:33	07:34	08:05 (B17)	07:40 08:37
	22:03	21:11	19:53	18:32	19 08:24 (B17)	16:19 15:39
10	04:39	05:33	06:35	07:36	08:06 (B17)	07:42 08:38
	22:02	21:08	19:50	18:30	15 08:21 (B17)	16:17 15:39
11	04:40	05:35	06:37	07:38	08:09 (B17)	07:44 08:39
	22:01	21:06	19:47	18:27	9 08:18 (B17)	16:15 15:38
12	04:42	05:37	06:39	07:40	07:46 08:40	15:38 19 10:27 (B1)
	22:00	21:04	19:45	18:25	16:13 15:38	19 10:09 (B1)
13	04:43	05:39	06:41	07:42	07:49 08:42	15:38 20 10:09 (B1)
	21:59	21:02	19:42	18:22	16:11 15:38	20 10:29 (B1)
14	04:45	05:41	06:43	07:44	07:51 08:43	15:38 22 10:09 (B1)
	21:58	20:59	19:39	18:19	16:09 15:38	20 10:29 (B1)
15	04:46	05:43	06:45	07:46	07:53 08:44	15:38 21 10:09 (B1)
	21:57	20:57	19:37	18:17	16:07 15:38	21 10:30 (B1)
16	04:48	05:45	06:47	07:48	07:55 08:45	15:38 22 10:09 (B1)
	21:55	20:54	19:34	18:14	16:06 15:38	22 10:31 (B1)
17	04:49	05:47	06:49	07:50	07:57 08:46	15:38 21 10:10 (B1)
	21:54	20:52	19:31	18:12	16:04 15:38	21 10:31 (B1)
18	04:51	05:49	06:51	07:52	07:59 08:46	15:38 22 10:10 (B1)
	21:53	20:50	19:29	18:09	16:02 15:38	22 10:32 (B1)
19	04:52	05:51	06:53	07:55	08:01 08:47	15:38 22 10:11 (B1)
	21:51	20:47	19:26	18:07	16:01 15:38	22 10:33 (B1)
20	04:54	05:53	06:55	07:57	08:03 08:48	15:38 22 10:11 (B1)
	21:50	20:45	19:23	18:04	15:59 15:38	22 10:33 (B1)
21	04:56	05:55	06:57	07:59	08:05 08:49	15:38 22 10:12 (B1)
	21:48	20:42	19:20	18:02	15:57 15:39	21 10:33 (B1)
22	04:57	05:57	06:59	08:01	08:07 08:49	15:39 21 10:12 (B1)
	21:46	20:40	19:18	17:59	15:56 15:39	21 10:33 (B1)
23	04:59	05:59	07:01	08:03	08:09 08:50	15:40 21 10:13 (B1)
	21:45	20:37	19:15	17:57	15:54 15:40	21 10:34 (B1)
24	05:01	06:01	07:03	08:05	08:11 08:50	15:40 22 10:13 (B1)
	21:43	20:35	19:12	17:54	15:53 15:40	22 10:35 (B1)
25	05:02	06:03	07:05	08:11	07:07 08:13	15:41 22 10:13 (B1)
	21:41	20:32	19:10	16:52	15:52 15:41	22 10:35 (B1)
26	05:04	06:05	07:07	08:08	07:10 08:15	15:42 21 10:14 (B1)
	21:39	20:30	19:07	16:50	15:50 15:42	21 10:35 (B1)
27	05:06	06:07	07:09	08:07	07:12 08:17	15:43 21 10:14 (B1)
	21:38	20:27	19:04	16:47	15:49 15:43	21 10:35 (B1)
28	05:08	06:09	07:11	08:06	07:14 08:19	15:43 21 10:15 (B1)
	21:36	20:24	19:02	16:45	7 08:12 (B2)	15:48 21 10:36 (B1)
29	05:10	06:11	07:13	08:05	07:16 08:21	15:43 21 10:15 (B1)
	21:34	20:22	18:59	16:43	12 08:15 (B2)	15:47 21 10:36 (B1)
30	05:12	06:13	07:15	08:04	07:18 08:22	15:45 21 10:16 (B1)
	21:32	20:19	18:56	16:40	14 08:16 (B2)	15:46 21 10:37 (B1)
31	05:14	06:15		07:20	08:02 (B2)	08:51 10:17 (B1)
	21:30	20:17		16:38	15 08:17 (B2)	15:46 20 10:37 (B1)
Potential sun hours	529	469	385	324	247	216
Total, worst case			130	296	102	553
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.62	0.62	0.61	0.61
Total reduction			0.26	0.16	0.05	0.04
Total, real			34	46	5	23

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Galvani 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (98)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:47	07:37 (B1) 18:55 (B1)	06:49 19:53	05:32 20:55
2	08:51 15:49	08:13 16:47	07:08 17:50	07:34 (B1) 19:55	06:46 19:55	05:30 20:58
3	08:50 15:51	08:11 16:50	07:06 17:52	07:34 (B1) 19:57	06:43 19:57	05:28 21:00
4	08:50 15:52	08:09 16:52	07:03 17:54	07:33 (B1) 19:59	06:41 19:59	05:26 21:02
5	08:49 15:53	08:07 16:54	07:00 17:56	07:32 (B1) 20:01	06:38 20:01	05:23 21:04
6	08:49 15:55	08:05 16:56	06:58 17:58	07:33 (B1) 20:03	06:35 20:03	05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:00	07:32 (B1) 20:05	06:33 20:05	05:19 21:08
8	08:48 15:58	08:01 17:01	06:53 18:03	07:32 (B1) 20:08	06:30 20:08	05:17 21:10
9	08:47 15:59	07:58 17:03	06:50 18:05	07:33 (B1) 20:10	06:27 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07	07:34 (B1) 20:12	06:25 20:12	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	07:34 (B1) 20:14	06:22 20:14	05:10 21:16
12	08:44 16:04	07:52 17:10	06:42 18:11	07:37 (B1) 20:16	06:20 20:16	05:08 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	07:40 (B1) 20:18	06:17 20:18	05:06 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	07:45 (B1) 20:20	06:14 20:20	05:04 21:22
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	06:38 (B17) 20:22	05:02 21:24
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	06:35 (B17) 20:24	05:01 21:26
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	06:33 (B17) 20:26	04:59 21:27
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	06:30 (B17) 20:28	04:57 21:29
19	08:36 16:18	07:36 17:25	06:24 18:26	06:02 20:30	06:28 (B17) 20:30	04:55 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	06:25 (B17) 20:33	04:53 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:24 (B17) 20:35	04:52 21:35
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	06:25 (B17) 20:37	04:50 21:37
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:24 (B17) 20:39	04:48 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:25 (B17) 20:41	04:47 21:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	06:27 (B17) 20:43	04:45 21:42
26	08:26 16:32	07:18 17:41	07:45 (B1) 18:41	05:44 20:45	06:28 (B17) 20:45	04:44 21:43
27	08:24 16:34	07:16 17:43	07:42 (B1) 18:43	05:42 20:47	06:35 (B17) 20:47	04:42 21:45
28	08:22 16:36	07:13 17:45	07:51 (B1) 18:45	05:39 20:49	06:40 (B17) 20:49	04:41 21:47
29	08:20 16:39		07:54 (B1) 18:47	05:37 20:51	06:42 (B17) 20:51	04:40 21:48
30	08:19 16:41		06:57 19:47	05:35 20:53	06:43 (B17) 20:53	04:38 21:50
31	08:17 16:43		06:51 19:51		06:44 (B17) 21:51	04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		26	252	141		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.62	0.62	0.65		
Total reduction		0.12	0.25	0.32		
Total, real		3	63	45		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Galvani 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (98)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:17 (B1) 16:36	08:24 15:45
2	04:31 22:09	05:17 21:26	06:19 20:11	07:19 18:51	08:14 (B1) 16:34	08:26 15:44
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	08:12 (B1) 16:31	08:28 15:43
4	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:46	08:11 (B1) 16:29	08:29 15:42
5	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	08:10 (B1) 16:27	08:31 15:41
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	08:09 (B1) 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:08 (B1) 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	08:07 (B1) 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	08:08 (B1) 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:08 (B1) 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:08 (B1) 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:09 (B1) 16:13	08:40 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:11 (B1) 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	08:13 (B1) 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:16 (B1) 16:07	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	08:23 (B1) 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	04:51 21:53	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:49 15:39
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:40
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	05:04 21:39	06:05 20:30	07:07 19:07	08:09 16:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 16:47	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 16:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 16:43	08:21 15:47	08:51 15:44
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:40	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		140		278		
Sun reduction		0.50		0.26		
Oper. time red.		0.98		0.98		
Wind dir. red.		0.65		0.62		
Total reduction		0.32		0.16		
Total, real		44		44		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Grantini 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (157)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:22 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:18	06:27 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:19 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:40	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Graudini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (175)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	04:56 21:43	05:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Gulbji - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (180)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:49	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:26 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:12	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:50 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:06 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39	07:10 17:47	05:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41	07:06 17:49	05:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:05 17:51	05:52 19:51	05:34 20:51	04:37 21:51	04:30 21:51	05:14 21:30	06:16 20:17	07:20 16:38	07:20 15:42	08:51 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Guž ani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (40)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	07:55 (B22) 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	07:57 (B22) 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:00 (B22) 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:02 (B22) 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:05 (B22) 15:42
6	08:49 15:55	08:05 16:56	07:00 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:07 (B22) 15:41
7	08:48 15:56	08:03 16:59	06:59 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:08 (B22) 15:40
8	08:48 15:58	08:01 17:01	06:58 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:09 (B22) 15:39
9	08:47 15:59	07:58 17:03	06:57 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:10 (B22) 15:38
10	08:46 16:01	07:56 17:05	06:56 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:11 (B22) 15:39
11	08:45 16:03	07:54 17:08	06:55 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:12 (B22) 15:38
12	08:44 16:05	07:52 17:10	06:54 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:13 (B22) 15:38
13	08:43 16:06	07:50 17:12	06:53 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:14 (B22) 15:38
14	08:42 16:08	07:47 17:14	06:52 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:15 (B22) 15:38
15	08:41 16:10	07:45 17:17	06:51 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:16 (B22) 15:38
16	08:40 16:12	07:43 17:19	06:50 18:20	06:11 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:17 (B22) 15:38
17	08:39 16:14	07:40 17:21	06:49 18:22	06:10 20:26	05:00 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:18 (B22) 15:38
18	08:38 16:16	07:38 17:23	06:48 18:24	06:09 20:28	04:59 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:19 (B22) 15:38
19	08:36 16:18	07:36 17:26	06:46 18:26	06:07 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:20 (B22) 15:38
20	08:35 16:20	07:33 17:28	06:45 18:28	06:05 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:21 (B22) 15:39
21	08:33 16:22	07:31 17:30	06:43 18:30	06:03 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:22 (B22) 15:39
22	08:32 16:24	07:28 17:32	06:42 18:32	06:02 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:23 (B22) 15:39
23	08:30 16:26	07:26 17:34	06:40 18:34	06:00 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:24 (B22) 15:40
24	08:29 16:28	07:23 17:37	06:39 18:36	05:59 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:25 (B22) 15:41
25	08:27 16:30	07:21 17:39	06:37 18:39	05:57 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:26 (B22) 15:41
26	08:26 16:32	07:18 17:41	06:36 18:41	05:56 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	07:59 (B22) 15:51	08:27 (B22) 15:42
27	08:24 16:34	07:16 17:43	06:34 18:43	05:54 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	07:56 (B22) 15:49	08:28 (B22) 15:43
28	08:22 16:37	07:13 17:45	06:32 18:45	05:52 20:49	04:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	07:55 (B22) 15:48	08:29 (B22) 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	07:54 (B22) 15:47	08:30 (B22) 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	07:53 (B22) 15:46	08:31 (B22) 15:46
31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17	07:20 16:38	07:20 16:08	07:53 (B22) 15:46	08:32 (B22) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		111								73	40	
Sun reduction		0.20								0.26	0.08	
Oper. time red.		0.98								0.98	0.98	
Wind dir. red.		0.62								0.62	0.62	
Total reduction		0.12								0.16	0.05	
Total, real		13								11	2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ievas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (59)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:55 (B14)	06:49	05:33
	15:48	16:45	17:48	27 08:22 (B14)	19:53	20:55
2	08:50	08:13	07:08	07:56 (B14)	06:46	05:30
	15:50	16:48	17:50	25 08:21 (B14)	19:55	20:58
3	08:50	08:11	07:06	07:57 (B14)	06:43	05:28
	15:51	16:50	17:52	23 08:20 (B14)	19:57	21:00
4	08:50	08:09	07:03	07:58 (B14)	06:41	05:26
	15:52	16:52	17:54	21 08:19 (B14)	19:59	21:02
5	08:49	08:07	07:01	07:59 (B14)	06:38	05:24
	15:54	16:54	17:56	17 08:16 (B14)	20:01	21:04
6	08:49	08:05	06:58	08:01 (B14)	06:36	05:21
	15:55	16:56	17:58	13 08:14 (B14)	20:03	21:06
7	08:48	08:03	06:55	08:06 (B14)	06:33	05:19
	15:56	16:59	18:01	3 08:09 (B14)	20:06	21:08
8	08:48	08:01	06:53		06:30	05:17
	15:58	17:01	18:03		20:08	21:10
9	08:47	07:58	06:50		2 06:56 (B22)	05:15
	16:00	17:03	18:05		06:53 (B22)	21:12
10	08:46	07:56	06:48		6 06:59 (B22)	05:13
	16:01	17:05	18:07		06:50 (B22)	21:14
11	08:45	07:54	06:45		10 07:00 (B22)	05:11
	16:03	17:08	18:09		06:48 (B22)	21:16
12	08:44	07:52	06:42		13 07:01 (B22)	05:09
	16:05	17:10	18:11		06:45 (B22)	21:18
13	08:43	07:50	06:40		16 07:01 (B22)	05:07
	16:06	17:12	18:13		06:43 (B22)	21:20
14	08:42	07:47	06:37		18 07:01 (B22)	05:05
	16:08	17:14	18:15		06:40 (B22)	21:22
15	08:41	07:45	06:34		21 07:01 (B22)	05:03
	16:10	17:17	18:18		06:41 (B22)	21:24
16	08:40	07:43	06:32		20 07:01 (B22)	05:01
	16:12	17:19	18:20		06:40 (B22)	21:26
17	08:39	07:40	06:29		20 07:00 (B22)	04:59
	16:14	17:21	7 08:08 (B14)		06:41 (B22)	21:27
18	08:38	07:38	06:26		18 06:59 (B22)	04:57
	16:16	17:23	12 08:17 (B14)		06:58 (B22)	21:29
19	08:36	07:36	06:24		17 06:58 (B22)	04:55
	16:18	17:26	17 08:20 (B14)		06:42 (B22)	21:31
20	08:35	07:33	06:21		15 06:57 (B22)	04:53
	16:20	17:28	20 08:20 (B14)		06:44 (B22)	21:33
21	08:33	07:31	06:18		11 06:55 (B22)	04:52
	16:22	17:30	24 08:22 (B14)		06:47 (B22)	21:35
22	08:32	07:28	06:16		4 06:51 (B22)	04:50
	16:24	17:32	27 08:22 (B14)			21:37
23	08:30	07:26	06:13			04:48
	16:26	17:34	27 08:23 (B14)			21:38
24	08:29	07:23	06:10			04:47
	16:28	17:37	27 08:23 (B14)			21:40
25	08:27	07:21	06:08			04:45
	16:30	17:39	28 08:24 (B14)			21:42
26	08:26	07:18	06:05			04:44
	16:32	17:41	28 08:23 (B14)			21:43
27	08:24	07:16	06:02			04:42
	16:34	17:43	28 08:23 (B14)			21:45
28	08:22	07:13	06:00			04:41
	16:37	17:45	27 08:23 (B14)			21:47
29	08:20		06:57			04:40
	16:39		19:47			21:48
30	08:19		06:54			04:38
	16:41		19:49			21:50
31	08:17		06:51			04:37
	16:43		19:51			21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		272	129			
Sun reduction		0.20	0.41			
Oper. time red.		0.98	0.98			
Wind dir. red.		0.63	0.63			
Total reduction		0.12	0.25			
Total, real		33	32	61		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ievas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (59)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	06:47 (B22) 07:00 (B22)	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	06:49 (B22) 06:59 (B22)	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:51 (B22) 06:57 (B22)	07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (B22) 06:55 (B22)	07:23 18:46	07:29 16:30
5	04:34 22:07	05:23 21:20	06:25 20:04	07:25 18:43	07:25 16:27	07:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:38 (B14) 08:48 (B14)	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:35 (B14) 08:51 (B14)	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:34 (B14) 08:53 (B14)	07:40 16:19
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:32 (B14) 08:54 (B14)	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:30 (B14) 08:55 (B14)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:29 (B14) 08:55 (B14)	07:46 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:28 (B14) 08:55 (B14)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:27 (B14) 08:55 (B14)	07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:28 (B14) 08:56 (B14)	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:27 (B14) 08:55 (B14)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:27 (B14) 08:55 (B14)	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	08:27 (B14) 08:54 (B14)	07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:27 (B24) 08:54 (B14)	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:27 (B24) 08:53 (B14)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:29 (B14) 08:52 (B14)	08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:31 (B14) 08:50 (B14)	08:07 15:56
23	04:59 21:45	05:59 20:37	06:57 (B22) 06:48 (B22)	19:15 17:57	15 08:49 (B14)	15:40 15:55
24	05:01 21:43	06:01 20:35	06:46 (B22) 07:01 (B22)	19:03 19:12	11 08:36 (B14)	15:40 15:53
25	05:03 21:41	06:03 20:32	06:45 (B22) 07:02 (B22)	19:05 19:10	5 07:38 (B14)	15:40 15:52
26	05:05 21:39	06:05 20:30	06:44 (B22) 07:02 (B22)	19:07 19:07	10 16:50	15:42 15:51
27	05:06 21:38	06:07 20:27	06:43 (B22) 07:03 (B22)	19:09 19:04	12 16:48	15:42 15:50
28	05:08 21:36	06:09 20:24	06:41 (B22) 07:02 (B22)	19:11 19:02	14 16:45	15:43 15:48
29	05:10 21:34	06:11 20:22	06:41 (B22) 07:02 (B22)	19:13 18:59	16 16:43	15:44 15:47
30	05:12 21:32	06:13 20:19	06:43 (B22) 07:01 (B22)	19:15 18:56	18 16:41	15:45 15:46
31	05:14 21:30	06:15 20:17	06:45 (B22) 07:01 (B22)	18:56 16:38	20 16:38	15:46 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		164	31	410		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.66	0.63		
Total reduction		0.32	0.27	0.16		
Total, real		52	8	64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ievinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (142)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January		February		March		April		May		June	
1	08:51		08:15		07:11		07:40 (B22)	06:49	05:33		04:36	
	15:48		16:45		17:48	15	07:55 (B22)	19:53	20:56		21:53	
2	08:51		08:13		07:08		07:40 (B22)	06:46	05:30		04:35	
	15:49		16:48		17:50	13	07:53 (B22)	19:55	20:58		21:54	
3	08:50		08:11		07:06		07:42 (B22)	06:44	05:28		04:34	
	15:51		16:50		17:52	10	07:52 (B22)	19:57	21:00		21:55	
4	08:50		08:09		07:03		07:45 (B22)	06:41	05:26		04:33	
	15:52		16:52		17:54	4	07:49 (B22)	19:59	21:02		21:57	
5	08:49		08:07		07:01			06:38	05:24		04:32	
	15:53		16:54		17:56			20:01	21:04		21:58	
6	08:49		08:05		06:58			06:36	05:21		04:31	
	15:55		16:56		17:58			20:04	21:06		21:59	
7	08:48		08:03		06:55			06:33	05:19		04:30	
	15:56		16:59		18:01			20:06	21:08		22:00	
8	08:48		08:01		06:53			06:30	05:17		04:29	
	15:58		17:01		18:03			20:08	21:10		22:01	
9	08:47		07:58		06:50			06:28	05:15		04:29	
	16:00		17:03		18:05			20:10	21:12		22:02	
10	08:46		07:56		06:48			06:25	05:13		04:28	
	16:01		17:05		18:07			20:12	21:14		22:03	
11	08:45		07:54		06:45			06:22	05:11		04:27	
	16:03	1	09:23 (B14)	17:08	18:09			20:14	21:16		22:04	
12	08:44		07:52		06:42			06:20	05:09		04:27	
	16:05	3	09:24 (B14)	17:10	18:11			20:16	21:18		22:05	
13	08:43		07:50		06:40			06:17	05:07		04:26	
	16:06	5	09:24 (B14)	17:12	18:13			20:18	21:20		22:06	
14	08:42		07:47		06:37			06:15	05:05		04:26	
	16:08	7	09:25 (B14)	17:14	18:16			20:20	21:22		22:07	
15	08:41		07:45		06:34			06:12	05:03		04:26	
	16:10	9	09:26 (B14)	17:17	18:18			20:22	21:24		22:07	
16	08:40		07:43		06:32			06:09	05:01		04:26	
	16:12	11	09:26 (B14)	17:19	18:20			20:24	21:26		22:08	
17	08:39		07:40		06:29			06:07	04:59		04:25	
	16:14	13	09:27 (B14)	17:21	18:22			20:26	21:27		22:09	
18	08:38		07:38		06:26			06:04	04:57		04:25	
	16:16	15	09:27 (B14)	17:23	18:24			20:28	21:29		22:09	
19	08:36		07:36		06:24			06:02	04:55		04:25	
	16:18	16	09:27 (B14)	17:26	18:26			20:31	21:31		22:09	
20	08:35		07:33		06:21			05:59	04:53		04:25	
	16:20	16	09:28 (B14)	17:28	18:28			20:33	21:33		22:10	
21	08:33		07:31		06:18			05:57	04:52		04:25	
	16:22	16	09:28 (B14)	17:30	18:30			20:35	21:35		22:10	
22	08:32		07:28		06:16			05:54	04:50		04:26	
	16:24	15	09:28 (B14)	17:32	18:32			20:37	21:37		22:10	
23	08:30		07:26		06:13			05:52	04:48		04:26	
	16:26	14	09:28 (B14)	17:34	18:34			20:39	21:38		22:10	
24	08:29		07:23		06:10			05:49	04:47		04:26	
	16:28	12	09:27 (B14)	17:37	18:36	4	07:54 (B22)	20:41	21:40		22:11	
25	08:27		07:21		06:08			05:47	04:45		04:26	
	16:30	9	09:26 (B14)	17:39	18:39	7	07:55 (B22)	20:43	21:42		22:11	
26	08:26		07:18		06:05			05:44	04:44		04:27	
	16:32	6	09:25 (B14)	17:41	18:41	10	07:55 (B22)	20:45	21:43		22:10	
27	08:24		07:16		06:02			05:42	04:42		04:27	
	16:34		17:43	13	07:55 (B22)			20:47	21:45		22:10	
28	08:22		07:13		06:00			05:40	04:41		04:28	
	16:37		17:45	15	07:55 (B22)			20:49	21:47		22:10	
29	08:20				06:57			05:37	04:40		04:29	
	16:39				19:47			20:51	21:48		22:10	
30	08:19				06:54			05:35	04:38		04:29	
	16:41				19:49			20:53	21:50		22:10	
31	08:17				06:52				04:37			
	16:43				19:51				21:51			
Potential sun hours	235		266		366			426	508		529	
Total, worst case	168		49		42							
Sun reduction	0.13		0.20		0.41							
Oper. time red.	0.98		0.98		0.98							
Wind dir. red.	0.59		0.63		0.63							
Total reduction	0.08		0.12		0.25							
Total, real	13		6		10							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ievinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (142)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November		December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54		07:23 16:36		08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51		07:25 16:34	1	09:04 (B14) 09:05 (B14)
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48		07:27 16:32		08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46		07:29 16:29		08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43		07:31 16:27		08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40		07:34 16:25		08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38		07:36 16:23		08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35		07:38 16:21		08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33		07:40 16:19		08:37 15:39
10	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	7	08:18 (B22) 08:25 (B22)		07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	12	08:15 (B22) 08:27 (B22)		07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	14	08:14 (B22) 08:28 (B22)		07:47 16:13
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	15	08:13 (B22) 08:28 (B22)		07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	15	08:14 (B22) 08:29 (B22)		07:51 16:09
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	12	08:16 (B22) 08:28 (B22)		07:53 16:08
16	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	9	08:18 (B22) 08:27 (B22)	7	08:51 (B14) 08:58 (B14)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	6	08:20 (B22) 08:26 (B22)	9	08:50 (B14) 08:59 (B14)
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	3	08:22 (B22) 08:25 (B22)	12	08:49 (B14) 09:01 (B14)
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07		08:01 16:01	14	08:48 (B14) 09:02 (B14)
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04		08:03 15:59	15	08:48 (B14) 09:03 (B14)
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02		08:05 15:58	16	08:49 (B14) 09:04 (B14)
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00		08:07 15:56	16	08:48 (B14) 09:04 (B14)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57		08:09 15:55	16	08:50 (B14) 09:04 (B14)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55		08:11 15:53	15	08:49 (B14) 09:04 (B14)
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52		08:13 15:52	13	08:51 (B14) 09:04 (B14)
26	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50		08:15 15:51	11	08:54 (B14) 09:05 (B14)
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48		08:17 15:49	9	08:56 (B14) 09:05 (B14)
28	05:08 21:36	06:09 20:25	07:11 19:02	08:14 16:45		08:19 15:48	7	08:58 (B14) 09:05 (B14)
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43		08:21 15:47	5	09:00 (B14) 09:05 (B14)
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41		08:23 15:46	3	09:02 (B14) 09:05 (B14)
31	05:14 21:30	06:15 20:17		08:20 16:38				08:51 15:47
Potential sun hours	529	469	385	324		247		216
Total, worst case				93		168		1
Sun reduction				0.26		0.08		0.07
Oper. time red.				0.98		0.98		0.98
Wind dir. red.				0.63		0.59		0.59
Total reduction				0.16		0.05		0.04
Total, real				15		8		0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Irbites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (167)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:51	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:08	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:03	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:41 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:37
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:18	06:31 18:19	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:53	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:49 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:11	05:00 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:11	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:10	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jasmini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (93)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	06:49	05:33	04:36
	15:48	16:45	17:48	19:53	20:56	21:53
2	08:51	08:13	07:08	06:46	05:30	04:35
	15:50	16:48	17:50	19:55	20:58	21:54
3	08:50	08:11	07:06	06:44	05:28	04:34
	15:51	16:50	17:52	19:57	21:00	21:55
4	08:50	08:09	07:03	06:41	05:26	04:33
	15:52	16:52	17:54	19:59	21:02	21:57
5	08:49	08:07	07:01	06:38	05:24	04:32
	15:54	16:54	17:56	20:01	21:04	21:58
6	08:49	08:05	06:58	06:36	05:21	04:31
	15:55	16:57	17:58	20:04	21:06	21:59
7	08:48	08:03	06:55	06:33	05:19	04:30
	15:56	16:59	18:01	20:06	21:08	22:00
8	08:48	08:01	06:53	06:30	05:17	04:29
	15:58	17:01	18:03	20:08	21:10	22:01
9	08:47	07:58	06:50	06:28	05:15	04:29
	16:00	17:03	18:05	20:10	21:12	22:02
10	08:46	07:56	06:48	06:25	05:13	04:28
	16:01	17:05	18:07	20:12	21:14	22:03
11	08:45	07:54	06:45	06:22	05:11	04:27
	16:03	17:08	18:09	20:14	21:16	22:04
12	08:44	07:52	06:42	06:20	05:09	04:27
	16:05	17:10	18:11	20:16	21:18	22:05
13	08:43	07:50	06:40	06:17	05:07	04:27
	16:06	17:12	18:13	20:18	21:20	22:06
14	08:42	07:47	06:37	06:15	05:05	04:26
	16:08	17:14	18:16	20:20	21:22	22:07
15	08:41	07:45	06:34	06:12	05:03	04:26
	16:10	17:17	18:18	20:22	21:24	22:07
16	08:40	07:43	06:32	06:09	05:01	04:26
	16:12	17:19	18:20	06:57 (B22)	20:24	21:26
17	08:39	07:40	06:29	06:07	04:59	04:25
	16:14	17:21	18:22	06:54 (B22)	20:26	21:27
18	08:38	07:38	06:26	06:04	04:57	04:25
	16:16	17:23	18:24	06:52 (B22)	20:28	21:29
19	08:36	07:36	06:24	06:02	04:55	04:25
	16:18	17:26	18:26	06:50 (B22)	20:30	21:31
20	08:35	07:33	06:21	05:59	04:53	04:25
	16:20	17:28	18:28	06:46 (B22)	20:32	21:33
21	08:33	07:31	06:18	05:57	04:52	04:25
	16:22	17:30	18:30	06:44 (B22)	20:34	21:35
22	08:32	07:28	06:16	05:54	04:50	04:26
	16:24	17:32	18:32	06:42 (B22)	20:36	21:37
23	08:30	07:26	06:13	05:52	04:48	04:26
	16:26	17:35	18:34	06:40 (B22)	20:38	21:38
24	08:29	07:23	06:10	05:49	04:47	04:26
	16:28	17:37	18:36	06:38 (B22)	20:40	21:40
25	08:27	07:21	06:08	05:47	04:45	04:27
	16:30	17:39	18:39	06:36 (B22)	20:42	21:42
26	08:26	07:18	06:05	05:45	04:44	04:27
	16:32	17:41	18:41	06:34 (B22)	20:44	21:44
27	08:24	07:16	06:02	05:42	04:42	04:27
	16:34	17:43	18:43	06:32 (B22)	20:46	21:46
28	08:22	07:13	06:00	05:40	04:41	04:28
	16:37	17:45	18:45	06:30 (B22)	20:48	21:48
29	08:20		06:57	05:37	04:40	04:29
	16:39		19:47	06:28 (B22)	20:50	21:50
30	08:19		06:54	05:35	04:38	04:29
	16:41		19:49	06:26 (B22)	20:52	21:52
31	08:17		06:52		04:37	
	16:43		19:51		21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case		151	85			
Sun reduction		0.20	0.41			
Oper. time red.		0.98	0.98			
Wind dir. red.		0.62	0.64			
Total reduction		0.12	0.26			
Total, real		18	22			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jasmini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (93)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	07:55 (B14) 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:12 (B14) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:11 (B14) 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:10 (B14) 15:43
5	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:05 (B14) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:07 (B14) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:08 (B14) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:10 (B14) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:11 (B14) 15:39
10	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:12 (B14) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:13 (B14) 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:14 (B14) 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:15 (B14) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:16 (B14) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:17 (B14) 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:18 (B14) 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:19 (B14) 15:38
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:20 (B14) 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:21 (B14) 15:38
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:22 (B14) 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:23 (B14) 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:24 (B14) 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:25 (B14) 15:40
24	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:26 (B14) 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:27 (B14) 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:28 (B14) 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:17 15:50	08:29 (B14) 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:46	08:19 15:48	08:30 (B14) 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47	08:31 (B14) 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:23 15:46	08:32 (B14) 15:46
31	05:14 21:30	06:15 20:17		08:19 17:38	08:25 15:45	08:33 (B14) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			82	92	56	
Sun reduction			0.43	0.26	0.08	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.64	0.62	0.62	
Total reduction			0.27	0.15	0.05	
Total, real			22	14	3	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunberzi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (189)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	07:19 (B24) 20:55	06:19 (B14) 21:53
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:19 (B24) 20:57	06:19 (B14) 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	07:20 (B24) 21:00	06:19 (B14) 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:21 (B24) 21:02	06:19 (B14) 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:22 (B24) 21:04	06:20 (B14) 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:32 (B24) 21:06	06:20 (B14) 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	06:21 (B14) 22:00
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	06:22 (B14) 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	06:23 (B14) 22:02
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	06:24 (B14) 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	06:26 (B14) 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	06:29 (B14) 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	06:36 (B14) 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	06:31 (B14) 21:31	04:55 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	06:29 (B14) 21:33	04:54 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:26 (B14) 21:35	04:52 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:25 (B14) 21:36	04:50 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:23 (B14) 21:38	04:49 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:22 (B14) 21:40	04:47 22:10
25	08:27 16:30	07:21 17:39	06:08 18:39	06:33 (B24) 20:43	06:21 (B14) 21:42	04:45 22:10
26	08:26 16:32	07:18 17:41	06:05 18:41	06:30 (B24) 20:45	06:20 (B14) 21:43	04:44 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	06:27 (B24) 20:47	06:19 (B14) 21:45	04:42 22:10
28	08:22 16:37	07:13 17:45	06:00 18:45	06:25 (B24) 20:49	06:19 (B14) 21:47	04:41 22:10
29	08:20 16:39	07:11 17:47	06:57 19:47	07:22 (B24) 20:51	06:19 (B14) 21:48	05:13 (B22) 22:10
30	08:18 16:41	07:09 17:49	06:54 19:49	07:20 (B24) 20:53	06:19 (B14) 21:50	05:12 (B22) 22:09
31	08:17 16:43	07:08 17:51	06:52 19:51	07:20 (B24) 20:53	06:50 (B14) 21:51	05:11 (B22) 22:09
Potential sun hours	235	266	366	426	508	528
Total, worst case			89	370	392	415
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.66	0.65	0.66	0.67
Total reduction			0.26	0.32	0.36	0.37
Total, real			23	118	143	152

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunberzi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (189)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:20 (B22)	05:16	06:39 (B14)	06:17	07:17
	22:09	14	05:34 (B22)	21:28	10	06:49 (B14)
2	04:31	05:19 (B22)	05:18	06:35 (B14)	06:19	07:19
	22:08	15	05:34 (B22)	21:26	15	06:50 (B14)
3	04:32	05:19 (B22)	05:20	06:34 (B14)	06:21	07:21
	22:08	15	05:34 (B22)	21:24	18	06:52 (B14)
4	04:33	05:19 (B22)	05:22	06:33 (B14)	06:23	07:23
	22:07	16	05:35 (B22)	21:22	21	06:54 (B14)
5	04:34	05:20 (B22)	05:24	06:32 (B14)	06:25	07:25
	22:07	16	05:36 (B22)	21:20	23	06:55 (B14)
6	04:35	05:20 (B22)	05:25	06:30 (B14)	06:27	07:28
	22:06	16	05:36 (B22)	21:17	25	06:55 (B14)
7	04:36	05:19 (B22)	05:27	06:30 (B14)	06:29	07:17 (B24)
	22:05	17	05:36 (B22)	21:15	26	06:56 (B14)
8	04:37	05:19 (B22)	05:29	06:29 (B14)	06:31	07:15 (B24)
	22:04	18	05:37 (B22)	21:13	27	06:56 (B14)
9	04:38	05:19 (B22)	05:31	06:29 (B14)	06:33	07:14 (B24)
	22:03	18	05:37 (B22)	21:11	28	06:57 (B14)
10	04:40	05:19 (B22)	05:33	06:28 (B14)	06:35	07:13 (B24)
	22:02	18	05:37 (B22)	21:08	29	06:57 (B14)
11	04:41	05:20 (B22)	05:35	06:28 (B14)	06:37	07:12 (B24)
	22:01	18	05:38 (B22)	21:06	30	06:58 (B14)
12	04:42	05:20 (B22)	05:37	06:27 (B14)	06:39	07:11 (B24)
	22:00	18	05:38 (B22)	21:04	30	06:57 (B14)
13	04:44	05:20 (B22)	05:39	06:27 (B14)	06:41	07:11 (B24)
	21:59	18	05:38 (B22)	21:02	30	06:57 (B14)
14	04:45	05:21 (B22)	05:41	06:27 (B14)	06:43	07:12 (B24)
	21:58	17	05:38 (B22)	20:59	30	06:57 (B14)
15	04:46	05:23 (B22)	05:43	06:27 (B14)	06:45	07:14 (B24)
	21:57	15	05:38 (B22)	20:57	30	06:57 (B14)
16	04:48	05:24 (B22)	05:45	06:27 (B14)	06:47	07:16 (B24)
	21:55	14	05:38 (B22)	20:54	29	06:56 (B14)
17	04:49	05:25 (B22)	05:47	06:27 (B14)	06:49	07:18 (B24)
	21:54	13	05:38 (B22)	20:52	29	06:56 (B14)
18	04:51	05:27 (B22)	05:49	06:28 (B14)	06:51	07:20 (B24)
	21:52	11	05:38 (B22)	20:50	27	06:55 (B14)
19	04:53	05:28 (B22)	05:51	06:28 (B14)	06:53	07:24 (B24)
	21:51	9	05:37 (B22)	20:47	26	06:54 (B14)
20	04:54	05:30 (B22)	05:53	06:28 (B14)	06:55	07:24 (B24)
	21:49	7	05:37 (B22)	20:45	25	06:53 (B14)
21	04:56	05:31 (B22)	05:55	06:29 (B14)	06:57	07:25 (B24)
	21:48	5	05:36 (B22)	20:42	22	06:51 (B14)
22	04:58	05:33 (B22)	05:57	06:31 (B14)	06:59	07:26 (B24)
	21:46	3	05:36 (B22)	20:40	19	06:50 (B14)
23	04:59		05:59	06:33 (B14)	07:01	07:27 (B24)
	21:45		20:37	06:48 (B14)	15	07:15
24	05:01		06:01	06:36 (B14)	07:03	07:28 (B24)
	21:43		20:35	06:44 (B14)	8	07:12
25	05:03		06:03			07:05
	21:41		20:32			16:52
26	05:05		06:05			07:07
	21:39		20:30			16:50
27	05:06		06:07			07:09
	21:38		20:27			16:48
28	05:08		06:09			07:11
	21:36		20:24			16:45
29	05:10		06:11			07:13
	21:34		20:22			16:43
30	05:12		06:13			07:15
	21:32		20:19			16:41
31	05:14		06:15			07:17
	21:30		20:17			16:38
Potential sun hours	529		469		385	324
Total, worst case	311		572		170	
Sun reduction	0.49		0.50		0.43	
Oper. time red.	0.98		0.98		0.98	
Wind dir. red.	0.67		0.65		0.66	
Total reduction	0.32		0.32		0.27	
Total, real	101		181		47	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaundruvas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (23)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April		May		June
1	08:51 15:48	08:15 16:45	07:11 17:47		06:49 19:53		05:32 20:55		04:36 21:53
2	08:50 15:49	08:13 16:47	07:08 17:50		06:46 19:55		05:30 20:57	18	05:28 (B17) 05:09 (B17)
3	08:50 15:51	08:11 16:50	07:06 17:52		06:43 19:57		05:28 21:00	19	05:28 (B17) 05:09 (B17)
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	07:21 (B1)	05:26 21:02	19	05:28 (B17) 05:09 (B17)
5	08:49 15:53	08:07 16:54	07:00 17:56		06:38 20:01	07:15 (B1)	05:23 21:04	20	05:29 (B17) 05:30 (B17)
6	08:49 15:55	08:05 16:56	06:58 17:58		06:35 20:03	07:01 (B2)	05:21 21:06	20	05:30 (B17) 05:29 (B17)
7	08:48 15:56	08:03 16:59	06:55 18:00		06:33 20:05	06:58 (B2)	05:19 21:08	20	05:29 (B17) 05:10 (B17)
8	08:48 15:58	08:00 17:01	06:53 18:03		06:30 20:08	06:55 (B2)	05:17 21:10	20	05:10 (B17) 05:30 (B17)
9	08:47 15:59	07:58 17:03	06:50 18:05	6	07:16 (B4) 07:22 (B4)	06:27 20:10	05:15 21:12	20	05:10 (B17) 05:30 (B17)
10	08:46 16:01	07:56 17:05	06:47 18:07	10	07:13 (B4) 07:23 (B4)	06:25 20:12	05:13 21:14	21	05:10 (B17) 05:31 (B17)
11	08:45 16:03	07:54 17:08	06:45 18:09	14	07:10 (B4) 07:24 (B4)	06:22 20:14	05:10 21:16	21	05:10 (B17) 05:30 (B17)
12	08:44 16:04	07:52 17:10	06:42 18:11	17	07:08 (B4) 07:25 (B4)	06:20 20:16	05:08 21:18	21	05:10 (B17) 05:31 (B17)
13	08:43 16:06	07:49 17:12	06:39 18:13	19	07:06 (B4) 07:25 (B4)	06:17 20:18	05:06 21:20	20	05:11 (B17) 05:31 (B17)
14	08:42 16:08	07:47 17:14	06:37 18:15	20	07:05 (B4) 07:25 (B4)	06:14 20:20	05:04 21:22	20	05:10 (B17) 05:30 (B17)
15	08:41 16:10	07:45 17:17	06:34 18:17	19	07:05 (B4) 07:24 (B4)	06:12 20:22	05:02 21:24	20	05:11 (B17) 05:31 (B17)
16	08:40 16:12	07:43 17:19	06:32 18:20	19	07:05 (B4) 07:24 (B4)	06:09 20:24	05:01 21:25	20	05:11 (B17) 05:31 (B17)
17	08:39 16:14	07:40 17:21	06:29 18:22	18	07:05 (B4) 07:23 (B4)	06:07 20:26	04:59 21:27	19	05:12 (B17) 05:31 (B17)
18	08:37 16:16	07:38 17:23	06:26 18:24	16	07:06 (B4) 07:22 (B4)	06:04 20:28	04:57 21:29	20	05:12 (B17) 05:32 (B17)
19	08:36 16:18	07:35 17:25	06:23 18:26	13	07:08 (B4) 07:21 (B4)	06:02 20:30	04:55 21:31	20	05:12 (B17) 05:32 (B17)
20	08:35 16:20	07:33 17:28	06:21 18:28	9	07:09 (B4) 07:18 (B4)	05:59 20:33	04:53 21:33	20	05:12 (B17) 05:32 (B17)
21	08:33 16:22	07:31 17:30	06:18 18:30		05:57 20:35	07:01 (B1)	04:52 21:35	20	05:12 (B17) 05:32 (B17)
22	08:32 16:24	07:28 17:32	06:15 18:32		05:54 20:37	07:02 (B1)	04:50 21:37	20	05:13 (B17) 05:33 (B17)
23	08:30 16:26	07:26 17:34	06:13 18:34		05:52 20:39	07:03 (B1)	04:48 21:38	20	05:13 (B17) 05:33 (B17)
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	07:03 (B1)	04:47 21:40	20	05:13 (B17) 05:33 (B17)
25	08:27 16:30	07:21 17:39	06:07 18:38		05:47 20:43	07:04 (B1)	04:45 21:42	19	05:14 (B17) 05:33 (B17)
26	08:26 16:32	07:18 17:41	06:05 18:40		05:44 20:45	07:04 (B1)	04:44 21:43	20	05:13 (B17) 05:33 (B17)
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	07:06 (B1)	04:42 21:45	20	05:14 (B17) 05:34 (B17)
28	08:22 16:36	07:13 17:45	05:59 18:45		05:39 20:49	07:08 (B1)	04:41 21:47	20	05:14 (B17) 05:34 (B17)
29	08:20 16:39		06:57 19:47		05:37 20:51	07:11 (B1)	04:39 21:48	20	05:14 (B17) 05:34 (B17)
30	08:18 16:41		06:54 19:49		05:35 20:53		04:38 21:50	20	05:15 (B17) 05:35 (B17)
31	08:17 16:43		06:51 19:51				04:37 21:51	17	05:11 (B17) 05:28 (B17)
Potential sun hours	235	266	366		426		508		529
Total, worst case			180		870		83		596
Sun reduction			0.41		0.50		0.57		0.56
Oper. time red.			0.98		0.98		0.98		0.98
Wind dir. red.			0.63		0.66		0.67		0.67
Total reduction			0.25		0.32		0.37		0.37
Total, real			45		280		31		218

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaundruvas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (23)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December		
1	04:30		05:14 (B17)	05:16			06:17		06:49 (B2)	07:17		07:46 (B4)	07:23		08:24			
	22:09	20	05:34 (B17)	21:28			20:14	48	07:37 (B1)	18:54	19	08:05 (B4)	16:36		15:45			
2	04:31		05:15 (B17)	05:17			06:19		06:49 (B2)	07:19		07:48 (B4)	07:25		08:26			
	22:09	20	05:35 (B17)	21:26			20:11	47	07:36 (B1)	18:51	16	08:04 (B4)	16:34		15:44			
3	04:32		05:15 (B17)	05:19			06:21		06:51 (B2)	07:21		07:50 (B4)	07:27		08:28			
	22:08	20	05:35 (B17)	21:24			20:09	44	07:35 (B1)	18:48	12	08:02 (B4)	16:31		15:43			
4	04:33		05:15 (B17)	05:21			06:23		06:53 (B2)	07:23		07:52 (B4)	07:29		08:29			
	22:07	20	05:35 (B17)	21:22			20:06	39	07:33 (B1)	18:46	8	08:00 (B4)	16:29		15:42			
5	04:33		05:15 (B17)	05:23			06:25		06:54 (B2)	07:25		07:54 (B4)	07:31		08:31			
	22:07	21	05:36 (B17)	21:19			20:03	34	07:31 (B1)	18:43	3	07:57 (B4)	16:27		15:41			
6	04:35		05:16 (B17)	05:25			06:27		06:56 (B2)	07:27			07:33		08:32			
	22:06	20	05:36 (B17)	21:17			20:01	26	07:29 (B1)	18:40			16:25		15:41			
7	04:36		05:16 (B17)	05:27			06:29		07:10 (B1)	07:29			07:36		08:34			
	22:05	20	05:36 (B17)	21:15			19:58	16	07:26 (B1)	18:38			16:23		15:40			
8	04:37		05:16 (B17)	05:29			06:31		07:14 (B1)	07:32			07:38		08:35			
	22:04	20	05:36 (B17)	21:13			19:55	7	07:21 (B1)	18:35			16:21		15:40			
9	04:38		05:16 (B17)	05:31			06:33			07:34			07:40		08:37			
	22:03	20	05:36 (B17)	21:11			19:53			18:32			16:19		15:39			
10	04:39		05:16 (B17)	05:33			06:35			07:36			07:42		08:38			
	22:02	20	05:36 (B17)	21:08			19:50			18:30			16:17		15:39			
11	04:41		05:17 (B17)	05:35			06:37			07:38			07:44		08:39			
	22:01	19	05:36 (B17)	21:06			19:47			18:27			16:15		15:38			
12	04:42		05:19 (B17)	05:37			06:39			07:40			07:46		08:40			
	22:00	17	05:36 (B17)	21:04			19:45			18:25			16:13		15:38			
13	04:43		05:20 (B17)	05:39		07:24 (B1)	06:41			07:42			07:49		08:42			
	21:59	16	05:36 (B17)	21:01	1	07:25 (B1)	19:42			18:22			16:11		15:38			
14	04:45		05:21 (B17)	05:41		07:18 (B1)	06:43			07:44			07:51		08:43			
	21:58	14	05:35 (B17)	20:59	13	07:31 (B1)	19:39			18:19			16:09		15:38			
15	04:46		05:22 (B17)	05:43		07:15 (B1)	06:45			07:46			07:53		08:44			
	21:57	13	05:35 (B17)	20:57	19	07:34 (B1)	19:37			18:17			16:07		15:38			
16	04:48		05:24 (B17)	05:45		07:13 (B1)	06:47			07:48			07:55		08:45			
	21:55	11	05:35 (B17)	20:54	23	07:36 (B1)	19:34			18:14			16:06		15:38			
17	04:49		05:25 (B17)	05:47		07:11 (B1)	06:49			07:50			07:57		08:46			
	21:54	9	05:34 (B17)	20:52	25	07:36 (B1)	19:31			18:12			16:04		15:38			
18	04:51		05:27 (B17)	05:49		07:09 (B1)	06:51			07:52			07:59		08:46			
	21:52	7	05:34 (B17)	20:50	28	07:37 (B1)	19:29			18:09			16:02		15:38			
19	04:52		05:28 (B17)	05:51		07:08 (B1)	06:53			07:55			08:01		08:47			
	21:51	4	05:32 (B17)	20:47	30	07:38 (B1)	19:26			18:07			16:01		15:38			
20	04:54		05:30 (B17)	05:53		07:07 (B1)	06:55			07:57			08:03		08:48			
	21:49	1	05:31 (B17)	20:45	32	07:39 (B1)	19:23			18:04			15:59		15:38			
21	04:56			05:55		07:06 (B1)	06:57			07:59			08:05		08:48			
	21:48			20:42	34	07:40 (B1)	19:20			18:02			15:58		15:39			
22	04:57			05:57		07:06 (B1)	06:59			08:01			08:07		08:49			
	21:46			20:40	34	07:40 (B1)	19:18			17:59			15:56		15:39			
23	04:59			05:59		07:05 (B1)	07:01		07:54 (B4)	08:03			08:09		08:50			
	21:45			20:37	36	07:41 (B1)	19:15	6	08:00 (B4)	17:57			15:55		15:40			
24	05:01			06:01		07:05 (B1)	07:03		07:51 (B4)	08:05			08:11		08:50			
	21:43			20:35	36	07:41 (B1)	19:12	12	08:03 (B4)	17:55			15:53		15:40			
25	05:03			06:03		07:04 (B1)	07:05		07:49 (B4)	07:07			08:13		08:50			
	21:41			20:32	37	07:41 (B1)	19:10	15	08:04 (B4)	16:52			15:52		15:41			
26	05:04			06:05		07:03 (B1)	07:07		07:48 (B4)	07:10			08:15		08:51			
	21:39			20:29	37	07:40 (B1)	19:07	18	08:06 (B4)	16:50			15:51		15:42			
27	05:06			06:07		06:54 (B2)	07:09		07:47 (B4)	07:12			08:17		08:51			
	21:38			20:27	46	07:40 (B1)	19:04	19	08:06 (B4)	16:47			15:49		15:43			
28	05:08			06:09		06:52 (B2)	07:11		07:47 (B4)	07:14			08:19		08:51			
	21:36			20:24	47	07:39 (B1)	19:02	19	08:06 (B4)	16:45			15:48		15:44			
29	05:10			06:11		06:51 (B2)	07:13		07:46 (B4)	07:16			08:21		08:51			
	21:34			20:22	48	07:39 (B1)	18:59	20	08:06 (B4)	16:43			15:47		15:44			
30	05:12			06:13		06:50 (B2)	07:15		07:46 (B4)	07:18			08:22		08:51			
	21:32			20:19	49	07:39 (B1)	18:56	19	08:05 (B4)	16:40			15:46		15:45			
31	05:14			06:15		06:49 (B2)				07:20					08:51			
	21:30			20:17	49	07:38 (B1)				16:38					15:47			
Potential sun hours	529			469			385			324			247		216			
Total, worst case		312			624			389			58							
Sun reduction		0.49			0.50			0.43			0.26							
Oper. time red.		0.98			0.98			0.98			0.98							
Wind dir. red.		0.67			0.66			0.65			0.63							
Total reduction		0.32			0.32			0.27			0.16							
Total, real		101			200			105			9							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaundruvas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (113)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	06:39 (B1) 21:53
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	06:39 (B1) 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	06:40 (B1) 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	06:40 (B1) 21:57
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	06:41 (B1) 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	06:42 (B1) 21:59
7	08:48 15:56	08:03 16:59	06:55 18:00	06:33 20:05	05:19 21:08	06:42 (B1) 22:00
8	08:48 15:58	08:00 17:01	06:53 18:03	06:30 20:08	05:17 21:10	06:43 (B1) 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:15 21:12	06:44 (B1) 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	06:50 (B2) 06:55 (B2)	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	06:48 (B2) 06:57 (B2)	05:10 21:16
12	08:44 16:04	07:52 17:10	06:42 18:11	06:20 20:16	06:45 (B2) 06:57 (B2)	05:08 21:18
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	06:43 (B2) 07:06 (B1)	05:06 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	06:40 (B2) 07:10 (B1)	05:04 21:22
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	06:40 (B2) 07:13 (B1)	05:02 21:24
16	08:40 16:12	07:43 17:19	06:31 18:20	06:09 20:24	06:39 (B2) 07:14 (B1)	05:01 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	06:39 (B2) 07:16 (B1)	04:59 21:27
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	06:39 (B2) 07:17 (B1)	04:57 21:29
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	06:40 (B2) 07:18 (B1)	04:55 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	06:41 (B2) 07:18 (B1)	04:53 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:42 (B1) 07:19 (B1)	04:52 21:35
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	06:42 (B1) 07:20 (B1)	04:50 21:36
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:41 (B1) 07:19 (B1)	04:48 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:40 (B1) 07:20 (B1)	04:47 21:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	06:40 (B1) 07:20 (B1)	04:45 21:42
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	06:39 (B1) 07:19 (B1)	04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:39 (B1) 07:19 (B1)	04:42 21:45
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	06:39 (B1) 07:19 (B1)	04:41 21:47
29	08:20 16:39		06:57 19:47	05:37 20:51	06:40 (B1) 07:19 (B1)	04:39 21:48
30	08:18 16:41		06:54 19:49	05:35 20:53	06:39 (B1) 07:18 (B1)	04:38 21:50
31	08:17 16:43		06:51 19:51			04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case			204	686	388	348
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.63	0.66	0.66	0.67
Total reduction			0.25	0.32	0.36	0.36
Total, real			52	220	141	126

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaundruvas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (113)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November		December	
1	04:30		05:07 (B17)	05:16		06:58 (B1)	06:17		06:47 (B2)	07:17		07:46 (B4)	07:23		08:24	
	22:09	12	05:19 (B17)	21:28	19	07:17 (B1)	20:14	9	06:56 (B2)	18:54	8	07:54 (B4)	16:36		15:45	
2	04:31		05:08 (B17)	05:17		06:56 (B1)	06:19		06:49 (B2)	07:19		07:48 (B4)	07:25		08:26	
	22:09	11	05:19 (B17)	21:26	23	07:19 (B1)	20:11	5	06:54 (B2)	18:51	1	07:49 (B4)	16:34		15:44	
3	04:32		05:09 (B17)	05:19		06:55 (B1)	06:21			07:21			07:27		08:28	
	22:08	11	05:20 (B17)	21:24	26	07:21 (B1)	20:09			18:48			16:31		15:43	
4	04:33		05:10 (B17)	05:21		06:54 (B1)	06:23			07:23			07:29		08:29	
	22:07	10	05:20 (B17)	21:22	28	07:22 (B1)	20:06			18:46			16:29		15:42	
5	04:33		05:11 (B17)	05:23		06:52 (B1)	06:25			07:25			07:31		08:31	
	22:07	8	05:19 (B17)	21:19	30	07:22 (B1)	20:03			18:43			16:27		15:41	
6	04:35		05:12 (B17)	05:25		06:51 (B1)	06:27			07:27			07:33		08:32	
	22:06	7	05:19 (B17)	21:17	32	07:23 (B1)	20:01			18:40			16:25		15:41	
7	04:36		05:13 (B17)	05:27		06:51 (B1)	06:29			07:29			07:36		08:34	
	22:05	6	05:19 (B17)	21:15	33	07:24 (B1)	19:58			18:38			16:23		15:40	
8	04:37		05:14 (B17)	05:29		06:50 (B1)	06:31			07:32			07:38		08:35	
	22:04	4	05:18 (B17)	21:13	35	07:25 (B1)	19:55			18:35			16:21		15:40	
9	04:38		05:15 (B17)	05:31		06:50 (B1)	06:33			07:34			07:40		08:37	
	22:03	2	05:17 (B17)	21:11	36	07:26 (B1)	19:53			18:32			16:19		15:39	
10	04:39			05:33		06:48 (B1)	06:35			07:36			07:42		08:38	
	22:02			21:08	37	07:25 (B1)	19:50			18:30			16:17		15:39	
11	04:41			05:35		06:48 (B1)	06:37			07:38			07:44		08:39	
	22:01			21:06	38	07:26 (B1)	19:47			18:27			16:15		15:38	
12	04:42			05:37		06:47 (B1)	06:39			07:40			07:46		08:40	
	22:00			21:04	39	07:26 (B1)	19:45			18:25			16:13		15:38	
13	04:43			05:39		06:47 (B1)	06:41			07:42			07:49		08:42	
	21:59			21:01	40	07:27 (B1)	19:42			18:22			16:11		15:38	
14	04:45			05:41		06:47 (B1)	06:43			07:44			07:51		08:43	
	21:58			20:59	40	07:27 (B1)	19:39			18:19			16:09		15:38	
15	04:46			05:43		06:47 (B1)	06:45			07:46			07:53		08:44	
	21:57			20:57	40	07:27 (B1)	19:37			18:17			16:07		15:38	
16	04:48			05:45		06:47 (B1)	06:47			07:48			07:55		08:45	
	21:55			20:54	40	07:27 (B1)	19:34			18:14			16:06		15:38	
17	04:49			05:47		06:46 (B1)	06:49			07:50			07:57		08:46	
	21:54			20:52	40	07:26 (B1)	19:31			18:12			16:04		15:38	
18	04:51			05:49		06:46 (B1)	06:51			07:52			07:59		08:46	
	21:52			20:50	39	07:25 (B1)	19:29			18:09			16:02		15:38	
19	04:52			05:51		06:46 (B1)	06:53		07:50 (B4)	07:55			08:01		08:47	
	21:51			20:47	39	07:25 (B1)	19:26	5	07:55 (B4)	18:07			16:01		15:38	
20	04:54			05:53		06:46 (B1)	06:55		07:46 (B4)	07:57			08:03		08:48	
	21:49			20:45	39	07:25 (B1)	19:23	12	07:58 (B4)	18:04			15:59		15:38	
21	04:56			05:55		06:47 (B1)	06:57		07:44 (B4)	07:59			08:05		08:48	
	21:48			20:42	37	07:24 (B1)	19:20	16	08:00 (B4)	18:02			15:58		15:39	
22	04:57			05:57		06:47 (B2)	06:59		07:42 (B4)	08:01			08:07		08:49	
	21:46			20:40	36	07:23 (B1)	19:18	17	07:59 (B4)	17:59			15:56		15:39	
23	04:59			05:59		06:45 (B2)	07:01		07:41 (B4)	08:03			08:09		08:50	
	21:45			20:37	37	07:22 (B1)	19:15	19	08:00 (B4)	17:57			15:55		15:40	
24	05:01			06:01		06:44 (B2)	07:03		07:40 (B4)	08:05			08:11		08:50	
	21:43			20:35	37	07:21 (B1)	19:12	20	08:00 (B4)	17:55			15:53		15:40	
25	05:03			06:03		06:43 (B2)	07:05		07:39 (B4)	07:07			08:13		08:50	
	21:41			20:32	37	07:20 (B1)	19:10	21	08:00 (B4)	16:52			15:52		15:41	
26	05:04			06:05		06:41 (B2)	07:07		07:39 (B4)	07:09			08:15		08:51	
	21:39			20:29	37	07:18 (B1)	19:07	20	07:59 (B4)	16:50			15:51		15:42	
27	05:06			06:07		06:41 (B2)	07:09		07:40 (B4)	07:12			08:17		08:51	
	21:38			20:27	35	07:16 (B1)	19:04	20	08:00 (B4)	16:47			15:49		15:43	
28	05:08			06:09		06:40 (B2)	07:11		07:40 (B4)	07:14			08:19		08:51	
	21:36			20:24	34	07:14 (B1)	19:02	19	07:59 (B4)	16:45			15:48		15:44	
29	05:10			06:11		06:41 (B2)	07:13		07:42 (B4)	07:16			08:21		08:51	
	21:34			20:22	30	07:11 (B1)	18:59	16	07:58 (B4)	16:43			15:47		15:44	
30	05:12			06:13		06:43 (B2)	07:15		07:44 (B4)	07:18			08:22		08:51	
	21:32	9	07:12 (B1)	20:19	20	07:05 (B1)	18:56	12	07:56 (B4)	16:40			15:46		15:45	
31	05:14		07:01 (B1)	06:15		06:45 (B2)				07:20					08:51	
	21:30	15	07:16 (B1)	20:17	12	06:57 (B2)				16:38					15:47	
Potential sun hours	529			469			385			324			247		216	
Total, worst case		95			1045		211			9					41	
Sun reduction		0.49			0.50		0.43			0.26					0.07	
Oper. time red.		0.98			0.98		0.98			0.98					0.98	
Wind dir. red.		0.66			0.66		0.64			0.63					0.64	
Total reduction		0.32			0.32		0.27			0.16					0.04	
Total, real		30			334		56			1					2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunie Robežnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (222)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:32 20:55	20:01 (B25) 21:52	04:36 22:09	04:30 21:28	05:16 21:08	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	20:01 (B25) 21:54	04:35 22:08	04:31 21:25	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	20:01 (B25) 21:55	04:34 22:08	04:32 21:23	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	20:02 (B25) 21:56	04:33 22:07	04:33 21:21	05:21 20:25 (B25)	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	20:02 (B25) 21:57	04:32 22:06	04:34 21:19	05:23 20:13 (B25)	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	20:03 (B25) 21:59	04:31 22:06	04:35 21:17	05:25 20:27 (B25)	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	20:04 (B25) 22:00	04:30 22:05	04:36 21:15	05:27 20:28 (B25)	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	20:05 (B25) 22:01	04:29 22:04	04:37 21:13	05:29 20:29 (B25)	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	20:08 (B25) 22:02	04:28 22:03	04:38 21:10	05:31 20:29 (B25)	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:13 21:13	20:13 (B25) 22:02	04:28 22:03	04:39 21:08	05:33 20:29 (B25)	06:35 19:50	07:35 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:15	20:10 (B25) 22:04	04:27 22:01	04:41 21:06	05:35 20:29 (B25)	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:20 20:16	05:08 21:17	20:10 (B25) 22:04	04:27 22:01	04:42 21:04	05:37 20:29 (B25)	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	20:10 (B25) 22:05	04:26 22:01	04:43 21:01	05:39 20:29 (B25)	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	20:10 (B25) 22:06	04:26 22:01	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	20:10 (B25) 22:07	04:26 22:01	04:46 20:56	05:43 20:25 (B25)	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	20:11 (B25) 22:08	04:25 22:01	04:48 20:54	05:45 20:23 (B25)	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	20:11 (B25) 22:08	04:25 22:01	04:49 20:52	05:47 20:19 (B25)	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	20:13 (B25) 22:09	04:25 22:01	04:51 20:49	05:49 20:17 (B25)	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	20:13 (B25) 22:09	04:25 22:01	04:52 20:47	05:51 20:18 (B25)	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	20:14 (B25) 22:09	04:25 22:01	04:54 20:44	05:53 20:19 (B25)	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	20:15 (B25) 22:10	04:25 22:01	04:56 20:42	05:55 20:18 (B25)	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	20:16 (B25) 22:10	04:25 22:01	04:57 20:39	05:57 20:18 (B25)	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	20:17 (B25) 22:10	04:26 22:01	04:59 20:37	05:59 20:15 (B25)	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	20:18 (B25) 22:10	04:26 22:01	05:01 20:34	06:01 20:12 (B25)	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	20:19 (B25) 22:10	04:26 22:01	06:03 20:32	06:03 20:10 (B25)	07:05 19:09	08:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	20:20 (B25) 22:10	04:27 22:01	06:05 20:29	06:05 20:07 (B25)	07:07 19:07	08:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	20:21 (B25) 22:10	04:27 22:01	06:07 20:27	06:07 20:08 (B25)	07:09 19:04	08:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	20:22 (B25) 22:10	04:28 22:01	06:09 20:24	06:09 20:09 (B25)	07:11 19:01	08:14 16:45	08:18 15:48	08:51 15:44
29	08:20 16:39	07:11 19:47	06:57 20:51	05:37 21:48	04:40 21:48	20:23 (B25) 22:09	04:29 22:01	06:11 20:22	06:11 20:09 (B25)	07:13 18:59	08:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41	07:09 19:54	06:54 20:53	05:35 21:49	04:38 21:49	20:24 (B25) 22:09	04:29 22:01	06:13 20:19	06:13 20:06 (B25)	07:15 18:56	08:18 16:40	08:22 15:46	08:51 15:46
31	08:16 16:43	07:07 19:51	06:51 20:51	05:37 21:51	04:37 21:51	20:25 (B25) 22:10	04:30 22:01	06:15 20:16	06:15 20:03 (B25)	07:20 16:38	08:20 16:38	08:25 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216	
Total, worst case				78	136			218					
Sun reduction				0.50	0.57			0.50					
Oper. time red.				0.98	0.98			0.98					
Wind dir. red.				0.62	0.62			0.62					
Total reduction				0.31	0.35			0.30					
Total, real				24	47			66					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunjosti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (182)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:20 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:22 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:26 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:28 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:30 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:12	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:09	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:24	06:26 18:24	06:04 20:29	04:57 21:29	04:26 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:50 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:04 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:06 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:05	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:25	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunlakstīgas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (63)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	06:01 (B22) 21:53
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	06:01 (B22) 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:32 (B24) 19:57	05:28 21:00	06:02 (B22) 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:29 (B24) 19:59	05:26 21:02	06:03 (B22) 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	07:26 (B24) 20:01	05:24 21:04	06:03 (B22) 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	07:24 (B24) 20:03	05:21 21:06	06:05 (B22) 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	07:21 (B24) 20:06	05:19 21:08	06:06 (B22) 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	07:18 (B24) 20:08	05:17 21:10	06:15 (B22) 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	07:19 (B24) 20:10	05:15 21:12	06:17 (B22) 22:02
10	08:46 16:01	07:56 17:05	06:48 18:07	07:19 (B24) 20:12	05:13 21:14	06:18 (B22) 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	07:19 (B24) 20:14	05:11 21:16	06:19 (B22) 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	07:08 (B14) 20:16	05:09 21:18	06:20 (B22) 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	07:05 (B14) 20:17	05:07 21:20	06:21 (B22) 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	07:02 (B14) 20:20	05:05 21:22	06:22 (B22) 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	07:00 (B14) 20:22	05:03 21:24	06:23 (B22) 22:08
16	08:40 16:12	07:43 17:19	06:32 18:20	06:58 (B14) 20:24	05:01 21:25	06:24 (B22) 22:09
17	08:39 16:14	07:40 17:21	06:29 18:22	06:56 (B14) 20:26	04:59 21:27	06:25 (B22) 22:10
18	08:37 16:16	07:38 17:23	06:26 18:24	06:55 (B14) 20:28	04:57 21:29	06:26 (B22) 22:11
19	08:36 16:18	07:36 17:26	06:24 18:26	06:55 (B14) 20:31	04:55 21:31	06:27 (B22) 22:12
20	08:35 16:20	07:33 17:28	06:21 18:28	06:54 (B14) 20:33	04:54 21:33	06:28 (B22) 22:13
21	08:33 16:22	07:31 17:30	06:18 18:30	06:54 (B14) 20:35	04:52 21:35	06:29 (B22) 22:14
22	08:32 16:24	07:28 17:32	06:16 18:32	06:54 (B14) 20:37	04:50 21:37	06:30 (B22) 22:15
23	08:30 16:26	07:26 17:34	06:13 18:34	06:54 (B14) 20:39	04:48 21:38	06:31 (B22) 22:16
24	08:29 16:28	07:23 17:37	06:10 18:36	06:54 (B14) 20:41	06:16 (B22) 21:40	06:32 (B22) 22:17
25	08:27 16:30	07:21 17:39	06:08 18:39	06:55 (B14) 20:43	06:14 (B22) 21:42	06:33 (B22) 22:18
26	08:26 16:32	07:18 17:41	06:05 18:41	06:55 (B14) 20:45	06:11 (B22) 21:43	06:34 (B22) 22:19
27	08:24 16:34	07:16 17:43	06:02 18:43	06:56 (B14) 20:47	06:09 (B22) 21:45	06:35 (B22) 22:20
28	08:22 16:37	07:13 17:45	06:00 18:45	06:58 (B14) 20:49	06:07 (B22) 21:47	06:36 (B22) 22:21
29	08:20 16:39		06:57 19:47	07:59 (B14) 20:51	06:05 (B22) 21:48	06:37 (B22) 22:22
30	08:19 16:41		06:54 19:49	08:04 (B14) 20:53	06:03 (B22) 21:50	06:38 (B22) 22:23
31	08:17 16:43		06:52 19:51	08:06 (B14)	06:21 (B22)	04:37 21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case			541	75	108	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.63	0.66	0.66	
Total reduction			0.25	0.32	0.37	
Total, real			137	24	40	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunlakstīgalas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (63)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:46 (B14) 16:36 (B24)	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:59 (B24) 16:34 (B24)	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:57 (B24) 16:32 (B24)	08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:56 (B24) 16:30 (B24)	08:29 15:43
5	04:34 22:07	05:24 21:20	06:25 (B22) 20:04	07:25 18:43	07:55 (B24) 16:27 (B24)	08:31 15:42
6	04:35 22:06	05:25 21:17	06:15 (B22) 20:01	07:28 18:40	07:56 (B24) 16:25 (B24)	08:32 15:41
7	04:36 22:05	05:27 21:15	06:13 (B22) 19:58	07:30 18:38	07:58 (B24) 16:23 (B24)	08:34 15:40
8	04:37 22:04	05:29 21:13	06:12 (B22) 19:56	07:32 18:35	08:00 (B24) 16:21 (B24)	08:35 15:40
9	04:38 22:03	05:31 21:11	06:12 (B22) 19:53	07:34 18:33	08:03 (B24) 16:19 (B24)	08:37 15:39
10	04:40 22:02	05:33 21:08	06:11 (B22) 19:50	07:36 18:30	08:05 (B24) 16:17 (B24)	08:38 15:39
11	04:41 22:01	05:35 21:06	06:11 (B22) 19:47	07:38 18:27	08:07 (B24) 16:15 (B24)	08:39 15:39
12	04:42 22:00	05:37 21:04	06:10 (B22) 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	04:44 21:59	05:39 21:02	06:11 (B22) 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:13 (B22) 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	04:46 21:57	05:43 20:57	06:15 (B22) 19:37	07:47 (B14) 18:17	07:46 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:17 (B22) 19:34	07:45 (B14) 18:15	07:48 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:19 (B22) 19:31	07:44 (B14) 18:12	07:50 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:21 (B22) 19:29	07:42 (B14) 18:09	07:52 16:03	08:46 15:38
19	04:53 21:51	05:51 20:47	06:22 (B22) 19:26	07:41 (B14) 18:07	07:55 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:23 (B22) 19:23	07:40 (B14) 18:04	07:57 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:40 (B14) 18:02	07:59 15:58	08:48 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	07:39 (B14) 18:00	08:01 15:56	08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	07:39 (B14) 17:57	08:03 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	07:39 (B14) 17:55	08:05 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	07:39 (B14) 17:52	08:07 15:52	08:51 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	07:39 (B14) 17:50	08:09 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	07:39 (B14) 17:48	08:11 15:50	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:40 (B14) 17:46	08:13 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:42 (B14) 17:44	08:15 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	07:44 (B14) 17:42	08:17 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		07:46 17:40		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		187	407	139		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.63	0.62		
Total reduction		0.32	0.26	0.16		
Total, real		60	108	22		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunleiš upi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (16)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	06:00 (B14) 21:53	04:30 22:09	05:16 21:28	06:02 (B14) 20:14	06:17 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	05:58 (B14) 21:54	04:31 22:08	05:18 21:26	06:00 (B14) 20:11	06:19 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	05:56 (B14) 21:55	04:32 22:08	05:20 21:24	06:00 (B14) 20:09	06:21 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	05:54 (B14) 21:57	04:33 22:07	05:22 21:22	06:00 (B14) 20:06	06:23 18:46	07:23 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	05:52 (B14) 21:58	04:32 22:07	05:24 21:20	06:00 (B14) 20:04	06:25 18:43	07:26 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	05:50 (B14) 21:59	04:31 22:06	05:26 21:17	05:59 (B14) 20:01	06:27 18:40	07:28 16:25	07:33 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	05:50 (B14) 22:00	04:30 22:05	05:28 21:15	06:00 (B14) 19:58	06:29 18:38	07:30 16:23	07:36 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	05:50 (B14) 22:01	04:30 22:04	05:29 21:13	06:02 (B14) 19:56	06:31 18:35	07:32 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	05:50 (B14) 22:02	04:38 22:03	05:31 21:11	06:04 (B14) 19:53	06:33 18:33	07:34 16:19	07:40 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	05:50 (B14) 22:03	04:40 22:02	05:33 21:08	06:06 (B14) 19:50	06:35 18:30	07:36 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	05:50 (B14) 22:04	04:41 22:01	05:35 21:06	06:08 (B14) 19:48	06:37 18:27	07:38 16:15	07:44 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	05:51 (B14) 22:05	04:42 22:00	05:37 21:04	06:09 (B14) 19:45	06:39 18:25	07:40 16:13	07:46 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	05:53 (B14) 22:06	04:44 21:59	05:39 21:02	06:13 (B14) 19:42	06:41 18:22	07:42 16:11	07:49 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	05:54 (B14) 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:03 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	05:55 (B14) 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:03	08:04 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	06:01 (B14) 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:05 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	06:06 (B14) 22:09	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:06 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	06:07 (B14) 22:10	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:08 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	06:08 (B14) 22:11	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:10 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	06:09 (B14) 22:12	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:12 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	06:10 (B14) 22:13	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:14 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	06:11 (B14) 22:14	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:16 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	06:12 (B14) 22:15	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:18 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	06:13 (B14) 22:16	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:20 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	06:14 (B14) 22:17	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:22 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	06:15 (B14) 22:18	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:24 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	06:16 (B14) 22:19	05:07 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:26 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	06:17 (B14) 22:20	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:45	08:19 15:48	08:28 15:44
29	08:20 16:39	07:11 17:47	06:57 18:42	05:37 20:51	04:40 21:48	06:18 (B14) 22:21	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:30 15:45
30	08:19 16:41	07:04 17:54	06:54 18:35	05:35 20:53	04:39 21:50	06:19 (B14) 22:22	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:31 15:46
31	08:17 16:43	07:02 17:51	06:52 18:31	05:34 20:52	04:37 21:51	06:20 (B14) 22:23	05:14 21:30	06:15 20:17	07:17 18:58	08:19 17:40	08:23 15:47	08:32 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case				1	201		33	169				
Sun reduction				0.50	0.57		0.49	0.50				
Oper. time red.				0.98	0.98		0.98	0.98				
Wind dir. red.				0.67	0.67		0.67	0.67				
Total reduction				0.33	0.37		0.32	0.33				
Total, real				0	75		11	55				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunmedni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (174)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:51	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:08	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:03	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:41 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:37
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:53	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:11	05:00 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:10	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:17		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunmasani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (213)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:58	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:29 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:45
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Jaunrudzati - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (83)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	07:14 (B14) 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	07:06 (B14) 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:11 (B14) 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	07:04 (B14) 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	07:09 (B14) 21:00	05:28 21:55	04:32 22:08	05:20 21:24	05:20 20:09	07:03 (B14) 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:06 (B14) 21:02	05:26 21:57	04:33 22:07	05:22 21:22	05:22 20:06	07:02 (B14) 18:46	07:23 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:04 (B14) 21:04	05:24 21:58	04:32 22:07	05:24 21:20	05:24 20:04	07:01 (B14) 18:43	07:26 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:04 (B14) 21:06	05:21 21:59	04:35 22:06	05:26 21:17	05:26 20:01	07:01 (B14) 18:40	07:28 16:25	07:34 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	07:04 (B14) 21:08	05:19 22:00	04:36 22:05	05:27 21:15	05:27 19:58	07:00 (B14) 18:38	07:30 16:23	07:36 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:05 (B14) 21:10	05:17 22:01	04:37 22:04	05:29 21:13	05:29 19:56	07:00 (B14) 18:35	07:32 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:05 (B14) 21:12	05:15 22:02	04:38 22:03	05:31 21:11	05:31 19:53	07:02 (B14) 18:33	07:34 16:19	07:40 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	07:05 (B14) 21:14	05:13 22:03	04:40 22:02	05:33 21:08	05:33 19:50	07:04 (B14) 18:30	07:36 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:07 (B14) 21:16	05:11 22:04	04:41 22:01	05:35 21:06	05:35 19:48	07:06 (B14) 18:27	07:38 16:15	07:44 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:10 (B14) 21:18	05:09 22:05	04:42 22:00	05:37 21:04	05:37 19:45	07:08 (B14) 18:25	07:40 16:13	07:46 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:11 (B14) 21:20	05:07 22:06	04:44 21:59	05:39 21:02	05:39 19:42	07:10 (B14) 18:22	07:42 16:11	07:49 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	07:12 (B14) 21:22	05:05 22:07	04:45 21:58	05:41 20:59	05:41 19:39	07:11 (B14) 18:20	07:44 16:10	07:51 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	07:13 (B14) 21:24	05:03 22:07	04:46 21:57	05:43 20:57	05:43 19:37	07:12 (B14) 18:17	07:46 16:08	07:53 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	07:14 (B14) 21:26	05:01 22:08	04:48 21:55	05:45 20:54	05:45 19:34	07:13 (B14) 18:15	07:48 16:06	07:55 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	07:15 (B14) 21:27	04:59 22:08	04:50 21:54	05:47 20:52	05:47 19:31	07:14 (B14) 18:12	07:50 16:04	07:57 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	07:16 (B14) 21:29	04:57 22:09	04:51 21:52	05:49 20:50	05:49 19:29	07:15 (B14) 18:10	07:53 16:03	07:59 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	07:17 (B14) 21:31	04:55 22:09	04:53 21:51	05:51 20:47	05:51 19:26	07:16 (B14) 18:07	07:55 16:01	08:01 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	07:18 (B14) 21:33	04:54 22:10	04:54 21:49	05:53 20:45	05:53 19:23	07:17 (B14) 18:05	07:57 15:59	08:03 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	07:19 (B14) 21:35	04:52 22:10	04:56 21:48	05:55 20:42	05:55 19:21	07:18 (B14) 18:02	07:59 15:58	08:05 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	07:20 (B14) 21:37	04:50 22:10	04:58 21:46	05:57 20:40	05:57 19:18	07:19 (B14) 18:00	08:01 15:56	08:07 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	07:21 (B14) 21:38	04:49 22:10	04:59 21:45	05:59 20:37	05:59 19:15	07:20 (B14) 18:03	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	07:22 (B14) 21:40	04:47 22:10	05:01 21:43	06:01 20:35	06:01 19:13	07:21 (B14) 18:05	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	07:23 (B14) 21:42	04:45 22:10	05:03 21:41	06:03 20:32	06:03 19:10	07:22 (B14) 18:07	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	07:24 (B14) 21:43	04:44 22:10	05:05 21:39	06:05 20:30	06:05 19:07	07:23 (B14) 18:07	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	07:25 (B14) 21:45	04:42 22:10	05:07 21:38	06:07 20:27	06:07 19:04	07:24 (B14) 18:06	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	07:26 (B14) 21:47	04:41 22:10	05:08 21:36	06:09 20:24	06:09 19:02	07:25 (B14) 18:07	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	06:57 18:47	05:37 20:51	07:27 (B14) 21:48	04:40 22:10	05:10 21:34	06:11 20:22	06:11 18:59	07:26 (B14) 18:08	08:21 15:47	08:51 15:45
30	08:19 16:41	07:04 17:49	06:54 18:49	05:35 20:53	07:28 (B14) 21:50	04:38 22:09	05:12 21:32	06:13 20:19	06:13 18:56	07:27 (B14) 18:09	08:22 15:46	08:51 15:46
31	08:17 16:43	07:02 19:51	06:52 18:51	07:17 (B14) 20:53	07:29 (B14) 21:51	04:37 21:30	05:14 20:17	06:15 20:15	06:15 18:54	07:28 (B14) 18:10	08:23 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case			6	186				5	189			
Sun reduction			0.41	0.50				0.50	0.43			
Oper. time red.			0.98	0.98				0.98	0.98			
Wind dir. red.			0.66	0.66				0.66	0.66			
Total reduction			0.27	0.32				0.32	0.28			
Total, real			2	60				2	52			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalna Galvani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (35)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		10:37 (B1)	08:15			07:11		07:56 (B2)	06:49			05:32		06:31 (B17)	04:36		
	15:48	43	11:20 (B1)	16:45			17:47	22	08:18 (B2)	19:53			20:55	41	07:12 (B17)	21:53		
2	08:50		09:30 (B4)	08:13			07:08		07:56 (B2)	06:46			05:30		06:31 (B17)	04:34		
	15:49	44	11:21 (B1)	16:47			17:50	20	08:16 (B2)	19:55			20:57	41	07:12 (B17)	21:54		
3	08:50		09:29 (B4)	08:11			07:06		07:58 (B2)	06:43			05:28		06:31 (B17)	04:33		
	15:50	46	11:21 (B1)	16:49			17:52	17	08:15 (B2)	19:57			21:00	40	07:11 (B17)	21:55		
4	08:50		09:28 (B4)	08:09			07:03		07:59 (B2)	06:41			05:25		06:32 (B17)	04:32		
	15:52	47	11:21 (B1)	16:52			17:54	14	08:13 (B2)	19:59			21:02	39	07:11 (B17)	21:57		
5	08:49		09:28 (B4)	08:07			07:00		08:02 (B2)	06:38			05:23		06:32 (B17)	04:31		
	15:53	49	11:22 (B1)	16:54			17:56	7	08:09 (B2)	20:01			21:04	38	07:10 (B17)	21:58		
6	08:49		09:27 (B4)	08:05			06:58			06:35			05:21		06:32 (B17)	04:31		
	15:55	51	11:23 (B1)	16:56			17:58			20:03			21:06	38	07:10 (B17)	21:59		
7	08:48		09:26 (B4)	08:03			06:55			06:33			05:19		06:33 (B17)	04:30		
	15:56	53	11:23 (B1)	16:58			18:00			20:05			21:08	36	07:09 (B17)	22:00		
8	08:48		09:25 (B4)	08:00			06:53			06:30			05:17		06:33 (B17)	04:29		
	15:58	55	11:23 (B1)	17:01			18:03			20:07			21:10	36	07:09 (B17)	22:01		
9	08:47		09:24 (B4)	07:58			06:50			06:27			05:15		06:34 (B17)	04:28		
	15:59	57	11:24 (B1)	17:03			18:05			20:10			21:12	34	07:08 (B17)	22:02		
10	08:46		09:23 (B4)	07:56			06:47			06:25			05:12		06:34 (B17)	04:28		
	16:01	59	11:24 (B1)	17:05			18:07			20:12			21:14	33	07:07 (B17)	22:03		
11	08:45		09:22 (B4)	07:54			06:45			06:22			05:10		06:35 (B17)	04:27		
	16:03	61	11:25 (B1)	17:07			18:09			20:14			21:16	31	07:06 (B17)	22:04		
12	08:44		09:21 (B4)	07:52			06:42			06:20			05:08		06:36 (B17)	04:27		
	16:04	62	11:25 (B1)	17:10			18:11			20:16			21:18	28	07:04 (B17)	22:05		
13	08:43		09:20 (B4)	07:49			06:39			06:17			05:06		06:37 (B17)	04:26		
	16:06	63	11:25 (B1)	17:12			18:13			20:18			21:20	26	07:03 (B17)	22:06		
14	08:42		09:20 (B4)	07:47			06:37			06:14			05:04		06:39 (B17)	04:26		
	16:08	63	11:25 (B1)	17:14			18:15			20:20			21:22	23	07:02 (B17)	22:07		
15	08:41		09:21 (B4)	07:45			06:34			06:12	06:51 (B17)		05:02		06:40 (B17)	04:25		
	16:10	63	11:26 (B1)	17:16			18:17			20:22	8	06:59 (B17)	21:24	20	07:00 (B17)	22:07		
16	08:40		09:20 (B4)	07:43			06:31			06:09	06:46 (B17)		05:00		06:42 (B17)	04:25		
	16:12	63	11:25 (B1)	17:19			18:20			20:24	17	07:03 (B17)	21:25	16	06:58 (B17)	22:08		
17	08:39		09:21 (B4)	07:40			06:29			06:07	06:44 (B17)		04:59		06:44 (B17)	04:25		
	16:14	62	11:26 (B1)	17:21			18:22			20:26	22	07:06 (B17)	21:27	11	06:55 (B17)	22:09		
18	08:37		09:21 (B4)	07:38		08:05 (B2)	06:26			06:04	06:41 (B17)		04:57			04:25		
	16:15	61	11:25 (B1)	17:23	8	08:13 (B2)	18:24			20:28	26	07:07 (B17)	21:29			22:09		
19	08:36		09:21 (B4)	07:35		08:03 (B2)	06:23			06:02	06:39 (B17)		04:55			04:25		
	16:17	61	11:25 (B1)	17:25	13	08:16 (B2)	18:26			20:30	30	07:09 (B17)	21:31			22:09		
20	08:35		09:22 (B4)	07:33		08:00 (B2)	06:21			05:59	06:37 (B17)		04:53			04:25		
	16:19	59	11:25 (B1)	17:28	17	08:17 (B2)	18:28			20:32	32	07:09 (B17)	21:33			22:10		
21	08:33		09:22 (B4)	07:31		07:58 (B2)	06:18			05:57	06:36 (B17)		04:51			04:25		
	16:21	58	11:25 (B1)	17:30	20	08:18 (B2)	18:30			20:35	34	07:10 (B17)	21:35			22:10		
22	08:32		09:22 (B4)	07:28		07:56 (B2)	06:15			05:54	06:36 (B17)		04:50			04:25		
	16:24	57	11:24 (B1)	17:32	23	08:19 (B2)	18:32			20:37	35	07:11 (B17)	21:37			22:10		
23	08:30		09:23 (B4)	07:26		07:56 (B2)	06:13			05:52	06:34 (B17)		04:48			04:25		
	16:26	53	11:23 (B1)	17:34	24	08:20 (B2)	18:34			20:39	37	07:11 (B17)	21:38			22:10		
24	08:29		09:25 (B4)	07:23		07:55 (B2)	06:10			05:49	06:34 (B17)		04:47			04:26		
	16:28	50	11:23 (B1)	17:36	24	08:19 (B2)	18:36			20:41	38	07:12 (B17)	21:40			22:10		
25	08:27		09:25 (B4)	07:21		07:55 (B2)	06:07			05:47	06:33 (B17)		04:45			04:26		
	16:30	48	11:22 (B1)	17:39	24	08:19 (B2)	18:38			20:43	40	07:13 (B17)	21:42			22:10		
26	08:26		09:26 (B4)	07:18		07:55 (B2)	06:05			05:44	06:32 (B17)		04:44			04:27		
	16:32	43	11:21 (B1)	17:41	25	08:20 (B2)	18:40			20:45	40	07:12 (B17)	21:43			22:10		
27	08:24		09:28 (B4)	07:16		07:55 (B2)	06:02			05:42	06:32 (B17)		04:42			04:27		
	16:34	37	11:20 (B1)	17:43	24	08:19 (B2)	18:43			20:47	40	07:12 (B17)	21:45			22:10		
28	08:22		09:30 (B4)	07:13		07:56 (B2)	05:59			05:39	06:32 (B17)		04:41			04:28		
	16:36	29	11:18 (B1)	17:45	23	08:19 (B2)	18:45			20:49	41	07:13 (B17)	21:47			22:10		
29	08:20		09:33 (B4)				06:57			05:37	06:31 (B17)		04:39			04:28		
	16:38	17	11:15 (B1)				19:47			20:51	41	07:12 (B17)	21:48			22:10		
30	08:18						06:54			05:35	06:31 (B17)		04:38			04:29		
	16:41						19:49			20:53	41	07:12 (B17)	21:50			22:09		
31	08:17						06:51						04:37					
	16:43						19:51						21:51					
Potential sun hours	235			266			366			426			508			529		
Total, worst case		1514			225		80			522				531				
Sun reduction		0.13			0.20		0.41			0.50				0.57				
Oper. time red.		0.98			0.98		0.98			0.98				0.98				
Wind dir. red.		0.60			0.63		0.63			0.65				0.65				
Total reduction		0.08			0.12		0.24			0.31				0.35				
Total, real		116			27		20			162				188				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalna Galvani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (35)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:15	06:46 (B17)	06:17	07:17			07:23		08:24	09:04 (B4)
	22:09	21:28	29	07:15 (B17)	20:14	18:53		16:36		15:45	61 11:07 (B1)
2	04:31	05:17		06:45 (B17)	06:19	07:19		07:25		08:26	09:06 (B4)
	22:09	21:26	31	07:16 (B17)	20:11	18:51		16:34		15:44	58 11:07 (B1)
3	04:31	05:19		06:44 (B17)	06:21	07:21		07:27		08:28	09:08 (B4)
	22:08	21:24	33	07:17 (B17)	20:09	18:48		16:31		15:43	57 11:08 (B1)
4	04:32	05:21		06:44 (B17)	06:23	07:23		07:29		08:29	09:09 (B4)
	22:07	21:22	34	07:18 (B17)	20:06	18:46		16:29		15:42	54 11:07 (B1)
5	04:33	05:23		06:42 (B17)	06:25	07:25		07:31		08:31	09:11 (B4)
	22:07	21:19	36	07:18 (B17)	20:03	18:43		16:27		15:41	53 11:08 (B1)
6	04:34	05:25		06:42 (B17)	06:27	07:27		07:33		08:32	09:13 (B4)
	22:06	21:17	37	07:19 (B17)	20:01	18:40		16:25		15:41	51 11:09 (B1)
7	04:36	05:27		06:41 (B17)	06:29	07:29		07:36		08:34	09:14 (B4)
	22:05	21:15	38	07:19 (B17)	19:58	18:38		16:23		15:40	49 11:09 (B1)
8	04:37	05:29		06:41 (B17)	06:31	07:31		07:38		08:35	09:16 (B4)
	22:04	21:13	39	07:20 (B17)	19:55	18:35		16:21		15:40	48 11:09 (B1)
9	04:38	05:31		06:41 (B17)	06:33	07:34		07:40		08:37	09:18 (B4)
	22:03	21:11	39	07:20 (B17)	19:53	18:32	11	08:46 (B2)	16:19	15:39	46 11:10 (B1)
10	04:39	05:33		06:40 (B17)	06:35	07:36		08:33 (B2)	07:42	08:38	09:19 (B4)
	22:02	21:08	40	07:20 (B17)	19:50	18:30	16	08:49 (B2)	16:17	15:39	44 11:10 (B1)
11	04:40	05:35		06:39 (B17)	06:37	07:38		08:31 (B2)	07:44	08:39	10:27 (B1)
	22:01	21:06	41	07:20 (B17)	19:47	18:27	19	08:50 (B2)	16:15	15:38	43 11:10 (B1)
12	04:42	05:37		06:39 (B17)	06:39	07:40		08:30 (B2)	07:46	08:40	10:29 (B1)
	22:00	21:04	41	07:20 (B17)	19:45	18:25	21	08:51 (B2)	16:13	15:38	42 11:11 (B1)
13	04:43	05:39		06:39 (B17)	06:41	07:42		08:28 (B2)	07:49	08:42	10:29 (B1)
	21:59	21:01	41	07:20 (B17)	19:42	18:22	23	08:51 (B2)	16:11	15:38	43 11:12 (B1)
14	04:45	05:41		06:39 (B17)	06:43	07:44		08:27 (B2)	07:51	09:02 (B4)	08:43
	21:58	20:59	41	07:20 (B17)	19:39	18:19	24	08:51 (B2)	16:09	15:38	43 11:12 (B1)
15	04:46	05:43		06:39 (B17)	06:45	07:46		08:28 (B2)	07:53	09:00 (B4)	08:44
	21:57	20:57	41	07:20 (B17)	19:37	18:17	24	08:52 (B2)	16:07	15:38	42 11:12 (B1)
16	04:48	05:45		06:39 (B17)	06:47	07:48		08:27 (B2)	07:55	08:59 (B4)	08:45
	21:55	20:54	41	07:20 (B17)	19:34	18:14	25	08:52 (B2)	16:06	15:38	43 11:13 (B1)
17	04:49	05:47		06:39 (B17)	06:49	07:50		08:27 (B2)	07:57	08:58 (B4)	08:46
	21:54	20:52	39	07:18 (B17)	19:31	18:12	24	08:51 (B2)	16:04	15:38	42 11:13 (B1)
18	04:51	05:49		06:39 (B17)	06:51	07:52		08:26 (B2)	07:59	08:59 (B4)	08:46
	21:52	20:49	39	07:18 (B17)	19:28	18:09	24	08:50 (B2)	16:02	15:38	43 11:14 (B1)
19	04:52	05:51		06:39 (B17)	06:53	07:54		08:27 (B2)	08:01	08:58 (B4)	08:47
	21:51	20:47	38	07:17 (B17)	19:26	18:07	24	08:51 (B2)	16:01	15:38	42 11:14 (B1)
20	04:54	05:53		06:40 (B17)	06:55	07:57		08:28 (B2)	08:03	08:58 (B4)	08:48
	21:49	20:45	37	07:17 (B17)	19:23	18:04	22	08:50 (B2)	15:59	15:38	42 11:14 (B1)
21	04:56	05:55		06:40 (B17)	06:57	07:59		08:29 (B2)	08:05	08:57 (B4)	08:49
	21:48	20:42	36	07:16 (B17)	19:20	18:02	19	08:48 (B2)	15:57	15:39	42 11:15 (B1)
22	04:57	05:57		06:41 (B17)	06:59	08:01		08:31 (B2)	08:07	08:58 (B4)	08:49
	21:46	20:40	34	07:15 (B17)	19:18	17:59	16	08:47 (B2)	15:56	15:39	42 11:15 (B1)
23	04:59	05:59		06:42 (B17)	07:01	08:03		08:34 (B2)	08:09	08:58 (B4)	08:50
	21:45	20:37	32	07:14 (B17)	19:15	17:57	12	08:46 (B2)	15:54	15:40	42 11:16 (B1)
24	05:01	06:01		06:43 (B17)	07:03	08:05		08:36 (B2)	08:11	08:58 (B4)	08:50
	21:43	20:35	29	07:12 (B17)	19:12	17:54	7	08:43 (B2)	15:53	15:40	42 11:16 (B1)
25	05:02	06:03		06:44 (B17)	07:05	07:07		08:13	08:58 (B4)	08:50	10:34 (B1)
	21:41	20:32	26	07:10 (B17)	19:10	16:52		15:52	11:03 (B1)	15:41	43 11:17 (B1)
26	05:04	06:05		06:46 (B17)	07:07	07:09		08:15	08:59 (B4)	08:51	10:34 (B1)
	21:39	5	07:03 (B17)	20:29	21	16:50		15:50	11:04 (B1)	15:42	43 11:17 (B1)
27	05:06	06:54 (B17)	06:07	06:48 (B17)	07:09	07:12		08:17	09:00 (B4)	08:51	10:35 (B1)
	21:38	13	07:07 (B17)	20:27	17	16:47		15:49	11:05 (B1)	15:43	42 11:17 (B1)
28	05:08	06:51 (B17)	06:09	06:52 (B17)	07:11	07:14		08:19	09:00 (B4)	08:51	10:35 (B1)
	21:36	18	07:09 (B17)	20:24	8	16:45		15:48	11:05 (B1)	15:43	43 11:18 (B1)
29	05:10	06:50 (B17)	06:11		07:13	07:16		08:21	09:01 (B4)	08:51	10:36 (B1)
	21:34	21	07:11 (B17)	20:22		16:43		15:47	11:06 (B1)	15:44	43 11:19 (B1)
30	05:12	06:49 (B17)	06:13		07:15	07:18		08:22	09:02 (B4)	08:51	10:37 (B1)
	21:32	24	07:13 (B17)	20:19		16:40		15:46	11:06 (B1)	15:45	42 11:19 (B1)
31	05:14	06:47 (B17)	06:15		07:20					08:51	10:37 (B1)
	21:30	27	07:14 (B17)	20:17		16:38				15:46	43 11:20 (B1)
Potential sun hours	529		469		385	324		247		216	
Total, worst case	108		958			311		948		1413	
Sun reduction	0.49		0.50			0.26		0.08		0.07	
Oper. time red.	0.98		0.98			0.98		0.98		0.98	
Wind dir. red.	0.65		0.65			0.63		0.60		0.60	
Total reduction	0.31		0.31			0.15		0.05		0.04	
Total, real	33		297			48		45		57	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalnmuiža - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (28)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

		January	February	March	April	May	June		July		August	September	October	November	December		
1	08:50	08:14	07:11	06:49	05:32	04:36			04:30	19	05:07 (B12)	05:16	06:17	07:17	07:22	08:24	
	15:48	16:45	17:47	19:53	20:55	21:52			22:09		21:28 (B24)	21:28	20:14	18:53	16:36	15:45	
	2	08:50	08:13	07:08	06:46	05:30	04:35		04:31		05:08 (B12)	05:18	06:19	07:19	07:24	08:26	
	3	15:49	16:47	17:50	19:55	20:57	21:54			22:08	18	21:28 (B24)	21:26	20:11	18:51	16:34	15:44
		08:50	08:11	07:05	06:43	05:28	04:34			04:32		05:09 (B12)	05:19	06:21	07:21	07:27	08:27
		15:51	16:50	17:52	19:57	20:59	21:55			22:08	15	21:28 (B24)	21:23	20:09	18:48	16:32	15:43
	4	08:49	08:09	07:03	06:41	05:26	04:33		21:16 (B24)	04:33		05:10 (B12)	05:21	06:23	07:23	07:29	08:29
		15:52	16:52	17:54	19:59	21:01	21:56	2	21:18 (B24)	22:07	12	21:27 (B24)	21:21	20:06	18:45	16:29	15:42
	5	08:49	08:07	07:00	06:38	05:23	04:32		21:15 (B24)	04:34		05:11 (B12)	05:23	06:25	07:25	07:31	08:30
		15:53	16:54	17:56	20:01	21:03	21:57	4	21:19 (B24)	22:06	10	21:27 (B24)	21:19	20:03	18:43	16:27	15:42
	6	08:48	08:04	06:58	06:35	05:21	04:31		21:14 (B24)	04:35		21:20 (B24)	05:25	06:27	07:27	07:33	08:32
		15:55	16:56	17:58	20:03	21:05	21:59	6	21:20 (B24)	22:06	6	21:26 (B24)	21:17	20:01	18:40	16:25	15:41
	7	08:48	08:02	06:55	06:33	05:19	04:30		05:05 (B12)	04:36		21:21 (B24)	05:27	06:29	07:29	07:35	08:33
		15:56	16:59	18:00	20:05	21:07	22:00	8	21:20 (B24)	22:05	5	21:26 (B24)	21:15	19:58	18:38	16:23	15:40
	8	08:47	08:00	06:53	06:30	05:17	04:29		05:05 (B12)	04:37		21:22 (B24)	05:29	06:31	07:31	07:38	08:35
		15:58	17:01	18:03	20:07	21:09	22:01	11	21:22 (B24)	22:04	3	21:25 (B24)	21:13	19:55	18:35	16:21	15:40
	9	08:46	07:58	06:50	06:27	05:15	04:29		05:04 (B12)	04:38			05:31	06:33	07:33	07:40	08:36
		15:59	17:03	18:05	20:09	21:11	22:02	14	21:22 (B24)	22:03			21:10	19:53	18:32	16:19	15:39
	10	08:46	07:56	06:47	06:25	05:13	04:28		05:04 (B12)	04:39			05:33	06:35	07:36	07:42	08:38
		16:01	17:05	18:07	20:12	21:13	22:03	16	21:23 (B24)	22:02			21:08	19:50	18:30	16:17	15:39
	11	08:45	07:54	06:45	06:22	05:11	04:27		05:03 (B12)	04:41			05:35	06:37	07:38	07:44	08:39
		16:03	17:08	18:09	20:14	21:15	22:04	19	21:24 (B24)	22:01			21:06	19:47	18:27	16:15	15:39
	12	08:44	07:52	06:42	06:20	05:08	04:27		05:03 (B12)	04:42			05:37	06:39	07:40	07:46	08:40
		16:05	17:10	18:11	20:16	21:17	22:05	20	21:25 (B24)	22:00			21:04	19:45	18:25	16:13	15:38
	13	08:43	07:49	06:39	06:17	05:06	04:26		05:03 (B12)	04:43			05:39	06:41	07:42	07:48	08:41
		16:06	17:12	18:13	20:18	21:19	22:06	22	21:26 (B24)	21:59			21:01	19:42	18:22	16:11	15:38
	14	08:42	07:47	06:37	06:14	05:04	04:26		05:03 (B12)	04:45			05:41	06:43	07:44	07:50	08:42
		16:08	17:14	18:15	20:20	21:21	22:06	24	21:27 (B24)	21:58			20:59	19:39	18:19	16:09	15:38
	15	08:41	07:45	06:34	06:12	05:03	04:26		05:02 (B12)	04:46			05:43	06:45	07:46	07:53	08:43
		16:10	17:17	18:17	20:22	21:23	22:07	25	21:26 (B24)	21:56			20:57	19:37	18:17	16:08	15:38
	16	08:40	07:42	06:31	06:09	05:01	04:26		05:02 (B12)	04:48			05:45	06:47	07:48	07:55	08:44
16:12		17:19	18:19	20:24	21:25	22:08	25	21:27 (B24)	21:55			20:54	19:34	18:14	16:06	15:38	
17	08:38	07:40	06:29	06:07	04:59	04:25		05:02 (B12)	04:49			05:47	06:49	07:50	07:57	08:45	
	16:14	17:21	18:22	20:26	21:27	22:08	27	21:28 (B24)	21:54			20:52	19:31	18:12	16:04	15:38	
18	08:37	07:38	06:26	06:04	04:57	04:25		05:02 (B12)	04:51			05:49	06:51	07:52	07:59	08:46	
	16:16	17:23	18:24	20:28	21:29	22:09	27	21:28 (B24)	21:52			20:49	19:28	18:09	16:02	15:38	
19	08:36	07:35	06:23	06:02	04:55	04:25		05:02 (B12)	04:53			05:51	06:53	07:54	08:01	08:47	
	16:18	17:25	18:26	20:30	21:31	22:09	27	21:28 (B24)	21:51			20:47	19:26	18:07	16:01	15:38	
20	08:34	07:33	06:21	05:59	04:53	04:25		05:02 (B12)	04:54			05:53	06:55	07:56	08:03	08:48	
	16:20	17:28	18:28	20:32	21:33	22:09	28	21:29 (B24)	21:49			20:44	19:23	18:04	15:59	15:39	
21	08:33	07:30	06:18	05:57	04:52	04:25		05:03 (B12)	04:56			05:55	06:57	07:59	08:05	08:48	
	16:22	17:30	18:30	20:34	21:34	22:10	28	21:30 (B24)	21:48			20:42	19:20	18:02	15:58	15:39	
22	08:32	07:28	06:15	05:54	04:50	04:26		05:03 (B12)	04:57			05:57	06:59	08:01	08:07	08:49	
	16:24	17:32	18:32	20:36	21:36	22:10	28	21:30 (B24)	21:46			20:39	19:18	17:59	15:56	15:39	
23	08:30	07:26	06:13	05:52	04:48	04:26		05:03 (B12)	04:59			05:59	07:01	08:03	08:09	08:49	
	16:26	17:34	18:34	20:39	21:38	22:10	27	21:29 (B24)	21:44			20:37	19:15	17:57	15:55	15:40	
24	08:29	07:23	06:10	05:49	04:47	04:26		05:04 (B12)	05:01			06:01	07:03	08:05	08:11	08:50	
	16:28	17:36	18:36	20:41	21:40	22:10	27	21:30 (B24)	21:43			20:34	19:12	17:55	15:53	15:41	
25	08:27	07:21	06:07	05:47	04:45	04:26		05:04 (B12)	05:03			06:03	07:05	07:07	08:13	08:50	
	16:30	17:39	18:38	20:43	21:41	22:10	27	21:30 (B24)	21:41			20:32	19:10	16:52	15:52	15:41	
26	08:25	07:18	06:05	05:44	04:44	04:27		05:04 (B12)	05:05			06:05	07:07	07:09	08:15	08:50	
	16:32	17:41	18:40	20:45	21:43	22:10	25	21:29 (B24)	21:39			20:29	19:07	16:50	15:51	15:42	
27	08:24	07:16	06:02	05:42	04:42	04:27		05:05 (B12)	05:06			06:07	07:09	07:11	08:17	08:50	
	16:34	17:43	18:42	20:47	21:45	22:10	25	21:30 (B24)	21:37			20:27	19:04	16:47	15:49	15:43	
28	08:22	07:13	05:59	05:40	04:41	04:28		05:05 (B12)	05:08			06:09	07:11	07:14	08:19	08:51	
	16:36	17:45	18:45	20:49	21:46	22:10	24	21:29 (B24)	21:35			20:24	19:01	16:45	15:48	15:44	
29	08:20		06:57	05:37	04:40	04:29		05:06 (B12)	05:10			06:11	07:13	07:16	08:20	08:51	
	16:39		19:47	20:51	21:48	22:09	23	21:29 (B24)	21:33			20:22	18:59	16:43	15:47	15:45	
30	08:18		06:54	05:35	04:38	04:29		05:07 (B12)	05:12			06:13	07:15	07:18	08:22	08:51	
	16:41		19:49	20:53	21:49	22:09	21	21:29 (B24)				20:19	18:56	16:40	15:46		
31	08:16		06:51		04:37				05:14			06:15		07:20		08:51	
	16:43		19:51		21:51				21:30			20:16		16:38		15:47	
Potential sun hours	235	266	366	426	508	528		529			469	384	324	248	216		
Total, worst case							560			88							
Sun reduction							0.56			0.49							
Oper. time red.							0.98			0.98							
Wind dir. red.							0.63			0.62							
Total reduction							0.34			0.30							
Total, real							192			26							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalnsetas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (8)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalnvidi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (48)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalnares - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (43)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	08:15 (B1)	06:49	05:32
	15:48	16:45	17:47	16	08:31 (B1)	19:53
2	08:51	08:13	07:08	08:18 (B1)	06:46	20:55
	15:49	16:47	17:50	10	08:28 (B1)	19:55
3	08:50	08:11	07:06		06:43	20:58
	15:50	16:50	17:52		19:57	21:00
4	08:50	08:09	07:03		06:41	21:02
	15:52	16:52	17:54		19:59	21:57
5	08:49	08:07	07:00		06:38	21:23
	15:53	16:54	17:56		20:01	21:58
6	08:49	08:05	06:58		06:35	21:04
	15:55	16:56	17:58		20:03	21:59
7	08:48	08:03	06:55		06:33	21:06
	15:56	16:59	18:00		20:05	21:59
8	08:48	08:01	06:53		06:30	22:00
	15:58	17:01	18:03		20:08	21:57
9	08:47	07:58	06:50	07:16 (B2)	06:27	21:10
	15:59	17:03	18:05	3	07:19 (B2)	21:12
10	08:46	07:56	06:47	07:13 (B2)	06:25	22:02
	16:01	17:05	18:07	6	07:19 (B2)	21:12
11	08:45	07:54	06:45	07:10 (B2)	06:22	22:03
	16:03	17:08	2	08:25 (B4)	18:09	21:14
12	08:44	07:52	06:42	07:08 (B2)	06:20	22:04
	16:04	17:10	8	08:28 (B1)	18:11	21:16
13	08:43	07:50	06:39	07:05 (B2)	06:17	22:04
	16:06	17:12	14	08:32 (B1)	18:13	21:18
14	08:42	07:47	06:37	07:03 (B2)	06:14	22:05
	16:08	17:14	18	08:33 (B1)	18:15	21:20
15	08:41	07:45	06:34	07:03 (B2)	06:12	22:06
	16:10	17:17	22	08:35 (B1)	18:17	21:22
16	08:40	07:43	06:32	07:05 (B2)	06:09	22:07
	16:12	17:19	26	08:36 (B1)	18:20	21:24
17	08:39	07:40	06:29	07:06 (B2)	06:07	22:08
	16:14	17:21	26	08:37 (B1)	18:22	21:26
18	08:38	07:38	06:26	9	07:15 (B2)	22:09
	16:16	17:23	26	08:37 (B1)	18:24	21:27
19	08:36	07:35	06:24		06:02	22:09
	16:18	17:25	27	08:38 (B1)	18:26	21:29
20	08:35	07:33	06:21		05:59	22:09
	16:20	17:28	28	08:38 (B1)	18:28	21:31
21	08:33	07:31	06:18		05:57	22:10
	16:22	17:30	28	08:39 (B1)	18:30	21:33
22	08:32	07:28	06:15		05:54	22:10
	16:24	17:32	28	08:38 (B1)	18:32	21:35
23	08:30	07:26	06:13		05:52	22:10
	16:26	17:34	27	08:38 (B1)	18:34	21:37
24	08:29	07:23	06:10		05:49	22:10
	16:28	17:37	26	08:37 (B1)	18:36	21:38
25	08:27	07:21	06:07		05:47	22:10
	16:30	17:39	25	08:36 (B1)	18:38	21:40
26	08:26	07:18	06:05		05:44	22:10
	16:32	17:41	24	08:36 (B1)	18:40	21:42
27	08:24	07:16	06:02		05:42	22:10
	16:34	17:43	22	08:34 (B1)	18:43	21:44
28	08:22	07:13	05:59		05:39	22:10
	16:36	17:45	20	08:34 (B1)	18:45	21:46
29	08:20		06:57		05:37	22:10
	16:39		19:47		20:51	21:48
30	08:19		06:54		05:35	22:10
	16:41		19:49		20:53	21:50
31	08:17		06:51			21:51
	16:43		19:51			22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case			123		218	
Sun reduction		397	0.20		0.50	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.62	0.63		0.65	
Total reduction		0.12	0.25		0.32	
Total, real		48	31	69		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalnares - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (43)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:46 (B2)	07:23
	22:09	21:28	20:14	18:54	13	15:45
2	04:31	05:17	06:19	07:19	07:48 (B2)	07:25
	22:09	21:26	20:11	18:51	11	15:44
3	04:32	05:19	06:21	07:21	07:50 (B2)	07:27
	22:08	21:24	20:09	18:48	8	15:43
4	04:32	05:21	06:23	07:23	07:52 (B2)	07:29
	22:07	21:22	20:06	18:46	4	15:42
5	04:33	05:23	06:25	07:25		15:41
	22:07	21:20	20:03	18:43		15:41
6	04:35	05:25	06:27	07:27		15:41
	22:06	21:17	20:01	18:40		15:41
7	04:36	05:27	06:29	07:29		15:41
	22:05	21:15	19:58	18:38		15:40
8	04:37	05:29	06:31	07:32		15:40
	22:04	21:13	19:55	18:35		15:40
9	04:38	05:31	06:33	07:34		15:39
	22:03	21:11	19:53	18:32		15:39
10	04:39	05:33	06:35	07:36		15:39
	22:02	21:08	19:50	18:30		15:39
11	04:40	05:35	06:37	07:38	08:56 (B1)	15:39
	22:01	21:06	19:47	18:27	2	15:38
12	04:42	05:37	06:39	07:40	08:50 (B1)	15:38
	22:00	21:04	19:45	18:25	13	15:38
13	04:43	05:39	06:41	07:42	08:47 (B1)	15:38
	21:59	21:02	19:42	18:22	18	15:38
14	04:45	05:41	06:43	07:44	08:45 (B1)	15:38
	21:58	20:59	19:39	18:19	21	15:38
15	04:46	05:43	06:45	07:46	08:45 (B1)	15:38
	21:57	20:57	19:37	18:17	23	15:38
16	04:48	05:45	06:47	07:48	08:44 (B1)	15:38
	21:55	20:54	19:34	18:14	24	15:38
17	04:49	05:47	06:49	07:50	08:42 (B1)	15:38
	21:54	20:52	19:31	18:12	27	15:38
18	04:51	05:49	06:51	07:52	08:42 (B1)	15:38
	21:53	20:50	19:29	18:09	27	15:38
19	04:52	05:51	06:53	07:55	08:42 (B1)	15:38
	21:51	20:47	19:26	18:07	28	15:38
20	04:54	05:53	06:55	07:57	08:41 (B1)	15:38
	21:49	20:45	19:23	18:04	28	15:38
21	04:56	05:55	06:57	07:59	08:41 (B1)	15:38
	21:48	20:42	19:20	18:02	28	15:38
22	04:57	05:57	06:59	08:01	08:41 (B1)	15:38
	21:46	20:40	19:18	17:59	27	15:38
23	04:59	05:59	07:01	08:03	08:42 (B1)	15:38
	21:45	20:37	19:15	17:57	26	15:40
24	05:01	06:01	07:03	08:05	08:41 (B4)	15:40
	21:43	20:35	19:12	17:55	26	15:40
25	05:03	06:03	07:05	08:07	07:40 (B4)	15:40
	21:41	20:32	19:10	16:52	26	15:41
26	05:04	06:05	07:07	07:10	07:41 (B4)	15:41
	21:39	20:30	19:07	16:50	25	15:42
27	05:06	06:07	07:09	07:12	07:43 (B4)	15:42
	21:38	20:27	19:04	16:47	21	15:43
28	05:08	06:09	07:11	07:14	07:45 (B1)	15:43
	21:36	20:24	19:02	16:45	17	15:43
29	05:10	06:11	07:13	07:16	07:48 (B1)	15:43
	21:34	20:22	18:59	16:43	13	15:44
30	05:12	06:13	07:15	07:18	07:50 (B4)	15:45
	21:32	20:19	18:56	16:40	6	15:46
31	05:14	06:15		07:20	07:53 (B4)	15:47
	21:30	20:17		16:38	1	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		221	62	463		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.65	0.63	0.62		
Total reduction		0.32	0.26	0.16		
Total, real		70	16	72		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kalvani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (207)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	08:31 15:41
6	08:49 15:54	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:09	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:16	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:16	07:53 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:44 15:37
17	08:39 16:13	07:40 17:21	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:55	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:56	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:41
27	08:24 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:07 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:21	07:13 18:58	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kaupernieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (155)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:11	04:57 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kaupres - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (126)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:50 15:48	08:15 16:45	07:11 17:47	07:47 (B12) 17:18 (B24)	06:49 19:53	07:26 (B11) 20:55
2	08:50 15:49	08:13 16:47	07:08 17:50	07:46 (B12) 17:20 (B24)	06:46 19:55	07:25 (B11) 20:57
3	08:50 15:51	08:11 16:50	07:05 17:52	07:46 (B12) 17:23 (B24)	06:43 19:57	07:24 (B11) 20:59
4	08:50 15:52	08:09 16:52	07:03 17:54	07:46 (B12) 17:25 (B24)	06:41 19:59	07:24 (B11) 21:01
5	08:49 15:53	08:07 16:54	07:00 17:56	07:45 (B12) 17:25 (B24)	06:38 20:01	07:23 (B11) 21:03
6	08:49 15:55	08:05 16:56	06:58 17:58	07:46 (B12) 17:27 (B24)	06:35 20:03	07:23 (B11) 21:05
7	08:48 15:56	08:02 16:59	06:55 18:00	07:46 (B12) 17:26 (B24)	06:33 20:05	07:22 (B11) 21:08
8	08:47 15:58	08:00 17:01	06:53 18:03	07:47 (B12) 17:26 (B24)	06:30 20:07	07:22 (B11) 21:10
9	08:47 15:59	07:58 17:03	06:50 18:05	07:48 (B12) 17:26 (B24)	06:27 20:09	07:23 (B11) 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07	07:49 (B12) 17:25 (B24)	06:25 20:12	07:22 (B11) 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	07:51 (B12) 17:24 (B24)	06:22 20:14	07:23 (B11) 21:16
12	08:44 16:04	07:52 17:10	06:42 18:11	07:51 (B12) 17:23 (B24)	06:20 20:16	07:24 (B11) 21:18
13	08:43 16:06	07:49 17:12	06:39 18:13	07:52 (B12) 17:22 (B24)	06:17 20:18	07:25 (B11) 21:19
14	08:42 16:08	07:47 17:14	06:37 18:15	07:53 (B12) 17:19 (B24)	06:14 20:20	07:26 (B11) 21:21
15	08:41 16:10	07:45 17:16	06:34 18:17	07:54 (B12) 17:18 (B24)	06:12 20:22	07:27 (B11) 21:23
16	08:40 16:12	07:42 17:19	06:31 18:19	07:55 (B12) 17:17 (B24)	06:09 20:24	07:28 (B11) 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22	07:56 (B12) 17:16 (B24)	06:07 20:26	07:29 (B11) 21:27
18	08:37 16:16	07:38 17:23	06:26 18:24	07:57 (B12) 17:15 (B24)	06:04 20:28	07:30 (B11) 21:29
19	08:36 16:18	07:35 17:25	06:23 18:26	07:58 (B12) 17:14 (B24)	06:02 20:30	07:31 (B11) 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	07:59 (B12) 18:00 (B14)	05:59 20:32	07:32 (B11) 21:33
21	08:33 16:22	07:30 17:30	06:18 18:30	07:59 (B12) 18:02 (B14)	05:57 20:34	07:33 (B11) 21:35
22	08:32 16:24	07:28 17:32	06:15 18:32	07:59 (B12) 18:04 (B14)	05:54 20:37	07:34 (B11) 21:36
23	08:30 16:26	07:26 17:34	06:13 18:34	07:59 (B12) 18:06 (B14)	05:52 20:39	07:35 (B11) 21:38
24	08:29 16:28	07:23 17:36	06:10 18:36	07:59 (B12) 18:08 (B14)	05:49 20:41	07:36 (B11) 21:40
25	08:27 16:30	07:21 17:39	06:07 18:38	07:59 (B12) 18:07 (B14)	05:47 20:43	07:37 (B11) 21:41
26	08:25 16:32	07:18 17:41	06:05 18:40	07:59 (B12) 18:06 (B14)	05:44 20:45	07:38 (B11) 21:43
27	08:24 16:34	07:16 17:43	06:02 18:42	07:59 (B12) 18:04 (B14)	05:42 20:47	07:39 (B11) 21:45
28	08:22 16:36	07:13 17:45	05:59 18:45	07:59 (B12) 18:02 (B14)	05:39 20:49	07:40 (B11) 21:46
29	08:20 16:39		05:57 19:47	07:59 (B12) 18:01 (B14)	05:37 20:51	07:41 (B11) 21:48
30	08:18 16:41		05:54 19:49	07:59 (B12) 18:00 (B14)	05:35 20:53	07:42 (B11) 21:49
31	08:16 16:43		05:51 19:51	07:59 (B12) 18:00 (B14)	05:33 20:55	07:43 (B11) 21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case		668	728	450	551	703
Sun reduction		0.20	0.41	0.50	0.57	0.56
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.66	0.65	0.65	0.65	0.67
Total reduction		0.13	0.26	0.32	0.36	0.37
Total, real		87	189	144	198	257

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kaupres - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (126)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:13 (B18)	05:16	05:49 (B23)	06:17	07:22 (B11)	07:17	17:44 (B24)	07:22	15:25 (B25)	08:24
2	22:09	25 05:38 (B18)	21:28	36 20:43 (B22)	20:14	29 07:51 (B11)	18:53	18 18:02 (B24)	16:36	26 15:51 (B25)	15:45
3	04:31	05:14 (B18)	05:17	05:51 (B23)	06:19	07:21 (B11)	07:19	08:31 (B12)	07:25	15:25 (B25)	08:26
4	22:08	24 05:38 (B18)	21:26	33 20:43 (B22)	20:11	31 07:52 (B11)	18:51	30 18:03 (B24)	16:34	25 15:50 (B25)	15:44
5	04:32	05:15 (B18)	05:19	05:53 (B23)	06:21	07:21 (B11)	07:21	08:28 (B12)	07:27	15:26 (B25)	08:27
6	22:08	23 05:38 (B18)	21:24	32 20:44 (B22)	20:09	31 07:52 (B11)	18:48	37 18:03 (B24)	16:31	22 15:48 (B25)	15:43
7	04:33	05:15 (B18)	05:21	05:55 (B23)	06:23	07:19 (B11)	07:23	08:26 (B12)	07:29	15:28 (B25)	08:29
8	22:07	23 05:38 (B18)	21:21	28 20:44 (B22)	20:06	32 07:51 (B11)	18:45	41 18:03 (B24)	16:29	20 15:48 (B25)	15:42
9	04:34	05:16 (B18)	05:23	05:56 (B23)	06:25	07:18 (B11)	07:25	08:24 (B12)	07:31	15:30 (B25)	08:31
10	22:06	22 05:38 (B18)	21:19	25 20:43 (B22)	20:03	33 07:51 (B11)	18:43	45 18:03 (B24)	16:27	15 15:45 (B25)	15:42
11	04:35	05:17 (B18)	05:25	05:58 (B23)	06:27	07:18 (B11)	07:27	08:23 (B12)	07:33	15:33 (B25)	08:32
12	22:06	21 05:38 (B18)	21:17	22 20:43 (B22)	20:01	33 07:51 (B11)	18:40	47 18:03 (B24)	16:25	10 15:43 (B25)	15:41
13	04:36	05:17 (B18)	05:27	20:23 (B22)	06:29	07:18 (B11)	07:29	08:22 (B12)	07:35		08:34
14	22:05	20 05:37 (B18)	21:15	18 20:41 (B22)	19:58	33 07:51 (B11)	18:38	47 18:02 (B24)	16:23		15:40
15	04:37	05:18 (B18)	05:29	20:23 (B22)	06:31	07:18 (B11)	07:31	08:21 (B12)	07:38		08:35
16	22:04	19 05:37 (B18)	21:13	17 20:40 (B22)	19:55	33 07:51 (B11)	18:35	47 18:01 (B24)	16:21		15:40
17	04:38	05:19 (B18)	05:31	20:24 (B22)	06:33	07:18 (B11)	07:33	08:20 (B12)	07:40		08:36
18	22:03	17 05:36 (B18)	21:11	14 20:38 (B22)	19:53	32 07:50 (B11)	18:32	47 18:00 (B24)	16:19		15:39
19	04:39	05:20 (B18)	05:33	20:24 (B22)	06:35	07:18 (B11)	07:36	08:20 (B12)	07:42		08:38
20	22:02	15 05:35 (B18)	21:08	11 20:35 (B22)	19:50	31 07:49 (B11)	18:30	45 17:59 (B24)	16:17		15:39
21	04:41	05:21 (B18)	05:35	20:26 (B22)	06:37	07:18 (B11)	07:38	08:20 (B12)	07:44		08:39
22	22:01	13 05:34 (B18)	21:06	7 20:33 (B22)	19:47	30 07:48 (B11)	18:27	40 17:56 (B24)	16:15		15:38
23	04:42	05:23 (B18)	05:37	20:28 (B22)	06:39	07:19 (B11)	07:40	08:20 (B12)	07:46		08:40
24	22:00	11 05:34 (B18)	21:04	3 20:31 (B22)	19:45	28 07:47 (B11)	18:25	36 17:53 (B24)	16:13		15:38
25	04:43	05:25 (B18)	05:39		06:41	07:20 (B11)	07:42	08:20 (B12)	07:48		08:41
26	21:59	7 05:32 (B18)	21:01		19:42	26 07:46 (B11)	18:22	26 08:46 (B12)	16:11		15:38
27	04:45		05:41		06:43	07:21 (B11)	07:44	08:20 (B12)	07:50		08:42
28	21:58		20:59		19:39	23 07:44 (B11)	18:19	25 08:45 (B12)	16:09		15:38
29	04:46		05:43		06:45	07:22 (B11)	07:46	08:20 (B12)	07:53		08:43
30	21:56		20:57		19:37	26 18:51 (B14)	18:17	27 16:41 (B25)	16:07		15:38
31	04:48		05:45		06:47	07:24 (B11)	07:48	08:22 (B12)	07:55		08:44
32	21:55		20:54		19:34	26 18:54 (B14)	18:14	35 16:47 (B25)	16:06		15:38
33	04:49		05:47		06:49	07:28 (B11)	07:50	08:23 (B12)	07:57		08:45
34	21:54		20:52		19:31	21 18:55 (B14)	18:12	37 16:49 (B25)	16:04		15:38
35	04:51		05:49		06:51	18:40 (B14)	07:52	08:25 (B12)	07:59		08:46
36	21:52		20:49		19:28	15 18:55 (B14)	18:09	36 16:50 (B25)	16:02		15:38
37	04:52	05:53 (B23)	05:51		06:53	18:38 (B14)	07:54	08:28 (B12)	08:01		08:47
38	21:51	3 05:56 (B23)	20:47		19:26	16 18:54 (B14)	18:07	32 16:51 (B25)	16:01		15:38
39	04:54	05:51 (B23)	05:53		06:55	18:38 (B14)	07:56	16:26 (B25)	08:03		08:48
40	21:49	8 05:59 (B23)	20:44		19:23	14 18:52 (B14)	18:04	27 16:53 (B25)	15:59		15:39
41	04:56	05:49 (B23)	05:55		06:57	18:37 (B14)	07:59	16:25 (B25)	08:05		08:48
42	21:48	11 06:00 (B23)	20:42		19:20	13 18:50 (B14)	18:02	28 16:53 (B25)	15:58		15:39
43	04:57	05:49 (B23)	05:57		06:59	18:38 (B14)	08:01	16:23 (B25)	08:07		08:49
44	21:46	13 06:02 (B23)	20:39		19:18	9 18:47 (B14)	17:59	30 16:53 (B25)	15:56		15:39
45	04:59	05:48 (B23)	05:59		07:01	18:38 (B14)	08:03	16:24 (B25)	08:09		08:49
46	21:44	14 06:02 (B23)	20:37		19:15	6 18:44 (B14)	17:57	30 16:54 (B25)	15:55		15:40
47	05:01	05:47 (B23)	06:01		07:03	18:39 (B14)	08:05	16:23 (B25)	08:11		08:50
48	21:43	20 20:35 (B22)	20:34		19:12	3 18:42 (B14)	17:54	31 16:54 (B25)	15:53		15:40
49	05:03	05:46 (B23)	06:03		07:05		07:07	15:22 (B25)	08:13		08:50
50	21:41	26 20:37 (B22)	20:32		19:10		16:52	32 15:54 (B25)	15:52		15:41
51	05:04	05:46 (B23)	06:05		07:07		07:09	15:22 (B25)	08:15		08:50
52	21:39	30 20:39 (B22)	20:29		19:07		16:50	31 15:53 (B25)	15:51		15:42
53	05:06	05:46 (B23)	06:07	07:31 (B11)	07:09		07:12	15:22 (B25)	08:17		08:51
54	21:37	33 20:41 (B22)	20:27	13 07:44 (B11)	19:04		16:47	32 15:54 (B25)	15:49		15:43
55	05:08	05:46 (B23)	06:09	07:28 (B11)	07:11		07:14	15:22 (B25)	08:19		08:51
56	21:35	35 20:41 (B22)	20:24	19 07:47 (B11)	19:01		16:45	31 15:53 (B25)	15:48		15:44
57	05:10	05:46 (B23)	06:11	07:26 (B11)	07:13	17:48 (B24)	07:16	15:23 (B25)	08:20		08:51
58	21:34	36 20:42 (B22)	20:22	22 07:48 (B11)	18:59	10 17:58 (B24)	16:43	30 15:53 (B25)	15:47		15:45
59	05:12	05:46 (B23)	06:13	07:25 (B11)	07:15		07:18	15:23 (B25)	08:22		08:51
60	21:32	38 20:43 (B22)	20:19	25 07:50 (B11)	18:56	15 18:01 (B24)	16:40	30 15:53 (B25)	15:46		15:46
61	05:14	05:48 (B23)	06:15	07:23 (B11)			07:20	15:23 (B25)			08:51
62	21:30	37 20:43 (B22)	20:16	28 07:51 (B11)			16:38	28 15:51 (B25)			15:47
Potential sun hours	529		469		385		324		247		216
Total, worst case	544		353		599		1058		118		
Sun reduction	0.49		0.50		0.43		0.26		0.08		
Oper. time red.	0.98		0.98		0.98		0.98		0.98		
Wind dir. red.	0.66		0.64		0.65		0.65		0.67		
Total reduction	0.32		0.31		0.27		0.16		0.05		
Total, real	173		110		164		174		6		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kaupres 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (127)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:50 15:48	08:15 16:45	07:11 17:47	07:48 (B12) 19:53	07:27 (B11) 20:55	05:32 20:16 (B22)
2	08:50 15:49	08:13 16:47	07:08 17:50	07:47 (B12) 19:55	07:26 (B11) 20:57	20:55 20:25 (B22)
3	08:50 15:51	08:11 16:50	07:05 17:52	07:48 (B12) 19:57	07:24 (B11) 20:59	20:58 20:27 (B22)
4	08:50 15:52	08:09 16:52	07:03 17:54	07:47 (B12) 19:59	07:24 (B11) 21:01	20:56 20:29 (B22)
5	08:49 15:53	08:07 16:54	07:00 17:56	07:47 (B12) 20:01	07:24 (B11) 21:03	20:53 20:31 (B22)
6	08:49 15:55	08:05 16:56	06:58 17:58	07:48 (B12) 20:03	07:24 (B11) 21:05	20:51 20:32 (B22)
7	08:48 15:56	08:02 16:59	06:55 18:00	07:48 (B12) 20:05	07:23 (B11) 21:08	20:51 20:48 (B23)
8	08:47 15:58	08:00 17:01	06:53 18:03	07:49 (B12) 20:07	07:23 (B11) 21:10	20:51 20:46 (B23)
9	08:47 15:59	07:58 17:03	06:50 18:05	07:50 (B12) 20:09	07:24 (B11) 21:12	20:51 20:32 (B22)
10	08:46 16:01	07:56 17:05	06:47 18:07	07:52 (B12) 20:12	07:23 (B11) 21:14	20:51 20:32 (B22)
11	08:45 16:03	07:54 17:08	06:45 18:09	07:54 (B12) 20:14	07:24 (B11) 21:16	20:51 20:31 (B22)
12	08:44 16:04	07:52 17:10	06:42 18:11	07:54 (B12) 20:16	07:25 (B11) 21:18	20:51 20:31 (B22)
13	08:43 16:06	07:49 17:12	06:39 18:13	07:55 (B12) 20:18	07:26 (B11) 21:19	20:51 20:30 (B22)
14	08:42 16:08	07:47 17:14	06:37 18:15	07:55 (B12) 20:20	07:27 (B11) 21:21	20:51 20:30 (B22)
15	08:41 16:10	07:45 17:16	06:34 18:17	07:55 (B12) 20:22	07:29 (B11) 21:23	20:51 20:29 (B22)
16	08:40 16:12	07:42 17:19	06:31 18:19	07:55 (B12) 20:24	07:31 (B11) 21:25	20:51 20:28 (B22)
17	08:39 16:14	07:40 17:21	06:29 18:22	07:55 (B12) 20:26	07:43 (B11) 21:27	20:51 20:27 (B22)
18	08:37 16:16	07:38 17:23	06:26 18:24	07:55 (B12) 20:28	07:45 (B11) 21:29	20:51 20:25 (B22)
19	08:36 16:18	07:35 17:25	06:23 18:26	07:55 (B12) 20:30	07:45 (B11) 21:31	20:51 20:53 (B23)
20	08:35 16:20	07:33 17:28	06:21 18:28	07:55 (B12) 20:32	07:45 (B11) 21:33	20:51 20:53 (B23)
21	08:33 16:22	07:30 17:30	06:18 18:30	07:55 (B12) 20:34	07:45 (B11) 21:35	20:51 20:51 (B18)
22	08:32 16:24	07:28 17:32	06:15 18:32	07:55 (B12) 20:37	07:45 (B11) 21:36	20:51 20:51 (B18)
23	08:30 16:26	07:26 17:34	06:13 18:34	07:55 (B12) 20:39	07:45 (B11) 21:38	20:51 20:51 (B18)
24	08:29 16:28	07:23 17:36	06:10 18:36	07:55 (B12) 20:41	07:45 (B11) 21:40	20:51 20:51 (B18)
25	08:27 16:30	07:21 17:39	06:07 18:38	07:55 (B12) 20:43	07:45 (B11) 21:41	20:51 20:51 (B18)
26	08:25 16:32	07:18 17:41	06:05 18:40	07:55 (B12) 20:45	07:45 (B11) 21:43	20:51 20:51 (B18)
27	08:24 16:34	07:16 17:43	06:02 18:42	07:55 (B12) 20:47	07:45 (B11) 21:45	20:51 20:51 (B18)
28	08:22 16:36	07:13 17:45	05:59 18:45	07:55 (B12) 20:49	07:45 (B11) 21:46	20:51 20:51 (B18)
29	08:20 16:39	07:11 17:47	05:57 19:47	07:55 (B12) 20:51	07:45 (B11) 21:48	20:51 20:51 (B18)
30	08:18 16:41	07:09 17:49	05:55 19:49	07:55 (B12) 20:53	07:45 (B11) 21:49	20:51 20:51 (B18)
31	08:16 16:43	07:07 17:51	05:53 19:51	07:55 (B12) 20:55	07:45 (B11) 21:51	20:51 20:51 (B18)
Potential sun hours	235	266	366	426	508	528
Total, worst case		672	730	463	538	675
Sun reduction		0.20	0.41	0.50	0.57	0.56
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.66	0.65	0.65	0.65	0.67
Total reduction		0.13	0.26	0.32	0.36	0.37
Total, real		87	190	148	193	247

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kaupres 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (127)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December	
1	04:30		05:13 (B18)	05:16		05:49 (B23)	06:17		07:23 (B11)	07:17		17:45 (B24)	07:22		15:26 (B25)	08:24	
	22:09	24	05:37 (B18)	21:28	33	20:41 (B22)	20:14	30	07:53 (B11)	18:53	17	18:02 (B24)	16:36	26	15:52 (B25)	15:45	
2	04:31		05:14 (B18)	05:17		05:51 (B23)	06:19		07:22 (B11)	07:19		08:35 (B12)	07:25		15:27 (B25)	08:26	
	22:08	23	05:37 (B18)	21:26	33	20:42 (B22)	20:11	31	07:53 (B11)	18:51	26	18:03 (B24)	16:34	24	15:51 (B25)	15:44	
3	04:32		05:14 (B18)	05:19		05:53 (B23)	06:21		07:22 (B11)	07:21		08:31 (B12)	07:27		15:28 (B25)	08:27	
	22:08	23	05:37 (B18)	21:24	31	20:42 (B22)	20:09	32	07:54 (B11)	18:48	34	18:03 (B24)	16:31	21	15:49 (B25)	15:43	
4	04:33		05:15 (B18)	05:21		05:55 (B23)	06:23		07:20 (B11)	07:23		08:28 (B12)	07:29		15:30 (B25)	08:29	
	22:07	22	05:37 (B18)	21:21	29	20:43 (B22)	20:06	33	07:53 (B11)	18:45	40	18:03 (B24)	16:29	18	15:48 (B25)	15:42	
5	04:34		05:16 (B18)	05:23		05:56 (B23)	06:25		07:19 (B11)	07:25		08:26 (B12)	07:31		15:31 (B25)	08:31	
	22:06	21	05:37 (B18)	21:19	25	20:42 (B22)	20:03	34	07:53 (B11)	18:43	43	18:03 (B24)	16:27	15	15:46 (B25)	15:42	
6	04:35		05:17 (B18)	05:25		20:21 (B22)	06:27		07:19 (B11)	07:27		08:25 (B12)	07:33		15:35 (B25)	08:32	
	22:06	19	05:36 (B18)	21:17	21	20:42 (B22)	20:01	34	07:53 (B11)	18:40	46	18:03 (B24)	16:25	8	15:43 (B25)	15:41	
7	04:36		05:17 (B18)	05:27		20:21 (B22)	06:29		07:19 (B11)	07:29		08:24 (B12)	07:35		15:31 (B25)	08:34	
	22:05	19	05:36 (B18)	21:15	20	20:41 (B22)	19:58	33	07:52 (B11)	18:38	47	18:02 (B24)	16:23		15:40		
8	04:37		05:18 (B18)	05:29		20:22 (B22)	06:31		07:19 (B11)	07:31		08:23 (B12)	07:38		15:35	08:35	
	22:04	17	05:35 (B18)	21:13	18	20:40 (B22)	19:55	33	07:52 (B11)	18:35	47	18:01 (B24)	16:21		15:40		
9	04:38		05:19 (B18)	05:31		20:23 (B22)	06:33		07:19 (B11)	07:33		08:22 (B12)	07:40		15:36	08:36	
	22:03	16	05:35 (B18)	21:11	15	20:38 (B22)	19:53	33	07:52 (B11)	18:32	47	18:00 (B24)	16:19		15:39		
10	04:39		05:20 (B18)	05:33		20:22 (B22)	06:35		07:19 (B11)	07:36		08:22 (B12)	07:42		15:38	08:38	
	22:02	14	05:34 (B18)	21:08	13	20:35 (B22)	19:50	32	07:51 (B11)	18:30	45	17:59 (B24)	16:17		15:39		
11	04:41		05:21 (B18)	05:35		20:24 (B22)	06:37		07:19 (B11)	07:38		08:22 (B12)	07:44		15:39	08:39	
	22:01	11	05:32 (B18)	21:06	9	20:33 (B22)	19:47	31	07:50 (B11)	18:27	40	17:56 (B24)	16:15		15:38		
12	04:42		05:24 (B18)	05:37		20:25 (B22)	06:39		07:20 (B11)	07:40		08:21 (B12)	07:46		15:40	08:40	
	22:00	8	05:32 (B18)	21:04	6	20:31 (B22)	19:45	29	07:49 (B11)	18:25	37	17:53 (B24)	16:13		15:38		
13	04:43			05:39			06:41		07:20 (B11)	07:42		08:21 (B12)	07:48		15:41	08:41	
	21:59			21:01			19:42	28	07:48 (B11)	18:22	27	08:48 (B12)	16:11		15:38		
14	04:45			05:41			06:43		07:21 (B11)	07:44		08:21 (B12)	07:50		15:42	08:42	
	21:58			20:59			19:39	25	07:46 (B11)	18:19	26	08:47 (B12)	16:09		15:38		
15	04:46			05:43			06:45		07:23 (B11)	07:46		08:22 (B12)	07:53		15:43	08:43	
	21:56			20:57			19:37	25	18:50 (B14)	18:17	24	08:46 (B12)	16:07		15:38		
16	04:48			05:45			06:47		07:24 (B11)	07:48		08:23 (B12)	07:55		15:44	08:44	
	21:55			20:54			19:34	28	18:53 (B14)	18:14	35	16:48 (B25)	16:06		15:38		
17	04:49			05:47			06:49		07:28 (B11)	07:50		08:24 (B12)	07:57		15:45	08:45	
	21:54			20:52			19:31	23	18:54 (B14)	18:12	38	16:50 (B25)	16:04		15:38		
18	04:51			05:49			06:51		18:40 (B14)	07:52		08:25 (B12)	07:59		15:46	08:46	
	21:52			20:49			19:28	15	18:55 (B14)	18:09	39	16:51 (B25)	16:02		15:38		
19	04:52		05:52 (B23)	05:51			06:53		18:38 (B14)	07:54		08:27 (B12)	08:01		15:47	08:47	
	21:51	5	05:57 (B23)	20:47			19:26	16	18:54 (B14)	18:07	36	16:52 (B25)	16:01		15:38		
20	04:54		05:50 (B23)	05:53			06:55		18:37 (B14)	07:56		16:27 (B25)	08:03		15:48	08:48	
	21:49	10	06:00 (B23)	20:44			19:23	15	18:52 (B14)	18:04	27	16:54 (B25)	15:59		15:39		
21	04:56		05:49 (B23)	05:55			06:57		18:37 (B14)	07:59		16:26 (B25)	08:05		15:49	08:48	
	21:48	11	06:00 (B23)	20:42			19:20	13	18:50 (B14)	18:02	28	16:54 (B25)	15:58		15:39		
22	04:57		05:48 (B23)	05:57			06:59		18:37 (B14)	08:01		16:25 (B25)	08:07		15:49	08:49	
	21:46	14	06:02 (B23)	20:39			19:18	10	18:47 (B14)	17:59	29	16:54 (B25)	15:56		15:39		
23	04:59		05:47 (B23)	05:59			07:01		18:38 (B14)	08:03		16:25 (B25)	08:09		15:49	08:49	
	21:44	15	06:02 (B23)	20:37			19:15	6	18:44 (B14)	17:57	30	16:55 (B25)	15:55		15:40		
24	05:01		05:47 (B23)	06:01			07:03		18:39 (B14)	08:05		16:24 (B25)	08:11		15:50	08:50	
	21:43	16	06:03 (B23)	20:34			19:12	3	18:42 (B14)	17:54	31	16:55 (B25)	15:53		15:40		
25	05:03		05:46 (B23)	06:03			07:05			07:07		15:23 (B25)	08:13		15:50	08:50	
	21:41	20	20:33 (B22)	20:32			19:10			16:52	32	15:55 (B25)	15:52		15:41		
26	05:04		05:46 (B23)	06:05			07:07			07:09		15:23 (B25)	08:15		15:50	08:50	
	21:39	27	20:36 (B22)	20:29			19:07			16:50	31	15:54 (B25)	15:51		15:42		
27	05:06		05:46 (B23)	06:07		07:32 (B11)	07:09			07:12		15:24 (B25)	08:17		15:51	08:51	
	21:37	30	20:38 (B22)	20:27	13	07:45 (B11)	19:04			16:47	31	15:55 (B25)	15:49		15:43		
28	05:08		05:45 (B23)	06:09			07:29 (B11)	07:11		07:14		15:24 (B25)	08:19		15:51	08:51	
	21:35	34	20:39 (B22)	20:24	19	07:48 (B11)	19:01			16:45	30	15:54 (B25)	15:48		15:44		
29	05:10		05:46 (B23)	06:11			07:27 (B11)	07:13		17:49 (B24)	07:16		15:24 (B25)	08:20		15:51	08:51
	21:34	34	20:40 (B22)	20:22	23	07:50 (B11)	18:59	9	17:58 (B24)	16:43	30	15:54 (B25)	15:47		15:45		
30	05:12		05:46 (B23)	06:13			07:26 (B11)	07:15		17:47 (B24)	07:18		15:25 (B25)	08:22		15:51	08:51
	21:32	36	20:41 (B22)	20:19	25	07:51 (B11)	18:56	14	18:01 (B24)	16:40	28	15:53 (B25)	15:46		15:46		
31	05:14		05:48 (B23)	06:15			07:24 (B11)			07:20		15:25 (B25)			15:51	08:51	
	21:30	36	20:42 (B22)	20:16	28	07:52 (B11)				16:38	27	15:52 (B25)			15:47	15:47	
Potential sun hours	529			469				385		324		247				216	
Total, worst case		505			361			615		1048			112				
Sun reduction		0.49			0.50			0.43		0.26			0.08				
Oper. time red.		0.98			0.98			0.98		0.98			0.98				
Wind dir. red.		0.66			0.64			0.65		0.65			0.67				
Total reduction		0.32			0.31			0.27		0.16			0.05				
Total, real		161			113			168		173			6				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Krasta Ozoli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (9)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	06:49	05:32	06:29 (B1)
	15:48	16:45	17:47	19:53	20:55	31 07:00 (B1)
2	08:50	08:13	07:08	06:46	05:30	06:29 (B1)
	15:49	16:47	17:50	19:55	20:57	31 07:00 (B1)
3	08:50	08:11	07:06	06:43	05:28	06:30 (B1)
	15:51	16:50	17:52	19:57	21:00	30 07:00 (B1)
4	08:50	08:09	07:03	06:41	05:26	06:30 (B1)
	15:52	16:52	17:54	19:59	21:02	29 06:59 (B1)
5	08:49	08:07	07:00	06:38	05:23	06:31 (B1)
	15:53	16:54	17:56	20:01	21:04	27 06:58 (B1)
6	08:49	08:05	06:58	06:35	05:21	06:32 (B1)
	15:55	16:56	17:58	20:03	21:06	25 06:57 (B1)
7	08:48	08:03	06:55	06:33	05:19	06:33 (B1)
	15:56	16:59	18:00	20:05	21:08	23 06:56 (B1)
8	08:48	08:00	06:53	06:30	05:17	06:34 (B1)
	15:58	17:01	18:03	20:08	21:10	20 06:54 (B1)
9	08:47	07:58	06:50	06:27	05:15	06:36 (B1)
	15:59	17:03	18:05	20:10	21:12	16 06:52 (B1)
10	08:46	07:56	06:47	06:25	05:13	06:38 (B1)
	16:01	17:05	18:07	20:12	21:14	12 06:50 (B1)
11	08:45	07:54	06:45	06:22	05:10	06:42 (B1)
	16:03	17:08	18:09	20:14	21:16	4 06:46 (B1)
12	08:44	07:52	06:42	06:20	06:45 (B2)	05:08
	16:04	17:10	18:11	20:16	4 06:49 (B2)	21:18
13	08:43	07:49	06:39	06:17	06:43 (B2)	05:06
	16:06	17:12	18:13	20:18	7 06:50 (B2)	21:20
14	08:42	07:47	06:37	06:14	06:40 (B2)	05:04
	16:08	17:14	18:15	20:20	11 06:51 (B2)	21:22
15	08:41	07:45	06:34	06:12	06:38 (B2)	05:02
	16:10	17:17	18:17	20:22	13 06:51 (B2)	21:24
16	08:40	07:43	06:32	06:09	06:35 (B2)	05:01
	16:12	17:19	18:20	20:24	17 06:52 (B1)	21:25
17	08:39	07:40	06:29	06:07	06:34 (B2)	04:59
	16:14	17:21	18:22	5 06:59 (B4)	20:26	22 06:56 (B1)
18	08:37	07:38	06:26	06:04	06:34 (B2)	04:57
	16:16	17:23	18:24	9 07:00 (B4)	20:28	23 06:57 (B1)
19	08:36	07:35	06:24	06:02	06:35 (B2)	04:55
	16:18	17:25	18:26	13 07:02 (B4)	20:30	24 06:59 (B1)
20	08:35	07:33	06:21	06:00	06:34 (B1)	04:53
	16:20	17:28	18:28	16 07:02 (B4)	20:33	26 07:00 (B1)
21	08:33	07:31	06:18	06:03 (B4)	05:57	06:33 (B1)
	16:22	17:30	18:30	19 07:02 (B4)	20:35	28 07:01 (B1)
22	08:32	07:28	06:15	06:04 (B4)	05:54	06:32 (B1)
	16:24	17:32	18:32	18 07:02 (B4)	20:37	30 07:02 (B1)
23	08:30	07:26	06:13	06:03 (B4)	05:52	06:31 (B1)
	16:26	17:34	18:34	19 07:02 (B4)	20:39	30 07:01 (B1)
24	08:29	07:23	06:10	06:03 (B4)	05:49	06:30 (B1)
	16:28	17:37	18:36	18 07:01 (B4)	20:41	32 07:02 (B1)
25	08:27	07:21	06:07	06:03 (B4)	05:47	06:30 (B1)
	16:30	17:39	18:38	16 06:59 (B4)	20:43	32 07:02 (B1)
26	08:26	07:18	06:05	06:04 (B4)	05:44	06:29 (B1)
	16:32	17:41	18:40	13 06:58 (B4)	20:45	33 07:02 (B1)
27	08:24	07:16	06:02	06:04 (B4)	05:42	06:29 (B1)
	16:34	17:43	18:43	10 06:56 (B4)	20:47	33 07:02 (B1)
28	08:22	07:13	05:59	05:40	06:29 (B1)	04:41
	16:36	17:45	18:45	20:49	33 07:02 (B1)	21:47
29	08:20		06:57	05:37	06:29 (B1)	04:39
	16:39		19:47	20:51	33 07:02 (B1)	21:48
30	08:18		06:54	05:35	06:29 (B1)	04:38
	16:41		19:49	20:53	32 07:01 (B1)	21:50
31	08:17		06:51			04:37
	16:43		19:51			21:51
Potential sun hours	235	266	366	426	508	4 05:15 (B17)
Total, worst case			156	463	255	485
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.64	0.65	0.65	0.67
Total reduction			0.26	0.32	0.36	0.36
Total, real			40	148	92	177

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Krasta Ozoli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (9)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:07 (B17)	05:16		07:17	07:23
	22:09	17 05:24 (B17)	21:28		18:54	16:36
2	04:31	05:08 (B17)	05:17	06:50 (B1)	07:19	07:25
	22:09	17 05:25 (B17)	21:26	8 06:58 (B1)	18:51	16:34
3	04:32	05:09 (B17)	05:19	06:47 (B1)	07:21	07:27
	22:08	16 05:25 (B17)	21:24	14 07:01 (B1)	18:48	16:31
4	04:33	05:10 (B17)	05:21	06:45 (B1)	07:23	07:29
	22:07	15 05:25 (B17)	21:22	18 07:03 (B1)	18:46	16:29
5	04:34	05:11 (B17)	05:23	06:43 (B1)	07:25	07:31
	22:07	14 05:25 (B17)	21:19	21 07:04 (B1)	18:43	16:27
6	04:35	05:12 (B17)	05:25	06:42 (B1)	07:27	07:33
	22:06	13 05:25 (B17)	21:17	24 07:06 (B1)	18:40	16:25
7	04:36	05:13 (B17)	05:27	06:41 (B1)	07:29	07:36
	22:05	12 05:25 (B17)	21:15	26 07:07 (B1)	18:38	16:23
8	04:37	05:14 (B17)	05:29	06:40 (B1)	07:32	07:38
	22:04	11 05:25 (B17)	21:13	28 07:08 (B1)	18:35	16:21
9	04:38	05:15 (B17)	05:31	06:40 (B1)	07:34	07:40
	22:03	10 05:25 (B17)	21:11	28 07:08 (B1)	18:32	16:19
10	04:39	05:16 (B17)	05:33	06:38 (B1)	07:36	07:42
	22:02	8 05:24 (B17)	21:08	30 07:08 (B1)	18:30	16:17
11	04:41	05:17 (B17)	05:35	06:38 (B1)	07:38	07:44
	22:01	7 05:24 (B17)	21:06	31 07:09 (B1)	18:27	16:15
12	04:42	05:19 (B17)	05:37	06:37 (B1)	07:40	07:46
	22:00	5 05:24 (B17)	21:04	32 07:09 (B1)	18:25	16:13
13	04:43	05:20 (B17)	05:39	06:37 (B1)	07:42	07:49
	21:59	3 05:23 (B17)	21:01	32 07:09 (B1)	18:22	16:11
14	04:45	05:21 (B17)	05:41	06:37 (B1)	07:44	07:51
	21:58	1 05:22 (B17)	20:59	33 07:10 (B1)	18:19	16:09
15	04:46		05:43	06:37 (B1)	07:46	07:53
	21:57		20:57	33 07:10 (B1)	18:17	16:07
16	04:48		05:45	06:37 (B1)	07:48	07:55
	21:55		20:54	32 07:09 (B1)	18:14	16:06
17	04:49		05:47	06:36 (B1)	07:50	07:57
	21:54		20:52	32 07:08 (B1)	18:12	16:04
18	04:51		05:49	06:36 (B1)	07:52	07:59
	21:52		20:50	32 07:08 (B1)	18:09	16:02
19	04:52		05:51	06:36 (B1)	07:55	08:01
	21:51		20:47	32 07:08 (B1)	18:07	16:01
20	04:54		05:53	06:36 (B1)	07:57	08:03
	21:49		20:45	31 07:07 (B1)	18:04	15:59
21	04:56		05:55	06:37 (B1)	07:59	08:05
	21:48		20:42	29 07:06 (B1)	18:02	15:58
22	04:57		05:57	06:38 (B1)	08:01	08:07
	21:46		20:40	27 07:05 (B1)	17:59	15:56
23	04:59		05:59	06:39 (B2)	08:03	08:09
	21:45		20:37	25 07:04 (B1)	17:57	15:55
24	05:01		06:01	06:38 (B2)	08:05	08:11
	21:43		20:35	25 07:03 (B1)	17:55	15:53
25	05:03		06:03	06:37 (B2)	08:07	08:13
	21:41		20:32	24 07:01 (B1)	17:52	15:52
26	05:04		06:05	06:36 (B2)	08:10	08:15
	21:39		20:29	22 06:58 (B1)	17:50	15:51
27	05:06		06:07	06:37 (B2)	08:12	08:17
	21:38		20:27	17 06:54 (B1)	17:47	15:49
28	05:08		06:09	06:39 (B2)	08:14	08:19
	21:36		20:24	13 06:52 (B2)	16:45	15:48
29	05:10		06:11	06:41 (B2)	08:16	08:21
	21:34		20:22	10 06:51 (B2)	16:43	15:47
30	05:12		06:13	06:43 (B2)	08:18	08:22
	21:32		20:19	7 06:50 (B2)	16:40	15:46
31	05:14		06:15	06:45 (B2)	08:20	08:25
	21:30		20:17	4 06:49 (B2)	16:38	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case	149		720			142
Sun reduction	0.49		0.50			0.07
Oper. time red.	0.98		0.98			0.98
Wind dir. red.	0.67		0.65			0.64
Total reduction	0.32		0.32			0.04
Total, real	48		229	44		6

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Krastini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (116)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		14:03 (B22)	08:15		14:07 (B22)	07:11		07:37 (B18)	06:49			05:32					04:36
	15:48	43	14:46 (B14)	16:45	41	14:48 (B22)	17:47	5	07:42 (B18)	19:53			20:55					21:52
2	08:50		14:04 (B22)	08:13		14:08 (B22)	07:08		07:34 (B18)	06:46			05:30					04:35
	15:49	42	14:46 (B14)	16:47	39	14:47 (B22)	17:50	8	07:42 (B18)	19:55			20:57					21:54
3	08:50		14:03 (B22)	08:11		14:09 (B22)	07:06		07:32 (B18)	06:43			05:28					04:34
	15:51	43	14:46 (B14)	16:50	38	14:47 (B22)	17:52	11	07:43 (B18)	19:57			20:59					21:55
4	08:50		14:03 (B22)	08:09		14:10 (B22)	07:03		07:29 (B18)	06:41			05:26					04:33
	15:52	43	14:46 (B14)	16:52	37	14:47 (B22)	17:54	14	07:43 (B18)	19:59			21:02					21:57
5	08:49		14:03 (B22)	08:07		14:12 (B22)	07:00		07:27 (B18)	06:38			05:23					04:32
	15:53	44	14:47 (B14)	16:54	34	14:46 (B22)	17:56	15	07:42 (B18)	20:01			21:04					21:58
6	08:49		14:03 (B22)	08:05		14:12 (B22)	06:58		07:28 (B18)	06:35			05:21					04:31
	15:55	44	14:47 (B14)	16:56	32	14:44 (B22)	17:58	14	07:42 (B18)	20:03			21:06					21:59
7	08:48		14:03 (B22)	08:03		14:14 (B22)	06:55		07:28 (B18)	06:33			05:19					04:30
	15:56	44	14:47 (B14)	16:59	29	14:43 (B22)	18:00	12	07:40 (B18)	20:05			21:08					22:00
8	08:47		14:03 (B22)	08:00		14:16 (B22)	06:53		07:29 (B18)	06:30			05:17					04:29
	15:58	44	14:47 (B14)	17:01	26	14:42 (B22)	18:03	9	07:38 (B18)	20:07			21:10					22:01
9	08:47		14:03 (B22)	07:58		14:18 (B22)	06:50		06:27				05:15					04:28
	15:59	44	14:47 (B14)	17:03	22	14:40 (B22)	18:05		20:10				21:12					22:02
10	08:46		14:03 (B22)	07:56		14:21 (B22)	06:47		06:25				05:13			05:42 (B2)		04:28
	16:01	44	14:47 (B14)	17:05	16	14:37 (B22)	18:07		20:12				21:14	4		05:46 (B2)		22:03
11	08:45		14:03 (B22)	07:54		14:27 (B22)	06:45		06:22				05:10			05:40 (B2)		04:27
	16:03	44	14:47 (B14)	17:08	5	14:32 (B22)	18:09		20:14				21:16	7		05:47 (B2)		22:04
12	08:44		14:02 (B22)	07:52			06:42		06:20				05:08			05:38 (B2)		04:27
	16:04	43	14:45 (B14)	17:10			18:11		20:16				21:18	10		05:48 (B2)		22:05
13	08:43		14:03 (B22)	07:49			06:39		06:17		06:43 (B4)		05:06			05:36 (B2)		04:26
	16:06	41	14:44 (B14)	17:12			18:13		20:18	8	06:51 (B4)		21:20	12		05:48 (B2)		22:06
14	08:42		14:03 (B22)	07:47			06:37		06:14		06:40 (B4)		05:04			05:35 (B2)		04:26
	16:08	40	14:43 (B22)	17:14			18:15		20:20	12	06:52 (B4)		21:22	14		05:49 (B2)		22:07
15	08:41		14:02 (B22)	07:45			06:34		06:12		06:38 (B4)		05:02			05:33 (B2)		04:26
	16:10	41	14:43 (B22)	17:17			18:17		20:22	16	06:54 (B4)		21:24	16		05:49 (B2)		22:07
16	08:40		14:03 (B22)	07:43			06:31		06:09		06:35 (B4)		05:01			05:31 (B2)		04:25
	16:12	41	14:44 (B22)	17:19			18:20		20:24	19	06:54 (B4)		21:25	18		05:49 (B2)		22:08
17	08:39		14:02 (B22)	07:40			06:29		06:07		06:34 (B4)		04:59			05:32 (B2)		04:25
	16:14	42	14:44 (B22)	17:21			18:22		20:26	21	06:55 (B4)		21:27	18		05:50 (B2)		22:08
18	08:37		14:03 (B22)	07:38			06:26		06:04		06:33 (B4)		04:57			05:31 (B2)		04:25
	16:16	42	14:45 (B22)	17:23			18:24		20:28	22	06:55 (B4)		21:29	18		05:49 (B2)		22:09
19	08:36		14:03 (B22)	07:35			06:23		06:02		06:33 (B4)		04:55			05:31 (B2)		04:25
	16:18	42	14:45 (B22)	17:25			18:26		20:30	22	06:55 (B4)		21:31	18		05:49 (B2)		22:09
20	08:35		14:04 (B22)	07:33			06:21		05:59		06:32 (B4)		04:53			05:32 (B2)		04:25
	16:20	43	14:47 (B22)	17:28			18:28		20:32	22	06:54 (B4)		21:33	17		05:49 (B2)		22:10
21	08:33		14:03 (B22)	07:31			06:18		05:57		06:32 (B4)		04:52			05:32 (B2)		04:25
	16:22	44	14:47 (B22)	17:30			18:30		20:35	22	06:54 (B4)		21:35	16		05:48 (B2)		22:10
22	08:32		14:03 (B22)	07:28			06:15		05:54		06:33 (B4)		04:50			05:33 (B2)		04:25
	16:24	44	14:47 (B22)	17:32			18:32		20:37	21	06:54 (B4)		21:36	15		05:48 (B2)		22:10
23	08:30		14:03 (B22)	07:26			06:13		06:38 (B15)	05:52		06:32 (B4)	04:48			05:33 (B2)		04:26
	16:26	44	14:47 (B22)	17:34			18:34	4	06:42 (B15)	20:39	21	06:53 (B4)	21:38	14		05:47 (B2)		22:10
24	08:29		14:03 (B22)	07:23			06:10		06:35 (B15)	05:49		06:33 (B4)	04:47			05:34 (B2)		04:26
	16:28	44	14:47 (B22)	17:37			18:36	8	06:43 (B15)	20:41	19	06:52 (B4)	21:40	13		05:47 (B2)		22:10
25	08:27		14:05 (B22)	07:21			06:07		06:32 (B15)	05:47		06:34 (B4)	04:45			05:35 (B2)		04:26
	16:30	43	14:48 (B22)	17:39			18:38	11	06:43 (B15)	20:43	18	06:52 (B4)	21:42	12		05:47 (B2)		22:10
26	08:25		14:05 (B22)	07:18			06:05		06:30 (B15)	05:44		06:34 (B4)	04:44			05:37 (B2)		04:27
	16:32	44	14:49 (B22)	17:41			18:40	14	06:44 (B15)	20:45	16	06:50 (B4)	21:43	9		05:46 (B2)		22:10
27	08:24		14:05 (B22)	07:16			06:02		06:27 (B15)	05:42		06:36 (B4)	04:42			05:38 (B2)		04:27
	16:34	44	14:49 (B22)	17:43			18:43	16	06:43 (B15)	20:47	12	06:48 (B4)	21:45	6		05:44 (B2)		22:10
28	08:22		14:06 (B22)	07:13		07:40 (B18)	05:59		06:27 (B15)	05:40		06:39 (B4)	04:41					04:28
	16:36	43	14:49 (B22)	17:45	1	07:41 (B18)	18:45	15	06:42 (B15)	20:49	6	06:45 (B4)	21:47					22:10
29	08:20		14:06 (B22)				06:57		07:28 (B15)	05:37			04:39					04:28
	16:39	43	14:49 (B22)				19:47	14	07:42 (B15)	20:51			21:48					22:10
30	08:18		14:07 (B22)				06:54		07:28 (B15)	05:35			04:38					04:29
	16:41	42	14:49 (B22)				19:49	12	07:40 (B15)	20:53			21:50					22:09
31	08:17		14:06 (B22)				06:51		07:30 (B15)				04:37					
	16:43	42	14:48 (B22)				19:51	7	07:37 (B15)				21:51					
Potential sun hours	235			266			366			426			508					529
Total, worst case	1331			320			189			277			237					
Sun reduction	0.13			0.20			0.41			0.50			0.57					
Oper. time red.	0.98			0.98			0.98			0.98			0.98					
Wind dir. red.	0.66			0.66			0.64			0.65			0.67					
Total reduction	0.09			0.13			0.26			0.32			0.37					
Total, real	115			42			49			89			89					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Krastini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (116)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	05:49 (B2) 20:14	07:17 18:54	07:22 16:36	13:50 (B22) 15:45
2	04:31 22:08	05:17 21:26	05:51 (B2) 20:11	07:19 18:51	17 16:34	14:07 (B22) 15:44
3	04:32 22:08	05:19 21:24	05:53 (B2) 20:09	07:21 18:48	23 16:34	14:10 (B22) 15:44
4	04:33 22:07	05:21 21:22	05:56 (B2) 20:06	07:23 18:46	27 16:31	14:12 (B22) 15:43
5	04:34 22:07	05:23 21:19	06:23 20:03	07:25 18:43	30 16:29	14:13 (B22) 15:42
6	04:35 22:06	05:25 21:17	06:25 20:01	08:08 (B18) 18:43	32 16:27	14:14 (B22) 15:42
7	04:36 22:05	05:27 21:15	06:27 19:58	08:05 (B18) 18:38	35 16:25	14:16 (B22) 15:41
8	04:37 22:04	05:29 21:13	06:29 19:55	08:04 (B18) 18:35	36 16:23	14:16 (B22) 15:40
9	04:38 22:03	05:31 21:11	06:31 19:53	08:02 (B18) 18:32	38 16:21	14:18 (B22) 15:40
10	04:39 22:02	05:33 21:08	06:33 19:50	08:00 (B18) 18:30	39 16:19	14:18 (B22) 15:39
11	04:41 22:01	05:35 21:06	06:35 19:47	08:18 (B18) 18:27	40 16:17	14:18 (B22) 15:39
12	04:42 22:00	05:37 21:04	06:37 19:45	08:07 (B18) 18:25	42 16:15	14:18 (B22) 15:38
13	04:43 21:59	05:39 21:01	06:39 19:42	08:09 (B18) 18:23	44 16:13	14:20 (B22) 15:38
14	04:45 21:58	05:41 20:59	06:41 19:39	08:11 (B18) 18:21	43 16:11	14:20 (B22) 15:38
15	04:46 21:57	05:43 20:57	06:43 19:37	08:14 (B18) 18:19	44 16:09	14:21 (B22) 15:38
16	04:48 21:55	05:45 20:54	06:45 19:34	07:17 (B15) 18:17	44 16:08	14:21 (B22) 15:38
17	04:49 21:54	05:47 20:52	06:47 19:31	07:17 (B15) 18:14	44 16:06	14:22 (B22) 15:38
18	04:51 21:52	05:49 20:49	06:49 19:29	07:18 (B15) 18:12	44 16:04	14:22 (B22) 15:38
19	04:52 21:51	05:51 20:47	06:51 19:26	07:20 (B15) 18:10	43 16:02	14:21 (B22) 15:38
20	04:54 21:49	05:53 20:45	06:53 19:23	07:22 (B15) 18:07	44 16:01	14:22 (B22) 15:38
21	04:56 21:48	05:55 20:42	06:55 19:20	07:24 (B15) 18:05	44 15:59	14:22 (B22) 15:39
22	04:57 21:46	05:57 20:40	06:57 19:18	07:26 (B15) 18:02	44 15:58	14:22 (B22) 15:39
23	04:59 21:45	05:59 20:37	06:59 19:15	06:37 (B4) 18:01	43 15:56	14:23 (B22) 15:39
24	05:01 21:43	06:01 20:35	07:01 19:12	06:37 (B4) 17:59	43 15:54	14:23 (B22) 15:39
25	05:03 21:41	06:03 20:32	07:03 19:10	06:37 (B4) 17:57	42 15:53	14:22 (B22) 15:40
26	05:04 21:39	06:05 20:29	07:05 19:07	06:37 (B4) 17:55	42 15:52	14:22 (B22) 15:41
27	05:06 21:37	06:07 20:27	07:07 19:04	06:37 (B4) 17:52	41 15:51	14:22 (B22) 15:42
28	05:08 21:36	06:09 20:24	07:11 19:02	06:37 (B4) 17:49	41 15:49	14:22 (B22) 15:43
29	05:10 21:34	06:11 20:22	07:13 18:59	06:37 (B4) 17:46	41 15:47	14:23 (B22) 15:43
30	05:12 21:32	06:13 20:19	07:15 18:56	06:37 (B4) 17:43	41 15:45	14:23 (B22) 15:44
31	05:14 21:30	06:15 20:17		06:37 (B4) 17:41	43 15:44	14:23 (B22) 15:44
Potential sun hours	529	469	385	324	247	216
Total, worst case	225	295	101	101	1170	1299
Sun reduction	0.49	0.50	0.43	0.26	0.08	0.07
Oper. time red.	0.98	0.98	0.98	0.98	0.98	0.98
Wind dir. red.	0.67	0.66	0.65	0.63	0.66	0.66
Total reduction	0.32	0.32	0.27	0.16	0.05	0.05
Total, real	73	94	28	16	63	59

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kropini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (172)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:57	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:37 22:03	05:31 21:11	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:07	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:04	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:12 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:46	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kvieši - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (101)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:17 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:07 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:50 21:53	05:49 20:50	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:17		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Klavas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (81)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

January		February		March		April		May		June	
1	08:51	09:30 (B12)	08:15	08:59 (B11)	07:11	06:49	07:14 (B9)	05:32	06:07 (B7)	04:36	05:20 (B15)
2	15:48	29 15:05 (B25)	16:45	35 16:10 (B24)	17:47	19:53	56 19:06 (B22)	20:55	16 06:23 (B7)	21:52	23 05:43 (B15)
3	08:50	09:29 (B12)	08:13	08:59 (B11)	07:08	06:46	07:11 (B9)	05:30	06:08 (B7)	04:35	05:20 (B15)
4	15:49	31 15:06 (B25)	16:47	39 16:13 (B24)	17:50	19:55	56 19:03 (B22)	20:57	15 06:23 (B7)	21:54	24 05:44 (B15)
5	08:50	09:29 (B12)	08:11	08:59 (B11)	07:05	06:43	07:08 (B9)	05:28	06:09 (B7)	04:34	05:19 (B15)
6	15:51	34 15:08 (B25)	16:50	42 16:15 (B24)	17:52	19:57	53 08:13 (B18)	20:59	13 06:22 (B7)	21:55	26 05:45 (B15)
7	08:50	09:28 (B12)	08:09	08:59 (B11)	07:03	06:41	07:06 (B9)	05:26	06:11 (B7)	04:33	05:18 (B15)
8	15:52	37 15:09 (B25)	16:52	45 16:18 (B24)	17:54	19:59	58 08:14 (B18)	21:01	9 06:20 (B7)	21:56	27 05:45 (B15)
9	08:49	09:27 (B12)	08:07	08:58 (B11)	07:00	06:38	07:03 (B23)	05:23	06:14 (B7)	04:32	05:19 (B15)
10	15:53	39 15:09 (B25)	16:54	48 16:19 (B24)	17:56	20:01	62 08:13 (B18)	21:03	3 06:17 (B7)	21:58	27 05:46 (B15)
11	08:49	09:28 (B12)	08:05	08:59 (B11)	06:58	06:35	07:03 (B23)	05:21		04:31	05:18 (B15)
12	15:55	38 15:10 (B25)	16:56	48 16:20 (B24)	17:58	20:03	63 08:14 (B18)	21:05		21:59	29 05:47 (B15)
13	08:48	09:28 (B12)	08:02	08:59 (B11)	06:55	06:33	07:01 (B23)	05:19		04:30	05:18 (B15)
14	15:56	40 15:11 (B25)	16:58	48 16:20 (B24)	18:00	20:05	64 08:13 (B18)	21:08		22:00	29 05:47 (B15)
15	08:47	09:28 (B12)	08:00	09:00 (B11)	06:53	06:30	07:01 (B23)	05:17		04:29	05:18 (B15)
16	15:58	41 15:11 (B25)	17:01	46 16:20 (B24)	18:02	20:07	64 08:12 (B18)	21:10		22:01	30 05:48 (B15)
17	08:47	09:28 (B12)	07:58	09:00 (B11)	06:50	06:27	07:01 (B23)	05:15		04:28	05:18 (B15)
18	15:59	42 15:12 (B25)	17:03	43 16:18 (B24)	18:05	20:09	63 08:12 (B18)	21:12		22:02	30 05:48 (B15)
19	08:46	09:29 (B12)	07:56	09:00 (B11)	06:47	06:25	07:00 (B23)	05:12		04:28	05:18 (B15)
20	16:01	41 15:12 (B25)	17:05	42 16:18 (B24)	18:07	20:12	63 08:11 (B18)	21:14		22:03	31 05:49 (B15)
21	08:45	09:29 (B12)	07:54	09:00 (B11)	06:45	06:22	07:01 (B23)	05:10		04:27	05:17 (B15)
22	16:03	43 15:13 (B25)	17:07	36 16:15 (B24)	18:09	20:14	61 08:11 (B18)	21:16		22:04	32 05:49 (B15)
23	08:44	09:28 (B12)	07:52	09:02 (B11)	06:42	06:20	07:01 (B23)	05:08		04:27	05:18 (B15)
24	16:04	43 15:12 (B25)	17:10	25 09:27 (B11)	18:11	20:16	58 08:10 (B18)	21:18		22:05	31 05:49 (B15)
25	08:43	09:29 (B12)	07:49	09:03 (B11)	06:39	06:17	07:02 (B23)	05:06		04:26	05:18 (B15)
26	16:06	42 15:13 (B25)	17:12	24 09:27 (B11)	18:13	20:18	55 08:09 (B18)	21:19		22:06	32 05:50 (B15)
27	08:42	09:29 (B12)	07:47	09:04 (B11)	06:37	06:14	07:03 (B23)	05:04		04:26	05:17 (B15)
28	16:08	43 15:14 (B25)	17:14	21 09:25 (B11)	18:15	20:20	50 08:08 (B18)	21:21		22:06	33 05:50 (B15)
29	08:41	09:29 (B12)	07:45	09:06 (B11)	06:34	06:12	07:05 (B23)	05:02		04:26	05:18 (B15)
30	16:10	43 15:13 (B25)	17:16	17 09:23 (B11)	18:17	20:22	44 08:07 (B18)	21:23		22:07	32 05:50 (B15)
31	08:40	09:30 (B12)	07:42	09:08 (B11)	06:31	06:09	07:33 (B18)	05:00		04:25	05:18 (B15)
32	16:12	42 15:14 (B25)	17:19	12 09:20 (B11)	18:19	20:24	32 08:05 (B18)	21:25		22:08	32 05:50 (B15)
33	08:39	09:30 (B12)	07:40		06:29	06:07	07:35 (B18)	04:59		04:25	05:18 (B15)
34	16:14	41 15:13 (B25)	17:21		18:22	20:26	28 08:03 (B18)	21:27		22:08	33 05:51 (B15)
35	08:37	09:31 (B12)	07:38		06:26	06:04	07:35 (B18)	04:57		04:25	05:18 (B15)
36	16:16	40 15:14 (B25)	17:23		18:24	20:28	26 08:01 (B18)	21:29		22:09	33 05:51 (B15)
37	08:36	09:31 (B12)	07:35		06:23	06:02	07:38 (B18)	04:55		04:25	05:18 (B15)
38	16:18	38 15:13 (B25)	17:25		18:26	20:30	21 07:59 (B18)	21:31		22:09	33 05:51 (B15)
39	08:35	09:31 (B12)	07:33		06:21	05:59	07:40 (B18)	04:53		04:25	05:18 (B15)
40	16:20	36 15:12 (B25)	17:28		18:28	20:32	15 07:55 (B18)	21:33		22:10	33 05:51 (B15)
41	08:33	09:33 (B12)	07:31		06:18	05:57	07:45 (B18)	04:52		04:25	05:19 (B15)
42	16:22	32 15:12 (B25)	17:30		18:30	2 18:02 (B22)	20:34	5 07:50 (B18)		21:35	32 05:51 (B15)
43	08:32	09:33 (B12)	07:28		06:15	05:54	07:56 (B22)	05:54		04:50	05:20 (B15)
44	16:24	29 15:10 (B25)	17:32		18:32	7 18:03 (B22)	20:37			21:36	32 05:52 (B15)
45	08:30	09:34 (B12)	07:26		06:13	05:52	07:55 (B22)	05:52		04:48	05:19 (B15)
46	16:26	20 15:07 (B25)	17:34		18:34	11 18:06 (B22)	20:39	4 06:22 (B7)		21:38	33 05:52 (B15)
47	08:29	09:08 (B11)	07:23		06:10	05:49	07:53 (B22)	05:49		04:47	05:19 (B15)
48	16:28	24 09:52 (B12)	17:36		18:36	15 18:08 (B22)	20:41	8 06:24 (B7)		21:40	33 05:52 (B15)
49	08:27	09:05 (B11)	07:21		06:07	05:47	06:49 (B18)	05:47		04:45	05:20 (B15)
50	16:30	28 09:51 (B12)	17:39		18:38	32 18:10 (B22)	20:43	11 06:25 (B7)		21:41	33 05:53 (B15)
51	08:25	09:04 (B11)	07:18		06:05	05:44	06:46 (B18)	05:44		04:44	05:20 (B15)
52	16:32	28 09:50 (B12)	17:41		18:40	40 18:11 (B22)	20:45	13 06:24 (B7)		21:43	33 05:53 (B15)
53	08:24	09:03 (B11)	07:16		06:02	05:42	06:43 (B18)	05:42		04:42	05:21 (B15)
54	16:34	26 09:48 (B12)	17:43		18:42	45 18:11 (B22)	20:47	16 06:25 (B7)		21:45	32 05:53 (B15)
55	08:22	09:02 (B11)	07:13		05:59	05:39	06:40 (B18)	05:39		04:41	05:21 (B15)
56	16:36	22 09:24 (B11)	17:45		18:45	49 18:10 (B22)	20:49	18 06:25 (B7)		21:46	32 05:53 (B15)
57	08:20	09:01 (B11)			06:57	05:37	07:39 (B18)	05:37		04:39	05:21 (B15)
58	16:38	24 09:25 (B11)			19:47	51 19:10 (B22)	20:51	17 06:24 (B7)		21:48	32 05:53 (B15)
59	08:18	09:00 (B11)			06:54	05:35	07:37 (B18)	05:35		04:38	05:22 (B15)
60	16:41	25 09:25 (B11)			19:49	53 19:09 (B22)	20:53	17 06:24 (B7)		21:49	32 05:54 (B15)
61	08:16	08:59 (B11)			06:51	05:31	07:16 (B9)			04:37	
62	16:43	31 16:08 (B24)			19:51	53 19:07 (B22)				21:51	
Potential sun hours	235		266		366		426		508		529
Total, worst case	1072		571		358		1101		137		924
Sun reduction	0.13		0.20		0.41		0.50		0.57		0.56
Oper. time red.	0.98		0.98		0.98		0.98		0.98		0.98
Wind dir. red.	0.62		0.61		0.65		0.65		0.67		0.67
Total reduction	0.08		0.12		0.26		0.31		0.36		0.36
Total, real	86		67		93		346		50		333

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Klavas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (81)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December		
1	04:30		05:22 (B15)	05:16		06:17	07:00 (B23)	07:17		07:22	08:30 (B11)	08:24	09:10 (B12)					
	22:09	31	05:53 (B15)	21:28		20:14	61 08:10 (B18)	18:53		16:36	40 15:47 (B24)	15:45	43 14:54 (B25)					
2	04:31		05:22 (B15)	05:17		06:19	06:59 (B23)	07:19		07:25	08:29 (B11)	08:26	09:11 (B12)					
	22:08	31	05:53 (B15)	21:26		20:11	63 08:10 (B18)	18:51		16:34	45 15:48 (B24)	15:44	41 14:54 (B25)					
3	04:32		05:23 (B15)	05:19		06:21	06:59 (B23)	07:21		07:27	08:28 (B11)	08:27	09:11 (B12)					
	22:08	30	05:53 (B15)	21:24		20:09	63 08:10 (B18)	18:48		16:31	46 15:48 (B24)	15:43	42 14:55 (B25)					
4	04:32		05:23 (B15)	05:21		06:23	06:58 (B23)	07:23		07:29	08:29 (B11)	08:29	09:12 (B12)					
	22:07	30	05:53 (B15)	21:21		20:06	64 08:09 (B18)	18:45		16:29	47 15:49 (B24)	15:42	41 14:55 (B25)					
5	04:33		05:24 (B15)	05:23		06:25	06:57 (B23)	07:25		07:31	08:28 (B11)	08:31	09:13 (B12)					
	22:06	29	05:53 (B15)	21:19		20:03	64 08:09 (B18)	18:43		16:27	48 15:49 (B24)	15:41	40 14:56 (B25)					
6	04:35		05:25 (B15)	05:25		06:27	06:58 (B23)	07:27		07:33	08:29 (B11)	08:32	09:14 (B12)					
	22:06	28	05:53 (B15)	21:17		20:01	63 08:09 (B18)	18:40		16:25	48 15:50 (B24)	15:41	39 14:57 (B25)					
7	04:36		05:25 (B15)	05:27		06:29	06:58 (B23)	07:29		07:35	08:29 (B11)	08:34	09:14 (B12)					
	22:05	28	05:53 (B15)	21:15		19:58	62 08:09 (B18)	18:38		16:23	46 15:48 (B24)	15:40	38 14:56 (B25)					
8	04:37		05:26 (B15)	05:29		06:31	07:00 (B9)	07:31		07:38	08:29 (B11)	08:35	09:16 (B12)					
	22:04	27	05:53 (B15)	21:13	6	06:28 (B7)	19:55	58 08:08 (B18)	18:35	16:21	42 15:45 (B24)	15:40	36 14:57 (B25)					
9	04:38		05:26 (B15)	05:31		06:20 (B7)	06:33	07:02 (B9)	07:33	07:40	08:30 (B11)	08:36	09:17 (B12)					
	22:03	26	05:52 (B15)	21:11	10	06:30 (B7)	19:53	53 08:07 (B18)	18:32	16:19	38 15:43 (B24)	15:39	34 14:56 (B25)					
10	04:39		05:27 (B15)	05:33		06:17 (B7)	06:35	07:04 (B9)	07:36	07:42	08:30 (B11)	08:38	09:19 (B12)					
	22:02	25	05:52 (B15)	21:08	13	06:30 (B7)	19:50	56 18:55 (B22)	18:30	16:17	35 15:41 (B24)	15:39	31 14:56 (B25)					
11	04:41		05:27 (B15)	05:35		06:16 (B7)	06:37	07:06 (B9)	07:38	07:44	08:31 (B11)	08:39	09:20 (B12)					
	22:01	24	05:51 (B15)	21:06	15	06:31 (B7)	19:47	58 18:58 (B22)	18:27	16:15	30 15:39 (B24)	15:38	30 14:56 (B25)					
12	04:42		05:28 (B15)	05:37		06:16 (B7)	06:39	07:08 (B9)	07:40	07:46	08:32 (B11)	08:40	09:21 (B12)					
	22:00	22	05:50 (B15)	21:04	16	06:32 (B7)	19:45	55 18:59 (B22)	18:24	16:13	25 08:57 (B11)	15:38	28 14:55 (B25)					
13	04:43		05:30 (B15)	05:39		06:15 (B7)	06:41	07:28 (B18)	07:42	07:48	08:33 (B11)	08:41	09:23 (B12)					
	21:59	20	05:50 (B15)	21:01	17	06:32 (B7)	19:42	52 19:00 (B22)	18:22	16:11	24 08:57 (B11)	15:38	25 14:55 (B25)					
14	04:45		05:31 (B15)	05:41		06:15 (B7)	06:43	07:29 (B18)	07:44	07:51	08:34 (B11)	08:42	09:24 (B12)					
	21:58	18	05:49 (B15)	20:59	17	06:32 (B7)	19:39	51 19:00 (B22)	18:19	16:09	22 08:56 (B11)	15:38	24 14:55 (B25)					
15	04:46		05:32 (B15)	05:43		06:15 (B7)	06:45	07:30 (B18)	07:46	07:53	08:35 (B11)	08:43	09:25 (B12)					
	21:56	15	05:47 (B15)	20:57	17	06:32 (B7)	19:37	49 19:00 (B22)	18:17	16:07	27 09:20 (B12)	15:38	22 14:55 (B25)					
16	04:48		05:34 (B15)	05:45		06:17 (B7)	06:47	07:32 (B18)	07:48	07:55	08:37 (B11)	08:44	09:26 (B12)					
	21:55	13	05:47 (B15)	20:54	15	06:32 (B7)	19:34	46 19:00 (B22)	18:14	16:06	28 09:23 (B12)	15:38	19 14:54 (B25)					
17	04:49		05:36 (B15)	05:47		06:18 (B7)	06:49	07:34 (B18)	07:50	07:57	08:39 (B11)	08:45	09:27 (B12)					
	21:54	8	05:44 (B15)	20:52	13	06:31 (B7)	19:31	42 19:00 (B22)	18:12	16:04	28 09:25 (B12)	15:38	19 14:55 (B25)					
18	04:51			05:49		06:20 (B7)	06:51	07:35 (B18)	07:52	07:59	08:42 (B11)	08:46	09:28 (B12)					
	21:52			20:49	10	06:30 (B7)	19:28	35 18:58 (B22)	18:09	16:02	24 09:26 (B12)	15:38	17 14:55 (B25)					
19	04:52			05:51		06:22 (B7)	06:53	07:41 (B18)	07:54	08:01	09:09 (B12)	08:47	09:28 (B12)					
	21:51			20:47	7	06:29 (B7)	19:26	20 18:55 (B22)	18:07	16:01	20 14:42 (B25)	15:38	16 14:54 (B25)					
20	04:54			05:53		06:24 (B7)	06:55	18:40 (B22)	07:56	08:03	09:08 (B12)	08:48	09:29 (B12)					
	21:49			20:44	4	06:28 (B7)	19:23	12 18:52 (B22)	18:04	15:59	28 14:45 (B25)	15:38	15 14:55 (B25)					
21	04:56			05:55			06:57	18:41 (B22)	07:59	08:05	09:08 (B12)	08:48	09:29 (B12)					
	21:48			20:42			19:20	9 18:50 (B22)	18:02	15:57	32 14:47 (B25)	15:39	15 14:55 (B25)					
22	04:57			05:57		07:48 (B18)	06:59	18:43 (B22)	08:01	08:07	09:07 (B12)	08:49	09:30 (B12)					
	21:46			20:39	8	07:56 (B18)	19:18	4 18:47 (B22)	17:59	15:56	36 14:48 (B25)	15:39	15 14:56 (B25)					
23	04:59			05:59		07:44 (B18)	07:01		08:03	08:09	09:08 (B12)	08:49	09:30 (B12)					
	21:44			20:37	16	08:00 (B18)	19:15		17:57	15:55	38 14:50 (B25)	15:40	15 14:56 (B25)					
24	05:01			06:01		07:41 (B18)	07:03		08:05	08:11	09:08 (B12)	08:50	09:31 (B12)					
	21:43			20:34	22	08:03 (B18)	19:12		17:54	15:53	40 14:51 (B25)	15:40	16 14:57 (B25)					
25	05:03			06:03		07:38 (B18)	07:05		07:07	08:13	09:08 (B12)	08:50	09:31 (B12)					
	21:41			20:32	26	08:04 (B18)	19:10		16:52	6 08:47 (B11)	15:52	15:41	17 14:58 (B25)					
26	05:04			06:05		07:36 (B18)	07:07		07:09	08:15	09:08 (B12)	08:50	09:31 (B12)					
	21:39			20:29	29	08:05 (B18)	19:07		16:50	15 08:52 (B11)	15:51	15:42	18 14:58 (B25)					
27	05:06			06:07		07:35 (B18)	07:09		07:12	08:17	09:08 (B12)	08:51	09:31 (B12)					
	21:37			20:27	32	08:07 (B18)	19:04		16:47	18 08:53 (B11)	15:49	15:43	19 14:59 (B25)					
28	05:08			06:09		07:06 (B23)	07:11		07:14	08:19	09:08 (B12)	08:51	09:31 (B12)					
	21:35			20:24	44	08:08 (B18)	19:01		16:45	22 08:55 (B11)	15:48	15:44	20 15:00 (B25)					
29	05:10			06:11		07:04 (B23)	07:13		07:16	08:20	09:10 (B12)	08:51	09:31 (B12)					
	21:34			20:22	50	08:08 (B18)	18:59		16:43	24 08:56 (B11)	15:47	15:44	22 15:01 (B25)					
30	05:12			06:13		07:02 (B23)	07:15		07:18	08:31 (B11)	08:22	08:51	09:31 (B12)					
	21:32			20:19	56	08:09 (B18)	18:56		16:40	28 15:42 (B24)	15:46	15:45	24 15:03 (B25)					
31	05:14			06:15		07:01 (B23)			07:20	08:30 (B11)		08:51	09:30 (B12)					
	21:30			20:16	58	08:10 (B18)			16:38	36 15:45 (B24)		15:47	26 15:03 (B25)					
Potential sun hours	529			469			385		324	247		216						
Total, worst case	405			501			1040		149	1091		807						
Sun reduction	0.49			0.50			0.43		0.26	0.08		0.07						
Oper. time red.	0.98			0.98			0.98		0.98	0.98		0.98						
Wind dir. red.	0.67			0.65			0.65		0.59	0.62		0.64						
Total reduction	0.32			0.31			0.27		0.15	0.05		0.04						
Total, real	129			157			279		22	53		35						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Klavini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (149)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:58	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:34 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:10	04:29 22:04	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:21	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:29	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kukas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (217)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:49 19:53	05:32 20:55	04:36 21:52	04:30 22:09	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:13 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:20 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:57 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:18 15:48	08:50 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Laides - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (135)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		09:48 (B14)	08:15		08:45 (B25)	07:11		06:49				05:33			04:36		
	15:48	19	10:07 (B14)	16:45	62	10:26 (B14)	17:48		19:53				20:55			21:53		
2	08:50		09:48 (B14)	08:13		08:43 (B25)	07:08		06:46				05:30			04:35		
	15:49	21	10:09 (B14)	16:48	64	10:26 (B14)	17:50		19:55				20:57			21:54		
3	08:50		09:47 (B14)	08:11		08:41 (B25)	07:06		06:43		07:17 (B22)		05:28			04:34		
	15:51	23	10:10 (B14)	16:50	64	10:25 (B14)	17:52		19:57	4	07:21 (B22)		21:00			21:55		
4	08:50		09:47 (B14)	08:09		08:39 (B25)	07:03		06:41		07:11 (B22)		05:26			04:33		
	15:52	23	10:10 (B14)	16:52	65	10:25 (B14)	17:54		19:59	14	07:25 (B22)		21:02			21:57		
5	08:49		09:47 (B14)	08:07		08:37 (B25)	07:01		06:38		07:08 (B22)		05:23			04:32		
	15:53	25	10:12 (B14)	16:54	65	10:24 (B14)	17:56		20:01	19	07:27 (B22)		21:04			21:58		
6	08:49		09:47 (B14)	08:05		08:34 (B25)	06:58		06:35		07:06 (B22)		05:21			04:31		
	15:55	26	10:13 (B14)	16:56	62	10:22 (B14)	17:58		20:03	23	07:29 (B22)		21:06			21:59		
7	08:48		09:47 (B14)	08:03		08:34 (B25)	06:55		06:33		07:04 (B22)		05:19			04:30		
	15:56	27	10:14 (B14)	16:59	58	10:21 (B14)	18:01		20:05	26	07:30 (B22)		21:08			22:00		
8	08:48		09:47 (B14)	08:01		08:35 (B25)	06:53		06:30		07:04 (B22)		05:17			04:29		
	15:58	28	10:15 (B14)	17:01	51	10:20 (B14)	18:03		20:08	27	07:31 (B22)		21:10			22:01		
9	08:47		09:46 (B14)	07:58		08:35 (B25)	06:50		06:28		07:02 (B22)		05:15			04:29		
	16:00	30	10:16 (B14)	17:03	41	10:17 (B14)	18:05		20:10	29	07:31 (B22)		21:12			22:02		
10	08:46		09:46 (B14)	07:56		08:36 (B25)	06:47		06:25		07:01 (B22)		05:13			04:28		
	16:01	31	10:17 (B14)	17:05	22	10:13 (B14)	18:07		20:12	30	07:31 (B22)		21:14			22:03		
11	08:45		09:46 (B14)	07:54		08:38 (B25)	06:45		06:22		07:00 (B22)		05:11			04:27		
	16:03	32	10:18 (B14)	17:08	10	08:48 (B25)	18:09		20:14	32	07:32 (B22)		21:16			22:04		
12	08:44		09:45 (B14)	07:52		08:40 (B25)	06:42		06:20		06:59 (B22)		05:09			04:27		
	16:05	33	10:18 (B14)	17:10	4	08:44 (B25)	18:11		20:16	33	07:32 (B22)		21:18			22:05		
13	08:43		09:46 (B14)	07:50			06:40		06:17		06:59 (B22)		05:07			04:26		
	16:06	33	10:19 (B14)	17:12			18:13		20:18	33	07:32 (B22)		21:20			22:06		
14	08:42		09:46 (B14)	07:47			06:37		06:15		06:59 (B22)		05:05			04:26		
	16:08	34	10:20 (B14)	17:14			18:15		20:20	32	07:31 (B22)		21:22			22:07		
15	08:41		09:45 (B14)	07:45			06:34		06:12		06:59 (B22)		05:03			04:26		
	16:10	36	10:21 (B14)	17:17			18:18		20:22	32	07:31 (B22)		21:24			22:07		
16	08:40		09:46 (B14)	07:43			06:32		06:09		06:58 (B22)		05:01			04:26		
	16:12	36	10:22 (B14)	17:19			18:20		20:24	32	07:30 (B22)		21:25			22:08		
17	08:39		09:45 (B14)	07:40			06:29		06:07		06:59 (B22)		04:59			04:25		
	16:14	37	10:22 (B14)	17:21			18:22		20:26	31	07:30 (B22)		21:27			22:08		
18	08:37		09:46 (B14)	07:38			06:26		06:04		06:59 (B22)		04:57			04:25		
	16:16	37	10:23 (B14)	17:23			18:24		20:28	30	07:29 (B22)		21:29			22:09		
19	08:36		09:45 (B14)	07:36			06:24		06:02		06:59 (B22)		04:55			04:25		
	16:18	39	10:24 (B14)	17:26			18:26		20:30	29	07:28 (B22)		21:31			22:09		
20	08:35		09:46 (B14)	07:33			06:21		05:59		06:59 (B22)		04:53			04:25		
	16:20	39	10:25 (B14)	17:28			18:28		20:33	28	07:27 (B22)		21:33			22:10		
21	08:33		09:07 (B24)	07:31			06:18		05:57		07:01 (B22)		04:52			04:25		
	16:22	40	10:25 (B14)	17:30			18:30		20:35	25	07:26 (B22)		21:35			22:10		
22	08:32		09:05 (B24)	07:28			06:16		05:54		07:02 (B22)		04:50			04:26		
	16:24	44	10:25 (B14)	17:32			18:32		20:37	23	07:25 (B22)		21:37			22:10		
23	08:30		09:03 (B24)	07:26			06:13		05:52		07:03 (B22)		04:48			04:26		
	16:26	48	10:25 (B14)	17:34			18:34		20:39	19	07:22 (B22)		21:38			22:10		
24	08:29		09:02 (B24)	07:23			06:10		05:49		07:05 (B22)		04:47			04:26		
	16:28	52	10:27 (B14)	17:37			18:36		20:41	15	07:20 (B22)		21:40			22:10		
25	08:27		09:00 (B24)	07:21			06:08		05:47		07:09 (B22)		04:45			04:26		
	16:30	55	10:27 (B14)	17:39			18:38		20:43	7	07:16 (B22)		21:42			22:10		
26	08:26		08:58 (B24)	07:18			06:05		05:44				04:44			04:27		
	16:32	58	10:27 (B14)	17:41			18:41		20:45				21:43			22:10		
27	08:24		08:57 (B24)	07:16			06:02		05:42				04:42			04:27		
	16:34	60	10:27 (B14)	17:43			18:43		20:47				21:45			22:10		
28	08:22		08:56 (B24)	07:13			05:59		05:40				04:41			04:28		
	16:37	61	10:27 (B14)	17:45			18:45		20:49				21:47			22:10		
29	08:20		08:56 (B24)				06:57		05:37				04:40			04:29		
	16:39	62	10:27 (B14)				19:47		20:51				21:48			22:10		
30	08:18		08:56 (B24)				06:54		05:35				04:38			04:29		
	16:41	61	10:27 (B14)				19:49		20:53				21:50			22:09		
31	08:17		08:57 (B24)				06:51						04:37					
	16:43	60	10:27 (B14)				19:51						21:51					
Potential sun hours	235			266			366		426				508			529		
Total, worst case	1210			568					573									
Sun reduction	0.13			0.20					0.50									
Oper. time red.	0.98			0.98					0.98									
Wind dir. red.	0.61			0.60					0.66									
Total reduction	0.08			0.12					0.31									
Total, real	93			66					180									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Laides - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (135)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	06:59 (B22) 18:54	07:17 16:36	08:06 (B25) 15:45
2	04:31 22:08	05:18 21:26	06:19 20:11	07:00 (B22) 18:51	07:19 16:34	08:04 (B25) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:00 (B22) 18:48	07:21 16:32	08:04 (B25) 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:01 (B22) 18:46	07:23 16:29	08:04 (B25) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:01 (B22) 18:43	07:25 16:27	08:04 (B25) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:01 (B22) 18:40	07:27 16:25	08:07 (B25) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:03 (B22) 18:38	07:30 16:23	08:09 (B25) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:05 (B22) 18:35	07:32 16:21	08:12 (B25) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:09 (B22) 18:32	07:34 16:19	08:14 (B25) 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:15 (B22) 18:30	07:36 16:17	08:16 (B25) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:27 (B24) 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:27 (B24) 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:28 (B24) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:28 (B24) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:29 (B24) 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:31 (B24) 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:33 (B24) 15:38
18	04:51 21:52	05:49 20:50	07:13 (B22) 19:29	07:52 18:09	07:59 16:02	08:36 (B24) 15:38
19	04:53 21:51	05:51 20:47	07:10 (B22) 19:26	07:55 18:07	08:01 16:01	08:38 (B24) 15:38
20	04:54 21:49	05:53 20:45	07:08 (B22) 19:23	07:57 18:04	08:03 15:59	08:40 (B24) 15:39
21	04:56 21:48	05:55 20:42	07:06 (B22) 19:21	07:59 18:02	08:05 15:58	08:42 (B24) 15:39
22	04:58 21:46	05:57 20:40	07:05 (B22) 19:18	08:01 18:00	08:07 15:56	08:44 (B24) 15:40
23	04:59 21:45	05:59 20:37	07:04 (B22) 19:15	08:03 17:57	08:09 15:55	08:44 (B24) 15:40
24	05:01 21:43	06:01 20:35	07:03 (B22) 19:12	08:05 17:55	08:11 15:53	08:46 (B24) 15:41
25	05:03 21:41	06:03 20:32	07:02 (B22) 19:10	08:07 17:52	08:13 15:52	08:48 (B24) 15:41
26	05:05 21:39	06:05 20:30	07:02 (B22) 19:07	08:09 17:50	08:15 15:51	08:50 (B24) 15:42
27	05:06 21:38	06:07 20:27	07:00 (B22) 19:04	08:11 17:48	08:17 15:49	08:52 (B24) 15:43
28	05:08 21:36	06:09 20:24	07:00 (B22) 19:02	08:13 17:46	08:19 15:48	08:54 (B24) 15:44
29	05:10 21:34	06:11 20:22	06:59 (B22) 18:59	08:15 17:43	08:21 15:47	08:56 (B24) 15:45
30	05:12 21:32	06:13 20:19	06:59 (B22) 18:56	08:17 17:41	08:23 15:46	08:58 (B24) 15:46
31	05:14 21:30	06:15 20:17	06:59 (B22) 18:54	08:19 17:39	08:25 15:45	09:00 (B24) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		375	207	17	1490	558
Sun reduction		0.50	0.43	0.26	0.08	0.07
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.66	0.66	0.61	0.61	0.61
Total reduction		0.31	0.27	0.15	0.05	0.04
Total, real		117	55	3	71	23

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (124)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B14) 19:53	05:33 20:55	06:18 (B22) 21:53
2	08:50 15:50	08:13 16:48	07:08 17:50	07:34 (B14) 19:55	05:30 20:58	06:20 (B22) 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:32 (B14) 19:57	05:28 21:00	06:28 (B22) 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:30 (B14) 19:59	05:26 21:02	06:28 (B22) 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	07:28 (B14) 20:01	05:24 21:04	06:28 (B22) 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	07:28 (B14) 20:03	05:21 21:06	06:28 (B22) 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	07:27 (B14) 20:06	05:19 21:08	06:28 (B22) 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	07:26 (B14) 20:08	05:17 21:10	06:28 (B22) 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	07:26 (B14) 20:10	05:15 21:12	06:28 (B22) 22:02
10	08:46 16:01	07:56 17:05	06:48 18:07	07:25 (B14) 20:12	05:13 21:14	06:28 (B22) 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	07:25 (B14) 20:14	05:11 21:16	06:28 (B22) 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	07:26 (B14) 20:16	05:09 21:18	06:28 (B22) 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	07:25 (B14) 20:18	05:07 21:20	06:28 (B22) 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	07:26 (B14) 20:20	05:05 21:22	06:28 (B22) 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	07:27 (B14) 20:22	05:03 21:24	06:28 (B22) 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	07:27 (B14) 20:24	05:01 21:25	06:28 (B22) 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	07:28 (B14) 20:26	04:59 21:27	06:28 (B22) 22:08
18	08:38 16:16	07:38 17:23	06:26 18:24	07:30 (B14) 20:28	04:57 21:29	06:28 (B22) 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	07:33 (B14) 20:31	04:55 21:31	06:28 (B22) 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	07:43 (B14) 20:33	04:53 21:33	06:28 (B22) 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:59 20:35	04:53 21:35	06:28 (B22) 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	06:28 (B22) 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	06:28 (B22) 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	06:28 (B22) 22:10
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	06:28 (B22) 22:10
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	06:28 (B22) 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	06:28 (B22) 22:10
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	06:28 (B22) 22:10
29	08:20 16:39		05:57 19:47	05:37 20:51	04:40 21:48	06:28 (B22) 22:10
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	06:28 (B22) 22:09
31	08:17 16:43		06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case		55	475	191	20	
Sun reduction		0.20	0.41	0.50	0.57	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.63	0.62	0.65	0.65	
Total reduction		0.12	0.25	0.32	0.36	
Total, real		7	119	61	7	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (124)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	08:05 (B14)	07:23
	22:09	21:28	20:14	18:54	29 08:34 (B14)	16:36
2	04:31	05:18	06:19	07:19	08:04 (B14)	07:25
	22:09	21:26	20:11	18:51	30 08:34 (B14)	16:34
3	04:32	05:20	06:21	07:21	08:03 (B14)	07:27
	22:08	21:24	20:09	18:48	31 08:34 (B14)	16:32
4	04:33	05:22	06:23	07:23	08:03 (B14)	07:29
	22:07	21:22	20:06	18:46	31 08:34 (B14)	16:30
5	04:34	05:23	06:25	07:25	08:03 (B14)	07:31
	22:07	21:20	20:03	18:43	30 08:33 (B14)	16:27
6	04:35	05:25	06:27	07:28	08:03 (B14)	07:33
	22:06	21:17	20:01	18:40	29 08:32 (B14)	16:25
7	04:36	05:27	06:29	07:30	08:03 (B14)	07:36
	22:05	21:15	19:58	18:38	28 08:31 (B14)	16:23
8	04:37	05:29	06:31	07:32	08:03 (B14)	07:38
	22:04	21:13	19:56	18:35	27 08:30 (B14)	16:21
9	04:38	05:31	06:33	07:34	08:05 (B14)	07:40
	22:03	21:11	19:53	18:33	25 08:30 (B14)	16:19
10	04:40	05:33	06:35	07:36	08:05 (B14)	07:42
	22:02	21:08	19:50	18:30	24 08:29 (B24)	16:17
11	04:41	05:35	06:37	07:38	08:07 (B14)	07:44
	22:01	21:06	9 06:38 (B22)	18:27	23 08:30 (B24)	16:15
12	04:42	05:37	06:39	07:40	08:09 (B14)	07:46
	22:00	21:04	13 06:39 (B22)	18:25	21 08:30 (B24)	16:13
13	04:44	05:39	06:41	07:42	08:11 (B14)	07:49
	21:59	21:02	15 06:40 (B22)	18:22	18 08:29 (B24)	16:11
14	04:45	05:41	06:43	07:44	08:13 (B24)	07:51
	21:58	20:59	17 06:41 (B22)	18:20	16 08:29 (B24)	16:10
15	04:46	05:43	06:45	07:46	08:16 (B24)	07:53
	21:57	20:57	19 06:42 (B22)	18:17	13 08:29 (B24)	16:08
16	04:48	05:45	06:47	07:48	08:18 (B24)	07:55
	21:55	20:54	19 06:42 (B22)	18:15	10 08:28 (B24)	16:06
17	04:49	05:47	06:49	07:50	08:20 (B24)	07:57
	21:54	20:52	21 06:43 (B22)	18:12	7 08:27 (B24)	16:04
18	04:51	05:49	06:51	07:52	08:22 (B24)	07:59
	21:52	20:50	21 06:43 (B22)	18:09	3 08:25 (B24)	16:03
19	04:53	05:51	06:53	07:55	08:01	08:47
	21:51	20:47	19 06:41 (B22)	18:07	16:01	15:38
20	04:54	05:53	06:55	07:57	08:03	08:48
	21:49	20:45	17 06:41 (B22)	18:04	15:59	15:39
21	04:56	05:55	06:57	07:59	08:05	08:48
	21:48	20:42	15 06:41 (B22)	18:02	15:58	15:39
22	04:58	05:57	06:59	08:01	08:07	08:49
	21:46	20:40	12 06:40 (B22)	18:00	15:56	15:40
23	04:59	05:59	07:01	08:03	08:09	08:50
	21:45	20:37	9 06:39 (B22)	17:57	15:55	15:40
24	05:01	06:01	07:03	08:05	08:11	08:50
	21:43	20:35	5 06:37 (B22)	7 08:25 (B14)	17:55	15:53
25	05:03	06:03	07:05	08:14 (B14)	07:07	08:13
	21:41	20:32	1 06:35 (B22)	15 08:29 (B14)	16:52	15:52
26	05:05	06:05	07:07	08:12 (B14)	07:10	08:15
	21:39	20:30	19 07:07	08:31 (B14)	16:50	15:51
27	05:06	06:07	07:09	08:10 (B14)	07:12	08:17
	21:38	20:27	22 07:04	08:32 (B14)	16:48	15:50
28	05:08	06:09	07:11	08:08 (B14)	07:14	08:19
	21:36	20:24	25 07:13	08:33 (B14)	16:45	15:48
29	05:10	06:11	07:13	08:07 (B14)	07:16	08:21
	21:34	20:22	27 07:15	08:34 (B14)	16:43	15:47
30	05:12	06:13	07:15	08:06 (B14)	07:18	08:22
	21:32	20:19	28 07:16	08:34 (B14)	16:41	15:46
31	05:14	06:15	07:17	07:20	08:51	08:51
	21:30	20:17	16:38	15:47	15:47	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		212	143	395		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.65	0.62	0.62		
Total reduction		0.32	0.26	0.16		
Total, real		67	37	62		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (75)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:37 (B14)	06:49	05:33
	15:48	16:45	17:48	22 07:59 (B14)	19:53	20:55
2	08:50	08:13	07:08	07:34 (B14)	06:46	05:30
	15:50	16:48	17:50	25 07:59 (B14)	19:55	20:58
3	08:50	08:11	07:06	07:34 (B14)	06:44	05:28
	15:51	16:50	17:52	26 08:00 (B14)	19:57	21:00
4	08:50	08:09	07:03	07:33 (B14)	06:41	05:26
	15:52	16:52	17:54	27 08:00 (B14)	19:59	21:02
5	08:49	08:07	07:01	07:33 (B14)	06:38	05:24
	15:54	16:54	17:56	26 07:59 (B14)	20:01	21:04
6	08:49	08:05	06:58	07:33 (B14)	06:36	05:21
	15:55	16:57	17:58	27 08:00 (B14)	20:03	21:06
7	08:48	08:03	06:55	07:33 (B14)	06:33	05:19
	15:56	16:59	18:01	26 07:59 (B14)	20:06	21:08
8	08:48	08:01	06:53	07:33 (B14)	06:30	05:17
	15:58	17:01	18:03	25 07:58 (B14)	20:08	21:10
9	08:47	07:58	06:50	07:34 (B14)	06:28	05:15
	16:00	17:03	18:05	24 07:58 (B14)	20:10	21:12
10	08:46	07:56	06:48	07:34 (B14)	06:25	05:13
	16:01	17:05	18:07	22 07:56 (B14)	20:12	21:14
11	08:45	07:54	06:45	07:35 (B14)	06:22	05:11
	16:03	17:08	18:09	19 07:54 (B14)	20:14	21:16
12	08:44	07:52	06:42	07:37 (B14)	06:20	05:09
	16:05	17:10	18:11	16 07:53 (B14)	20:16	21:18
13	08:43	07:50	06:40	07:39 (B14)	06:17	05:07
	16:06	17:12	18:13	10 07:49 (B14)	20:18	21:20
14	08:42	07:47	06:37	06:15	06:45 (B22)	05:09
	16:08	17:14	18:15	20:20	10 06:50 (B22)	21:22
15	08:41	07:45	06:34	06:12	06:38 (B22)	05:03
	16:10	17:17	18:18	20:22	13 06:51 (B22)	21:24
16	08:40	07:43	06:32	06:09	06:35 (B22)	05:01
	16:12	17:19	18:20	20:24	16 06:51 (B22)	21:26
17	08:39	07:40	06:29	06:07	06:33 (B22)	04:59
	16:14	17:21	18:22	20:26	18 06:51 (B22)	21:27
18	08:38	07:38	06:26	06:04	06:31 (B22)	04:57
	16:16	17:23	18:24	20:28	19 06:50 (B22)	21:29
19	08:36	07:36	06:24	06:02	06:32 (B22)	04:55
	16:18	17:26	18:26	20:31	18 06:50 (B22)	21:31
20	08:35	07:33	06:21	05:59	06:32 (B22)	04:53
	16:20	17:28	18:28	20:33	17 06:49 (B22)	21:33
21	08:33	07:31	06:18	05:57	06:32 (B22)	04:52
	16:22	17:30	18:30	20:35	15 06:47 (B22)	21:35
22	08:32	07:28	06:16	05:54	06:34 (B22)	04:50
	16:24	17:32	2 07:55 (B24)	18:32	12 06:46 (B22)	21:37
23	08:30	07:26	06:13	05:52	06:35 (B22)	04:48
	16:26	17:34	5 07:58 (B24)	18:34	8 06:43 (B22)	21:38
24	08:29	07:23	06:10	05:49		04:47
	16:28	17:37	8 07:58 (B24)	18:36		21:40
25	08:27	07:21	06:08	05:47		04:45
	16:30	17:39	11 07:59 (B24)	18:39		21:42
26	08:26	07:18	06:05	05:44		04:44
	16:32	17:41	14 07:59 (B24)	18:41		21:43
27	08:24	07:16	06:02	05:42		04:42
	16:34	17:43	16 07:58 (B24)	18:43		21:45
28	08:22	07:13	06:00	05:40		04:41
	16:37	17:45	18 07:58 (B14)	18:45		21:47
29	08:20		06:57	05:37		04:40
	16:39		19:47	20:51		21:48
30	08:19		06:54	05:35		04:38
	16:41		19:49	20:53		21:50
31	08:17		06:52			04:37
	16:43		19:51			21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		74	295		157	
Sun reduction		0.20	0.41		0.50	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.63	0.62		0.65	
Total reduction		0.12	0.25		0.32	
Total, real		9	74		50	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (75)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:17 (B14) 16:36	07:23 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	08:15 (B14) 16:34	07:25 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:13 (B14) 16:32	07:27 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	08:11 (B14) 16:30	07:29 15:43
5	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	08:10 (B14) 16:27	07:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:09 (B14) 16:25	07:33 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:09 (B14) 16:23	07:36 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:08 (B14) 16:21	07:38 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:09 (B14) 16:19	07:40 15:39
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:08 (B14) 16:17	07:42 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:08 (B14) 16:15	07:44 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:09 (B14) 16:13	07:46 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:11 (B14) 16:11	07:49 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:13 (B14) 16:10	07:51 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:30 (B14) 16:08	07:53 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:31 (B24) 16:06	07:55 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:31 (B24) 16:04	07:57 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	08:30 (B24) 16:03	07:59 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:29 (B24) 16:01	08:01 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:29 (B24) 15:59	08:03 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:18 (B14) 15:58	08:05 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:20 (B14) 15:56	08:07 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:22 (B24) 15:55	08:09 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:31 (B24) 15:53	08:11 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:33 (B24) 15:52	08:13 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:35 (B24) 15:51	08:15 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:37 (B24) 15:50	08:17 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:46	08:39 (B24) 15:48	08:19 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:41 (B24) 15:47	08:21 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:23 (B14) 15:46	08:22 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:19 17:39	08:25 (B14) 15:45	08:24 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		157				
Sun reduction		0.50				
Oper. time red.		0.98				
Wind dir. red.		0.65				
Total reduction		0.32				
Total, real		50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani 4 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (159)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:37 (B24)	06:49	05:33
	15:48	16:45	17:48	10 07:47 (B24)	19:53	20:55
2	08:51	08:13	07:08	07:34 (B24)	06:46	05:30
	15:50	16:48	17:50	13 07:47 (B24)	19:55	20:58
3	08:50	08:11	07:06	07:32 (B14)	06:44	05:28
	15:51	16:50	17:52	15 07:47 (B24)	19:57	21:00
4	08:50	08:09	07:03	07:29 (B14)	06:41	05:26
	15:52	16:52	17:54	17 07:46 (B24)	19:59	21:02
5	08:49	08:07	07:01	07:26 (B14)	06:38	05:24
	15:54	16:54	17:56	18 07:44 (B24)	20:01	21:04
6	08:49	08:05	06:58	07:24 (B14)	06:36	05:21
	15:55	16:57	17:58	19 07:43 (B24)	20:03	21:06
7	08:48	08:03	06:55	07:21 (B14)	06:33	05:19
	15:56	16:59	18:01	21 07:42 (B14)	20:06	21:08
8	08:48	08:01	06:53	07:18 (B14)	06:30	05:17
	15:58	17:01	18:03	23 07:41 (B14)	20:08	21:10
9	08:47	07:58	06:50	07:19 (B14)	06:28	05:15
	16:00	17:03	18:05	23 07:42 (B14)	20:10	21:12
10	08:46	07:56	06:48	07:18 (B14)	06:25	05:13
	16:01	17:06	18:07	24 07:42 (B14)	20:12	21:14
11	08:45	07:54	06:45	07:17 (B14)	06:22	05:11
	16:03	17:08	18:09	24 07:41 (B14)	20:14	21:16
12	08:44	07:52	06:42	07:18 (B14)	06:20	05:09
	16:05	17:10	18:11	23 07:41 (B14)	20:16	21:18
13	08:43	07:50	06:40	07:18 (B14)	06:17	05:07
	16:06	17:12	18:13	22 07:40 (B14)	20:18	21:20
14	08:42	07:47	06:37	07:19 (B14)	06:15	05:05
	16:08	17:14	18:16	19 07:38 (B14)	20:20	21:22
15	08:41	07:45	06:34	07:20 (B14)	06:12	05:03
	16:10	17:17	18:18	18 07:38 (B14)	20:22	21:24
16	08:40	07:43	06:32	07:21 (B14)	06:09	05:01
	16:12	17:19	18:20	14 07:35 (B14)	20:24	21:26
17	08:39	07:40	06:29	07:24 (B14)	06:07	05:00
	16:14	17:21	18:22	7 07:31 (B14)	20:26	21:27
18	08:38	07:38	06:26		06:04	05:00
	16:16	17:23	18:24		20:28	21:29
19	08:36	07:36	06:24		06:02	05:00
	16:18	17:26	18:26		20:31	21:31
20	08:35	07:33	06:21		05:59	05:00
	16:20	17:28	18:28		20:33	21:33
21	08:33	07:31	06:18		05:57	05:00
	16:22	17:30	18:30		20:35	21:35
22	08:32	07:28	06:16		05:54	05:00
	16:24	17:32	18:32		20:37	21:37
23	08:30	07:26	06:13		05:52	05:00
	16:26	17:35	18:34		20:39	21:38
24	08:29	07:23	06:10		05:49	05:00
	16:28	17:37	18:36		20:41	21:40
25	08:27	07:21	06:08		05:47	05:00
	16:30	17:39	18:39		20:43	21:42
26	08:26	07:18	06:05		05:45	05:00
	16:32	17:41	18:41		20:45	21:43
27	08:24	07:16	06:02		05:42	05:00
	16:34	17:43	18:43		20:47	21:45
28	08:22	07:13	06:00		05:40	05:00
	16:37	17:45	18:45		20:49	21:47
29	08:20		06:57		05:37	05:00
	16:39		19:47		20:51	21:48
30	08:19		06:54		05:35	05:00
	16:41		19:49		20:53	21:50
31	08:17		06:52			05:00
	16:43		19:51			21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		12	310	119		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.62	0.62	0.65		
Total reduction		0.12	0.25	0.32		
Total, real		1	77	38		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

## SHADOW - Calendar

Shadow receptor: Landzani 4 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (159)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:57 (B14) 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:57 (B14) 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:56 (B14) 16:32	08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:56 (B14) 16:30	08:29 15:43
5	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:55 (B14) 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:56 (B14) 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:58 (B14) 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:00 (B14) 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:03 (B14) 16:19	08:37 15:39
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:05 (B14) 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:07 (B14) 16:15	08:39 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:09 (B24) 16:13	08:40 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:11 (B24) 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:13 (B24) 16:10	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:16 (B24) 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:19 (B24) 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:09 (B24) 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	08:11 (B24) 16:03	08:46 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:13 (B24) 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:15 (B24) 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:17 (B24) 15:58	08:49 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:19 (B24) 15:56	08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:21 (B24) 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:23 (B24) 15:53	08:51 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:25 (B24) 15:52	08:51 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 (B14) 17:50	08:27 (B24) 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 (B14) 17:48	08:29 (B24) 15:50	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 (B14) 17:46	08:31 (B24) 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 (B14) 17:44	08:33 (B24) 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 (B14) 17:42	08:35 (B24) 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		08:19 (B14) 17:40	08:37 (B24) 15:45	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		122	70		253	
Sun reduction		0.50	0.43		0.26	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.65	0.62		0.62	
Total reduction		0.32	0.26		0.16	
Total, real		39	18		40	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani 5 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (133)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:42 (B14)	06:49	05:33
	15:48	16:45	17:48	26 08:08 (B14)	19:53	20:55
2	08:51	08:13	07:08	07:42 (B14)	06:46	05:30
	15:50	16:48	17:50	25 08:07 (B14)	19:55	20:58
3	08:50	08:11	07:06	07:42 (B14)	06:44	05:28
	15:51	16:50	17:52	25 08:07 (B14)	19:57	21:00
4	08:50	08:09	07:03	07:42 (B14)	06:41	05:26
	15:52	16:52	17:54	24 08:06 (B14)	19:59	21:02
5	08:49	08:07	07:01	07:42 (B14)	06:38	05:24
	15:54	16:54	17:56	23 08:05 (B14)	20:01	21:04
6	08:49	08:05	06:58	07:43 (B14)	06:36	05:21
	15:55	16:57	17:58	22 08:05 (B14)	20:03	21:06
7	08:48	08:03	06:55	07:44 (B14)	06:33	05:19
	15:56	16:59	18:01	19 08:03 (B14)	20:06	21:08
8	08:48	08:01	06:53	07:45 (B14)	06:30	05:17
	15:58	17:01	18:03	16 08:01 (B14)	20:08	21:10
9	08:47	07:58	06:50	07:48 (B14)	06:28	05:15
	16:00	17:03	18:05	11 07:59 (B14)	20:10	21:12
10	08:46	07:56	06:48	06:25	5 06:58 (B22)	05:13
	16:01	17:05	18:07	20:12	8 06:58 (B22)	21:14
11	08:45	07:54	06:45	06:22	06:48 (B22)	05:11
	16:03	17:08	18:09	20:14	11 06:59 (B22)	21:16
12	08:44	07:52	06:42	06:20	06:45 (B22)	05:09
	16:05	17:10	18:11	20:16	14 06:59 (B22)	21:18
13	08:43	07:50	06:40	06:17	06:43 (B22)	05:07
	16:06	17:12	18:13	20:18	17 07:00 (B22)	21:20
14	08:42	07:47	06:37	06:15	06:40 (B22)	05:05
	16:08	17:14	18:15	20:20	19 06:59 (B22)	21:22
15	08:41	07:45	06:34	06:12	06:40 (B22)	05:03
	16:10	17:17	18:18	20:22	19 06:59 (B22)	21:24
16	08:40	07:43	06:32	06:09	06:40 (B22)	05:01
	16:12	17:19	18:20	20:24	17 06:57 (B22)	21:26
17	08:39	07:40	06:29	06:07	06:41 (B22)	04:59
	16:14	17:21	18:22	20:26	16 06:57 (B22)	21:27
18	08:38	07:38	06:26	06:04	06:42 (B22)	04:57
	16:16	17:23	18:24	20:28	13 06:55 (B22)	21:29
19	08:36	07:36	06:24	06:02	06:44 (B22)	04:55
	16:18	17:26	18:26	20:31	9 06:53 (B22)	21:31
20	08:35	07:33	08:00 (B24)	06:21	05:59	04:53
	16:20	17:28	2 08:02 (B24)	18:28	20:33	21:33
21	08:33	07:31	07:58 (B24)	06:18	05:57	04:52
	16:22	17:30	5 08:03 (B24)	18:30	20:35	21:35
22	08:32	07:28	07:55 (B14)	06:16	05:54	04:50
	16:24	17:32	8 08:03 (B24)	18:32	20:37	21:37
23	08:30	07:26	07:53 (B14)	06:13	05:52	04:48
	16:26	17:34	11 08:04 (B14)	18:34	20:39	21:38
24	08:29	07:23	07:50 (B14)	06:10	05:49	04:47
	16:28	17:37	15 08:05 (B14)	18:36	20:41	21:40
25	08:27	07:21	07:48 (B14)	06:08	05:47	04:45
	16:30	17:39	19 08:07 (B14)	18:39	20:43	21:42
26	08:26	07:18	07:45 (B14)	06:05	05:44	04:44
	16:32	17:41	22 08:07 (B14)	18:41	20:45	21:43
27	08:24	07:16	07:43 (B14)	06:02	05:42	04:42
	16:34	17:43	24 08:07 (B14)	18:43	20:47	21:45
28	08:22	07:13	07:43 (B14)	06:00	05:40	04:41
	16:37	17:45	25 08:08 (B14)	18:45	20:49	21:47
29	08:20			06:57	05:37	04:40
	16:39			19:47	20:51	21:48
30	08:19			06:54	05:35	04:38
	16:41			19:49	20:53	21:50
31	08:17			06:52		04:37
	16:43			19:51		21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		131	191	149		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.63	0.63	0.66		
Total reduction		0.12	0.25	0.32		
Total, real		16	48	48		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Landzani 5 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (133)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	06:47 (B22)	07:17	07:23
	22:09	21:28	20:14	11 06:58 (B22)	18:54	16:36
2	04:31	05:18	06:19	06:49 (B22)	07:19	07:25
	22:09	21:26	20:11	8 06:57 (B22)	18:51	16:34
3	04:32	05:20	06:21	06:51 (B22)	07:21	07:27
	22:08	21:24	20:09	5 06:56 (B22)	18:48	16:32
4	04:33	05:22	06:23	06:53 (B22)	07:23	08:26 (B14)
	22:07	21:22	20:06	1 06:54 (B22)	18:46	8 08:34 (B14)
5	04:34	05:24	06:25	07:25	08:23 (B14)	16:30
	22:07	21:20	20:04	18:43	14 08:37 (B14)	16:27
6	04:35	05:25	06:27	07:28	08:21 (B14)	16:27
	22:06	21:17	20:01	18:40	18 08:39 (B14)	16:25
7	04:36	05:27	06:29	07:30	08:19 (B14)	16:25
	22:05	21:15	19:58	18:38	21 08:40 (B14)	16:23
8	04:37	05:29	06:31	07:32	08:18 (B14)	16:23
	22:04	21:13	19:56	18:35	22 08:40 (B14)	16:21
9	04:38	05:31	06:33	07:34	08:18 (B14)	16:21
	22:03	21:11	19:53	18:33	24 08:42 (B14)	16:19
10	04:40	05:33	06:35	07:36	08:17 (B14)	16:19
	22:02	21:08	19:50	18:30	25 08:42 (B14)	16:17
11	04:41	05:35	06:37	07:38	08:16 (B14)	16:17
	22:01	21:06	19:48	18:27	25 08:41 (B14)	16:15
12	04:42	05:37	06:39	07:40	08:15 (B14)	16:15
	22:00	21:04	19:45	18:25	26 08:41 (B14)	16:13
13	04:44	05:39	06:41	07:42	08:15 (B14)	16:13
	21:59	21:02	19:42	18:22	26 08:41 (B14)	16:11
14	04:45	05:41	06:43	07:44	08:15 (B14)	16:11
	21:58	20:59	19:39	18:20	25 08:40 (B14)	16:10
15	04:46	05:43	06:45	07:46	08:16 (B14)	16:10
	21:57	20:57	19:37	18:17	24 08:40 (B14)	16:08
16	04:48	05:45	06:47	07:48	08:18 (B14)	16:08
	21:55	20:54	19:34	18:15	21 08:39 (B14)	16:06
17	04:49	05:47	06:49	07:50	08:20 (B14)	16:06
	21:54	20:52	19:31	18:12	17 08:37 (B14)	16:04
18	04:51	05:49	06:51	07:53	08:22 (B14)	16:04
	21:52	20:50	19:29	18:09	14 08:36 (B14)	16:03
19	04:53	05:51	06:53	07:55	08:25 (B14)	16:03
	21:51	20:47	19:26	18:07	10 08:35 (B24)	16:01
20	04:54	05:53	06:55	07:57	08:27 (B14)	16:03
	21:49	20:45	19:23	18:04	7 08:34 (B24)	15:59
21	04:56	05:55	06:57	07:59	08:29 (B24)	15:59
	21:48	20:42	19:21	18:02	4 08:33 (B24)	15:58
22	04:58	05:57	06:59	08:01	08:31 (B24)	15:58
	21:46	20:40	19:18	18:00	1 08:32 (B24)	15:56
23	04:59	05:59	06:52 (B22)	07:01	08:03	15:56
	21:45	20:37	1 06:53 (B22)	19:15	17:57	15:55
24	05:01	06:01	06:47 (B22)	07:03	08:05	15:55
	21:43	20:35	10 06:57 (B22)	19:12	17:55	15:53
25	05:03	06:03	06:45 (B22)	07:05	07:07	15:53
	21:41	20:32	14 06:59 (B22)	19:10	16:52	15:52
26	05:05	06:05	06:44 (B22)	07:07	07:10	15:52
	21:39	20:30	16 07:00 (B22)	19:07	16:50	15:51
27	05:06	06:07	06:43 (B22)	07:09	07:12	15:51
	21:38	20:27	17 07:00 (B22)	19:04	16:48	15:50
28	05:08	06:09	06:41 (B22)	07:11	07:14	15:50
	21:36	20:24	19 07:00 (B22)	19:02	16:45	15:48
29	05:10	06:11	06:41 (B22)	07:13	07:16	15:48
	21:34	20:22	19 07:00 (B22)	18:59	16:43	15:47
30	05:12	06:13	06:43 (B22)	07:15	07:18	15:47
	21:32	20:19	16 06:59 (B22)	18:56	16:41	15:46
31	05:14	06:15	06:45 (B22)	07:17	07:20	15:46
	21:30	20:17	14 06:59 (B22)	18:54	16:38	15:45
Potential sun hours	529	469	385	324	247	216
Total, worst case		126	25		332	
Sun reduction		0.50	0.43		0.26	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.66	0.66		0.63	
Total reduction		0.32	0.27		0.16	
Total, real		40	7		52	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Latvian - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (168)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	09:02 (B14) 17:48	07:11 17:48	06:49 19:53	04:36 21:53
2	08:51 15:49	08:13 16:48	09:03 (B14) 17:50	07:08 17:50	06:46 19:55	04:35 21:54
3	08:50 15:51	08:11 16:50	09:06 (B14) 17:52	07:06 17:52	06:44 19:57	04:34 21:55
4	08:50 15:52	08:09 16:52	09:09 (B14) 17:54	07:03 17:54	06:41 19:59	04:33 21:57
5	08:49 15:53	08:07 16:54	09:01 17:56	07:01 17:56	06:38 20:01	04:32 21:58
6	08:49 15:55	08:05 16:56	09:00 17:58	07:00 17:58	06:36 20:04	04:31 21:59
7	08:48 15:56	08:03 16:59	09:00 18:01	07:00 18:01	06:33 20:06	04:30 22:00
8	08:48 15:58	08:01 17:01	09:00 18:03	07:00 18:03	06:30 20:08	04:29 22:01
9	08:47 16:00	07:58 17:03	09:00 18:05	07:00 18:05	06:28 20:10	04:29 22:02
10	08:46 16:01	07:56 17:05	09:00 18:07	07:00 18:07	06:25 20:12	04:28 22:03
11	08:45 16:03	07:54 17:08	09:00 18:09	07:00 18:09	06:22 20:14	04:27 22:04
12	08:44 16:05	07:52 17:10	09:00 18:11	07:00 18:11	06:20 20:16	04:27 22:05
13	08:43 16:06	07:50 17:12	09:00 18:13	07:00 18:13	06:17 20:18	04:26 22:06
14	08:42 16:08	07:47 17:14	09:00 18:16	07:00 18:16	06:15 20:20	04:26 22:07
15	08:41 16:10	07:45 17:17	09:00 18:18	07:00 18:18	06:12 20:22	04:26 22:07
16	08:40 16:12	07:43 17:19	09:00 18:20	07:00 18:20	06:09 20:24	04:26 22:08
17	08:39 16:14	07:40 17:21	09:00 18:22	07:00 18:22	06:07 20:26	04:25 22:09
18	08:38 16:16	07:38 17:23	09:00 18:24	07:00 18:24	06:04 20:28	04:25 22:09
19	08:36 16:18	07:36 17:26	09:00 18:26	07:00 18:26	06:02 20:31	04:25 22:09
20	08:35 16:20	09:09 (B14) 09:10 (B14)	07:33 17:28	06:21 18:28	05:59 20:33	04:25 22:10
21	08:33 16:22	09:07 (B14) 09:11 (B14)	07:31 17:30	06:18 18:30	05:57 20:35	04:25 22:10
22	08:32 16:24	09:05 (B14) 09:12 (B14)	07:28 17:32	06:16 18:32	05:54 20:37	04:26 22:10
23	08:30 16:26	09:03 (B14) 09:13 (B14)	07:26 17:34	06:13 18:34	05:52 20:39	04:26 22:10
24	08:29 16:28	09:02 (B14) 09:14 (B14)	07:23 17:37	06:10 18:36	05:49 20:41	04:26 22:11
25	08:27 16:30	09:00 (B14) 09:15 (B14)	07:21 17:39	06:08 18:39	05:47 20:43	04:26 22:11
26	08:26 16:32	08:58 (B14) 09:15 (B14)	07:18 17:41	06:05 18:41	05:44 20:45	04:27 22:10
27	08:24 16:34	08:58 (B14) 09:15 (B14)	07:16 17:43	06:02 18:43	05:42 20:47	04:27 22:10
28	08:22 16:37	08:58 (B14) 09:15 (B14)	07:13 17:45	06:00 18:45	05:40 20:49	04:28 22:10
29	08:20 16:39	08:59 (B14) 09:15 (B14)	07:11 17:47	06:57 19:47	05:37 20:51	04:29 22:10
30	08:19 16:41	09:00 (B14) 09:15 (B14)	07:10 17:49	06:54 19:49	05:35 20:53	04:29 22:10
31	08:17 16:43	09:01 (B14) 09:15 (B14)	07:09 17:51	06:52 19:51	05:37 21:51	04:29 22:10
Potential sun hours	235	266	366	426	508	529
Total, worst case	145	24	94			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.59	0.59	0.62			
Total reduction	0.08	0.11	0.25			
Total, real	11	3	23			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Latvian - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (168)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November		December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54		07:23 16:36		08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	7	08:02 (B22) 08:09 (B22)		08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	11	08:00 (B22) 08:11 (B22)		08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	14	07:58 (B22) 08:12 (B22)		08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	15	07:57 (B22) 08:12 (B22)		08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	16	07:56 (B22) 08:12 (B22)		08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	14	07:58 (B22) 08:12 (B22)		08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	11	08:01 (B22) 08:12 (B22)	4	08:36 (B14) 08:40 (B14)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	8	08:03 (B22) 08:11 (B22)	10	08:33 (B14) 08:43 (B14)
10	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	4	08:05 (B22) 08:09 (B22)	12	08:33 (B14) 08:45 (B14)
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27		07:44 16:15	15	08:31 (B14) 08:46 (B14)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25		07:47 16:13	16	08:30 (B14) 08:46 (B14)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22		07:49 16:11	16	08:31 (B14) 08:47 (B14)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20		07:51 16:09	17	08:30 (B14) 08:47 (B14)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17		07:53 16:08	17	08:31 (B14) 08:48 (B14)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15		07:55 16:06	17	08:31 (B14) 08:48 (B14)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12		07:57 16:04	15	08:33 (B14) 08:48 (B14)
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09		07:59 16:03	12	08:36 (B14) 08:48 (B14)
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07		08:01 16:01	10	08:38 (B14) 08:48 (B14)
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04		08:03 15:59	7	08:40 (B14) 08:47 (B14)
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02		08:05 15:58	4	08:43 (B14) 08:47 (B14)
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00		08:07 15:56	1	08:45 (B14) 08:46 (B14)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57		08:09 15:55		08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55		08:11 15:53		08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52		08:13 15:52		08:50 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50		08:15 15:51		08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48		08:17 15:50		08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45		08:19 15:48		08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43		08:21 15:47		08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41		08:23 15:46		08:51 15:46
31	05:14 21:30	06:15 20:17		08:20 16:38				08:51 15:47
Potential sun hours	529	469	385	324		247		216
Total, worst case				100		173		
Sun reduction				0.26		0.08		
Oper. time red.				0.98		0.98		
Wind dir. red.				0.62		0.59		
Total reduction				0.15		0.05		
Total, real				15		8		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Lauri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (49)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Lazdas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (68)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	08:46 (B14) 08:55 (B14)	07:11 17:48	06:49 19:53	05:33 20:56
2	08:51 15:49	08:13 16:48	08:43 (B14) 08:55 (B14)	07:08 17:50	06:46 19:55	05:30 20:58
3	08:50 15:51	08:11 16:50	08:41 (B14) 08:55 (B14)	07:06 17:52	06:44 19:57	05:28 21:00
4	08:50 15:52	08:09 16:52	08:39 (B14) 08:56 (B14)	07:03 17:54	06:41 19:59	05:26 21:02
5	08:49 15:53	08:07 16:54	08:38 (B14) 08:56 (B14)	07:01 17:56	06:38 20:01	05:24 21:04
6	08:49 15:55	08:05 16:57	08:38 (B14) 08:56 (B14)	06:58 17:58	06:36 20:04	05:21 21:06
7	08:48 15:56	08:03 16:59	08:39 (B14) 08:56 (B14)	06:55 18:01	06:33 20:06	05:19 21:08
8	08:48 15:58	08:01 17:01	08:40 (B14) 08:56 (B14)	06:53 18:03	06:30 20:08	05:17 21:10
9	08:47 16:00	07:58 17:03	08:40 (B14) 08:54 (B14)	06:50 18:05	06:28 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	08:41 (B14) 08:53 (B14)	06:48 18:07	06:25 20:12	05:13 21:14
11	08:45 16:03	07:54 17:08	08:44 (B14) 08:52 (B14)	06:45 18:09	06:22 20:14	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11	1 07:10 (B22) 07:08 (B22)	06:20 20:16	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	5 07:13 (B22) 07:05 (B22)	06:17 20:18	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:16	8 07:13 (B22) 07:02 (B22)	06:15 20:20	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18	11 07:13 (B22) 07:00 (B22)	06:12 20:22	05:03 21:24
16	08:40 16:12	07:43 17:19	06:32 18:20	14 07:14 (B22) 06:58 (B22)	06:09 20:24	05:01 21:26
17	08:39 16:14	07:40 17:21	06:29 18:22	15 07:13 (B22) 06:58 (B22)	06:07 20:26	04:59 21:27
18	08:38 16:16	07:38 17:23	06:26 18:24	14 07:12 (B22) 06:59 (B22)	06:04 20:28	04:57 21:29
19	08:36 16:18	07:36 17:26	06:24 18:26	12 07:11 (B22) 07:00 (B22)	06:02 20:31	04:55 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	9 07:09 (B22)	05:59 20:33	04:53 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30		05:57 20:35	04:52 21:35
22	08:32 16:24	07:28 17:32	06:16 18:32		05:54 20:37	04:50 21:37
23	08:30 16:26	07:26 17:34	06:13 18:34		05:52 20:39	04:48 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	04:47 21:40
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	04:45 21:42
26	08:26 16:32	07:18 17:41	06:05 18:41		05:44 20:45	04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	04:42 21:45
28	08:22 16:37	07:13 17:45	06:00 18:45		05:40 20:49	04:41 21:47
29	08:20 16:39		06:57 19:47		05:37 20:51	04:40 21:48
30	08:19 16:41	08:50 (B14) 08:52 (B14)	06:54 19:49		05:35 20:53	04:38 21:50
31	08:17 16:43	08:48 (B14) 08:53 (B14)	06:52 19:51			04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	7	155	89			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.61	0.61	0.63			
Total reduction	0.08	0.12	0.25			
Total, real	1	18	22			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Lazdas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (68)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:46 (B22) 07:53 (B22)	07:23 16:36	08:11 (B14) 08:23 (B14)	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:48 (B22) 07:51 (B22)	07:25 16:34	08:09 (B14) 08:24 (B14)	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48		07:27 16:32	08:09 (B14) 08:25 (B14)	08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46		07:29 16:30	08:08 (B14) 08:25 (B14)	08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43		07:31 16:27	08:09 (B14) 08:26 (B14)	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40		07:34 16:25	08:08 (B14) 08:26 (B14)	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38		07:36 16:23	08:09 (B14) 08:26 (B14)	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35		07:38 16:21	08:12 (B14) 08:26 (B14)	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33		07:40 16:19	08:14 (B14) 08:25 (B14)	08:37 15:39
10	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30		07:42 16:17	08:17 (B14) 08:25 (B14)	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27		07:44 16:15	08:19 (B14) 08:24 (B14)	08:39 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25		07:47 16:13	08:21 (B14) 08:23 (B14)	08:40 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22		07:49 16:11		08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20		07:51 16:10		08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17		07:53 16:08		08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15		07:55 16:06		08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12		07:57 16:04		08:46 15:38
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09		07:59 16:03		08:46 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07		08:01 16:01		08:47 15:38
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04		08:03 15:59		08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02		08:05 15:58		08:49 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00		08:07 15:56		08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57		08:09 15:55		08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:13	07:45 (B22) 07:52 (B22)		08:11 15:53		08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	07:42 (B22) 07:54 (B22)		08:13 15:52		08:50 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	07:41 (B22) 07:54 (B22)		08:15 15:51		08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	07:40 (B22) 07:55 (B22)		08:17 15:50		08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:40 (B22) 07:55 (B22)		08:19 15:48		08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:42 (B22) 07:54 (B22)		08:21 15:47		08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	07:44 (B22) 07:54 (B22)		08:23 15:46		08:51 15:46
31	05:14 21:30	06:15 20:17		07:20 16:38	08:13 (B14) 08:22 (B14)			08:51 15:47
Potential sun hours	529	469	385	324	247			216
Total, worst case			84	19	152			
Sun reduction			0.43	0.26	0.08			
Oper. time red.			0.98	0.98	0.98			
Wind dir. red.			0.63	0.62	0.61			
Total reduction			0.26	0.16	0.05			
Total, real			22	3	7			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Leiš ūpi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (31)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48 16:45	08:15 16:45 17:48	07:11 17:48 19:53	06:49 17:48 19:53	05:33 20:55 20:55	06:00 (B14) 21:53 22:09	04:36 21:53 22:09	05:16 21:28 22:09	05:59 (B14) 20:14 20:14	06:17 20:14 20:14	07:17 18:54 16:36	07:23 16:36 15:45
2	08:50 15:50 16:48	08:13 16:48 17:50	07:08 17:50 19:55	06:46 17:50 19:55	05:30 20:58 20:58	05:58 (B14) 21:54 22:08	04:35 21:54 22:08	05:18 21:26 22:08	05:58 (B14) 20:11 20:11	06:19 20:11 20:11	07:19 18:51 16:34	07:25 16:34 15:44
3	08:50 15:51 16:50	08:11 16:50 17:52	07:06 17:52 19:57	06:44 17:52 19:57	05:28 21:00 21:00	05:56 (B14) 21:55 22:08	04:34 21:55 22:08	05:20 21:24 22:08	05:58 (B14) 20:09 20:09	06:21 20:09 20:09	07:21 18:48 16:32	07:27 16:32 15:43
4	08:50 15:52 16:52	08:09 16:52 17:54	07:03 17:54 19:59	06:41 17:54 19:59	05:26 21:02 21:02	05:54 (B14) 21:57 22:07	04:33 21:57 22:07	05:22 21:22 22:07	05:58 (B14) 20:06 20:06	06:23 20:06 20:06	07:23 18:46 16:30	07:29 16:30 15:43
5	08:49 15:54 16:54	08:07 16:54 17:56	07:01 17:56 20:01	06:38 20:01 21:04	05:24 21:04 21:04	05:52 (B14) 21:58 22:07	04:32 21:58 22:07	05:24 21:20 22:07	05:59 (B14) 20:04 20:04	06:25 20:04 20:04	07:26 18:43 16:27	07:31 16:27 15:42
6	08:49 15:55 16:57	08:05 16:57 17:58	06:58 17:58 20:03	06:36 20:03 21:06	05:21 21:06 21:06	05:50 (B14) 21:59 22:06	04:31 21:59 22:06	05:26 21:17 22:06	05:58 (B14) 20:01 20:01	06:27 20:01 20:01	07:28 18:40 16:25	07:33 16:25 15:41
7	08:48 15:57 16:59	08:03 16:59 18:01	06:55 18:01 20:06	06:33 20:06 21:08	05:19 21:08 21:08	05:48 (B14) 22:00 22:05	04:30 22:00 22:05	05:28 21:15 22:05	06:00 (B14) 19:58 19:58	06:29 19:58 19:58	07:30 18:38 16:23	07:36 16:23 15:41
8	08:48 15:58 17:01	08:01 17:01 18:03	06:53 18:03 20:08	06:30 20:08 21:10	05:17 21:10 21:10	05:48 (B14) 22:01 22:04	04:29 22:01 22:04	05:29 21:13 22:04	06:02 (B14) 19:56 19:56	06:31 19:56 19:56	07:32 18:35 16:21	07:38 16:21 15:40
9	08:47 16:00 17:03	07:58 17:03 18:05	06:50 18:05 20:10	06:28 20:10 21:12	05:15 21:12 21:12	05:48 (B14) 22:02 22:03	04:29 22:02 22:03	05:31 21:11 22:03	06:04 (B14) 19:53 19:53	06:33 19:53 19:53	07:34 18:33 16:19	07:40 16:19 15:40
10	08:46 16:01 17:06	07:56 17:06 18:07	06:48 18:07 20:12	06:25 20:12 21:14	05:13 21:14 21:14	05:48 (B14) 22:03 22:03	04:28 22:03 22:03	05:33 21:08 22:03	06:06 (B14) 19:50 19:50	06:35 19:50 19:50	07:36 18:30 16:17	07:42 16:17 15:39
11	08:45 16:03 17:08	07:54 17:08 18:09	06:45 18:09 20:14	06:22 20:14 21:16	05:11 21:16 21:16	05:48 (B14) 22:04 22:04	04:28 22:04 22:04	05:35 21:06 22:04	06:08 (B14) 19:48 19:48	06:37 19:48 19:48	07:38 18:27 16:15	07:44 16:15 15:39
12	08:44 16:05 17:10	07:52 17:10 18:11	06:42 18:11 20:16	06:20 20:16 21:18	05:09 21:18 21:18	05:48 (B14) 22:05 22:05	04:27 22:05 22:05	05:37 21:04 22:05	06:09 (B14) 19:45 19:45	06:39 19:45 19:45	07:40 18:25 16:13	07:46 16:13 15:38
13	08:43 16:07 17:12	07:50 17:12 18:13	06:40 18:13 20:18	06:17 20:18 21:20	05:07 21:20 21:20	05:50 (B14) 22:06 22:06	04:27 22:06 22:06	05:39 21:02 22:06	06:10 (B14) 19:42 19:42	06:41 19:42 19:42	07:42 18:22 16:11	07:49 16:11 15:38
14	08:42 16:08 17:15	07:47 17:15 18:16	06:37 18:16 20:20	06:15 20:20 21:22	05:05 21:22 21:22	05:50 (B14) 22:07 22:07	04:26 22:07 22:07	05:41 20:59 22:07	06:13 (B14) 19:39 19:39	06:43 19:39 19:39	07:44 18:20 16:10	07:51 16:10 15:38
15	08:41 16:10 17:17	07:45 17:17 18:18	06:34 18:18 20:22	06:12 20:22 21:24	05:03 21:24 21:24	05:51 (B14) 22:07 22:07	04:26 22:07 22:07	05:43 20:57 22:07	06:15 (B14) 19:37 19:37	06:45 19:37 19:37	07:46 18:17 16:08	07:53 16:08 15:38
16	08:40 16:12 17:19	07:43 17:19 18:20	06:32 18:20 20:24	06:10 20:24 21:25	05:01 21:25 21:25	05:51 (B14) 22:08 22:08	04:26 22:08 22:08	05:45 20:54 22:08	06:17 (B14) 19:34 19:34	06:47 19:34 19:34	07:48 18:15 16:06	07:55 16:06 15:38
17	08:39 16:14 17:21	07:40 17:21 18:22	06:29 18:22 20:26	06:07 20:26 21:27	04:59 21:27 21:27	05:54 (B14) 22:08 22:08	04:26 22:08 22:08	05:47 20:52 22:08	06:19 (B14) 19:31 19:31	07:50 19:31 19:31	07:50 18:12 16:04	07:57 16:04 15:38
18	08:37 16:16 17:23	07:38 17:23 18:24	06:26 18:24 20:28	06:04 20:28 21:29	04:57 21:29 21:29	05:54 (B14) 22:09 22:09	04:25 22:09 22:09	05:49 20:50 22:09	06:21 (B14) 19:29 19:29	07:51 19:29 19:29	07:53 18:10 16:03	07:59 16:03 15:38
19	08:36 16:18 17:26	07:36 17:26 18:26	06:24 18:26 20:31	06:02 20:31 21:31	04:55 21:31 21:31	05:55 (B14) 22:10 22:10	04:25 22:10 22:10	05:51 20:47 22:10	06:23 (B14) 19:26 19:26	07:53 19:26 19:26	07:55 18:07 16:01	08:01 16:01 15:39
20	08:35 16:20 17:28	07:33 17:28 18:28	06:21 18:28 20:33	05:59 20:33 21:33	04:54 21:33 21:33	05:56 (B14) 22:11 22:11	04:25 22:11 22:11	05:53 20:45 22:11	06:25 (B14) 19:23 19:23	07:55 19:23 19:23	07:57 18:05 15:59	08:03 15:59 15:39
21	08:33 16:22 17:30	07:31 17:30 18:30	06:18 18:30 20:35	05:57 20:35 21:35	04:52 21:35 21:35	05:57 (B14) 22:12 22:12	04:26 22:12 22:12	05:55 20:42 22:12	06:27 (B14) 19:21 19:21	07:57 19:21 19:21	07:59 18:02 15:58	08:05 15:58 15:39
22	08:32 16:24 17:32	07:28 17:32 18:32	06:16 18:32 20:37	05:54 20:37 21:36	04:50 21:36 21:36	05:58 (B14) 22:13 22:13	04:26 22:13 22:13	05:57 20:40 22:13	06:29 (B14) 19:18 19:18	07:59 19:18 19:18	08:01 18:00 15:56	08:07 15:56 15:40
23	08:30 16:26 17:35	07:26 17:35 18:34	06:13 18:34 20:39	05:52 20:39 21:38	04:49 21:38 21:38	05:59 (B14) 22:14 22:14	04:26 22:14 22:14	05:59 20:37 22:14	06:31 (B14) 19:15 19:15	07:01 19:15 19:15	08:03 17:57 15:55	08:09 15:55 15:40
24	08:29 16:28 17:37	07:23 17:37 18:36	06:10 18:36 20:41	05:49 20:41 21:40	04:47 21:40 21:40	06:01 (B14) 22:15 22:15	04:26 22:15 22:15	06:01 20:35 22:15	06:33 (B14) 19:13 19:13	07:03 19:13 19:13	08:05 17:55 15:54	08:11 15:54 15:41
25	08:27 16:30 17:39	07:21 17:39 18:39	06:08 18:39 20:43	05:47 20:43 21:42	04:45 21:42 21:42	06:02 (B14) 22:16 22:16	04:27 22:16 22:16	06:03 20:32 22:16	06:35 (B14) 19:10 19:10	07:05 19:10 19:10	08:07 16:52 15:52	08:13 15:52 15:41
26	08:26 16:32 17:41	07:18 17:41 18:41	06:05 18:41 20:45	05:45 20:45 21:43	04:44 21:43 21:43	06:03 (B14) 22:17 22:17	04:27 22:17 22:17	06:05 20:30 22:17	06:37 (B14) 19:07 19:07	07:07 19:07 19:07	08:10 16:50 15:51	08:51 15:51 15:42
27	08:24 16:35 17:43	07:16 17:43 18:43	06:02 18:43 20:47	05:42 20:47 21:45	04:43 21:45 21:45	06:04 (B14) 22:18 22:18	04:28 22:18 22:18	06:07 20:27 22:18	06:39 (B14) 19:04 19:04	07:09 19:04 19:04	08:12 16:48 15:50	08:51 15:50 15:43
28	08:22 16:37 17:46	07:13 17:46 18:45	06:00 18:45 20:49	05:40 20:49 21:47	04:41 21:47 21:47	06:05 (B14) 22:19 22:19	04:28 22:19 22:19	06:09 20:24 22:19	06:41 (B14) 19:01 19:01	07:11 19:01 19:01	08:14 16:45 15:48	08:51 15:48 15:44
29	08:20 16:39 17:48	07:07 17:48 18:47	05:57 18:47 20:51	05:37 20:51 21:48	04:40 21:48 21:48	06:06 (B14) 22:20 22:20	04:29 22:20 22:20	06:11 20:22 22:20	06:43 (B14) 18:59 18:59	07:13 18:59 18:59	08:16 16:43 15:47	08:51 15:47 15:45
30	08:18 16:41 17:50	07:04 17:50 18:49	05:54 18:49 20:53	05:35 20:53 21:50	04:39 21:50 21:50	06:07 (B14) 22:21 22:21	04:30 22:21 22:21	06:13 20:19 22:21	06:45 (B14) 18:56 18:56	07:15 18:56 18:56	08:18 16:41 15:46	08:51 15:46 15:46
31	08:17 16:43	07:02 17:51	05:52 19:51	05:37 21:51	04:37 21:51	06:08 (B14) 22:22	04:30 22:22	06:15 20:17	06:47 (B14) 18:57	07:16 18:57	08:21 16:38	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case					246							
Sun reduction					0.57							
Oper. time red.					0.98							
Wind dir. red.					0.67							
Total reduction					0.37							
Total, real					91							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Lejas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (156)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B22) 07:46 (B22)	06:49 19:53	05:33 20:56
2	08:51 15:49	08:13 16:48	07:08 17:50	07:34 (B22) 07:46 (B22)	06:46 19:55	05:30 20:58
3	08:50 15:51	08:11 16:50	07:06 17:52	07:32 (B22) 07:46 (B22)	06:44 19:57	05:28 21:00
4	08:50 15:52	08:09 16:52	07:03 17:54	07:30 (B22) 07:45 (B22)	06:41 19:59	05:26 21:02
5	08:49 15:53	08:07 16:54	07:01 17:56	07:31 (B22) 07:45 (B22)	06:38 20:01	05:24 21:04
6	08:49 15:55	08:05 16:56	06:58 17:58	07:32 (B22) 07:44 (B22)	06:36 20:04	05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:01	07:33 (B22) 07:42 (B22)	06:33 20:06	05:19 21:08
8	08:48 15:58	08:01 17:01	06:53 18:03		06:30 20:08	05:17 21:10
9	08:47 16:00	07:58 17:03	06:50 18:05		06:28 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	06:48 18:07		06:25 20:12	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09		06:22 20:14	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11		06:20 20:16	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13		06:17 20:18	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:16		06:15 20:20	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18		06:12 20:22	05:03 21:24
16	08:40 16:12	09:15 (B14) 09:16 (B14)	07:43 17:19		06:09 20:24	05:01 21:26
17	08:39 16:14	09:14 (B14) 09:18 (B14)	07:40 17:21		06:07 20:26	04:59 21:27
18	08:38 16:16	09:12 (B14) 09:18 (B14)	07:38 17:23		06:04 20:28	04:57 21:29
19	08:36 16:18	09:10 (B14) 09:19 (B14)	07:36 17:26		06:02 20:31	04:55 21:31
20	08:35 16:20	09:09 (B14) 09:20 (B14)	07:33 17:28		05:59 20:33	04:53 21:33
21	08:33 16:22	09:07 (B14) 09:20 (B14)	07:31 17:30		05:57 20:35	04:52 21:35
22	08:32 16:24	09:05 (B14) 09:21 (B14)	07:28 17:32		05:54 20:37	04:50 21:37
23	08:30 16:26	09:04 (B14) 09:21 (B14)	07:26 17:34		05:52 20:39	04:48 21:38
24	08:29 16:28	09:05 (B14) 09:22 (B14)	07:23 17:37		05:49 20:41	04:47 21:40
25	08:27 16:30	09:06 (B14) 09:22 (B14)	07:21 17:39		05:47 20:43	04:45 21:42
26	08:26 16:32	09:06 (B14) 09:21 (B14)	07:18 17:41		05:44 20:45	04:44 21:43
27	08:24 16:34	09:07 (B14) 09:21 (B14)	07:16 17:43	07:42 (B22) 07:43 (B22)	05:42 20:47	04:42 21:45
28	08:22 16:37	09:08 (B14) 09:20 (B14)	07:13 17:45	07:40 (B22) 07:45 (B22)	05:40 20:49	04:41 21:47
29	08:20 16:39	09:09 (B14) 09:19 (B14)			05:37 20:51	04:40 21:48
30	08:19 16:41	09:12 (B14) 09:18 (B14)			05:35 20:53	04:38 21:50
31	08:17 16:43					04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	167	6	85			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.59	0.62	0.62			
Total reduction	0.08	0.12	0.25			
Total, real	13	1	21			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Lejas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (156)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November		December
1	04:30	05:16	06:17	07:17		07:23		08:24
	22:09	21:28	20:14	18:54		16:36		15:45
2	04:31	05:18	06:19	07:19		07:25		08:26
	22:09	21:26	20:11	18:51		16:34		15:44
3	04:32	05:20	06:21	07:21		07:27		08:28
	22:08	21:24	20:09	18:48		16:32		15:43
4	04:33	05:22	06:23	07:23		07:29		08:29
	22:07	21:22	20:06	18:46		16:29		15:42
5	04:34	05:23	06:25	07:26		07:31		08:31
	22:07	21:20	20:04	18:43		16:27		15:42
6	04:35	05:25	06:27	07:28	08:10 (B22)	07:34		08:32
	22:06	21:17	20:01	18:40	7 08:17 (B22)	16:25		15:41
7	04:36	05:27	06:29	07:30	08:07 (B22)	07:36		08:34
	22:05	21:15	19:58	18:38	11 08:18 (B22)	16:23		15:40
8	04:37	05:29	06:31	07:32	08:07 (B22)	07:38		08:35
	22:04	21:13	19:56	18:35	13 08:20 (B22)	16:21		15:40
9	04:38	05:31	06:33	07:34	08:06 (B22)	07:40		08:37
	22:03	21:11	19:53	18:33	14 08:20 (B22)	16:19		15:39
10	04:39	05:33	06:35	07:36	08:05 (B22)	07:42		08:38
	22:02	21:09	19:50	18:30	15 08:20 (B22)	16:17		15:39
11	04:41	05:35	06:37	07:38	08:07 (B22)	07:44		08:39
	22:01	21:06	19:48	18:27	13 08:20 (B22)	16:15		15:39
12	04:42	05:37	06:39	07:40	08:09 (B22)	07:47	08:42 (B14)	08:41
	22:00	21:04	19:45	18:25	10 08:19 (B22)	16:13	7 08:49 (B14)	15:38
13	04:43	05:39	06:41	07:42	08:11 (B22)	07:49	08:41 (B14)	08:42
	21:59	21:02	19:42	18:22	7 08:18 (B22)	16:11	10 08:51 (B14)	15:38
14	04:45	05:41	06:43	07:44	08:14 (B22)	07:51	08:40 (B14)	08:43
	21:58	20:59	19:39	18:20	4 08:18 (B22)	16:09	12 08:52 (B14)	15:38
15	04:46	05:43	06:45	07:46		07:53	08:40 (B14)	08:44
	21:57	20:57	19:37	18:17		16:08	14 08:54 (B14)	15:38
16	04:48	05:45	06:47	07:48		07:55	08:39 (B14)	08:45
	21:55	20:55	19:34	18:15		16:06	15 08:54 (B14)	15:38
17	04:49	05:47	06:49	07:50		07:57	08:39 (B14)	08:46
	21:54	20:52	19:31	18:12		16:04	16 08:55 (B14)	15:38
18	04:51	05:49	06:51	07:53		07:59	08:39 (B14)	08:47
	21:53	20:50	19:29	18:09		16:03	17 08:56 (B14)	15:38
19	04:53	05:51	06:53	07:55		08:01	08:39 (B14)	08:47
	21:51	20:47	19:26	18:07		16:01	17 08:56 (B14)	15:38
20	04:54	05:53	06:55	07:57		08:03	08:40 (B14)	08:48
	21:50	20:45	19:23	18:04		15:59	16 08:56 (B14)	15:39
21	04:56	05:55	06:57	07:59		08:05	08:43 (B14)	08:49
	21:48	20:42	19:21	18:02		15:58	13 08:56 (B14)	15:39
22	04:58	05:57	06:59	08:01		08:07	08:45 (B14)	08:49
	21:46	20:40	19:18	18:00		15:56	11 08:56 (B14)	15:40
23	04:59	05:59	07:01	08:03		08:09	08:47 (B14)	08:50
	21:45	20:37	19:15	17:57		15:55	9 08:56 (B14)	15:40
24	05:01	06:01	07:03	08:05		08:11	08:49 (B14)	08:50
	21:43	20:35	19:12	17:55		15:53	6 08:55 (B14)	15:41
25	05:03	06:03	07:05	07:07		08:13	08:51 (B14)	08:50
	21:41	20:32	19:10	16:52		15:52	4 08:55 (B14)	15:41
26	05:05	06:05	07:07	07:10		08:15	08:54 (B14)	08:51
	21:39	20:30	19:07	16:50		15:51	1 08:55 (B14)	15:42
27	05:06	06:07	07:09	07:12		08:17		08:51
	21:38	20:27	19:04	16:48		15:50		15:43
28	05:08	06:09	07:11	07:14		08:19		08:51
	21:36	20:24	19:02	16:45		15:48		15:44
29	05:10	06:11	07:13	07:16		08:21		08:51
	21:34	20:22	18:59	16:43		15:47		15:45
30	05:12	06:13	07:15	07:18		08:23		08:51
	21:32	20:19	18:56	16:41		15:46		15:46
31	05:14	06:15		07:20				08:51
	21:30	20:17		16:38				15:47
Potential sun hours	529	469	385	324		247		216
Total, worst case				94		168		
Sun reduction				0.26		0.08		
Oper. time red.				0.98		0.98		
Wind dir. red.				0.62		0.59		
Total reduction				0.16		0.05		
Total, real				15		8		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Lejas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (128)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:39 (B22) 19:53	05:33 20:56	04:36 21:53
2	08:51 15:49	08:13 16:48	07:08 17:50	07:39 (B22) 19:55	05:30 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:41 (B22) 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:42 (B22) 19:59	06:41 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	07:01 17:56	07:50 (B22) 20:01	19:59 21:04	21:57 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	20:01 21:06	21:04 21:59	21:58 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03
11	08:45 16:03	09:22 (B14) 09:24 (B14)	07:54 18:09	06:22 20:14	05:11 21:16	04:27 22:04
12	08:44 16:05	09:21 (B14) 09:25 (B14)	07:52 18:11	06:20 20:16	05:09 21:18	04:27 22:05
13	08:43 16:06	09:19 (B14) 09:25 (B14)	07:50 18:13	06:17 20:18	05:07 21:20	04:26 22:06
14	08:42 16:08	09:18 (B14) 09:26 (B14)	07:47 18:16	06:15 20:20	05:05 21:22	04:26 22:07
15	08:41 16:10	09:17 (B14) 09:27 (B14)	07:45 18:18	06:12 20:22	05:03 21:24	04:26 22:07
16	08:40 16:12	09:15 (B14) 09:27 (B14)	07:43 18:20	06:09 20:24	05:01 21:26	04:26 22:08
17	08:39 16:14	09:14 (B14) 09:28 (B14)	07:40 18:22	06:07 20:26	04:59 21:27	04:25 22:09
18	08:38 16:16	09:12 (B14) 09:28 (B14)	07:38 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	09:12 (B14) 09:28 (B14)	07:36 18:26	06:02 20:31	04:55 21:31	04:25 22:09
20	08:35 16:20	09:13 (B14) 09:29 (B14)	07:33 18:28	05:59 20:33	04:53 21:33	04:25 22:10
21	08:33 16:22	09:13 (B14) 09:29 (B14)	07:31 18:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	09:13 (B14) 09:28 (B14)	07:28 18:32	05:54 20:37	04:50 21:37	04:26 22:10
23	08:30 16:26	09:14 (B14) 09:28 (B14)	07:26 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	09:16 (B14) 09:28 (B14)	07:23 18:36	05:49 20:41	04:47 21:40	04:26 22:11
25	08:27 16:30	09:17 (B14) 09:27 (B14)	07:21 18:39	05:47 20:43	04:45 21:42	04:26 22:11
26	08:26 16:32	09:19 (B14) 09:26 (B14)	07:18 18:41	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	07:42 (B22) 18:43	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 16:37	07:13 17:45	07:55 (B22) 18:45	05:40 20:49	04:41 21:47	04:28 22:10
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10
31	08:17 16:43		06:52 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case	178	48	48			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.59	0.63	0.63			
Total reduction	0.08	0.12	0.25			
Total, real	14	6	12			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

## SHADOW - Calendar

Shadow receptor: Lejas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (128)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November	December
1	04:30	05:16	06:17	07:17		07:23	08:24 09:04 (B14)
	22:09	21:28	20:14	18:54		16:36	2 09:06 (B14)
2	04:31	05:18	06:19	07:19		07:25	08:26
	22:09	21:26	20:11	18:51		16:34	15:44
3	04:32	05:20	06:21	07:21		07:27	08:28
	22:08	21:24	20:09	18:48		16:32	15:43
4	04:33	05:22	06:23	07:23		07:29	08:29
	22:07	21:22	20:06	18:46		16:29	15:42
5	04:34	05:23	06:25	07:26		07:31	08:31
	22:07	21:20	20:04	18:43		16:27	15:42
6	04:35	05:25	06:27	07:28		07:34	08:32
	22:06	21:17	20:01	18:40		16:25	15:41
7	04:36	05:27	06:29	07:30		07:36	08:34
	22:05	21:15	19:58	18:38		16:23	15:40
8	04:37	05:29	06:31	07:32		07:38	08:35
	22:04	21:13	19:56	18:35		16:21	15:40
9	04:38	05:31	06:33	07:34	08:20 (B22)	07:40	08:37
	22:03	21:11	19:53	18:33	3 08:23 (B22)	16:19	15:39
10	04:39	05:33	06:35	07:36	08:16 (B22)	07:42	08:38
	22:03	21:09	19:50	18:30	10 08:26 (B22)	16:17	15:39
11	04:41	05:35	06:37	07:38	08:14 (B22)	07:44	08:39
	22:01	21:06	19:48	18:27	13 08:27 (B22)	16:15	15:39
12	04:42	05:37	06:39	07:40	08:13 (B22)	07:47	08:41
	22:00	21:04	19:45	18:25	14 08:27 (B22)	16:13	15:38
13	04:43	05:39	06:41	07:42	08:12 (B22)	07:49	08:42
	21:59	21:02	19:42	18:22	15 08:27 (B22)	16:11	15:38
14	04:45	05:41	06:43	07:44	08:14 (B22)	07:51	08:43
	21:58	20:59	19:39	18:20	14 08:28 (B22)	16:09	15:38
15	04:46	05:43	06:45	07:46	08:16 (B22)	07:53	08:44
	21:57	20:57	19:37	18:17	11 08:27 (B22)	16:08	15:38
16	04:48	05:45	06:47	07:48	08:18 (B22)	07:55	08:45
	21:55	20:55	19:34	18:15	9 08:27 (B22)	16:06	15:38
17	04:49	05:47	06:49	07:50	08:20 (B22)	07:57	08:46
	21:54	20:52	19:31	18:12	5 08:25 (B22)	16:04	15:38
18	04:51	05:49	06:51	07:53	08:22 (B22)	07:59	08:47
	21:53	20:50	19:29	18:09	2 08:24 (B22)	16:03	15:38
19	04:53	05:51	06:53	07:55		08:01	08:47
	21:51	20:47	19:26	18:07		16:01	15:38
20	04:54	05:53	06:55	07:57		08:03	08:48
	21:50	20:45	19:23	18:04		15:59	15:39
21	04:56	05:55	06:57	07:59		08:05	08:49
	21:48	20:42	19:21	18:02		15:58	15:39
22	04:58	05:57	06:59	08:01		08:07	08:49
	21:46	20:40	19:18	18:00		15:56	15:40
23	04:59	05:59	07:01	08:03		08:09	08:50
	21:45	20:37	19:15	17:57		15:55	15:40
24	05:01	06:01	07:03	08:05		08:11	08:50
	21:43	20:35	19:12	17:55		15:53	15:41
25	05:03	06:03	07:05	07:07		08:13	08:50
	21:41	20:32	19:10	16:52		15:52	15:41
26	05:05	06:05	07:07	07:10		08:15	08:51
	21:39	20:30	19:07	16:50		15:51	15:42
27	05:06	06:07	07:09	07:12		08:17	08:51
	21:38	20:27	19:04	16:48		15:49	15:43
28	05:08	06:09	07:11	07:14		08:19	08:51
	21:36	20:24	19:02	16:45		15:48	15:44
29	05:10	06:11	07:13	07:16		08:21	08:51
	21:34	20:22	18:59	16:43		15:47	15:45
30	05:12	06:13	07:15	07:18		08:23	08:51
	21:32	20:19	18:56	16:41		15:46	15:46
31	05:14	06:15		07:20			08:51
	21:30	20:17		16:38			15:47
Potential sun hours	529	469	385	324		247	216
Total, worst case				96		176	2
Sun reduction				0.26		0.08	0.07
Oper. time red.				0.98		0.98	0.98
Wind dir. red.				0.63		0.59	0.59
Total reduction				0.16		0.05	0.04
Total, real				15		8	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Lidijas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (51)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Lieknas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (100)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	06:10 (B14) 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	06:11 (B14) 21:54	04:35 22:08	04:31 21:26	05:18 20:11	06:19 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	06:13 (B14) 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	06:20 (B14) 21:55	04:33 22:07	04:33 21:22	05:22 20:06	06:23 18:46	07:23 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	06:20 (B14) 21:58	04:34 22:07	04:34 21:20	05:24 20:04	06:25 18:43	07:26 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	06:20 (B14) 21:59	04:35 22:06	04:35 21:17	05:26 20:01	06:27 18:40	07:28 16:25	07:34 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	06:20 (B14) 22:00	04:36 22:05	04:36 21:15	05:28 19:58	06:29 18:38	07:30 16:23	07:36 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	06:20 (B14) 22:01	04:37 22:04	04:37 21:13	05:29 19:56	06:31 18:35	07:32 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	06:20 (B14) 22:02	04:38 22:03	04:38 21:11	05:31 19:53	06:33 18:33	07:34 16:19	07:40 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	06:20 (B14) 22:03	04:40 22:02	04:40 21:08	05:33 19:50	06:35 18:30	07:36 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	06:20 (B14) 22:04	04:41 22:01	04:41 21:06	05:35 19:48	06:37 18:27	07:38 16:15	07:44 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	06:20 (B14) 22:04	04:42 22:00	04:42 21:04	05:37 19:45	06:39 18:25	07:40 16:13	07:46 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	06:20 (B14) 22:05	04:44 22:00	04:44 21:04	05:39 19:45	06:41 18:22	07:42 16:11	07:49 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	06:20 (B14) 22:06	04:45 22:00	04:45 21:02	05:41 19:42	06:43 18:22	07:44 16:11	07:51 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	06:20 (B14) 22:07	04:47 22:00	04:47 21:02	05:43 19:39	06:45 18:20	07:46 16:10	07:53 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	06:20 (B14) 22:07	04:48 22:00	04:48 21:02	05:45 19:34	06:47 18:15	07:48 16:06	07:55 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	06:20 (B14) 22:08	04:50 22:00	04:50 21:02	05:47 19:31	06:49 18:12	07:50 16:04	07:57 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	06:20 (B14) 22:09	04:51 22:00	04:51 21:02	05:49 19:29	06:51 18:10	07:53 16:03	07:59 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	06:20 (B14) 22:09	04:53 22:00	04:53 21:02	05:51 19:26	06:53 18:07	07:55 16:01	08:01 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	06:20 (B14) 22:10	04:54 22:00	04:54 21:02	05:53 19:23	06:55 18:05	07:57 16:00	08:03 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	06:20 (B14) 22:10	04:56 22:00	04:56 21:02	05:55 19:21	06:57 18:02	07:59 16:00	08:05 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	06:20 (B14) 22:10	04:58 22:00	04:58 21:02	05:57 19:18	06:59 18:00	08:01 16:00	08:07 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	06:20 (B14) 22:10	04:59 22:00	04:59 21:02	05:59 19:15	07:01 17:57	08:03 16:00	08:09 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	06:20 (B14) 22:10	05:01 22:00	05:01 21:02	06:01 19:13	07:03 17:55	08:05 16:00	08:11 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	06:20 (B14) 22:10	05:03 22:00	05:03 21:02	06:03 19:10	07:05 16:52	07:07 16:00	08:13 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	06:20 (B14) 22:10	05:05 22:00	05:05 21:02	06:05 19:07	07:07 16:50	07:10 16:00	08:15 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	06:20 (B14) 22:10	05:07 22:00	05:07 21:02	06:07 19:04	07:09 16:48	07:12 16:00	08:17 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	06:20 (B14) 22:10	05:08 22:00	05:08 21:02	06:09 19:02	07:11 16:45	07:14 16:00	08:19 15:44
29	08:20 16:39	07:11 19:47	06:57 20:51	05:37 21:48	04:40 21:48	06:20 (B14) 22:10	05:10 22:00	05:10 21:02	06:11 19:02	07:13 16:43	07:16 16:00	08:21 15:45
30	08:19 16:41	07:04 19:54	06:54 20:53	05:35 21:50	04:39 21:50	06:20 (B14) 22:10	05:12 22:00	05:12 21:02	06:13 19:02	07:15 16:41	07:18 16:00	08:22 15:46
31	08:17 16:43	07:02 19:51	06:52 20:51	05:32 21:51	04:37 21:51	06:20 (B14) 22:10	05:14 22:00	05:14 21:02	06:15 19:02	07:16 16:38	07:20 16:00	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction				108	31			141				
Oper. time red.				0.50	0.57			0.50				
Wind dir. red.				0.98	0.98			0.98				
Total reduction				0.66	0.66			0.66				
Total, real				0.32	0.37			0.32				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Liepsala - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (88)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		09:33 (B12)	08:15		09:09 (B11)	07:11		06:49		07:14 (B9)	05:32		06:11 (B7)	04:36		05:22 (B15)	
2	15:48	35	15:05 (B25)	16:45	38	16:10 (B24)	17:47		19:53	57	08:28 (B18)	20:55	15	06:26 (B7)	21:52	26	05:48 (B15)	
	08:50		09:33 (B12)	08:13		09:09 (B11)	07:08		06:46		07:11 (B9)	05:30		06:12 (B7)	04:35		05:22 (B15)	
3	15:49	37	15:06 (B25)	16:47	42	16:13 (B24)	17:50		19:55	61	08:27 (B18)	20:57	13	06:25 (B7)	21:54	26	05:48 (B15)	
	08:50		09:34 (B12)	08:11		09:09 (B11)	07:05		06:43		07:08 (B9)	05:28		06:13 (B7)	04:34		05:21 (B15)	
4	15:51	38	15:08 (B25)	16:50	44	16:15 (B24)	17:52		19:57	64	08:26 (B18)	20:59	10	06:23 (B7)	21:55	28	05:49 (B15)	
	08:50		09:34 (B12)	08:09		09:10 (B11)	07:03		06:41		07:08 (B9)	05:26		06:16 (B7)	04:33		05:21 (B15)	
5	15:52	39	15:09 (B25)	16:52	46	16:18 (B24)	17:54		19:59	65	08:27 (B18)	21:01	4	06:20 (B7)	21:56	29	05:50 (B15)	
	08:49		09:34 (B12)	08:07		09:10 (B11)	07:00		06:38		07:07 (B23)	05:23			04:32		05:21 (B15)	
6	15:53	40	15:10 (B25)	16:54	45	16:18 (B24)	17:56		20:01	66	08:26 (B18)	21:03			21:58	30	05:51 (B15)	
	08:49		09:35 (B12)	08:05		09:10 (B11)	06:58		06:35		07:07 (B23)	05:21			04:31		05:21 (B15)	
7	15:55	41	15:11 (B25)	16:56	46	16:19 (B24)	17:58		20:03	65	08:26 (B18)	21:05			21:59	30	05:51 (B15)	
	08:48		09:35 (B12)	08:02		09:11 (B11)	06:55		06:33		07:06 (B23)	05:19			04:30		05:20 (B15)	
8	15:56	42	15:12 (B25)	16:58	44	16:19 (B24)	18:00		20:05	66	08:25 (B18)	21:08			22:00	31	05:51 (B15)	
	08:47		09:35 (B12)	08:00		09:12 (B11)	06:53		06:30		07:05 (B23)	05:17			04:29		05:21 (B15)	
9	15:58	42	15:12 (B25)	17:01	41	16:18 (B24)	18:02		20:07	64	08:23 (B18)	21:10			22:01	31	05:52 (B15)	
	08:47		09:36 (B12)	07:58		09:13 (B11)	06:50		06:27		07:06 (B23)	05:15			04:28		05:20 (B15)	
10	15:59	42	15:13 (B25)	17:03	37	16:17 (B24)	18:05		20:09	62	08:23 (B18)	21:12			22:02	32	05:52 (B15)	
	08:46		09:36 (B12)	07:56		09:14 (B11)	06:47		06:25		07:06 (B23)	05:12			04:28		05:20 (B15)	
11	16:01	43	15:13 (B25)	17:05	33	16:16 (B24)	18:07		20:12	58	08:21 (B18)	21:14			22:03	33	05:53 (B15)	
	08:45		09:36 (B12)	07:54		09:15 (B11)	06:45		06:22		07:07 (B23)	05:10			04:27		05:20 (B15)	
12	16:03	43	15:14 (B25)	17:07	22	16:12 (B24)	18:09		20:14	56	08:21 (B18)	21:16			22:04	33	05:53 (B15)	
	08:44		09:36 (B12)	07:52		09:17 (B11)	06:42		06:20		07:08 (B23)	05:08			04:27		05:20 (B15)	
13	16:04	42	15:13 (B25)	17:10	16	09:33 (B11)	18:11		20:16	51	08:19 (B18)	21:18			22:05	34	05:54 (B15)	
	08:43		09:37 (B12)	07:49		09:21 (B11)	06:39		06:17		07:10 (B23)	05:06			04:26		05:21 (B15)	
14	16:06	43	15:14 (B25)	17:12	9	09:30 (B11)	18:13		20:18	44	08:18 (B18)	21:19			22:06	33	05:54 (B15)	
	08:42		09:38 (B12)	07:47			06:37		06:14		07:12 (B23)	05:04			04:26		05:20 (B15)	
15	16:08	42	15:15 (B25)	17:14			18:15		20:20	35	08:15 (B18)	21:21			22:06	34	05:54 (B15)	
	08:41		09:38 (B12)	07:45			06:34		06:12		07:48 (B18)	05:02			04:26		05:20 (B15)	
16	16:10	41	15:14 (B25)	17:16			18:17		20:22	26	08:14 (B18)	21:23			22:07	34	05:54 (B15)	
	08:40		09:39 (B12)	07:42			06:31		06:09		07:50 (B18)	05:00			04:25		05:20 (B15)	
17	16:12	40	15:15 (B25)	17:19			18:19		20:24	21	08:11 (B18)	21:25			22:08	35	05:55 (B15)	
	08:39		09:39 (B12)	07:40			06:29		06:07		07:53 (B18)	04:59			04:25		05:21 (B15)	
18	16:14	38	15:14 (B25)	17:21			18:22		20:26	14	08:07 (B18)	21:27			22:08	34	05:55 (B15)	
	08:37		09:40 (B12)	07:38			06:26		06:04			04:57			04:25		05:21 (B15)	
19	16:16	36	15:14 (B25)	17:23			18:24		20:28			21:29			22:09	35	05:56 (B15)	
	08:36		09:17 (B11)	07:35			06:23		06:02			04:55			04:25		05:21 (B15)	
20	16:18	42	15:14 (B25)	17:25			18:26		20:30			21:31			22:09	35	05:56 (B15)	
	08:35		09:14 (B11)	07:33			06:21	17:54 (B22)	05:59			04:53			04:25		05:21 (B15)	
21	16:20	45	15:13 (B25)	17:28			18:28	6 18:00 (B22)	20:32			21:33			22:10	35	05:56 (B15)	
	08:33		09:14 (B11)	07:31			06:18	07:01 (B18)	05:57		06:23 (B7)	04:51			04:25		05:21 (B15)	
22	16:22	42	15:12 (B25)	17:30			18:30	27 18:02 (B22)	20:34	1	06:24 (B7)	21:35			22:10	35	05:56 (B15)	
	08:32		09:12 (B11)	07:28			06:15	06:57 (B18)	05:54		06:21 (B7)	04:50			04:25		05:22 (B15)	
23	16:24	40	15:10 (B25)	17:32			18:32	35 18:03 (B22)	20:37	5	06:26 (B7)	21:36			22:10	35	05:57 (B15)	
	08:30		09:11 (B11)	07:26			06:13	06:55 (B18)	05:52		06:18 (B7)	04:48			04:26		05:22 (B15)	
24	16:26	33	09:57 (B12)	17:34			18:34	44 18:06 (B22)	20:39	8	06:26 (B7)	21:38			22:10	35	05:57 (B15)	
	08:29		09:10 (B11)	07:23			06:10	06:53 (B18)	05:49		06:16 (B7)	04:47			04:26		05:22 (B15)	
25	16:28	29	09:54 (B12)	17:36			18:36	50 18:08 (B22)	20:41	11	06:27 (B7)	21:40			22:10	35	05:57 (B15)	
	08:27		09:10 (B11)	07:21			06:07	06:51 (B18)	05:47		06:14 (B7)	04:45			04:26		05:23 (B15)	
26	16:30	25	09:35 (B11)	17:39			18:38	52 18:07 (B22)	20:43	14	06:28 (B7)	21:41			22:10	34	05:57 (B15)	
	08:25		09:10 (B11)	07:18			06:05	06:50 (B18)	05:44		06:11 (B7)	04:44		05:29 (B15)	04:27		05:22 (B15)	
27	16:32	27	09:37 (B11)	17:41			18:40	55 18:07 (B22)	20:45	17	06:28 (B7)	21:43	10	05:39 (B15)	22:10	35	05:57 (B15)	
	08:24		09:10 (B11)	07:16			06:02	06:48 (B18)	05:42		06:10 (B7)	04:42		05:27 (B15)	04:27		05:23 (B15)	
28	16:34	27	09:37 (B11)	17:43			18:42	56 18:06 (B22)	20:47	18	06:28 (B7)	21:45	14	05:41 (B15)	22:10	35	05:58 (B15)	
	08:22		09:10 (B11)	07:13			05:59	06:47 (B18)	05:39		06:10 (B7)	04:41		05:26 (B15)	04:28		05:23 (B15)	
29	16:36	28	09:38 (B11)	17:45			18:45	56 18:05 (B22)	20:49	18	06:28 (B7)	21:46	17	05:43 (B15)	22:10	34	05:57 (B15)	
	08:20		09:09 (B11)				06:57	07:46 (B18)	05:37		06:09 (B7)	04:39		05:25 (B15)	04:28		05:24 (B15)	
30	16:38	30	09:39 (B11)				19:47	56 19:04 (B22)	20:51	18	06:27 (B7)	21:48	20	05:45 (B15)	22:10	34	05:58 (B15)	
	08:18		09:08 (B11)				06:54	07:19 (B9)	05:35		06:10 (B7)	04:38		05:24 (B15)	04:29		05:24 (B15)	
31	16:41	31	16:05 (B24)				19:49	58 19:02 (B22)	20:53	16	06:26 (B7)	21:49	22	05:46 (B15)	22:09	34	05:58 (B15)	
	08:16		09:09 (B11)				06:51	07:16 (B9)				04:37		05:23 (B15)				
Potential sun hours	16:43	35	16:08 (B24)				19:51	57 18:58 (B22)				21:51	24	05:47 (B15)				
Total, worst case	235		266		366		426		508		529							
Sun reduction	1158		463		552		1001		149		984							
Oper. time red.	0.13		0.20		0.41		0.50		0.57		0.56							
Wind dir. red.	0.98		0.98		0.98		0.98		0.98		0.98							
Total reduction	0.62		0.61		0.65		0.65		0.67		0.67							
Total, real	0.08		0.12		0.26		0.31		0.36		0.36							
	92		55		142		313		54		355							

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Liepsala - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (88)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December		
1	04:30		05:24 (B15)	05:16			06:17		07:06 (B23)	07:17			07:22		08:43 (B11)	08:24		09:18 (B12)
	22:09	33	05:57 (B15)	21:28			20:14	56	08:20 (B18)	18:53			16:36	33	15:46 (B24)	15:45	42	14:55 (B25)
2	04:31		05:25 (B15)	05:17			06:19		07:05 (B23)	07:19			07:25		08:42 (B11)	08:26		09:18 (B12)
	22:08	33	05:58 (B15)	21:26			20:11	58	08:20 (B18)	18:51			16:34	38	15:47 (B24)	15:44	43	14:55 (B25)
3	04:32		05:25 (B15)	05:19			06:21		07:04 (B23)	07:21			07:27		08:41 (B11)	08:27		09:19 (B12)
	22:08	33	05:58 (B15)	21:24			20:09	62	08:21 (B18)	18:48			16:31	41	15:47 (B24)	15:43	42	14:56 (B25)
4	04:32		05:26 (B15)	05:21			06:23		07:02 (B23)	07:23			07:29		08:41 (B11)	08:29		09:19 (B12)
	22:07	32	05:58 (B15)	21:21			20:06	64	08:20 (B18)	18:45			16:29	44	15:48 (B24)	15:42	42	14:56 (B25)
5	04:33		05:26 (B15)	05:23			06:25		07:02 (B23)	07:25			07:31		08:40 (B11)	08:31		09:20 (B12)
	22:06	32	05:58 (B15)	21:19			20:03	66	08:21 (B18)	18:43			16:27	45	15:48 (B24)	15:41	42	14:57 (B25)
6	04:35		05:27 (B15)	05:25			06:27		07:02 (B23)	07:27			07:33		08:40 (B11)	08:32		09:21 (B12)
	22:06	31	05:58 (B15)	21:17			20:01	66	08:21 (B18)	18:40			16:25	47	15:49 (B24)	15:41	42	14:58 (B25)
7	04:36		05:27 (B15)	05:27			06:29		07:02 (B23)	07:29			07:35		08:40 (B11)	08:34		09:21 (B12)
	22:05	30	05:57 (B15)	21:15			19:58	66	08:21 (B18)	18:38			16:23	46	15:48 (B24)	15:40	41	14:57 (B25)
8	04:37		05:28 (B15)	05:29			06:31		07:02 (B9)	07:31			07:38		08:39 (B11)	08:35		09:22 (B12)
	22:04	29	05:57 (B15)	21:13			19:55	65	08:21 (B18)	18:35			16:21	44	15:45 (B24)	15:40	40	14:58 (B25)
9	04:38		05:28 (B15)	05:31		06:24 (B7)	06:33		07:02 (B9)	07:33			07:40		08:40 (B11)	08:36		09:22 (B12)
	22:03	29	05:57 (B15)	21:11	7	06:31 (B7)	19:53	64	08:21 (B18)	18:32			16:19	40	15:43 (B24)	15:39	38	14:56 (B25)
10	04:39		05:29 (B15)	05:33		06:21 (B7)	06:35		07:04 (B9)	07:36			07:42		08:39 (B11)	08:38		09:23 (B12)
	22:02	27	05:56 (B15)	21:08	11	06:32 (B7)	19:50	61	08:20 (B18)	18:30			16:17	39	15:41 (B24)	15:39	37	14:56 (B25)
11	04:41		05:30 (B15)	05:35		06:20 (B7)	06:37		07:06 (B9)	07:38			07:44		08:40 (B11)	08:39		09:23 (B12)
	22:01	26	05:56 (B15)	21:06	13	06:33 (B7)	19:47	58	08:20 (B18)	18:27			16:15	35	15:39 (B24)	15:38	36	14:56 (B25)
12	04:42		05:30 (B15)	05:37		06:19 (B7)	06:39		07:08 (B9)	07:40			07:46		08:40 (B11)	08:40		09:24 (B12)
	22:00	25	05:55 (B15)	21:04	15	06:34 (B7)	19:45	54	18:49 (B22)	18:24			16:13	31	15:37 (B24)	15:38	34	14:55 (B25)
13	04:43		05:32 (B15)	05:39		06:18 (B7)	06:41		07:10 (B9)	07:42			07:48		08:41 (B11)	08:41		09:25 (B12)
	21:59	23	05:55 (B15)	21:01	17	06:35 (B7)	19:42	60	18:53 (B22)	18:22			16:11	30	09:11 (B11)	15:38	33	14:55 (B25)
14	04:45		05:33 (B15)	05:41		06:18 (B7)	06:43		07:12 (B9)	07:44			07:51		08:42 (B11)	08:42		09:25 (B12)
	21:58	21	05:54 (B15)	20:59	17	06:35 (B7)	19:39	56	18:54 (B22)	18:19			16:09	28	09:10 (B11)	15:38	32	14:55 (B25)
15	04:46		05:34 (B15)	05:43		06:17 (B7)	06:45		07:37 (B18)	07:46			07:53		08:42 (B11)	08:43		09:26 (B12)
	21:56	18	05:52 (B15)	20:57	18	06:35 (B7)	19:36	56	18:55 (B22)	18:17			16:07	27	09:09 (B11)	15:38	31	14:55 (B25)
16	04:48		05:36 (B15)	05:45		06:17 (B7)	06:47		07:37 (B18)	07:48			07:55		08:43 (B11)	08:44		09:27 (B12)
	21:55	16	05:52 (B15)	20:54	18	06:35 (B7)	19:34	57	18:56 (B22)	18:14			16:06	27	09:10 (B11)	15:38	28	14:54 (B25)
17	04:49		05:37 (B15)	05:47		06:18 (B7)	06:49		07:38 (B18)	07:50			07:57		08:44 (B11)	08:45		09:27 (B12)
	21:54	13	05:50 (B15)	20:52	16	06:34 (B7)	19:31	55	18:56 (B22)	18:12			16:04	25	09:09 (B11)	15:38	29	14:55 (B25)
18	04:51		05:41 (B15)	05:49		06:20 (B7)	06:51		07:38 (B18)	07:52			07:59		08:44 (B11)	08:46		09:28 (B12)
	21:52	6	05:47 (B15)	20:49	14	06:34 (B7)	19:28	54	18:55 (B22)	18:09			16:02	29	09:28 (B12)	15:38	28	14:55 (B25)
19	04:52			05:51		06:22 (B7)	06:53		07:39 (B18)	07:54			08:01		08:46 (B11)	08:47		09:28 (B12)
	21:51			20:47	11	06:33 (B7)	19:26	50	18:54 (B22)	18:07			16:01	33	09:32 (B12)	15:38	27	14:54 (B25)
20	04:54			05:53		06:24 (B7)	06:55		07:40 (B18)	07:56			08:03		08:47 (B11)	08:48		09:29 (B12)
	21:49			20:44	8	06:32 (B7)	19:23	45	18:52 (B22)	18:04			15:59	40	14:45 (B25)	15:38	27	14:55 (B25)
21	04:56			05:55		06:26 (B7)	06:57		07:42 (B18)	07:59			08:05		08:49 (B11)	08:48		09:29 (B12)
	21:48			20:42	4	06:30 (B7)	19:20	39	18:50 (B22)	18:02			15:57	42	14:47 (B25)	15:39	27	14:55 (B25)
22	04:57			05:57			06:59		07:45 (B18)	08:01			08:07		08:50 (B11)	08:49		09:30 (B12)
	21:46			20:39			19:18	28	18:47 (B22)	17:59			15:56	45	14:49 (B25)	15:39	26	14:56 (B25)
23	04:59			05:59			07:01		07:50 (B18)	08:03			08:09		08:54 (B11)	08:49		09:30 (B12)
	21:44			20:37			19:15	14	18:44 (B22)	17:57			15:55	42	14:51 (B25)	15:40	27	14:56 (B25)
24	05:01			06:01			07:03		18:39 (B22)	08:05			08:11		09:17 (B12)	08:50		09:31 (B12)
	21:43			20:34			19:12	3	18:42 (B22)	17:54			15:53	36	14:51 (B25)	15:40	27	14:57 (B25)
25	05:03			06:03			07:05			07:07			08:13		09:17 (B12)	08:50		09:31 (B12)
	21:41			20:32			19:10			16:52			15:52	38	14:52 (B25)	15:41	28	14:58 (B25)
26	05:04			06:05		07:55 (B18)	07:07			07:09			08:15		09:17 (B12)	08:50		09:31 (B12)
	21:39			20:29	15	08:10 (B18)	19:07			16:50			15:51	40	14:53 (B25)	15:42	28	14:58 (B25)
27	05:06			06:07		07:51 (B18)	07:09			07:12			08:17		09:17 (B12)	08:51		09:31 (B12)
	21:37			20:27	22	08:13 (B18)	19:04			16:47			15:49	41	14:53 (B25)	15:43	29	14:59 (B25)
28	05:08			06:09		07:49 (B18)	07:11			07:14			08:19		09:17 (B12)	08:51		09:32 (B12)
	21:35			20:24	26	08:15 (B18)	19:01			16:45			15:48	42	14:54 (B25)	15:44	30	15:00 (B25)
29	05:10			06:11		07:13 (B23)	07:13			07:16			08:20		09:18 (B12)	08:51		09:32 (B12)
	21:34			20:22	35	08:16 (B18)	18:59			16:43	12	09:01 (B11)	15:47	43	14:55 (B25)	15:44	30	15:01 (B25)
30	05:12			06:13		07:09 (B23)	07:15			07:18			08:22		09:18 (B12)	08:51		09:33 (B12)
	21:32			20:19	45	08:18 (B18)	18:56			16:40	17	09:03 (B11)	15:46	43	14:56 (B25)	15:45	32	15:03 (B25)
31	05:14			06:15		07:08 (B23)				07:20			08:44 (B11)			08:51		09:32 (B12)
	21:30			20:16	51	08:19 (B18)				16:38	24	15:42 (B24)				15:47	33	15:03 (B25)
Potential sun hours	529			469			385			324			247			216		
Total, worst case		457			363		1257			53			1134				1031	
Sun reduction		0.49			0.50		0.43			0.26			0.08				0.07	
Oper. time red.		0.98			0.98		0.98			0.98			0.98				0.98	
Wind dir. red.		0.67			0.65		0.65			0.60			0.61				0.63	
Total reduction		0.32			0.31		0.27			0.15			0.05				0.04	
Total, real		145			113		335			8			55				44	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

## SHADOW - Calendar

Shadow receptor: Liciš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (84)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	08:57 (B22) 09:23 (B22)	07:11 17:48	06:49 19:53	05:33 20:55
2	08:51 15:49	08:13 16:47	08:57 (B22) 09:23 (B22)	07:08 17:50	06:46 19:55	05:30 20:58
3	08:50 15:51	08:11 16:50	08:58 (B22) 09:24 (B22)	07:06 17:52	06:43 19:57	05:28 21:00
4	08:50 15:52	08:09 16:52	08:58 (B22) 09:24 (B22)	07:03 17:54	06:41 19:59	05:26 21:02
5	08:49 15:53	08:07 16:54	08:59 (B22) 09:24 (B22)	07:01 17:56	06:38 20:01	05:23 21:04
6	08:49 15:55	08:05 16:56	08:58 (B22) 09:23 (B22)	06:58 17:58	06:35 20:03	05:21 21:06
7	08:48 15:56	08:03 16:59	08:59 (B22) 09:23 (B22)	06:55 18:01	06:33 20:06	05:19 21:08
8	08:48 15:58	08:01 17:01	09:00 (B22) 09:23 (B22)	06:53 18:03	06:30 20:08	05:17 21:10
9	08:47 15:59	07:58 17:03	09:00 (B22) 09:21 (B22)	06:50 18:05	06:28 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	09:02 (B22) 09:21 (B22)	06:47 18:07	06:25 20:12	05:13 21:14
11	08:45 16:03	07:54 17:08	09:04 (B22) 09:20 (B22)	06:45 18:09	06:22 20:14	05:11 21:16
12	08:44 16:05	07:52 17:10	09:05 (B22) 09:17 (B22)	06:42 18:11	06:20 20:16	05:08 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:06 21:20	04:26 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:04 21:22	04:26 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10
23	08:30 16:26	09:04 (B22) 09:12 (B22)	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38
24	08:29 16:28	09:03 (B22) 09:16 (B22)	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40
25	08:27 16:30	09:01 (B22) 09:17 (B22)	07:21 17:39	06:08 18:38	05:47 20:43	04:45 21:42
26	08:26 16:32	09:00 (B22) 09:19 (B22)	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43
27	08:24 16:34	08:59 (B22) 09:20 (B22)	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45
28	08:22 16:36	08:59 (B22) 09:21 (B22)	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:47
29	08:20 16:39	08:58 (B22) 09:22 (B22)	06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:19 16:41	08:58 (B22) 09:23 (B22)	06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09
31	08:17 16:43	08:58 (B22) 09:23 (B22)	06:51 19:51	05:32 20:54	04:37 21:51	04:29 22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case	173	269			105	
Sun reduction	0.13	0.20			0.50	
Oper. time red.	0.98	0.98			0.98	
Wind dir. red.	0.59	0.59			0.65	
Total reduction	0.07	0.11			0.31	
Total, real	13	30		33		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Līči šī - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (84)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:31 (B22) 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:30 (B22) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:30 (B22) 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 (B22) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:29 (B22) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:28 (B22) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:28 (B22) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:28 (B22) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:28 (B22) 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:29 (B22) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:29 (B22) 15:38
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:29 (B22) 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:30 (B22) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:31 (B22) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:32 (B22) 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:33 (B22) 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:34 (B22) 15:38
18	04:51 21:53	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:37 (B22) 15:38
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:39 (B22) 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:47 (B22) 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 16:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:41	08:23 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:19 16:38	08:25 15:45	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		108		35	415	
Sun reduction		0.50		0.26	0.08	
Oper. time red.		0.98		0.98	0.98	
Wind dir. red.		0.65		0.59	0.59	
Total reduction		0.31		0.15	0.05	
Total, real		33		5	19	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Licu Dzirnavas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (54)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Maurini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (37)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Mazezeri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (151)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:05	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:05 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:49	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Medni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (190)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:51	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:08	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:03	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:41 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:53	05:49 20:50	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:11	04:55 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:10	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:17		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Meistari - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (85)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April	May	June	July	August		September	October	November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48		06:49 19:53	07:14 (B14) 07:20 (B14)	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:03 (B14) 07:17 (B14)	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50		06:46 19:55	07:11 (B14) 07:21 (B14)	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:01 (B14) 07:18 (B14)	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52		06:44 19:57	07:09 (B14) 07:22 (B14)	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:00 (B14) 07:18 (B14)	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	07:06 (B14) 07:22 (B14)	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	06:59 (B14) 07:19 (B14)	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56		06:38 20:01	07:03 (B14) 07:22 (B14)	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	06:59 (B14) 07:19 (B14)	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58		06:36 20:03	07:02 (B14) 07:22 (B14)	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	06:58 (B14) 07:19 (B14)	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01		06:33 20:06	07:02 (B14) 07:22 (B14)	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	06:59 (B14) 07:18 (B14)	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03		06:30 20:08	07:02 (B14) 07:22 (B14)	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:00 (B14) 07:16 (B14)	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05		06:28 20:10	07:02 (B14) 07:20 (B14)	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:02 (B14) 07:15 (B14)	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07		06:25 20:12	07:02 (B14) 07:19 (B14)	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:04 (B14) 07:14 (B14)	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09		06:22 20:14	07:04 (B14) 07:18 (B14)	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:06 (B14) 07:12 (B14)	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11		06:20 20:16	07:05 (B14) 07:15 (B14)	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:08 (B14) 07:10 (B14)	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13		06:17 20:18	07:12 (B14) 07:45 (B14)	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 (B14) 07:44 (B14)	07:49 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16		06:15 20:20	07:47 (B14) 07:15 (B14)	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 (B14) 07:46 (B14)	07:51 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18		06:12 20:22	07:45 (B14) 07:17 (B14)	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 (B14) 07:48 (B14)	07:53 18:15	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20		06:10 20:24	07:43 (B14) 07:19 (B14)	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 (B14) 07:50 (B14)	07:55 18:12	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22		06:07 20:26	07:40 (B14) 07:21 (B14)	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 (B14) 07:52 (B14)	07:57 18:10	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24		06:04 20:28	07:38 (B14) 07:23 (B14)	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:49 19:29	07:50 (B14) 07:55 (B14)	07:59 18:08	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26		06:02 20:31	07:36 (B14) 07:26 (B14)	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 (B14) 07:57 (B14)	08:01 18:05	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28		05:59 20:33	07:33 (B14) 07:28 (B14)	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 (B14) 07:59 (B14)	08:03 18:05	08:03 16:05	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30		05:57 20:35	07:31 (B14) 07:30 (B14)	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 (B14) 08:01 (B14)	08:05 18:07	08:05 16:05	08:48 15:49
22	08:32 16:24	07:28 17:32	06:16 18:32		05:54 20:37	07:28 (B14) 07:32 (B14)	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:02 (B14) 08:03 (B14)	08:07 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34		05:52 20:39	07:26 (B14) 07:35 (B14)	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 (B14) 08:05 (B14)	08:09 18:05	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	07:23 (B14) 07:37 (B14)	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 (B14) 08:07 (B14)	08:11 18:03	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	07:21 (B14) 07:39 (B14)	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 (B14) 08:09 (B14)	08:13 18:05	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41		05:45 20:45	07:18 (B14) 07:41 (B14)	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 (B14) 08:12 (B14)	08:15 18:07	08:15 16:50	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	07:16 (B14) 07:43 (B14)	04:42 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	08:12 (B14) 08:14 (B14)	08:17 18:05	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45		05:40 20:49	07:13 (B14) 07:45 (B14)	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 (B14) 08:16 (B14)	08:19 18:05	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	06:57 18:47		05:37 20:51	07:11 (B14) 07:47 (B14)	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 (B14) 08:18 (B14)	08:21 18:05	08:21 15:47	08:51 15:45
30	08:19 16:41	07:10 17:49	06:54 18:49		05:35 20:53	07:10 (B14) 07:49 (B14)	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 (B14) 08:20 (B14)	08:22 18:05	08:22 15:46	08:51 15:46
31	08:17 16:43	07:08 17:51	06:52 18:51	07:17 (B14) 07:18 (B14)	07:17 (B14) 07:18 (B14)	04:37 21:51	04:37 21:51	05:14 21:30	06:15 20:17	07:05 (B14) 07:15 (B14)	07:15 (B14) 07:15 (B14)	08:19 (B14) 08:21 (B14)	08:24 18:05	08:24 15:47	08:51 15:47
Potential sun hours	235	266	366		426		508	528	529	469	385		324	247	216
Total, worst case															
Sun reduction			1			183				10		176			
Oper. time red.			0.41			0.50				0.50		0.43			
Wind dir. red.			0.98			0.98				0.98		0.98			
Total reduction			0.66			0.66				0.66		0.66			
Total reduction			0.27			0.32				0.32		0.28			
Total, real			0			59				3		48			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež a Muiž a - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (134)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		13:26 (B22)	08:15		13:40 (B22)	07:11		06:49				05:32				04:36	
	15:48	57	14:30 (B14)	16:45	34	14:14 (B22)	17:47		19:53				20:55				21:53	
2	08:50		13:27 (B22)	08:13		13:42 (B22)	07:08		06:46				05:30				04:35	
	15:49	57	14:31 (B14)	16:47	31	14:13 (B22)	17:50		19:55				20:57				21:54	
3	08:50		13:27 (B22)	08:11		13:44 (B22)	07:06		06:43				05:28				04:34	
	15:51	56	14:30 (B14)	16:50	28	14:12 (B22)	17:52		19:57				20:59				21:55	
4	08:50		13:27 (B22)	08:09		13:46 (B22)	07:03		06:41				05:26				04:33	
	15:52	55	14:30 (B14)	16:52	25	14:11 (B22)	17:54		19:59				21:02				21:57	
5	08:49		13:28 (B22)	08:07		13:49 (B22)	07:00		06:38				05:23				04:32	
	15:53	54	14:31 (B14)	16:54	20	14:09 (B22)	17:56		20:01				21:04				21:58	
6	08:49		13:28 (B22)	08:05		13:51 (B22)	06:58		06:35				05:21		05:50 (B2)		04:31	
	15:55	53	14:30 (B14)	16:56	14	14:05 (B22)	17:58		20:03				21:06	2	05:52 (B2)		21:59	
7	08:48		13:28 (B22)	08:03			06:55		06:33				05:19		05:48 (B2)		04:30	
	15:56	51	14:29 (B14)	16:59			18:00		20:05				21:08	6	05:54 (B2)		22:00	
8	08:47		13:28 (B22)	08:00			06:53		06:30				05:17		05:46 (B2)		04:29	
	15:58	49	14:28 (B14)	17:01			18:03		20:07				21:10	8	05:54 (B2)		22:01	
9	08:47		13:28 (B22)	07:58			06:50		06:27				05:15		05:44 (B2)		04:28	
	15:59	44	14:12 (B22)	17:03			18:05		20:10				21:12	11	05:55 (B2)		22:02	
10	08:46		13:29 (B22)	07:56			06:47		06:25		06:50 (B4)		05:13		05:42 (B2)		04:28	
	16:01	44	14:13 (B22)	17:05			18:07		20:12	3	06:53 (B4)		21:14	13	05:55 (B2)		22:03	
11	08:45		13:29 (B22)	07:54			06:45		06:22		06:48 (B4)		05:10		05:40 (B2)		04:27	
	16:03	45	14:14 (B22)	17:08			18:09		20:14	8	06:56 (B4)		21:16	15	05:55 (B2)		22:04	
12	08:44		13:29 (B22)	07:52			06:42		06:20		06:45 (B4)		05:08		05:38 (B2)		04:27	
	16:04	45	14:14 (B22)	17:10			18:11		20:16	12	06:57 (B4)		21:18	17	05:55 (B2)		22:05	
13	08:43		13:29 (B22)	07:49			06:39		06:17		06:43 (B4)		05:06		05:38 (B2)		04:26	
	16:06	45	14:14 (B22)	17:12			18:13		20:18	16	06:59 (B4)		21:20	17	05:55 (B2)		22:06	
14	08:42		13:30 (B22)	07:47			06:37		06:14		06:40 (B4)		05:04		05:39 (B2)		04:26	
	16:08	45	14:15 (B22)	17:14			18:15		20:20	19	06:59 (B4)		21:22	16	05:55 (B2)		22:07	
15	08:41		13:29 (B22)	07:45			06:34		06:12		06:39 (B4)		05:02		05:39 (B2)		04:26	
	16:10	46	14:15 (B22)	17:17			18:17		20:22	20	06:59 (B4)		21:24	16	05:55 (B2)		22:07	
16	08:40		13:30 (B22)	07:43			06:31		06:09		06:38 (B4)		05:01		05:39 (B2)		04:25	
	16:12	46	14:16 (B22)	17:19			18:20		20:24	21	06:59 (B4)		21:25	15	05:54 (B2)		22:08	
17	08:39		13:30 (B22)	07:40			06:29		06:07		06:38 (B4)		04:59		05:40 (B2)		04:25	
	16:14	46	14:16 (B22)	17:21			18:22		20:26	21	06:59 (B4)		21:27	14	05:54 (B2)		22:08	
18	08:37		13:31 (B22)	07:38			06:26		06:04		06:38 (B4)		04:57		05:40 (B2)		04:25	
	16:16	46	14:17 (B22)	17:23			18:24		20:28	20	06:58 (B4)		21:29	13	05:53 (B2)		22:09	
19	08:36		13:31 (B22)	07:35			06:23		06:02		06:38 (B4)		04:55		05:41 (B2)		04:25	
	16:18	46	14:17 (B22)	17:25			18:26		20:30	20	06:58 (B4)		21:31	11	05:52 (B2)		22:09	
20	08:35		13:32 (B22)	07:33			06:21		05:59		06:38 (B4)		04:53		05:43 (B2)		04:25	
	16:20	46	14:18 (B22)	17:28			18:28		20:32	19	06:57 (B4)		21:33	8	05:51 (B2)		22:10	
21	08:33		13:32 (B22)	07:31			06:18		05:57		06:39 (B4)		04:52		05:45 (B2)		04:25	
	16:22	45	14:17 (B22)	17:30			18:30		20:35	17	06:56 (B4)		21:35	2	05:47 (B2)		22:10	
22	08:32		13:32 (B22)	07:28			06:15		05:54		06:40 (B4)		04:50				04:25	
	16:24	45	14:17 (B22)	17:32			18:32		20:37	15	06:55 (B4)		21:36				22:10	
23	08:30		13:33 (B22)	07:26			06:13		05:52		06:41 (B4)		04:48				04:26	
	16:26	44	14:17 (B22)	17:34			18:34		20:39	12	06:53 (B4)		21:38				22:10	
24	08:29		13:33 (B22)	07:23			06:10		05:49		06:44 (B4)		04:47				04:26	
	16:28	44	14:17 (B22)	17:37			18:36		20:41	6	06:50 (B4)		21:40				22:10	
25	08:27		13:34 (B22)	07:21			06:07		05:47				04:45				04:26	
	16:30	44	14:18 (B22)	17:39			18:38		20:43				21:42				22:10	
26	08:25		13:35 (B22)	07:18			06:05		05:44				04:44				04:27	
	16:32	43	14:18 (B22)	17:41			18:40		20:45				21:43				22:10	
27	08:24		13:36 (B22)	07:16			06:02		05:42				04:42				04:27	
	16:34	41	14:17 (B22)	17:43			18:43		20:47				21:45				22:10	
28	08:22		13:37 (B22)	07:13			05:59		05:40				04:41				04:28	
	16:36	40	14:17 (B22)	17:45			18:45		20:49				21:47				22:10	
29	08:20		13:37 (B22)				06:57		05:37				04:39				04:28	
	16:39	40	14:17 (B22)				19:47		20:51				21:48				22:10	
30	08:18		13:39 (B22)				06:54		05:35				04:38				04:29	
	16:41	37	14:16 (B22)				19:49		20:53				21:50				22:09	
31	08:17		13:39 (B22)				06:51						04:37					
	16:43	36	14:15 (B22)				19:51						21:51					
Potential sun hours	235			266			366		426				508				529	
Total, worst case	1435			152					229				184					
Sun reduction	0.13			0.20					0.50				0.57					
Oper. time red.	0.98			0.98					0.98				0.98					
Wind dir. red.	0.65			0.65					0.66				0.67					
Total reduction	0.08			0.13					0.32				0.37					
Total, real	121			19					73				68					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež a Muiž a - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (134)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October	November			December		
1	04:30			05:16	05:49 (B2)	06:17	06:47 (B4)	07:17	07:23				08:24	13:11 (B22)		
	22:09			21:28	16 06:05 (B2)	20:14	8 06:55 (B4)	18:54	16:36				15:45	45 13:56 (B22)		
2	04:31			05:17	05:51 (B2)	06:19	06:49 (B4)	07:19	07:25				08:26	13:12 (B22)		
	22:08			21:26	14 06:05 (B2)	20:11	3 06:52 (B4)	18:51	16:34				15:44	44 13:56 (B22)		
3	04:32			05:19	05:53 (B2)	06:21		07:21	07:27				08:28	13:11 (B22)		
	22:08			21:24	12 06:05 (B2)	20:09		18:48	16:31				15:43	45 13:56 (B22)		
4	04:33			05:21	05:55 (B2)	06:23		07:23	07:29				08:29	13:12 (B22)		
	22:07			21:22	10 06:05 (B2)	20:06		18:46	16:29				15:42	48 14:12 (B14)		
5	04:34			05:23	05:56 (B2)	06:25		07:25	07:31	13:20 (B22)			08:31	13:13 (B22)		
	22:07			21:19	7 06:03 (B2)	20:03		18:43	16:27	15 13:35 (B22)			15:42	51 14:14 (B14)		
6	04:35			05:25	05:58 (B2)	06:27		07:27	07:33	13:18 (B22)			08:32	13:14 (B22)		
	22:06			21:17	5 06:03 (B2)	20:01		18:40	16:25	21 13:39 (B22)			15:41	53 14:16 (B14)		
7	04:36			05:27	06:00 (B2)	06:29		07:29	07:36	13:15 (B22)			08:34	13:14 (B22)		
	22:05			21:15	1 06:01 (B2)	19:58		18:38	16:23	26 13:41 (B22)			15:40	55 14:17 (B14)		
8	04:37			05:29		06:31		07:32	07:38	13:14 (B22)			08:35	13:15 (B22)		
	22:04			21:13		19:55		18:35	16:21	29 13:43 (B22)			15:40	55 14:18 (B14)		
9	04:38			05:31		06:33		07:34	07:40	13:12 (B22)			08:37	13:15 (B22)		
	22:03			21:11		19:53		18:32	16:19	32 13:44 (B22)			15:39	57 14:19 (B14)		
10	04:39			05:33		06:35		07:36	07:42	13:11 (B22)			08:38	13:16 (B22)		
	22:02			21:08		19:50		18:30	16:17	34 13:45 (B22)			15:39	57 14:20 (B14)		
11	04:41			05:35		06:37		07:38	07:44	13:11 (B22)			08:39	13:16 (B22)		
	22:01			21:06		19:47		18:27	16:15	36 13:47 (B22)			15:38	57 14:20 (B14)		
12	04:42			05:37		06:39		07:40	07:46	13:09 (B22)			08:40	13:18 (B22)		
	22:00			21:04		19:45		18:25	16:13	38 13:47 (B22)			15:38	58 14:22 (B14)		
13	04:43			05:39		06:41		07:42	07:49	13:09 (B22)			08:42	13:18 (B22)		
	21:59			21:01		19:42		18:22	16:11	40 13:49 (B22)			15:38	58 14:22 (B14)		
14	04:45			05:41		06:43		07:44	07:51	13:08 (B22)			08:43	13:19 (B22)		
	21:58			20:59		19:39		18:19	16:09	41 13:49 (B22)			15:38	57 14:23 (B14)		
15	04:46			05:43		06:45		07:46	07:53	13:08 (B22)			08:44	13:19 (B22)		
	21:57			20:57		19:37		18:17	16:08	41 13:49 (B22)			15:38	57 14:23 (B14)		
16	04:48			05:45		06:47		07:48	07:55	13:08 (B22)			08:45	13:20 (B22)		
	21:55			20:54		19:34		18:14	16:06	43 13:51 (B22)			15:38	57 14:24 (B14)		
17	04:49			05:47		06:49		07:50	07:57	13:07 (B22)			08:45	13:20 (B22)		
	21:54			20:52		19:31		18:12	16:04	44 13:51 (B22)			15:38	59 14:25 (B14)		
18	04:51			05:49		06:51		07:52	07:59	13:07 (B22)			08:46	13:21 (B22)		
	21:52			20:49		19:29		18:09	16:02	44 13:51 (B22)			15:38	57 14:25 (B14)		
19	04:52			05:51	06:49 (B4)	06:53		07:54	08:01	13:08 (B22)			08:47	13:21 (B22)		
	21:51			20:47	7 06:56 (B4)	19:26		18:07	16:01	44 13:52 (B22)			15:38	57 14:25 (B14)		
20	04:54			05:53	06:46 (B4)	06:55		07:57	08:03	13:07 (B22)			08:48	13:22 (B22)		
	21:49			20:45	13 06:59 (B4)	19:23		18:04	15:59	45 13:52 (B22)			15:39	58 14:26 (B14)		
21	04:56			05:55	06:44 (B4)	06:57		07:59	08:05	13:07 (B22)			08:48	13:23 (B22)		
	21:48			20:42	16 07:00 (B4)	19:20		18:02	15:58	45 13:52 (B22)			15:39	58 14:27 (B14)		
22	04:57			05:57	06:43 (B4)	06:59		08:01	08:07	13:08 (B22)			08:49	13:23 (B22)		
	21:46			20:40	18 07:01 (B4)	19:18		17:59	15:56	46 13:54 (B22)			15:39	58 14:27 (B14)		
23	04:59	05:54 (B2)	05:59	06:42 (B4)	07:01			08:03	08:09	13:08 (B22)			08:49	13:24 (B22)		
	21:45	5 05:59 (B2)	20:37	20 07:02 (B4)	19:15			17:57	15:55	46 13:54 (B22)			15:40	58 14:28 (B14)		
24	05:01	05:52 (B2)	06:01	06:42 (B4)	07:03			08:05	08:11	13:08 (B22)			08:50	13:24 (B22)		
	21:43	10 06:02 (B2)	20:35	20 07:02 (B4)	19:12			17:55	15:53	46 13:54 (B22)			15:40	57 14:28 (B14)		
25	05:03	05:51 (B2)	06:03	06:41 (B4)	07:05			07:07	08:13	13:08 (B22)			08:50	13:24 (B22)		
	21:41	11 06:02 (B2)	20:32	21 07:02 (B4)	19:10			16:52	15:52	46 13:54 (B22)			15:41	57 14:28 (B14)		
26	05:04	05:50 (B2)	06:05	06:40 (B4)	07:07			07:09	08:15	13:08 (B22)			08:51	13:24 (B22)		
	21:39	14 06:04 (B2)	20:29	21 07:01 (B4)	19:07			16:50	15:51	46 13:54 (B22)			15:42	58 14:28 (B14)		
27	05:06	05:50 (B2)	06:07	06:40 (B4)	07:09			07:12	08:17	13:10 (B22)			08:51	13:25 (B22)		
	21:37	15 06:05 (B2)	20:27	21 07:01 (B4)	19:04			16:47	15:49	45 13:55 (B22)			15:43	57 14:29 (B14)		
28	05:08	05:49 (B2)	06:09	06:40 (B4)	07:11			07:14	08:19	13:10 (B22)			08:51	13:25 (B22)		
	21:36	16 06:05 (B2)	20:24	20 07:00 (B4)	19:02			16:45	15:48	45 13:55 (B22)			15:44	58 14:29 (B14)		
29	05:10	05:49 (B2)	06:11	06:41 (B4)	07:13			07:16	08:21	13:10 (B22)			08:51	13:25 (B22)		
	21:34	16 06:05 (B2)	20:22	19 07:00 (B4)	18:59			16:43	15:47	45 13:55 (B22)			15:45	58 14:30 (B14)		
30	05:12	05:49 (B2)	06:13	06:43 (B4)	07:15			07:18	08:22	13:11 (B22)			08:51	13:26 (B22)		
	21:32	17 06:06 (B2)	20:19	16 06:59 (B4)	18:56			16:40	15:46	45 13:56 (B22)			15:46	57 14:30 (B14)		
31	05:14	05:49 (B2)	06:15	06:45 (B4)				07:20					08:51	13:27 (B22)		
	21:30	17 06:06 (B2)	20:17	12 06:57 (B4)				16:38					15:47	57 14:31 (B14)		
Potential sun hours	529		469			385		324	247				216			
Total, worst case	121		289			11			1028				1718			
Sun reduction	0.49		0.50			0.43			0.08				0.07			
Oper. time red.	0.98		0.98			0.98			0.98				0.98			
Wind dir. red.	0.67		0.66			0.66			0.65				0.65			
Total reduction	0.32		0.32			0.27			0.05				0.04			
Total, real	39		92			3			54				77			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež a Rasas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (102)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:00 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež muiža - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (122)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

January			February			March			April			May			June		
1	08:51		13:51 (B22)	08:15		13:56 (B22)	07:11		06:49		07:29 (B15)	05:32				04:36	
	15:48	51	14:42 (B14)	16:45	43	14:39 (B22)	17:47		19:53	4	07:33 (B15)	20:55				21:52	
2	08:50		13:51 (B22)	08:13		13:57 (B22)	07:08		06:46			05:30				04:35	
	15:49	51	14:42 (B14)	16:47	42	14:39 (B22)	17:50		19:55			20:57				21:54	
3	08:50		13:51 (B22)	08:11		13:58 (B22)	07:06		06:43			05:28				04:34	
	15:51	51	14:42 (B14)	16:50	40	14:38 (B22)	17:52		19:57			20:59				21:55	
4	08:50		13:51 (B22)	08:09		13:59 (B22)	07:03		06:41			05:26				04:33	
	15:52	51	14:42 (B14)	16:52	39	14:38 (B22)	17:54		19:59			21:02				21:57	
5	08:49		13:52 (B22)	08:07		14:00 (B22)	07:00		06:38			05:23				04:32	
	15:53	51	14:43 (B14)	16:54	37	14:37 (B22)	17:56		20:01			21:04				21:58	
6	08:49		13:51 (B22)	08:05		14:01 (B22)	06:58		06:35			05:21				04:31	
	15:55	52	14:43 (B14)	16:56	35	14:36 (B22)	17:58		20:03			21:06				21:59	
7	08:48		13:51 (B22)	08:03		14:02 (B22)	06:55		06:33			05:19				04:30	
	15:56	52	14:43 (B14)	16:59	33	14:35 (B22)	18:00		20:05			21:08				22:00	
8	08:47		13:51 (B22)	08:00		14:04 (B22)	06:53		06:30			05:17				04:29	
	15:58	52	14:43 (B14)	17:01	30	14:34 (B22)	18:03		20:07			21:10				22:01	
9	08:47		13:51 (B22)	07:58		14:06 (B22)	06:50		06:27			05:15			05:44 (B2)	04:28	
	15:59	52	14:43 (B14)	17:03	26	14:32 (B22)	18:05		20:10			21:12	1		05:45 (B2)	22:02	
10	08:46		13:51 (B22)	07:56		14:08 (B22)	06:47		06:25			05:13			05:42 (B2)	04:28	
	16:01	51	14:42 (B14)	17:05	22	14:30 (B22)	18:07		20:12			21:14	4		05:46 (B2)	22:03	
11	08:45		13:52 (B22)	07:54		14:12 (B22)	06:45		06:22			05:10			05:40 (B2)	04:27	
	16:03	50	14:42 (B14)	17:08	15	14:27 (B22)	18:09		20:14			21:16	7		05:47 (B2)	22:04	
12	08:44		13:51 (B22)	07:52			06:42		06:20			05:08			05:38 (B2)	04:27	
	16:04	49	14:40 (B14)	17:10			18:11		20:16			21:18	10		05:48 (B2)	22:05	
13	08:43		13:51 (B22)	07:49			06:39		06:17		06:43 (B4)	05:06			05:36 (B2)	04:26	
	16:06	46	14:39 (B14)	17:12			18:13		20:18	3	06:46 (B4)	21:20	12		05:48 (B2)	22:06	
14	08:42		13:51 (B22)	07:47			06:37		06:14		06:40 (B4)	05:04			05:35 (B2)	04:26	
	16:08	43	14:34 (B22)	17:14			18:15		20:20	9	06:49 (B4)	21:22	14		05:49 (B2)	22:07	
15	08:41		13:51 (B22)	07:45			06:34		06:12		06:38 (B4)	05:02			05:33 (B2)	04:26	
	16:10	43	14:34 (B22)	17:17			18:17		20:22	13	06:51 (B4)	21:24	16		05:49 (B2)	22:07	
16	08:40		13:51 (B22)	07:43			06:31		06:09		06:35 (B4)	05:01			05:31 (B2)	04:25	
	16:12	44	14:35 (B22)	17:19			18:20		20:24	16	06:51 (B4)	21:25	18		05:49 (B2)	22:08	
17	08:39		13:51 (B22)	07:40			06:29		06:07		06:33 (B4)	04:59			05:32 (B2)	04:25	
	16:14	44	14:35 (B22)	17:21			18:22		20:26	19	06:52 (B4)	21:27	17		05:49 (B2)	22:08	
18	08:37		13:52 (B22)	07:38			06:26		06:04		06:31 (B4)	04:57			05:32 (B2)	04:25	
	16:16	45	14:37 (B22)	17:23			18:24		20:28	21	06:52 (B4)	21:29	17		05:49 (B2)	22:09	
19	08:36		13:51 (B22)	07:35			06:23		06:02		06:31 (B4)	04:55			05:31 (B2)	04:25	
	16:18	46	14:37 (B22)	17:25			18:26		20:30	21	06:52 (B4)	21:31	17		05:48 (B2)	22:09	
20	08:35		13:52 (B22)	07:33			06:21		05:59		06:30 (B4)	04:53			05:32 (B2)	04:25	
	16:20	46	14:38 (B22)	17:28			18:28		20:32	22	06:52 (B4)	21:33	17		05:49 (B2)	22:10	
21	08:33		13:52 (B22)	07:31			06:18		05:57		06:30 (B4)	04:52			05:32 (B2)	04:25	
	16:22	46	14:38 (B22)	17:30			18:30		20:35	22	06:52 (B4)	21:35	16		05:48 (B2)	22:10	
22	08:32		13:52 (B22)	07:28			06:15		05:54		06:31 (B4)	04:50			05:33 (B2)	04:25	
	16:24	46	14:38 (B22)	17:32			18:32		20:37	21	06:52 (B4)	21:36	15		05:48 (B2)	22:10	
23	08:30		13:52 (B22)	07:26			06:13		05:52		06:30 (B4)	04:48			05:33 (B2)	04:26	
	16:26	46	14:38 (B22)	17:34			18:34		20:39	21	06:51 (B4)	21:38	13		05:46 (B2)	22:10	
24	08:29		13:52 (B22)	07:23			06:10		05:49		06:31 (B4)	04:47			05:35 (B2)	04:26	
	16:28	47	14:39 (B22)	17:37			18:36	4	06:39 (B15)	20:41	19	06:50 (B4)	21:40	11	05:46 (B2)	22:10	
25	08:27		13:53 (B22)	07:21			06:07		06:32 (B15)	05:47		06:32 (B4)	04:45		05:36 (B2)	04:26	
	16:30	47	14:40 (B22)	17:39			18:38	8	06:40 (B15)	20:43	17	06:49 (B4)	21:42	9	05:45 (B2)	22:10	
26	08:25		13:53 (B22)	07:18			06:05		06:30 (B15)	05:44		06:32 (B4)	04:44		05:38 (B2)	04:27	
	16:32	47	14:40 (B22)	17:41			18:40	11	06:41 (B15)	20:45	15	06:47 (B4)	21:43	6	05:44 (B2)	22:10	
27	08:24		13:54 (B22)	07:16			06:02		06:27 (B15)	05:42		06:34 (B4)	04:42			04:27	
	16:34	46	14:40 (B22)	17:43			18:43	13	06:40 (B15)	20:47	12	06:46 (B4)	21:45			22:10	
28	08:22		13:54 (B22)	07:13			05:59		06:24 (B15)	05:40		06:37 (B4)	04:41			04:28	
	16:36	46	14:40 (B22)	17:45			18:45	15	06:39 (B15)	20:49	6	06:43 (B4)	21:47			22:10	
29	08:20		13:55 (B22)				06:57		07:25 (B15)	05:37			04:39			04:28	
	16:39	45	14:40 (B22)				19:47	14	07:39 (B15)	20:51			21:48			22:10	
30	08:18		13:55 (B22)				06:54		07:25 (B15)	05:35			04:38			04:29	
	16:41	45	14:40 (B22)				19:49	13	07:38 (B15)	20:53			21:50			22:09	
31	08:17		13:55 (B22)				06:51		07:26 (B15)				04:37				
	16:43	44	14:39 (B22)				19:51	10	07:36 (B15)				21:51				
Potential sun hours	235			266			366		426			508				529	
Total, worst case	1475			362			88		261			220					
Sun reduction	0.13			0.20			0.41		0.50			0.57					
Oper. time red.	0.98			0.98			0.98		0.98			0.98					
Wind dir. red.	0.66			0.66			0.65		0.65			0.67					
Total reduction	0.09			0.13			0.26		0.32			0.37					
Total, real	127			47			23		83			82					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež muiža - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (122)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	05:49 (B2) 20:14	07:17 18:54	07:22 16:36	13:38 (B22) 15:45
2	04:31 22:08	05:17 21:26	05:51 (B2) 20:11	07:19 18:51	22 16:34	14:00 (B22) 15:45
3	04:32 22:08	05:19 21:24	05:53 (B2) 20:09	07:21 18:48	27 16:34	14:02 (B22) 15:44
4	04:33 22:07	05:21 21:22	05:56 (B2) 20:06	07:23 18:46	30 16:31	14:04 (B22) 15:43
5	04:34 22:07	05:23 21:19	06:23 20:03	07:25 18:43	33 16:29	14:08 (B22) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	36 16:27	14:06 (B22) 15:42
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	37 16:25	14:07 (B22) 15:41
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	40 16:23	14:08 (B22) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	41 16:21	14:09 (B22) 15:40
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	42 16:19	14:09 (B22) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	43 16:17	14:10 (B22) 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	44 16:15	14:11 (B22) 15:38
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	45 16:13	14:11 (B22) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	45 16:11	14:12 (B22) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	46 16:09	14:12 (B22) 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	46 16:08	14:12 (B22) 15:38
17	04:49 21:54	05:47 (B2) 20:52	06:49 19:31	07:50 18:12	47 16:06	14:13 (B22) 15:38
18	04:51 21:52	05:49 (B2) 20:49	06:51 19:29	07:52 18:09	47 16:04	14:13 (B22) 15:38
19	04:52 21:51	05:51 (B2) 20:47	06:53 19:26	07:54 18:07	47 16:02	14:13 (B22) 15:38
20	04:54 21:49	05:53 (B2) 20:45	06:55 19:23	07:57 18:04	48 16:01	14:13 (B22) 15:38
21	04:56 21:48	05:55 (B2) 20:42	06:57 19:20	07:59 18:02	46 15:59	14:13 (B22) 15:39
22	04:57 21:46	05:57 (B2) 20:40	06:59 19:18	08:01 17:59	46 15:58	14:13 (B22) 15:39
23	04:59 21:45	05:59 (B2) 20:37	07:01 19:15	08:03 17:57	46 15:56	14:14 (B22) 15:40
24	05:01 21:43	06:01 (B2) 20:35	07:03 19:12	08:05 17:55	46 15:55	14:14 (B22) 15:40
25	05:03 21:41	06:03 (B2) 20:32	07:05 19:10	08:07 17:52	45 15:53	14:14 (B22) 15:41
26	05:04 21:39	06:05 (B2) 20:29	07:07 19:07	08:09 17:50	45 15:52	14:14 (B22) 15:41
27	05:06 21:37	06:07 (B2) 20:27	07:09 19:04	08:11 17:47	44 15:51	14:13 (B22) 15:42
28	05:08 21:36	06:09 (B2) 20:24	07:11 19:02	08:13 17:45	44 15:49	14:13 (B22) 15:43
29	05:10 21:34	06:11 (B2) 20:22	07:13 18:59	08:15 17:43	43 15:48	14:14 (B22) 15:44
30	05:12 21:32	06:13 (B2) 20:19	07:15 18:56	08:17 17:41	42 15:46	14:14 (B22) 15:44
31	05:14 21:30	06:15 (B2) 20:17		08:19 17:38	42 15:44	14:14 (B22) 15:44
Potential sun hours	529	469	385	324	247	216
Total, worst case	202	278	94	18	1262	1556
Sun reduction	0.49	0.50	0.43	0.26	0.08	0.07
Oper. time red.	0.98	0.98	0.98	0.98	0.98	0.98
Wind dir. red.	0.67	0.65	0.65	0.66	0.66	0.66
Total reduction	0.32	0.32	0.27	0.17	0.05	0.05
Total, real	65	89	26	3	67	71

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež setas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (165)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	09:55 (B14)	08:15	07:11	06:49	05:33
	15:48	11 10:06 (B14)	16:45	17:48	19:53	20:56
2	08:51	09:57 (B14)	08:13	07:08	06:46	05:30
	15:49	9 10:06 (B14)	16:48	17:50	19:55	20:58
3	08:50	09:57 (B14)	08:11	07:06	06:43	05:28
	15:51	8 10:05 (B14)	16:50	17:52	19:57	21:00
4	08:50	09:58 (B14)	08:09	07:03	06:41	05:26
	15:52	6 10:04 (B14)	16:52	17:54	19:59	21:02
5	08:49	10:01 (B14)	08:07	07:01	06:38	05:23
	15:53	3 10:04 (B14)	16:54	17:56	20:01	21:04
6	08:49		08:05	06:58	06:36	05:21
	15:55		16:56	17:58	20:03	21:06
7	08:48		08:03	06:55	06:33	05:19
	15:56		16:59	18:01	20:06	21:08
8	08:48		08:01	06:53	06:30	05:17
	15:58		17:01	18:03	20:08	21:10
9	08:47		07:58	08:27 (B22)	06:50	06:28
	15:59		17:03	3 08:30 (B22)	18:05	20:10
10	08:46		07:56	08:25 (B22)	06:48	06:25
	16:01		17:05	7 08:32 (B22)	18:07	20:12
11	08:45		07:54	08:23 (B22)	06:45	06:22
	16:03		17:08	10 08:33 (B22)	18:09	20:14
12	08:44		07:52	08:20 (B22)	06:42	06:20
	16:05		17:10	13 08:33 (B22)	18:11	20:16
13	08:43		07:50	08:18 (B22)	06:40	06:17
	16:06		17:12	16 08:34 (B22)	18:13	20:18
14	08:42		07:47	08:16 (B22)	06:37	06:15
	16:08		17:14	18 08:34 (B22)	18:15	20:20
15	08:41		07:45	08:16 (B22)	06:34	06:12
	16:10		17:17	18 08:34 (B22)	18:18	20:22
16	08:40		07:43	08:16 (B22)	06:32	06:09
	16:12		17:19	17 08:33 (B22)	18:20	20:24
17	08:39		07:40	08:17 (B22)	06:29	06:07
	16:14		17:21	16 08:33 (B22)	18:22	20:26
18	08:38		07:38	08:18 (B22)	06:26	06:04
	16:16		17:23	15 08:33 (B22)	18:24	20:28
19	08:36		07:36	08:19 (B22)	06:24	06:02
	16:18		17:26	12 08:31 (B22)	18:26	20:31
20	08:35		07:33	08:21 (B22)	06:21	05:59
	16:20		17:28	7 08:28 (B22)	18:28	20:33
21	08:33		07:31		06:18	05:57
	16:22		17:30		18:30	20:35
22	08:32		07:28		06:16	05:54
	16:24		17:32		18:32	20:37
23	08:30		07:26		06:13	05:52
	16:26		17:34		18:34	20:39
24	08:29		07:23		06:10	05:49
	16:28		17:37		18:36	20:41
25	08:27		07:21		06:08	05:47
	16:30		17:39		18:39	20:43
26	08:26		07:18		06:05	05:44
	16:32		17:41		18:41	20:45
27	08:24		07:16		06:02	05:42
	16:34		17:43		18:43	20:47
28	08:22		07:13		06:00	05:40
	16:37		17:45		18:45	20:49
29	08:20				06:57	05:37
	16:39				19:47	20:51
30	08:19				06:54	05:35
	16:41				19:49	20:53
31	08:17				06:51	
	16:43				19:51	21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	37	152				
Sun reduction	0.13	0.20				
Oper. time red.	0.98	0.98				
Wind dir. red.	0.61	0.62				
Total reduction	0.08	0.12				
Total, real	3	18				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež setas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (165)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:23	07:55 (B22)   08:24
	22:09	21:28	20:14	18:54	16:36	6   08:01 (B22)   15:45
2	04:31	05:18	06:19	07:19	07:25	07:57 (B22)   08:26
	22:09	21:26	20:11	18:51	16:34	2   07:59 (B22)   15:44
3	04:32	05:20	06:21	07:21	07:27	08:28
	22:08	21:24	20:09	18:48	16:32	15:43
4	04:33	05:21	06:23	07:23	07:29	08:29
	22:07	21:22	20:06	18:46	16:29	15:42
5	04:34	05:23	06:25	07:25	07:31	08:31
	22:07	21:20	20:04	18:43	16:27	15:42
6	04:35	05:25	06:27	07:28	07:34	08:32
	22:06	21:17	20:01	18:40	16:25	15:41
7	04:36	05:27	06:29	07:30	07:36	08:34
	22:05	21:15	19:58	18:38	16:23	15:40
8	04:37	05:29	06:31	07:32	07:38	08:35
	22:04	21:13	19:56	18:35	16:21	15:40
9	04:38	05:31	06:33	07:34	07:40	08:37
	22:03	21:11	19:53	18:33	16:19	15:39
10	04:39	05:33	06:35	07:36	07:42	08:38
	22:02	21:09	19:50	18:30	16:17	15:39
11	04:41	05:35	06:37	07:38	07:44	08:39
	22:01	21:06	19:48	18:27	16:15	15:39
12	04:42	05:37	06:39	07:40	07:47	08:41
	22:00	21:04	19:45	18:25	16:13	15:38
13	04:43	05:39	06:41	07:42	07:49	08:42
	21:59	21:02	19:42	18:22	16:11	15:38
14	04:45	05:41	06:43	07:44	07:51	08:43
	21:58	20:59	19:39	18:20	16:09	15:38
15	04:46	05:43	06:45	07:46	07:53	08:44
	21:57	20:57	19:37	18:17	16:08	15:38
16	04:48	05:45	06:47	07:48	07:55	08:45
	21:55	20:54	19:34	18:14	16:06	15:38
17	04:49	05:47	06:49	07:50	07:57	08:46
	21:54	20:52	19:31	18:12	16:04	15:38
18	04:51	05:49	06:51	07:53	07:59	08:46
	21:53	20:50	19:29	18:09	16:02	15:38
19	04:53	05:51	06:53	07:55	08:01	08:47
	21:51	20:47	19:26	18:07	16:01	15:38
20	04:54	05:53	06:55	07:57	08:03	08:48
	21:50	20:45	19:23	18:04	15:59	15:39
21	04:56	05:55	06:57	07:59	08:05	08:49
	21:48	20:42	19:21	18:02	15:58	15:39
22	04:58	05:57	06:59	08:01	08:51 (B22)   08:07	08:49
	21:46	20:40	19:18	18:00	10   09:01 (B22)   15:56	15:39
23	04:59	05:59	07:01	08:03	08:49 (B22)   08:09	08:50
	21:45	20:37	19:15	17:57	13   09:02 (B22)   15:55	15:40
24	05:01	06:01	07:03	08:05	08:47 (B22)   08:11	08:50
	21:43	20:35	19:12	17:55	16   09:03 (B22)   15:53	15:41
25	05:03	06:03	07:05	07:07	07:46 (B22)   08:13	08:50
	21:41	20:32	19:10	16:52	17   08:03 (B22)   15:52	15:41
26	05:05	06:05	07:07	07:10	07:46 (B22)   08:15	08:51
	21:39	20:30	19:07	16:50	18   08:04 (B22)   15:51	15:42
27	05:06	06:07	07:09	07:12	07:46 (B22)   08:17	08:51
	21:38	20:27	19:04	16:48	18   08:04 (B22)   15:49	15:43
28	05:08	06:09	07:11	07:14	07:45 (B22)   08:19	08:51
	21:36	20:24	19:02	16:45	18   08:03 (B22)   15:48	15:44
29	05:10	06:11	07:13	07:16	07:48 (B22)   08:21	08:51
	21:34	20:22	18:59	16:43	16   08:04 (B22)   15:47	15:45
30	05:12	06:13	07:15	07:18	07:50 (B22)   08:23	08:51
	21:32	20:19	18:56	16:41	13   08:03 (B22)   15:46	15:46
31	05:14	06:15		07:20	07:53 (B22)	08:51
	21:30	20:17		16:38	10   08:03 (B22)	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case				149	8	302
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.62	0.62	0.61
Total reduction				0.16	0.05	0.04
Total, real				23	0	13

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež vidi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (71)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		12:21 (B25)	08:15		15:28 (B24)	07:11		07:37 (B12)	06:49		05:32		06:11 (B18)	04:36		05:16 (B15)	
2	15:48	46	13:07 (B25)	16:45	24	15:52 (B24)	17:47	4	07:41 (B12)	19:53		20:55	16	06:27 (B18)	21:52	15	05:31 (B15)	
	08:50		12:20 (B25)	08:13		15:27 (B24)	07:08		07:34 (B12)	06:46		05:30		06:12 (B18)	04:35		05:16 (B15)	
3	15:49	47	13:07 (B25)	16:47	27	15:54 (B24)	17:50	8	07:42 (B12)	19:55		20:57	14	06:26 (B18)	21:54	15	05:31 (B15)	
	08:50		12:21 (B25)	08:11		15:26 (B24)	07:06		07:32 (B12)	06:43		05:28		06:13 (B18)	04:34		05:17 (B15)	
4	15:51	47	13:08 (B25)	16:50	30	15:56 (B24)	17:52	11	07:43 (B12)	19:57		20:59	12	06:25 (B18)	21:55	14	05:31 (B15)	
	08:50		12:22 (B25)	08:09		15:25 (B24)	07:03		07:29 (B12)	06:41		05:26		06:15 (B18)	04:33		05:17 (B15)	
5	15:52	46	13:08 (B25)	16:52	32	15:57 (B24)	17:54	14	07:43 (B12)	19:59		21:01	8	06:23 (B18)	21:56	13	05:30 (B15)	
	08:49		12:22 (B25)	08:07		15:24 (B24)	07:00		07:26 (B12)	06:38		05:23			04:32		05:18 (B15)	
6	15:53	46	13:08 (B25)	16:54	33	15:57 (B24)	17:56	17	07:43 (B12)	20:01		21:04			21:58	13	05:31 (B15)	
	08:49		12:23 (B25)	08:05		15:23 (B24)	06:58		07:27 (B12)	06:35		05:21			04:31		05:19 (B15)	
7	15:55	47	13:10 (B25)	16:56	35	15:58 (B24)	17:58	16	07:43 (B12)	20:03		21:06			21:59	11	05:30 (B15)	
	08:48		12:23 (B25)	08:03		15:23 (B24)	06:55		07:27 (B12)	06:33		05:19			04:30		05:19 (B15)	
8	15:56	47	13:10 (B25)	16:59	37	16:00 (B24)	18:00	15	07:42 (B12)	20:05		21:08			22:00	11	05:30 (B15)	
	08:47		12:24 (B25)	08:00		15:23 (B24)	06:53		07:27 (B12)	06:30		05:17			04:29		05:20 (B15)	
9	15:58	46	13:10 (B25)	17:01	37	16:00 (B24)	18:03	14	07:41 (B12)	20:07		21:10			22:01	10	05:30 (B15)	
	08:47		12:24 (B25)	07:58		15:22 (B24)	06:50		07:29 (B12)	06:27		05:15			04:29		05:21 (B15)	
10	15:59	46	13:10 (B25)	17:03	38	16:00 (B24)	18:05	11	07:40 (B12)	20:10		21:12			22:02	8	05:29 (B15)	
	08:46		12:25 (B25)	07:56		15:22 (B24)	06:47		07:31 (B12)	06:25		05:13			04:28		05:22 (B15)	
11	16:01	46	13:11 (B25)	17:05	39	16:01 (B24)	18:07	15	17:37 (B14)	20:12		21:14			22:03	7	05:29 (B15)	
	08:45		12:25 (B25)	07:54		15:21 (B24)	06:45		17:23 (B14)	06:22		05:10			04:27		05:22 (B15)	
12	16:03	46	13:11 (B25)	17:08	40	16:01 (B24)	18:09	16	17:39 (B14)	20:14		21:16			22:04	6	05:28 (B15)	
	08:44		12:25 (B25)	07:52		15:21 (B24)	06:42		17:22 (B14)	06:20		05:08			04:27		05:24 (B15)	
13	16:04	46	13:11 (B25)	17:10	40	16:01 (B24)	18:11	20	17:42 (B14)	20:16		21:18			22:05	9	21:09 (B22)	
	08:43		12:26 (B25)	07:49		15:22 (B24)	06:39		17:20 (B14)	06:17		05:06			04:26		21:02 (B22)	
14	16:06	45	13:11 (B25)	17:12	40	16:02 (B24)	18:13	22	17:42 (B14)	20:18		21:20			22:06	9	21:11 (B22)	
	08:42		12:27 (B25)	07:47		15:21 (B24)	06:37		17:19 (B14)	06:14		05:04			04:26		21:02 (B22)	
15	16:08	45	13:12 (B25)	17:14	40	16:01 (B24)	18:15	23	17:42 (B14)	20:20		21:21			22:06	11	21:13 (B22)	
	08:41		12:27 (B25)	07:45		15:22 (B24)	06:34		17:18 (B14)	06:12		05:03			04:26		21:00 (B22)	
16	16:10	44	13:11 (B25)	17:17	40	16:02 (B24)	18:17	25	17:43 (B14)	20:22		21:23			22:07	13	21:13 (B22)	
	08:40		12:28 (B25)	07:42		15:22 (B24)	06:31		17:18 (B14)	06:09		05:01			04:25		21:00 (B22)	
17	16:12	44	13:12 (B25)	17:19	39	16:01 (B24)	18:20	25	17:43 (B14)	20:24		21:25			22:08	14	21:14 (B22)	
	08:39		12:28 (B25)	07:40		15:22 (B24)	06:29		17:17 (B14)	06:07		04:59			04:25		21:00 (B22)	
18	16:14	43	13:11 (B25)	17:21	39	16:01 (B24)	18:22	26	17:43 (B14)	20:26		21:27			22:08	14	21:14 (B22)	
	08:37		12:30 (B25)	07:38		15:22 (B24)	06:26		17:17 (B14)	06:04		04:57			04:25		21:00 (B22)	
19	16:16	42	13:12 (B25)	17:23	38	16:00 (B24)	18:24	25	17:42 (B14)	20:28		21:29			22:09	15	21:15 (B22)	
	08:36		12:30 (B25)	07:35		15:23 (B24)	06:23		06:49 (B11)	06:02		04:55		05:26 (B15)	04:25		21:00 (B22)	
20	16:18	41	13:11 (B25)	17:25	37	16:00 (B24)	18:26	30	17:42 (B14)	20:30		21:31	2	05:28 (B15)	22:09	15	21:15 (B22)	
	08:35		12:30 (B25)	07:33		15:24 (B24)	06:21		06:46 (B11)	05:59		04:53		05:25 (B15)	04:25		21:00 (B22)	
21	16:20	41	13:11 (B25)	17:28	35	15:59 (B24)	18:28	33	17:41 (B14)	20:32		21:33	4	05:29 (B15)	22:10	15	21:15 (B22)	
	08:33		12:32 (B25)	07:31		15:25 (B24)	06:18		06:43 (B11)	05:57		04:52		05:23 (B15)	04:25		21:01 (B22)	
22	16:22	39	13:11 (B25)	17:30	33	15:58 (B24)	18:30	36	17:40 (B14)	20:35	2	06:25 (B18)	21:35	6	05:29 (B15)	22:10	15	21:16 (B22)
	08:32		12:33 (B25)	07:28		15:26 (B24)	06:15		06:41 (B11)	05:54		06:21 (B18)	21:35		05:22 (B15)	04:25	21:01 (B22)	
23	16:24	38	13:11 (B25)	17:32	31	15:57 (B24)	18:32	37	17:40 (B14)	20:37	6	06:27 (B18)	21:36	8	05:30 (B15)	22:10	15	21:16 (B22)
	08:30		12:34 (B25)	07:26		15:28 (B24)	06:13		06:38 (B11)	05:52		06:18 (B18)	21:36		05:21 (B15)	04:26	21:01 (B22)	
24	16:26	36	13:10 (B25)	17:34	28	15:56 (B24)	18:34	38	17:38 (B14)	20:39	10	06:28 (B18)	21:38	10	05:31 (B15)	22:10	15	21:16 (B22)
	08:29		12:35 (B25)	07:23		15:29 (B24)	06:10		06:38 (B11)	05:49		06:16 (B18)	21:38		05:19 (B15)	04:26	21:01 (B22)	
25	16:28	34	13:09 (B25)	17:37	25	15:54 (B24)	18:36	33	17:35 (B14)	20:41	13	06:29 (B18)	21:40	12	05:31 (B15)	22:10	15	21:16 (B22)
	08:27		12:36 (B25)	07:21		15:31 (B24)	06:07		06:37 (B11)	05:47		06:14 (B18)	21:40		05:18 (B15)	04:26	21:02 (B22)	
26	16:30	32	13:08 (B25)	17:39	20	15:51 (B24)	18:38	27	17:32 (B14)	20:43	15	06:29 (B18)	21:42	13	05:31 (B15)	22:10	14	21:16 (B22)
	08:25		12:38 (B25)	07:18		15:34 (B24)	06:05		06:38 (B11)	05:44		06:11 (B18)	21:44		05:17 (B15)	04:27	21:02 (B22)	
27	16:32	30	13:08 (B25)	17:41	15	15:49 (B24)	18:40	17	06:55 (B11)	20:45	18	06:29 (B18)	21:43	15	05:32 (B15)	22:10	14	21:16 (B22)
	08:24		12:40 (B25)	07:16			06:02		06:38 (B11)	05:42		06:10 (B18)	21:42		05:15 (B15)	04:27	21:03 (B22)	
28	16:34	27	13:07 (B25)	17:43			18:43	16	06:54 (B11)	20:47	19	06:29 (B18)	21:45	16	05:31 (B15)	22:10	13	21:16 (B22)
	08:22		12:42 (B25)	07:13			05:59		06:39 (B11)	05:40		06:10 (B18)	21:41		05:15 (B15)	04:28	21:03 (B22)	
29	16:36	24	13:06 (B25)	17:45			18:45	13	06:52 (B11)	20:49	19	06:29 (B18)	21:46	16	05:31 (B15)	22:10	12	21:15 (B22)
	08:20		12:45 (B25)				06:57		07:41 (B11)	05:37		06:11 (B18)	21:40		05:15 (B15)	04:29	21:05 (B22)	
30	16:39	27	15:45 (B24)				19:47	9	07:50 (B11)	20:51	18	06:29 (B18)	21:48	16	05:31 (B15)	22:10	10	21:15 (B22)
	08:18		12:47 (B25)				06:54			05:35		06:10 (B18)	21:48		05:15 (B15)	04:29	21:06 (B22)	
31	16:41	28	15:48 (B24)				19:49			20:53	17	06:27 (B18)	21:49	17	05:32 (B15)	22:09	8	21:14 (B22)
	08:16		15:30 (B24)				06:51						04:37		05:16 (B15)			
	16:43	20	15:50 (B24)				19:51						21:51	15	05:31 (B15)			
Potential sun hours		235		266			366		426			508			528			
Total, worst case		1236		872			596		137			200			369			
Sun reduction		0.13		0.20			0.41		0.50			0.57			0.56			
Oper. time red.		0.98		0.98			0.98		0.98			0.98			0.98			
Wind dir. red.		0.64		0.66			0.65		0.66			0.67			0.63			
Total reduction		0.08		0.13			0.26		0.32			0.37			0.34			
Total, real		103		113			155		44			74			126			

Table layout: For each day in each month the following matrix apply

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Mež vidi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (71)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30 22:09	05:27 (B15) 21:12 (B22)	05:16 21:28		06:17 20:14		07:17 18:54		07:22 16:36		12:08 (B25) 15:45
2	04:31 22:08	05:27 (B15) 05:33 (B15)	05:18 21:26		06:19 20:11		07:19 18:51	20	07:25 16:34	39	12:53 (B25) 15:46
3	04:32 22:08	05:26 (B15) 05:34 (B15)	05:19 21:24		06:21 20:09		07:21 18:48	17	07:27 16:32	38	12:53 (B25) 15:47
4	04:33 22:07	05:26 (B15) 05:35 (B15)	05:21 21:21		06:23 20:06		07:23 18:46	14	07:29 16:29	37	12:54 (B25) 15:48
5	04:34 22:07	05:26 (B15) 05:36 (B15)	05:23 21:19		06:25 20:03		07:25 18:43	15	07:31 16:27	36	12:54 (B25) 15:49
6	04:35 22:06	05:25 (B15) 05:36 (B15)	05:25 21:17		06:27 20:01		07:27 18:40	12	07:33 16:25	35	12:55 (B25) 15:50
7	04:36 22:05	05:25 (B15) 05:37 (B15)	05:27 21:15		06:29 19:58		07:29 18:38	15	07:35 16:23	33	12:55 (B25) 15:51
8	04:37 22:04	05:25 (B15) 05:38 (B15)	05:29 21:13		06:31 19:55		07:31 18:35	16	07:37 16:21	32	12:55 (B25) 15:52
9	04:38 22:03	05:24 (B15) 05:38 (B15)	05:31 21:11	06:24 (B18)	06:33 19:53		07:34 18:32	17	07:40 16:19	29	12:56 (B25) 15:53
10	04:39 22:02	05:24 (B15) 05:38 (B15)	05:33 21:08	06:21 (B18)	06:35 19:50		07:36 18:30	16	07:42 16:17	27	12:56 (B25) 15:54
11	04:41 22:01	05:24 (B15) 05:39 (B15)	05:35 21:06	06:20 (B18)	06:37 19:47		07:38 18:27	17	07:44 16:15	24	12:57 (B25) 15:55
12	04:42 22:00	05:24 (B15) 05:40 (B15)	05:37 21:04	06:19 (B18)	06:39 19:45		07:40 18:25	10	07:46 16:13	20	12:57 (B25) 15:56
13	04:43 21:59	05:24 (B15) 05:40 (B15)	05:39 21:01	06:19 (B18)	06:41 19:42		07:42 18:22	6	07:48 16:11	27	12:57 (B25) 15:57
14	04:45 21:58	05:24 (B15) 05:40 (B15)	05:41 20:59	06:18 (B18)	06:43 19:39	07:32 (B11)	07:44 18:19	2	07:51 16:09	28	12:58 (B25) 15:58
15	04:46 21:56	05:23 (B15) 05:40 (B15)	05:43 20:57	06:18 (B18)	06:45 19:37	07:40 (B11)	07:46 18:17	8	07:53 16:08	23	12:59 (B25) 15:59
16	04:48 21:55	05:24 (B15) 05:41 (B15)	05:45 20:54	06:18 (B18)	06:47 19:34	07:42 (B11)	07:48 18:14	8	07:55 16:06	27	12:59 (B25) 16:00
17	04:49 21:54	05:25 (B15) 05:40 (B15)	05:47 20:52	06:18 (B18)	06:49 19:31	07:43 (B11)	07:50 18:12	17	07:57 16:04	30	13:00 (B25) 16:01
18	04:51 21:52	05:27 (B15) 05:41 (B15)	05:49 20:49	06:20 (B18)	06:51 19:28	07:44 (B11)	07:52 18:09	22	07:59 16:02	32	13:00 (B25) 16:02
19	04:52 21:51	05:28 (B15) 05:41 (B15)	05:51 20:47	06:22 (B18)	06:53 19:26	07:45 (B11)	07:54 18:07	6	08:01 16:01	34	13:01 (B25) 16:03
20	04:54 21:49	05:30 (B15) 05:41 (B15)	05:53 20:44	06:24 (B18)	06:55 19:23	07:46 (B11)	07:57 18:04	15	08:03 15:59	36	13:01 (B25) 16:04
21	04:56 21:48	05:31 (B15) 05:40 (B15)	05:55 20:42	06:26 (B18)	06:57 19:20	07:47 (B11)	07:59 18:02	8	08:05 15:58	31	13:02 (B25) 16:05
22	04:57 21:46	05:33 (B15) 05:40 (B15)	05:57 20:40	06:28 (B18)	06:59 19:18	07:48 (B11)	08:01 17:59	16	08:07 15:56	27	13:02 (B25) 16:06
23	04:59 21:44	05:34 (B15) 05:39 (B15)	05:59 20:37	06:29 (B18)	07:01 19:15	07:49 (B11)	08:03 17:57	34	08:09 15:55	35	13:02 (B25) 16:07
24	05:01 21:43	05:36 (B15) 05:39 (B15)	06:01 20:34		07:03 19:12	07:51 (B11)	08:05 17:55	37	08:11 15:53	41	13:02 (B25) 16:08
25	05:03 21:41		06:03 20:32		07:05 19:10	07:53 (B11)	08:07 17:53	38	08:13 15:52	42	13:03 (B25) 16:09
26	05:04 21:39		06:05 20:29		07:07 19:07	07:55 (B11)	08:09 17:51	39	08:15 15:51	43	13:04 (B25) 16:10
27	05:06 21:37		06:07 20:27		07:09 19:04	07:57 (B11)	08:11 17:49	40	08:17 15:49	44	13:04 (B25) 16:11
28	05:08 21:36		06:09 20:24		07:11 19:02	07:59 (B14)	08:13 17:47	41	08:19 15:48	45	13:05 (B25) 16:12
29	05:10 21:34		06:11 20:22		07:13 18:59	08:01 (B14)	08:15 17:45	42	08:21 15:47	46	13:05 (B25) 16:13
30	05:12 21:32		06:13 20:19		07:15 18:56	08:03 (B14)	08:17 17:43	43	08:23 15:46	47	13:06 (B25) 16:14
31	05:14 21:30		06:15 20:16			08:05 (B14)	08:19 17:41	44	08:25 15:45	48	13:06 (B25) 16:15
Potential sun hours	529		469		385		324		247		216
Total, worst case	279		186		437		729		1055		1435
Sun reduction	0.49		0.50		0.43		0.26		0.08		0.07
Oper. time red.	0.98		0.98		0.98		0.98		0.98		0.98
Wind dir. red.	0.67		0.66		0.65		0.65		0.65		0.64
Total reduction	0.32		0.32		0.27		0.16		0.05		0.04
Total, real	90		59		119		120		55		63

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Muižnieki (kad. apz. 56960040061) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (61)  
 Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	08:44 (B22) 17:48	06:49 19:53	05:33 21:53
2	08:50 15:49	08:13 16:47	07:08 17:50	08:47 (B22) 08:56 (B22)	06:46 19:55	05:30 20:57
3	08:50 15:51	08:11 16:50	07:06 17:52		06:43 19:57	05:28 21:00
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	05:26 21:02
5	08:49 15:53	08:07 16:54	07:01 17:56		06:38 20:01	05:23 21:04
6	08:49 15:55	08:05 16:56	06:58 17:58		06:35 20:03	05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:01		06:33 20:05	05:19 21:08
8	08:48 15:58	08:01 17:01	06:53 18:03		06:30 20:08	05:17 21:10
9	08:47 15:59	07:58 17:03	06:50 18:05		06:28 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07		06:25 20:12	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09		06:22 20:14	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11		06:20 20:16	05:08 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13		06:17 20:18	05:06 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15		06:15 20:20	05:04 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18		06:12 20:22	05:03 21:24
16	08:40 16:12	07:43 17:19	06:32 18:20		06:09 20:24	05:01 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22		06:07 20:26	05:59 21:27
18	08:37 16:16	07:38 17:23	06:26 18:24		06:04 20:28	05:57 21:29
19	08:36 16:18	07:36 17:26	06:24 18:26		06:02 20:30	05:55 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28		05:59 20:33	05:53 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30		05:57 20:35	05:47 21:35
22	08:32 16:24	07:28 17:32	06:16 18:32		05:54 20:37	05:44 21:37
23	08:30 16:26	07:26 17:34	06:13 18:34		05:52 20:39	05:42 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	05:40 21:40
25	08:27 16:30	07:21 17:39	06:07 18:38		05:47 20:43	05:38 21:42
26	08:26 16:32	07:18 17:41	06:05 18:41		05:44 20:45	05:35 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	05:33 21:45
28	08:22 16:36	07:13 17:45	05:59 18:45		05:40 20:49	05:31 21:47
29	08:20 16:39		05:57 19:47		05:37 20:51	05:29 21:48
30	08:18 16:41		05:54 19:49		05:35 20:53	05:27 21:50
31	08:17 16:43		05:51 19:51		05:33 21:51	05:25 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		697	25		163	
Sun reduction		0.20	0.41		0.57	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.61	0.61		0.67	
Total reduction		0.12	0.24		0.37	
Total, real		82	6		60	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Muižnieki (kad. apz. 56960040061) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (61)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:16	05:54 (B1)	06:17	07:17			07:23	08:09 (B22)	08:24	
	22:09	21:28	16 06:10 (B1)	20:14	18:54			16:36	28 08:37 (B22)	15:45	
2	04:31	05:18	05:53 (B1)	06:19	07:19			07:25	08:10 (B22)	08:26	
	22:09	21:26	17 06:10 (B1)	20:11	18:51			16:34	25 08:35 (B22)	15:44	
3	04:32	05:20	05:53 (B1)	06:21	07:21			07:27	08:12 (B22)	08:28	
	22:08	21:24	17 06:10 (B1)	20:09	18:48			16:32	22 08:34 (B22)	15:43	
4	04:33	05:21	05:55 (B1)	06:23	07:23			07:29	08:14 (B22)	08:29	
	22:07	21:22	16 06:11 (B1)	20:06	18:46			16:29	18 08:32 (B22)	15:42	
5	04:34	05:23	05:56 (B1)	06:25	07:25			07:31	08:16 (B22)	08:31	
	22:07	21:20	14 06:10 (B1)	20:03	18:43			16:27	13 08:29 (B22)	15:42	
6	04:35	05:25	05:58 (B1)	06:27	07:27			07:33		08:32	
	22:06	21:17	11 06:09 (B1)	20:01	18:40			16:25		15:41	
7	04:36	05:27	06:00 (B1)	06:29	07:30			07:36		08:34	
	22:05	21:15	9 06:09 (B1)	19:58	18:38			16:23		15:40	
8	04:37	05:29	06:02 (B1)	06:31	07:32			07:38		08:35	
	22:04	21:13	6 06:08 (B1)	19:55	18:35			16:21		15:40	
9	04:38	05:31	06:04 (B1)	06:33	07:34			07:40		08:37	
	22:03	21:11	3 06:07 (B1)	19:53	18:32			16:19		15:39	
10	04:39	05:33		06:35	07:36			07:42		08:38	
	22:02	21:08		19:50	18:30			16:17		15:39	
11	04:41	05:35		06:37	07:38			07:44		08:39	
	22:01	21:06		19:47	18:27			16:15		15:38	
12	04:42	05:37		06:39	07:40		09:19 (B22)	07:46		08:40	
	22:00	21:04		19:45	18:25	13	09:32 (B22)	16:13		15:38	
13	04:43	05:39		06:41	07:42		09:15 (B22)	07:49		08:42	
	21:59	21:02		19:42	18:22	19	09:34 (B22)	16:11		15:38	
14	04:45	05:41		06:43	07:44		09:13 (B22)	07:51		08:43	10:10 (B24)
	21:58	20:59		19:39	18:20	23	09:36 (B22)	16:09		15:38	3 10:13 (B24)
15	04:46	05:43		06:45	07:46		09:12 (B22)	07:53		08:44	10:09 (B24)
	21:57	20:57		19:37	18:17	26	09:38 (B22)	16:08		15:38	5 10:14 (B24)
16	04:48	05:45		06:47	07:48		09:10 (B22)	07:55		08:45	10:09 (B24)
	21:55	20:54		19:34	18:14	29	09:39 (B22)	16:06		15:38	7 10:16 (B24)
17	04:49	05:47		06:49	07:50		09:09 (B22)	07:57		08:46	10:09 (B24)
	21:54	20:52		19:31	18:12	31	09:40 (B22)	16:04		15:38	8 10:17 (B24)
18	04:51	05:49		06:51	07:52		09:08 (B22)	07:59		08:46	10:09 (B24)
	21:52	20:50		19:29	18:09	32	09:40 (B22)	16:02		15:38	8 10:17 (B24)
19	04:52	05:51		06:53	07:55		09:08 (B22)	08:01		08:47	10:09 (B24)
	21:51	20:47		19:26	18:07	34	09:42 (B22)	16:01		15:38	8 10:17 (B24)
20	04:54	05:53		06:55	07:57		09:07 (B22)	08:03		08:48	10:09 (B24)
	21:49	20:45		19:23	18:04	35	09:42 (B22)	15:59		15:39	9 10:18 (B24)
21	04:56	05:55		06:57	07:59		09:06 (B22)	08:05		08:48	10:10 (B24)
	21:48	20:42		19:20	18:02	36	09:42 (B22)	15:58		15:39	9 10:19 (B24)
22	04:57	05:57		06:59	08:01		09:05 (B22)	08:07		08:49	10:10 (B24)
	21:46	20:40		19:18	17:59	36	09:41 (B22)	15:56		15:39	9 10:19 (B24)
23	04:59	05:59		07:01	08:03		09:06 (B22)	08:09		08:50	10:11 (B24)
	21:45	20:37		19:15	17:57	36	09:42 (B22)	15:55		15:40	9 10:20 (B24)
24	05:01	06:01		07:03	08:05		09:05 (B22)	08:11		08:50	10:12 (B24)
	21:43	20:35		19:12	17:55	37	09:42 (B22)	15:53		15:41	8 10:20 (B24)
25	05:03	06:03		07:05	07:07		08:05 (B22)	08:13		08:50	10:12 (B24)
	21:41	20:32		19:10	16:52	36	08:41 (B22)	15:52		15:41	8 10:20 (B24)
26	05:05	06:05		07:07	07:10		08:06 (B22)	08:15		08:51	10:13 (B24)
	21:39	20:30		19:07	16:50	36	08:42 (B22)	15:51		15:42	8 10:21 (B24)
27	05:06	05:59 (B1)	06:07	07:09	07:12		08:06 (B22)	08:17		08:51	10:13 (B24)
	21:38	6 06:05 (B1)	20:27	19:04	16:47	35	08:41 (B22)	15:49		15:43	8 10:21 (B24)
28	05:08	05:58 (B1)	06:09	07:11	07:14		08:06 (B22)	08:19		08:51	10:14 (B24)
	21:36	9 06:07 (B1)	20:24	19:02	16:45	34	08:40 (B22)	15:48		15:44	6 10:20 (B24)
29	05:10	05:56 (B1)	06:11	07:13	07:16		08:07 (B22)	08:21		08:51	10:16 (B24)
	21:34	12 06:08 (B1)	20:22	18:59	16:43	33	08:40 (B22)	15:47		15:45	4 10:20 (B24)
30	05:12	05:55 (B1)	06:13	07:15	07:18		08:07 (B22)	08:22		08:51	
	21:32	14 06:09 (B1)	20:19	18:56	16:41	32	08:39 (B22)	15:46		15:46	
31	05:14	05:55 (B1)	06:15		07:20		08:09 (B22)			08:51	
	21:30	15 06:10 (B1)	20:17		16:38	29	08:38 (B22)			15:47	
Potential sun hours	529		469		385	324		247		216	
Total, worst case	56		109			622		106		117	
Sun reduction	0.49		0.50			0.26		0.08		0.07	
Oper. time red.	0.98		0.98			0.98		0.98		0.98	
Wind dir. red.	0.67		0.67			0.61		0.61		0.61	
Total reduction	0.32		0.32			0.15		0.05		0.04	
Total, real	18		35			94		5		5	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Muiž nieki (kad. apz. 76860010011) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (191)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1.01 1.91 4.85 7.09 9.29 9.83 8.40 7.53 5.47 2.70 0.68 0.49

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum  
441 466 538 463 488 780 784 937 1,214 1,078 832 556 8,577  
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:50	08:14	15:35 (B3)	07:10	06:48	05:32	04:35	04:29	05:15	06:17	07:17	07:22	08:24			
	15:48	16:45	21	15:56 (B3)	17:47	19:53	20:55	21:52	22:09	21:28	20:14	18:53	16:35	15:44		
2	08:50	08:12	15:36 (B3)	07:08	06:46	05:30	04:34	04:30	05:17	06:19	07:19	07:24	08:26			
	15:49	16:47	20	15:56 (B3)	17:49	19:55	20:57	21:54	22:08	21:25	20:11	18:50	16:33	15:43		
3	08:50	08:10	15:37 (B3)	07:05	06:43	05:27	04:33	04:31	05:19	06:21	07:21	07:27	08:27			
	15:50	16:49	18	15:55 (B3)	17:51	19:57	20:59	21:55	22:08	21:23	20:08	18:48	16:31	15:43		
4	08:49	08:08	15:38 (B3)	07:03	06:40	05:25	04:32	04:32	05:21	06:23	07:23	07:29	15:13 (B3)	08:29		
	15:51	16:51	17	15:55 (B3)	17:54	19:59	21:01	21:56	22:07	21:21	20:06	18:45	16:29	6	15:19 (B3)	15:42
5	08:49	08:06	15:39 (B3)	07:00	06:38	05:23	04:31	04:33	05:23	06:25	07:25	07:31	15:10 (B3)	08:30		
	15:53	16:54	14	15:53 (B3)	17:56	20:01	21:03	21:58	22:06	21:19	20:03	18:42	16:27	12	15:22 (B3)	15:41
6	08:49	08:04	15:41 (B3)	06:57	06:35	05:21	04:30	04:34	05:25	06:27	07:27	07:33	15:09 (B3)	08:32		
	15:54	16:56	11	15:52 (B3)	17:58	20:03	21:05	21:59	22:06	21:17	20:00	18:40	16:25	15	15:24 (B3)	15:40
7	08:48	08:02	15:45 (B3)	06:55	06:32	05:18	04:29	04:35	05:27	06:29	07:29	07:35	15:08 (B3)	08:33		
	15:56	16:58	4	15:49 (B3)	18:00	20:05	21:07	22:00	22:05	21:15	19:58	18:37	16:22	17	15:25 (B3)	15:40
8	08:47	08:00		06:52	06:30	05:16	04:29	04:36	05:29	06:31	07:31	07:37	15:07 (B3)	08:35		
	15:57	17:00		18:02	20:07	21:09	22:01	22:04	21:13	19:55	18:35	16:20	18	15:25 (B3)	15:39	
9	08:47	07:58		06:50	06:27	05:14	04:28	04:37	05:31	06:33	07:33	07:40	15:07 (B3)	08:36		
	15:59	17:03		18:04	20:09	21:11	22:02	22:03	21:10	19:52	18:32	16:18	19	15:26 (B3)	15:39	
10	08:46	07:56		06:47	06:24	05:12	04:27	04:39	05:33	06:35	07:35	07:42	15:06 (B3)	08:38		
	16:00	17:05		18:06	20:11	21:13	22:03	22:02	21:08	19:50	18:29	16:16	20	15:26 (B3)	15:38	
11	08:45	07:54		06:44	06:22	05:10	04:27	04:40	05:35	06:37	07:37	07:44	15:06 (B3)	08:39		
	16:02	17:07		18:09	20:13	21:15	22:04	22:01	21:06	19:47	18:27	16:14	21	15:27 (B3)	15:38	
12	08:44	07:51		06:42	06:19	05:08	04:26	04:41	05:37	06:39	07:39	07:46	15:06 (B3)	08:40		
	16:04	17:09		18:11	20:15	21:17	22:05	22:00	21:03	19:44	18:24	16:13	21	15:27 (B3)	15:38	
13	08:43	07:49		06:39	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:48	15:06 (B3)	08:41		
	16:06	17:12		18:13	20:18	21:19	22:06	21:59	21:01	19:42	18:22	16:11	21	15:27 (B3)	15:37	
14	08:42	07:47		06:36	06:14	05:04	04:25	04:44	05:41	06:43	07:44	07:50	15:07 (B3)	08:42		
	16:07	17:14		18:15	20:20	21:21	22:06	21:58	20:59	19:39	18:19	16:09	21	15:28 (B3)	15:37	
15	08:41	07:45		06:34	06:11	05:02	04:25	04:46	05:43	06:45	07:46	07:52	15:07 (B3)	08:43		
	16:09	17:16		18:17	20:22	21:23	22:07	21:56	20:56	19:36	18:16	16:07	20	15:27 (B3)	15:37	
16	08:40	07:42		06:31	06:09	05:00	04:25	04:47	05:45	06:47	07:48	07:55	15:08 (B3)	08:44		
	16:11	17:18		18:19	20:24	21:25	22:08	21:55	20:54	19:34	18:14	16:05	20	15:28 (B3)	15:37	
17	08:38	07:40		06:28	06:06	04:58	04:25	04:49	05:47	06:49	07:50	07:57	15:08 (B3)	08:45		
	16:13	17:21		18:21	20:26	21:27	22:08	21:54	20:52	19:31	18:11	16:03	18	15:26 (B3)	15:37	
18	08:37	07:38		06:26	06:04	04:56	04:24	04:50	05:49	06:51	07:52	07:59	15:09 (B3)	08:46		
	16:15	17:23		18:23	20:28	21:29	22:09	21:52	20:49	19:28	18:09	16:02	15	15:24 (B3)	15:37	
19	08:36	07:35		06:23	06:01	04:54	04:24	04:52	05:51	06:53	07:54	08:01	15:10 (B3)	08:47		
	16:17	17:25		18:25	20:30	21:31	22:09	21:51	20:47	19:25	18:06	16:00	13	15:23 (B3)	15:38	
20	08:34	15:38 (B3)	07:33	06:20	05:59	04:53	04:25	04:53	05:53	06:55	07:56	08:03	15:11 (B3)	08:48		
	16:19	2	15:40 (B3)	17:27	18:28	20:32	21:33	22:09	21:49	20:44	19:23	18:04	15:59	10	15:21 (B3)	15:38
21	08:33	15:38 (B3)	07:30	06:18	05:56	04:51	04:25	04:55	05:55	06:57	07:58	08:05	15:13 (B3)	08:48		
	16:21	5	15:43 (B3)	17:29	18:30	20:34	21:34	22:10	21:48	20:42	19:20	18:01	15:57	6	15:19 (B3)	15:38
22	08:32	15:36 (B3)	07:28	06:15	05:54	04:49	04:25	04:57	05:57	06:59	08:01	08:07	15:14 (B3)	08:49		
	16:23	10	15:46 (B3)	17:32	18:32	20:36	21:36	22:10	21:46	20:39	19:17	17:59	15:56	3	15:17 (B3)	15:39
23	08:30	15:35 (B3)	07:25	06:12	05:51	04:48	04:25	04:59	05:59	07:01	08:03	08:09	15:15 (B3)	08:49		
	16:25	13	15:48 (B3)	17:34	18:34	20:38	21:38	22:10	21:44	20:37	19:15	17:56	15:54		15:39	
24	08:28	15:35 (B3)	07:23	06:10	05:49	04:46	04:25	05:00	06:01	07:03	08:05	08:11	15:10 (B3)	08:50		
	16:27	15	15:50 (B3)	17:36	18:36	20:41	21:40	22:10	21:43	20:34	19:12	17:54	15:53		15:40	
25	08:27	15:34 (B3)	07:20	06:07	05:46	04:45	04:26	05:02	06:03	07:05	08:07	08:13	15:10 (B3)	08:51		
	16:29	18	15:52 (B3)	17:38	18:38	20:43	21:41	22:10	21:41	20:32	19:09	16:52	15:51		15:41	
26	08:25	15:34 (B3)	07:18	06:04	05:44	04:43	04:26	05:04	06:05	07:07	08:09	08:15	15:10 (B3)	08:52		
	16:32	20	15:54 (B3)	17:40	18:40	20:45	21:43	22:10	21:39	20:29	19:07	16:49	15:50		15:41	
27	08:24	15:34 (B3)	07:15	06:02	05:41	04:42	04:27	05:06	06:07	07:09	08:11	08:17	15:10 (B3)	08:53		
	16:34	20	15:54 (B3)	17:43	18:42	20:47	21:45	22:10	21:37	20:27	19:04	16:47	15:49		15:42	
28	08:22	15:34 (B3)	07:13	05:59	05:39	04:40	04:27	05:08	06:09	07:11	08:13	08:19	15:10 (B3)	08:54		
	16:36	21	15:55 (B3)	17:45	18:44	20:49	21:46	22:10	21:35	20:24	19:01	16:45	15:48		15:43	
29	08:20	15:34 (B3)		06:56	05:37	04:39	04:28	05:09	06:11	07:13	08:15	08:20	15:10 (B3)	08:55		
	16:38	21	15:55 (B3)		19:46	20:51	21:48	22:09	21:33	20:21	18:58	16:42	15:46		15:44	
30	08:18	15:34 (B3)		06:54	05:34	04:38	04:29	05:11	06:13	07:15	08:17	08:22	15:10 (B3)	08:56		
	16:40	21	15:55 (B3)		19:48	20:53	21:49	22:09	21:32	20:19	18:56	16:40	15:45		15:45	
31	08:16	15:35 (B3)		06:51		04:36		05:13	06:15		07:20		15:10 (B3)	08:57		
	16:42	21	15:56 (B3)		19:50	21:51		21:30	20:16		16:38		15:46		15:46	
Potential sun hours	235	266		366	426	508	529	529	469	385	324	247			216	
Total, worst case	187	105											296			
Sun reduction	0.13	0.20											0.08			
Oper. time red.	0.98	0.98											0.98			
Wind dir. red.	0.66	0.66											0.66			
Total reduction	0.09	0.13											0.05			
Total, real	16	14										16				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Malkalni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (64)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January		February		March		April		May		June	
1	08:51		08:15		07:11		07:38 (B22)	06:49	05:33		04:36	
	15:48		16:45		17:48	15	07:53 (B22)	19:53	20:56		21:53	
2	08:51		08:13		07:08		07:38 (B22)	06:46	05:30		04:35	
	15:49		16:48		17:50	14	07:52 (B22)	19:55	20:58		21:54	
3	08:50		08:11		07:06		07:40 (B22)	06:44	05:28		04:34	
	15:51		16:50		17:52	12	07:52 (B22)	19:57	21:00		21:55	
4	08:50		08:09		07:03		07:41 (B22)	06:41	05:26		04:33	
	15:52		16:52		17:54	8	07:49 (B22)	19:59	21:02		21:57	
5	08:49		08:07		07:01			06:38	05:24		04:32	
	15:53		16:54		17:56			20:01	21:04		21:58	
6	08:49		08:05		06:58			06:36	05:21		04:31	
	15:55		16:56		17:58			20:04	21:06		21:59	
7	08:48		08:03		06:55			06:33	05:19		04:30	
	15:56		16:59		18:01			20:06	21:08		22:00	
8	08:48		08:01		06:53			06:30	05:17		04:29	
	15:58		17:01		18:03			20:08	21:10		22:01	
9	08:47		07:58		06:50			06:28	05:15		04:29	
	16:00		17:03		18:05			20:10	21:12		22:02	
10	08:46		07:56		06:48			06:25	05:13		04:28	
	16:01		17:05		18:07			20:12	21:14		22:03	
11	08:45		07:54		06:45			06:22	05:11		04:27	
	16:03		17:08		18:09			20:14	21:16		22:04	
12	08:44		07:52		06:42			06:20	05:09		04:27	
	16:05	1	09:22 (B14)	17:10	18:11			20:16	21:18		22:05	
13	08:43		07:50		06:40			06:17	05:07		04:26	
	16:06	3	09:22 (B14)	17:12	18:13			20:18	21:20		22:06	
14	08:42		07:47		06:37			06:15	05:05		04:26	
	16:08	5	09:23 (B14)	17:14	18:16			20:20	21:22		22:07	
15	08:41		07:45		06:34			06:12	05:03		04:26	
	16:10	8	09:25 (B14)	17:17	18:18			20:22	21:24		22:07	
16	08:40		07:43		06:32			06:09	05:01		04:26	
	16:12	10	09:25 (B14)	17:19	18:20			20:24	21:26		22:08	
17	08:39		07:40		06:29			06:07	04:59		04:25	
	16:14	12	09:26 (B14)	17:21	18:22			20:26	21:27		22:09	
18	08:38		07:38		06:26			06:04	04:57		04:25	
	16:16	14	09:26 (B14)	17:23	18:24			20:28	21:29		22:09	
19	08:36		07:36		06:24			06:02	04:55		04:25	
	16:18	16	09:26 (B14)	17:26	18:26			20:31	21:31		22:09	
20	08:35		07:33		06:21			05:59	04:53		04:25	
	16:20	16	09:27 (B14)	17:28	18:28			20:33	21:33		22:10	
21	08:33		07:31		06:18			05:57	04:52		04:25	
	16:22	16	09:27 (B14)	17:30	18:30			20:35	21:35		22:10	
22	08:32		07:28		06:16			05:54	04:50		04:26	
	16:24	15	09:26 (B14)	17:32	18:32			20:37	21:37		22:10	
23	08:30		07:26		06:13			05:52	04:48		04:26	
	16:26	15	09:27 (B14)	17:34	18:34			20:39	21:38		22:10	
24	08:29		07:23		06:10			05:49	04:47		04:26	
	16:28	14	09:27 (B14)	17:37	18:36	1	07:51 (B22)	20:41	21:40		22:11	
25	08:27		07:21		06:08			05:47	04:45		04:26	
	16:30	12	09:26 (B14)	17:39	18:39	5	07:53 (B22)	20:43	21:42		22:11	
26	08:26		07:18		06:05			05:44	04:44		04:27	
	16:32	9	09:25 (B14)	17:41	18:41	9	07:54 (B22)	20:45	21:43		22:10	
27	08:24		07:16		06:02			05:42	04:42		04:27	
	16:34	5	09:23 (B14)	17:43	18:43	11	07:53 (B22)	20:47	21:45		22:10	
28	08:22		07:13		06:00			05:40	04:41		04:28	
	16:37		17:45	14	07:54 (B22)			20:49	21:47		22:10	
29	08:20				06:57			05:37	04:40		04:29	
	16:39				19:47			20:51	21:48		22:10	
30	08:19				06:54			05:35	04:38		04:29	
	16:41				19:49			20:53	21:50		22:10	
31	08:17				06:52				04:37			
	16:43				19:51				21:51			
Potential sun hours	235		266		366			426	508		529	
Total, worst case		171		40		49						
Sun reduction		0.13		0.20		0.41						
Oper. time red.		0.98		0.98		0.98						
Wind dir. red.		0.59		0.63		0.63						
Total reduction		0.08		0.12		0.25						
Total, real		13		5		12						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Malkalni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (64)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54		07:23 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51		07:25 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48		07:27 16:32	08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46		07:29 16:29	08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43		07:31 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40		07:34 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38		07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35		07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	5	08:18 (B22) 08:23 (B22)	07:40 16:19
10	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	10	08:15 (B22) 08:25 (B22)	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	13	08:13 (B22) 08:26 (B22)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	14	08:12 (B22) 08:26 (B22)	07:47 16:13
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	15	08:11 (B22) 08:26 (B22)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	13	08:14 (B22) 08:27 (B22)	07:51 16:09
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	10	08:16 (B22) 08:26 (B22)	07:53 16:08
16	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	7	08:18 (B22) 08:25 (B22)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	4	08:20 (B22) 08:24 (B22)	07:57 16:04
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09		07:59 16:03	08:51 (B14) 09:01 (B14)
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07		08:01 16:01	08:49 (B14) 09:01 (B14)
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04		08:03 15:59	08:46 (B14) 09:01 (B14)
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02		08:05 15:58	08:47 (B14) 09:03 (B14)
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00		08:07 15:56	08:47 (B14) 09:03 (B14)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57		08:09 15:55	08:47 (B14) 09:03 (B14)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55		08:11 15:53	08:49 (B14) 09:03 (B14)
25	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52		08:13 15:52	08:51 (B14) 09:03 (B14)
26	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50		08:15 15:51	08:54 (B14) 09:04 (B14)
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48		08:17 15:50	08:56 (B14) 09:04 (B14)
28	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45		08:19 15:48	08:58 (B14) 09:03 (B14)
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43		08:21 15:47	09:00 (B14) 09:03 (B14)
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41		08:23 15:46	09:02 (B14) 09:03 (B14)
31	05:14 21:30	06:15 20:17		07:20 16:38			08:51 15:47
Potential sun hours	529	469	385	324		247	216
Total, worst case				91		171	
Sun reduction				0.26		0.08	
Oper. time red.				0.98		0.98	
Wind dir. red.				0.63		0.59	
Total reduction				0.16		0.05	
Total, real				14		8	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Masanpurvs - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (192)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50	08:14	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:22	08:24
	15:48	16:45	17:47	19:53	20:55	21:52	22:09	21:28	20:14	18:53	16:36	15:45
2	08:50	08:12	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:24	08:26
	15:50	16:47	17:50	19:55	20:57	21:54	22:08	21:25	20:11	18:51	16:34	15:44
3	08:50	08:11	07:05	06:43	05:28	04:34	04:32	05:20	06:21	07:21	07:27	08:27
	15:51	16:50	17:52	19:57	20:59	21:55	22:08	21:23	20:09	18:48	16:32	15:43
4	08:49	08:09	07:03	06:41	05:26	04:33	04:33	05:21	06:23	07:23	07:29	08:29
	15:52	16:52	17:54	19:59	21:01	21:56	22:07	21:21	20:06	18:46	16:29	15:42
5	08:49	08:07	07:00	06:38	05:23	04:32	04:34	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:57	22:06	21:19	20:03	18:43	16:27	15:42
6	08:48	08:04	06:58	06:35	05:21	04:31	04:35	05:25	06:27	07:27	07:33	08:32
	15:55	16:56	17:58	20:03	21:05	21:59	22:06	21:17	20:01	18:40	16:25	15:41
7	08:48	08:02	06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	22:00	22:05	21:15	19:58	18:38	16:23	15:40
8	08:47	08:00	06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:31	07:38	08:35
	15:58	17:01	18:03	20:07	21:09	22:01	22:04	21:13	19:55	18:35	16:21	15:40
9	08:46	07:58	06:50	06:27	05:15	04:29	04:38	05:31	06:33	07:33	07:40	08:36
	16:00	17:03	18:05	20:09	21:11	22:02	22:03	21:10	19:53	18:32	16:19	15:39
10	08:46	07:56	06:47	06:25	05:13	04:28	04:40	05:33	06:35	07:36	07:42	08:38
	16:01	17:05	18:07	20:12	21:13	22:03	22:02	21:08	19:50	18:30	16:17	15:39
11	08:45	07:54	06:45	06:22	05:11	04:27	04:41	05:35	06:37	07:38	07:44	08:39
	16:03	17:08	18:09	20:14	21:15	22:04	22:01	21:06	19:47	18:27	16:15	15:39
12	08:44	07:51	06:42	06:20	05:09	04:27	04:42	05:37	06:39	07:40	07:46	08:40
	16:05	17:10	18:11	20:16	21:17	22:05	22:00	21:04	19:45	18:25	16:13	15:38
13	08:43	07:49	06:39	06:17	05:07	04:27	04:44	05:39	06:41	07:42	07:48	08:41
	16:06	17:12	18:13	20:18	21:19	22:05	21:59	21:01	19:42	18:22	16:11	15:38
14	08:42	07:47	06:37	06:14	05:05	04:26	04:45	05:41	06:43	07:44	07:50	08:42
	16:08	17:14	18:15	20:20	21:21	22:06	21:57	20:59	19:39	18:19	16:09	15:38
15	08:41	07:45	06:34	06:12	05:03	04:26	04:46	05:43	06:45	07:46	07:52	08:43
	16:10	17:17	18:17	20:22	21:23	22:07	21:56	20:56	19:36	18:17	16:08	15:38
16	08:40	07:42	06:31	06:09	05:01	04:26	04:48	05:45	06:47	07:48	07:55	08:44
	16:12	17:19	18:19	20:24	21:25	22:07	21:55	20:54	19:34	18:14	16:06	15:38
17	08:38	07:40	06:29	06:07	04:59	04:25	04:49	05:47	06:49	07:50	07:57	08:45
	16:14	17:21	18:22	20:26	21:27	22:08	21:53	20:52	19:31	18:12	16:04	15:38
18	08:37	07:38	06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:52	07:59	08:46
	16:16	17:23	18:24	20:28	21:29	22:08	21:52	20:49	19:28	18:09	16:02	15:38
19	08:36	07:35	06:23	06:02	04:55	04:25	04:53	05:51	06:53	07:54	08:01	08:47
	16:18	17:25	18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:01	15:38
20	08:34	07:33	06:21	05:59	04:53	04:25	04:54	05:53	06:55	07:56	08:03	08:47
	16:20	17:28	18:28	20:32	21:33	22:09	21:49	20:44	19:23	18:04	15:59	15:39
21	08:33	07:30	06:18	05:57	04:52	04:25	04:56	05:55	06:57	07:59	08:05	08:48
	16:22	17:30	18:30	20:34	21:34	22:10	21:47	20:42	19:20	18:02	15:58	15:39
22	08:32	07:28	06:15	05:54	04:50	04:26	04:58	05:57	06:59	08:01	08:07	08:49
	16:24	17:32	18:32	20:36	21:36	22:10	21:46	20:39	19:18	17:59	15:56	15:40
23	08:30	07:26	06:13	05:52	04:48	04:26	04:59	05:59	07:01	08:03	08:09	08:49
	16:26	17:34	18:34	20:39	21:38	22:10	21:44	20:37	19:15	17:57	15:55	15:40
24	08:28	07:23	06:10	05:49	04:47	04:26	05:01	06:01	07:03	08:05	08:11	08:50
	16:28	17:37	18:36	20:41	21:40	22:10	21:43	20:34	19:12	17:55	15:53	15:41
25	08:27	07:21	06:07	05:47	04:45	04:27	05:03	06:03	07:05	08:07	08:13	08:50
	16:30	17:39	18:38	20:43	21:41	22:10	21:41	20:32	19:10	17:52	15:52	15:41
26	08:25	07:18	06:05	05:44	04:44	04:27	05:05	06:05	07:07	08:09	08:15	08:50
	16:32	17:41	18:40	20:45	21:43	22:10	21:39	20:29	19:07	17:50	15:51	15:42
27	08:24	07:16	06:02	05:42	04:42	04:28	05:06	06:07	07:09	08:11	08:17	08:50
	16:34	17:43	18:42	20:47	21:45	22:10	21:37	20:27	19:04	17:47	15:49	15:43
28	08:22	07:13	05:59	05:40	04:41	04:28	05:08	06:09	07:11	08:14	08:18	08:51
	16:37	17:45	18:45	20:49	21:46	22:10	21:35	20:24	19:02	17:45	15:48	15:44
29	08:20		06:57	05:37	04:40	04:29	05:10	06:11	07:13	08:16	08:20	08:51
	16:39		19:47	20:51	21:48	22:09	21:33	20:22	18:59	17:43	15:47	15:45
30	08:18		06:54	05:35	04:38	04:29	05:12	06:13	07:15	08:18	08:22	08:51
	16:41		19:49	20:53	21:49	22:09	21:31	20:19	18:56	17:40	15:46	15:46
31	08:16		06:51		04:37		05:14	06:15		07:20		08:50
	16:43		19:51		21:51		21:30	20:16		16:38		15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (46)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B22) 19:53	05:33 20:56	04:36 21:53
2	08:51 15:49	08:13 16:48	07:08 17:50	07:34 (B22) 19:55	05:30 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:32 (B22) 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:29 (B22) 19:59	06:41 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	07:01 17:56	07:26 (B22) 20:01	06:38 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	07:27 (B22) 20:03	06:36 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	07:26 (B22) 20:06	06:33 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	07:27 (B22) 20:08	06:30 21:10	04:29 22:01
9	08:47 16:00	09:24 (B14) 09:26 (B14)	07:58 17:03	07:28 (B22) 18:05	06:28 20:10	04:29 22:02
10	08:46 16:01	09:23 (B14) 09:27 (B14)	07:56 17:05	07:41 (B22) 18:07	20:10 21:14	22:02 22:03
11	08:45 16:03	09:22 (B14) 09:28 (B14)	07:54 17:08	07:38 (B22) 18:09	20:12 21:16	22:03 22:04
12	08:44 16:05	09:21 (B14) 09:29 (B14)	07:52 17:10	06:42 18:11	20:20 21:18	22:04 22:05
13	08:43 16:06	09:19 (B14) 09:30 (B14)	07:50 17:12	06:40 18:13	20:17 21:20	22:04 22:06
14	08:42 16:08	09:18 (B14) 09:31 (B14)	07:47 17:14	06:37 18:15	20:15 21:22	22:06 22:07
15	08:41 16:10	09:17 (B14) 09:32 (B14)	07:45 17:17	06:34 18:18	20:12 21:24	22:07 22:07
16	08:40 16:12	09:15 (B14) 09:32 (B14)	07:43 17:19	06:32 18:20	20:09 21:26	22:07 22:08
17	08:39 16:14	09:14 (B14) 09:33 (B14)	07:40 17:21	06:29 18:22	20:07 21:27	22:09 22:09
18	08:38 16:16	09:14 (B14) 09:33 (B14)	07:38 17:23	06:26 18:24	20:04 21:29	22:09 22:09
19	08:36 16:18	09:14 (B14) 09:33 (B14)	07:36 17:26	06:24 18:26	20:02 21:31	22:09 22:09
20	08:35 16:20	09:15 (B14) 09:34 (B14)	07:33 17:28	06:21 18:28	20:59 21:33	22:09 22:10
21	08:33 16:22	09:15 (B14) 09:34 (B14)	07:31 17:30	06:18 18:30	20:57 21:35	22:10 22:10
22	08:32 16:24	09:15 (B14) 09:33 (B14)	07:28 17:32	06:16 18:32	20:54 21:37	22:10 22:10
23	08:30 16:26	09:16 (B14) 09:33 (B14)	07:26 17:34	06:13 18:34	20:52 21:38	22:10 22:10
24	08:29 16:28	09:17 (B14) 09:34 (B14)	07:23 17:37	06:10 18:36	20:49 21:40	22:10 22:10
25	08:27 16:30	09:18 (B14) 09:33 (B14)	07:21 17:39	06:08 18:39	20:47 21:42	22:11 22:11
26	08:26 16:32	09:19 (B14) 09:32 (B14)	07:18 17:41	06:05 18:41	20:44 21:43	22:11 22:10
27	08:24 16:34	09:21 (B14) 09:31 (B14)	07:16 17:43	06:02 18:43	20:42 21:45	22:10 22:10
28	08:22 16:37	09:24 (B14) 09:28 (B14)	07:13 17:45	07:40 (B22) 07:41 (B22)	20:40 21:47	22:10 22:10
29	08:20 16:39		1	06:57 19:47	20:37 21:48	22:10 22:10
30	08:19 16:41			06:54 19:49	20:35 21:50	22:10 22:09
31	08:17 16:43			06:52 19:51	20:53 21:51	22:09 22:10
Potential sun hours	235	266	366	426	508	529
Total, worst case	265	1	130			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.60	0.62	0.62			
Total reduction	0.08	0.12	0.25			
Total, real	20	0	32			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (46)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November		December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54		07:23 16:36		08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51		07:25 16:34	6	09:10 (B14) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:10 (B22) 5	07:27 16:32		09:08 (B14) 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	08:06 (B22) 11	07:29 16:29	2	09:10 (B14) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	08:04 (B22) 14	07:31 16:27		08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:03 (B22) 16	07:34 16:25		08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:02 (B22) 17	07:36 16:23		08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:02 (B22) 18	07:38 16:21		08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:03 (B22) 17	07:40 16:19		08:37 15:39
10	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	08:05 (B22) 14	07:42 16:17		08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:07 (B22) 11	07:44 16:15		08:39 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:09 (B22) 8	07:47 16:13		08:40 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:11 (B22) 4	07:49 16:11		08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20		07:51 16:09	08:56 (B14) 4	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17		07:53 16:08	08:54 (B14) 10	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14		07:55 16:06	08:52 (B14) 13	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12		07:57 16:04	08:51 (B14) 15	08:46 15:38
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09		07:59 16:02	08:51 (B14) 17	08:46 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07		08:01 16:01	08:51 (B14) 17	08:47 15:38
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04		08:03 15:59	08:50 (B14) 18	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02		08:05 15:58	08:51 (B14) 19	08:49 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00		08:07 15:56	08:51 (B14) 19	08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57		08:09 15:55	08:51 (B14) 19	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55		08:11 15:53	08:51 (B14) 19	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52		08:13 15:52	08:51 (B14) 19	08:50 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50		08:15 15:51	08:54 (B14) 17	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48		08:17 15:49	08:56 (B14) 15	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45		08:19 15:48	08:58 (B14) 13	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43		08:21 15:47	09:00 (B14) 11	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41		08:23 15:46	09:02 (B14) 9	08:51 15:46
31	05:14 21:30	06:15 20:17		07:20 16:38				08:51 15:47
Potential sun hours	529	469	385	324		247		216
Total, worst case				135		254		12
Sun reduction				0.26		0.08		0.07
Oper. time red.				0.98		0.98		0.98
Wind dir. red.				0.62		0.60		0.60
Total reduction				0.16		0.05		0.04
Total, real				21		12		0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 2 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (67)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January		February		March		April	May	June
1	08:51		08:15		07:11	07:37 (B22)	06:49	05:33	04:36
	15:48		16:45		17:48	10 07:47 (B22)	19:53	20:56	21:53
2	08:51		08:13		07:08	07:34 (B22)	06:46	05:30	04:35
	15:49		16:48		17:50	13 07:47 (B22)	19:55	20:58	21:54
3	08:50		08:11		07:06	07:32 (B22)	06:44	05:28	04:34
	15:51		16:50		17:52	16 07:48 (B22)	19:57	21:00	21:55
4	08:50		08:09		07:03	07:31 (B22)	06:41	05:26	04:33
	15:52		16:52		17:54	16 07:47 (B22)	19:59	21:02	21:57
5	08:49		08:07		07:01	07:32 (B22)	06:38	05:24	04:32
	15:53		16:54		17:56	15 07:47 (B22)	20:01	21:04	21:58
6	08:49		08:05		06:58	07:32 (B22)	06:36	05:21	04:31
	15:55		16:56		17:58	14 07:46 (B22)	20:03	21:06	21:59
7	08:48		08:03		06:55	07:33 (B22)	06:33	05:19	04:30
	15:56		16:59		18:01	11 07:44 (B22)	20:06	21:08	22:00
8	08:48		08:01		06:53	07:35 (B22)	06:30	05:17	04:29
	15:58		17:01		18:03	5 07:40 (B22)	20:08	21:10	22:01
9	08:47		07:58		06:50		06:28	05:15	04:29
	16:00		17:03		18:05		20:10	21:12	22:02
10	08:46		07:56		06:48		06:25	05:13	04:28
	16:01		17:05		18:07		20:12	21:14	22:03
11	08:45		07:54		06:45		06:22	05:11	04:27
	16:03		17:08		18:09		20:14	21:16	22:04
12	08:44	09:21 (B14)	07:52		06:42		06:20	05:09	04:27
	16:05	1 09:22 (B14)	17:10		18:11		20:16	21:18	22:05
13	08:43	09:19 (B14)	07:50		06:40		06:17	05:07	04:26
	16:06	3 09:22 (B14)	17:12		18:13		20:18	21:20	22:06
14	08:42	09:18 (B14)	07:47		06:37		06:15	05:05	04:26
	16:08	6 09:24 (B14)	17:14		18:16		20:20	21:22	22:07
15	08:41	09:17 (B14)	07:45		06:34		06:12	05:03	04:26
	16:10	8 09:25 (B14)	17:17		18:18		20:22	21:24	22:07
16	08:40	09:15 (B14)	07:43		06:32		06:09	05:01	04:26
	16:12	10 09:25 (B14)	17:19		18:20		20:24	21:26	22:08
17	08:39	09:14 (B14)	07:40		06:29		06:07	04:59	04:25
	16:14	12 09:26 (B14)	17:21		18:22		20:26	21:27	22:09
18	08:38	09:12 (B14)	07:38		06:26		06:04	04:57	04:25
	16:16	14 09:26 (B14)	17:23		18:24		20:28	21:29	22:09
19	08:36	09:10 (B14)	07:36		06:24		06:02	04:55	04:25
	16:18	17 09:27 (B14)	17:26		18:26		20:31	21:31	22:09
20	08:35	09:10 (B14)	07:33		06:21		05:59	04:53	04:25
	16:20	18 09:28 (B14)	17:28		18:28		20:33	21:33	22:10
21	08:33	09:10 (B14)	07:31		06:18		05:57	04:52	04:25
	16:22	18 09:28 (B14)	17:30		18:30		20:35	21:35	22:10
22	08:32	09:10 (B14)	07:28		06:16		05:54	04:50	04:26
	16:24	18 09:28 (B14)	17:32		18:32		20:37	21:37	22:10
23	08:30	09:11 (B14)	07:26		06:13		05:52	04:48	04:26
	16:26	16 09:27 (B14)	17:34		18:34		20:39	21:38	22:10
24	08:29	09:12 (B14)	07:23		06:10		05:49	04:47	04:26
	16:28	16 09:28 (B14)	17:37		18:36		20:41	21:40	22:11
25	08:27	09:13 (B14)	07:21		06:08		05:47	04:45	04:26
	16:30	15 09:28 (B14)	17:39		18:39		20:43	21:42	22:11
26	08:26	09:14 (B14)	07:18		06:05		05:44	04:44	04:27
	16:32	13 09:27 (B14)	17:41		18:41		20:45	21:43	22:10
27	08:24	09:15 (B14)	07:16	07:42 (B22)	06:02		05:42	04:42	04:27
	16:34	11 09:26 (B14)	17:43	3 07:45 (B22)	18:43		20:47	21:45	22:10
28	08:22	09:17 (B14)	07:13	07:40 (B22)	06:00		05:40	04:41	04:28
	16:37	8 09:25 (B14)	17:45	7 07:47 (B22)	18:45		20:49	21:47	22:10
29	08:20				06:57		05:37	04:40	04:29
	16:39				19:47		20:51	21:48	22:10
30	08:19				06:54		05:35	04:38	04:29
	16:41				19:49		20:53	21:50	22:10
31	08:17				06:52			04:37	
	16:43				19:51			21:51	
Potential sun hours	235		266		366		426	508	529
Total, worst case	204		10		100				
Sun reduction	0.13		0.20		0.41				
Oper. time red.	0.98		0.98		0.98				
Wind dir. red.	0.59		0.62		0.62				
Total reduction	0.08		0.12		0.25				
Total, real	16		1		25				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 2 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (67)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54		07:23 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51		07:25 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48		07:27 16:32	08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46		07:29 16:29	08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43		07:31 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	9	08:10 (B22) 08:19 (B22)	07:34 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	12	08:08 (B22) 08:20 (B22)	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	15	08:07 (B22) 08:22 (B22)	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	16	08:06 (B22) 08:22 (B22)	07:40 16:19
10	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	16	08:06 (B22) 08:22 (B22)	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	15	08:07 (B22) 08:22 (B22)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	12	08:09 (B22) 08:21 (B22)	07:47 16:13
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	9	08:11 (B22) 08:20 (B22)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	5	08:14 (B22) 08:19 (B22)	07:51 16:09
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	1	08:16 (B22) 08:17 (B22)	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15		07:55 16:06	08:11 15:58
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12		07:57 16:04	08:13 15:56
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09		07:59 16:03	08:15 15:54
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07		08:01 16:01	08:17 15:52
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04		08:03 15:59	08:19 15:50
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02		08:05 15:58	08:21 15:49
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00		08:07 15:56	08:23 15:47
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57		08:09 15:55	08:25 15:46
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55		08:11 15:53	08:27 15:44
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52		08:13 15:52	08:29 15:43
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 16:50		08:15 15:51	08:31 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48		08:17 15:50	08:34 15:41
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45		08:19 15:48	08:36 15:40
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43		08:21 15:47	08:38 15:39
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:41		08:23 15:46	08:40 15:38
31	05:14 21:30	06:15 20:17		08:20 16:38			08:42 15:37
Potential sun hours	529	469	385	324		247	216
Total, worst case				110		205	
Sun reduction				0.26		0.08	
Oper. time red.				0.98		0.98	
Wind dir. red.				0.62		0.59	
Total reduction				0.16		0.05	
Total, real				17		10	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 4 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (44)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B22) 19:53	05:33 20:56	04:36 21:53
2	08:51 15:49	08:13 16:48	07:08 17:50	07:34 (B22) 19:55	05:30 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:32 (B22) 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:29 (B22) 19:59	05:26 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	07:01 17:56	07:28 (B22) 20:01	05:24 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	07:28 (B22) 20:03	05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	07:28 (B22) 20:06	05:19 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	07:28 (B22) 20:08	05:17 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	07:31 (B22) 20:10	05:15 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05	06:48 18:07	07:38 (B22) 20:12	05:13 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06
14	08:42 16:08	09:18 (B14) 09:19 (B14)	07:47 17:14	06:37 18:16	05:05 21:22	04:26 22:07
15	08:41 16:10	09:17 (B14) 09:21 (B14)	07:45 17:17	06:34 18:18	05:03 21:24	04:26 22:07
16	08:40 16:12	09:15 (B14) 09:21 (B14)	07:43 17:19	06:32 18:20	05:01 21:26	04:26 22:08
17	08:39 16:14	09:14 (B14) 09:23 (B14)	07:40 17:21	06:29 18:22	04:59 21:27	04:25 22:09
18	08:38 16:16	09:12 (B14) 09:23 (B14)	07:38 17:23	06:26 18:24	04:57 21:29	04:25 22:09
19	08:36 16:18	09:10 (B14) 09:23 (B14)	07:36 17:26	06:24 18:26	04:55 21:31	04:25 22:09
20	08:35 16:20	09:09 (B14) 09:24 (B14)	07:33 17:28	06:21 18:28	04:53 21:33	04:25 22:10
21	08:33 16:22	09:07 (B14) 09:25 (B14)	07:31 17:30	06:18 18:30	04:52 21:35	04:25 22:10
22	08:32 16:24	09:07 (B14) 09:25 (B14)	07:28 17:32	06:16 18:32	04:50 21:37	04:26 22:10
23	08:30 16:26	09:07 (B14) 09:25 (B14)	07:26 17:34	06:13 18:34	04:48 21:38	04:26 22:10
24	08:29 16:28	09:08 (B14) 09:26 (B14)	07:23 17:37	06:10 18:36	04:47 21:40	04:26 22:11
25	08:27 16:30	09:09 (B14) 09:25 (B14)	07:21 17:39	06:08 18:39	04:45 21:42	04:26 22:11
26	08:26 16:32	09:10 (B14) 09:25 (B14)	07:18 17:41	06:05 18:41	04:44 21:43	04:27 22:10
27	08:24 16:34	09:10 (B14) 09:25 (B14)	07:16 17:43	06:02 18:43	04:42 21:45	04:27 22:10
28	08:22 16:37	09:12 (B14) 09:24 (B14)	07:13 17:45	07:40 (B22) 07:42 (B22)	05:40 20:49	04:41 21:47
29	08:20 16:39	09:13 (B14) 09:23 (B14)		06:57 19:47	05:37 20:51	04:40 21:48
30	08:19 16:41	09:16 (B14) 09:20 (B14)		06:54 19:49	05:35 21:50	04:38 21:50
31	08:17 16:43			06:52 19:51	04:37 21:51	04:29 22:10
Potential sun hours	235	266	366	426	508	529
Total, worst case	203	2	106			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.59	0.62	0.62			
Total reduction	0.08	0.12	0.25			
Total, real	15	0	26			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 4 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (44)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November	December
1	04:30	05:16	06:17	07:17		07:23	08:24
	22:09	21:28	20:14	18:54		16:36	15:45
2	04:31	05:18	06:19	07:19		07:25	08:26
	22:09	21:26	20:11	18:51		16:34	15:44
3	04:32	05:20	06:21	07:21		07:27	08:28
	22:08	21:24	20:09	18:48		16:32	15:43
4	04:33	05:22	06:23	07:23	08:10 (B22)	07:29	08:29
	22:07	21:22	20:06	18:46	4 08:14 (B22)	16:29	15:42
5	04:34	05:23	06:25	07:26	08:06 (B22)	07:31	08:31
	22:07	21:20	20:04	18:43	10 08:16 (B22)	16:27	15:42
6	04:35	05:25	06:27	07:28	08:04 (B22)	07:34	08:32
	22:06	21:17	20:01	18:40	14 08:18 (B22)	16:25	15:41
7	04:36	05:27	06:29	07:30	08:03 (B22)	07:36	08:34
	22:05	21:15	19:58	18:38	15 08:18 (B22)	16:23	15:40
8	04:37	05:29	06:31	07:32	08:03 (B22)	07:38	08:35
	22:04	21:13	19:56	18:35	16 08:19 (B22)	16:21	15:40
9	04:38	05:31	06:33	07:34	08:03 (B22)	07:40	08:37
	22:03	21:11	19:53	18:33	16 08:19 (B22)	16:19	15:39
10	04:39	05:33	06:35	07:36	08:05 (B22)	07:42	08:38
	22:02	21:09	19:50	18:30	14 08:19 (B22)	16:17	15:39
11	04:41	05:35	06:37	07:38	08:07 (B22)	07:44	08:39
	22:01	21:06	19:48	18:27	11 08:18 (B22)	16:15	15:39
12	04:42	05:37	06:39	07:40	08:09 (B22)	07:47	08:41
	22:00	21:04	19:45	18:25	8 08:17 (B22)	16:13	4 08:51 (B14) 15:38
13	04:43	05:39	06:41	07:42	08:11 (B22)	07:49	08:45 (B14) 08:42
	21:59	21:02	19:42	18:22	4 08:15 (B22)	16:11	10 08:55 (B14) 15:38
14	04:45	05:41	06:43	07:44		07:51	08:43 (B14) 08:43
	21:58	20:59	19:39	18:20		16:09	13 08:56 (B14) 15:38
15	04:46	05:43	06:45	07:46		07:53	08:43 (B14) 08:44
	21:57	20:57	19:37	18:17		16:08	15 08:58 (B14) 15:38
16	04:48	05:45	06:47	07:48		07:55	08:43 (B14) 08:45
	21:55	20:54	19:34	18:15		16:06	15 08:58 (B14) 15:38
17	04:49	05:47	06:49	07:50		07:57	08:42 (B14) 08:46
	21:54	20:52	19:31	18:12		16:04	16 08:58 (B14) 15:38
18	04:51	05:49	06:51	07:53		07:59	08:42 (B14) 08:46
	21:53	20:50	19:29	18:09		16:03	18 09:00 (B14) 15:38
19	04:53	05:51	06:53	07:55		08:01	08:42 (B14) 08:47
	21:51	20:47	19:26	18:07		16:01	18 09:00 (B14) 15:38
20	04:54	05:53	06:55	07:57		08:03	08:42 (B14) 08:48
	21:50	20:45	19:23	18:04		15:59	18 09:00 (B14) 15:39
21	04:56	05:55	06:57	07:59		08:05	08:43 (B14) 08:49
	21:48	20:42	19:21	18:02		15:58	18 09:01 (B14) 15:39
22	04:58	05:57	06:59	08:01		08:07	08:45 (B14) 08:49
	21:46	20:40	19:18	18:00		15:56	15 09:00 (B14) 15:40
23	04:59	05:59	07:01	08:03		08:09	08:47 (B14) 08:50
	21:45	20:37	19:15	17:57		15:55	13 09:00 (B14) 15:40
24	05:01	06:01	07:03	08:05		08:11	08:49 (B14) 08:50
	21:43	20:35	19:12	17:55		15:53	11 09:00 (B14) 15:41
25	05:03	06:03	07:05	07:07		08:13	08:51 (B14) 08:50
	21:41	20:32	19:10	16:52		15:52	9 09:00 (B14) 15:41
26	05:05	06:05	07:07	07:10		08:15	08:54 (B14) 08:51
	21:39	20:30	19:07	16:50		15:51	6 09:00 (B14) 15:42
27	05:06	06:07	07:09	07:12		08:17	08:56 (B14) 08:51
	21:38	20:27	19:04	16:48		15:50	4 09:00 (B14) 15:43
28	05:08	06:09	07:11	07:14		08:19	08:58 (B14) 08:51
	21:36	20:24	19:02	16:45		15:48	1 08:59 (B14) 15:44
29	05:10	06:11	07:13	07:16		08:21	08:51
	21:34	20:22	18:59	16:43		15:47	15:45
30	05:12	06:13	07:15	07:18		08:23	08:51
	21:32	20:19	18:56	16:41		15:46	15:46
31	05:14	06:15		07:20			08:51
	21:30	20:17		16:38			15:47
Potential sun hours	529	469	385	324		247	216
Total, worst case				112		204	
Sun reduction				0.26		0.08	
Oper. time red.				0.98		0.98	
Wind dir. red.				0.62		0.59	
Total reduction				0.16		0.05	
Total, real				17		10	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 5 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (131)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B22) 19:53	06:49 20:56	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 17:50	07:08 18:00	07:34 (B22) 19:55	06:46 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 18:51	07:19 16:34	08:26 15:44
3	08:50 15:51	08:11 17:52	07:06 18:02	07:32 (B22) 19:57	06:44 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	07:21 16:32	08:28 15:43
4	08:50 15:52	08:09 17:54	07:03 18:04	07:29 (B22) 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	06:23 18:46	07:23 16:29	08:29 15:42
5	08:49 15:53	08:07 17:56	07:01 18:05	07:27 (B22) 19:59	06:38 21:04	05:24 21:58	04:32 22:07	04:34 21:20	05:23 20:04	06:25 18:43	07:26 16:27	08:31 15:42
6	08:49 15:55	08:05 17:58	06:58 18:08	07:25 (B22) 19:59	06:36 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:28 16:25	08:32 15:41
7	08:48 15:56	08:03 18:01	06:55 18:15	07:25 (B22) 19:59	06:33 21:08	05:19 22:00	04:30 22:05	04:36 21:15	05:27 20:01	06:29 18:38	07:30 16:23	08:34 15:40
8	08:48 15:58	08:01 18:03	06:53 18:13	07:26 (B22) 19:59	06:30 21:10	05:17 22:01	04:29 22:04	04:37 21:13	05:29 20:01	06:31 18:35	07:32 16:21	08:35 15:40
9	08:47 16:00	07:58 18:05	06:50 18:11	07:27 (B22) 19:59	06:28 21:12	05:15 22:02	04:29 22:03	04:38 21:11	05:31 20:01	06:33 18:33	07:34 16:19	08:37 15:39
10	08:46 16:01	07:56 18:07	06:48 18:14	07:30 (B22) 19:59	06:25 21:14	05:13 22:03	04:28 22:02	04:39 21:09	05:33 20:01	06:35 18:30	07:36 16:17	08:38 15:39
11	08:45 16:03	07:54 18:09	06:45 18:16	07:34 (B22) 19:59	06:22 21:16	05:11 22:04	04:27 22:01	04:41 21:06	05:35 20:01	06:37 18:27	07:38 16:15	08:43 (B14) 15:39
12	08:44 16:05	07:52 18:11	06:42 18:18		06:20 21:18	05:09 22:05	04:27 22:00	04:42 21:04	05:37 20:01	06:39 18:25	07:40 16:13	08:40 (B14) 15:38
13	08:43 16:06	07:50 18:13	06:40 18:16		06:17 21:20	05:07 22:06	04:26 21:59	04:43 21:02	05:39 20:01	06:41 18:22	07:42 16:11	08:40 (B14) 15:38
14	08:42 16:08	07:47 18:14	06:37 18:16		06:15 21:22	05:05 22:07	04:26 21:58	04:45 20:59	05:41 20:01	06:43 18:20	07:44 16:09	08:39 (B14) 15:38
15	08:41 16:10	07:45 18:17	06:34 18:18		06:12 21:24	05:03 22:07	04:26 21:57	04:46 20:57	05:43 20:01	06:45 18:17	07:46 16:08	08:39 (B14) 15:38
16	08:40 16:12	09:15 (B14) 18:16	07:43 18:20		06:09 21:26	05:01 22:08	04:26 21:55	04:48 20:54	05:45 20:01	06:47 18:15	07:48 16:06	08:38 (B14) 15:38
17	08:39 16:14	09:14 (B14) 18:18	07:40 18:22		06:07 21:27	04:59 22:09	04:25 21:54	04:49 20:52	05:47 20:01	06:49 18:12	07:50 16:04	08:38 (B14) 15:38
18	08:38 16:16	09:12 (B14) 18:19	07:38 18:24		06:04 21:29	04:57 22:09	04:25 21:53	04:51 20:50	05:49 20:01	06:51 18:09	07:53 16:03	08:37 (B14) 15:38
19	08:36 16:18	09:10 (B14) 18:20	07:36 18:26		06:02 21:31	04:55 22:09	04:25 21:51	04:53 20:47	05:51 20:01	06:53 18:07	07:55 16:01	08:36 (B14) 15:38
20	08:35 16:20	09:09 (B14) 18:21	07:33 18:28		05:59 21:33	04:53 22:10	04:25 21:50	04:54 20:45	05:53 20:01	06:55 18:04	07:57 15:59	08:35 (B14) 15:39
21	08:33 16:22	09:07 (B14) 18:22	07:31 18:30		05:57 21:35	04:52 22:10	04:25 21:48	04:56 20:42	05:55 20:01	06:57 18:02	07:59 15:58	08:34 (B14) 15:39
22	08:32 16:24	09:05 (B14) 18:23	07:28 18:32		05:54 21:37	04:50 22:10	04:26 21:46	04:58 20:40	05:57 20:01	06:59 18:00	08:01 15:56	08:33 (B14) 15:40
23	08:30 16:26	09:04 (B14) 18:24	07:26 18:34		05:52 21:38	04:48 22:10	04:26 21:45	04:59 20:37	05:59 20:01	07:01 17:57	08:03 15:55	08:32 (B14) 15:40
24	08:29 16:28	09:02 (B14) 18:25	07:23 18:36		05:49 21:40	04:47 22:11	04:26 21:43	05:01 20:35	06:01 20:01	07:03 17:55	08:05 15:53	08:31 (B14) 15:41
25	08:27 16:30	09:00 (B14) 18:26	07:21 18:39		05:47 21:42	04:45 22:11	04:26 21:41	05:03 20:32	06:03 20:01	07:05 17:52	08:07 15:52	08:30 (B14) 15:41
26	08:26 16:32	08:58 (B14) 18:27	07:18 18:41		05:44 21:43	04:44 22:10	04:27 21:39	05:05 20:30	06:05 20:01	07:07 17:50	08:09 15:51	08:29 (B14) 15:42
27	08:24 16:34	08:56 (B14) 18:28	07:16 18:43		05:42 21:45	04:42 22:10	04:27 21:38	05:06 20:27	06:07 20:01	07:09 17:48	08:11 15:50	08:28 (B14) 15:43
28	08:22 16:37	08:54 (B14) 18:29	07:13 18:45		05:40 21:47	04:41 22:10	04:28 21:36	05:08 20:24	06:09 20:01	07:11 17:46	08:13 15:48	08:27 (B14) 15:44
29	08:20 16:39	08:52 (B14) 18:30	07:11 18:47		05:37 21:48	04:40 22:10	04:29 21:34	05:10 20:22	06:11 20:01	07:13 17:43	08:15 15:47	08:26 (B14) 15:45
30	08:19 16:41	08:50 (B14) 18:31	07:10 18:48		05:35 21:50	04:38 22:10	04:29 21:32	05:12 20:19	06:13 20:01	07:15 17:41	08:17 15:46	08:25 (B14) 15:46
31	08:17 16:43	08:48 (B14) 18:32	07:09 18:49		05:33 21:51	04:36 22:10	04:29 21:30	05:14 20:17	06:15 20:01	07:17 17:38	08:19 15:45	08:24 (B14) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	187			103						103	190	
Sun reduction	0.13			0.41						0.26	0.08	
Oper. time red.	0.98			0.98						0.98	0.98	
Wind dir. red.	0.59			0.62						0.62	0.59	
Total reduction	0.08			0.25						0.15	0.05	
Total, real	14			25						16	9	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 7 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (87)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B22) 19:53	06:49 20:56	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 17:50	07:08 18:00	07:34 (B22) 19:55	06:46 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 18:51	07:19 16:34	08:26 15:44
3	08:50 15:51	08:11 17:52	07:06 18:01	07:32 (B22) 19:57	06:44 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	07:21 16:32	08:28 15:43
4	08:50 15:52	08:09 17:54	07:03 18:04	07:29 (B22) 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	06:23 18:46	07:23 16:29	08:29 15:42
5	08:49 15:53	08:07 17:56	07:01 18:06	07:27 (B22) 19:59	06:38 21:04	05:24 21:58	04:32 22:07	04:34 21:20	05:23 20:04	06:25 18:43	07:26 16:27	08:31 15:42
6	08:49 15:55	08:05 17:58	06:58 18:09	07:26 (B22) 19:59	06:36 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:28 16:25	08:32 15:41
7	08:48 15:56	08:03 18:01	06:55 18:15	07:26 (B22) 19:59	06:33 21:08	05:19 22:00	04:30 22:05	04:36 21:15	05:27 20:01	06:29 18:38	07:30 16:23	08:34 15:40
8	08:48 15:58	08:01 18:03	06:53 18:18	07:26 (B22) 19:59	06:30 21:10	05:17 22:01	04:29 22:04	04:37 21:13	05:29 20:01	06:31 18:35	07:32 16:21	08:35 15:40
9	08:47 16:00	07:58 18:05	06:50 18:21	07:28 (B22) 19:59	06:28 21:12	05:15 22:02	04:29 22:03	04:38 21:11	05:31 20:01	06:33 18:33	07:34 16:19	08:37 15:39
10	08:46 16:01	07:56 18:07	06:48 18:24	07:31 (B22) 19:59	06:25 21:14	05:13 22:03	04:28 22:02	04:39 21:09	05:33 20:01	06:35 18:30	07:36 16:17	08:38 15:39
11	08:45 16:03	07:54 18:09	06:45 18:26	07:35 (B22) 19:59	06:22 21:16	05:11 22:04	04:27 22:01	04:41 21:06	05:35 20:01	06:37 18:27	07:38 16:15	08:39 15:39
12	08:44 16:05	07:52 18:11	06:42 18:31	07:35 (B22) 19:59	06:20 21:18	05:09 22:05	04:27 22:00	04:42 21:04	05:37 20:01	06:39 18:25	07:40 16:13	08:41 15:38
13	08:43 16:06	07:50 18:13	06:40 18:36	07:35 (B22) 19:59	06:17 21:20	05:07 22:06	04:26 21:59	04:43 21:02	05:39 20:01	06:41 18:22	07:42 16:11	08:42 15:38
14	08:42 16:08	07:47 18:14	06:37 18:41	07:35 (B22) 19:59	06:15 21:22	05:05 22:07	04:26 21:58	04:45 20:59	05:41 20:01	06:43 18:20	07:44 16:09	08:43 15:38
15	08:41 16:10	07:45 18:17	06:34 18:48	07:35 (B22) 19:59	06:12 21:24	05:03 22:07	04:26 21:57	04:46 20:57	05:43 20:01	06:45 18:17	07:46 16:08	08:44 15:38
16	08:40 16:12	07:43 18:19	06:32 18:20	07:35 (B22) 19:59	06:09 21:26	05:01 22:08	04:26 21:55	04:48 20:54	05:45 20:01	06:47 18:15	07:48 16:06	08:45 15:38
17	08:39 16:14	07:40 18:21	06:29 18:22	07:35 (B22) 19:59	06:07 21:27	04:59 22:09	04:25 21:54	04:49 20:52	05:47 20:01	06:49 18:12	07:50 16:04	08:46 15:38
18	08:38 16:16	07:38 18:23	06:26 18:24	07:35 (B22) 19:59	06:04 21:29	04:57 22:09	04:25 21:53	04:51 20:50	05:49 20:01	06:51 18:09	07:53 16:03	08:47 15:38
19	08:36 16:18	07:36 18:26	06:24 18:26	07:35 (B22) 19:59	06:02 21:31	04:55 22:09	04:25 21:51	04:53 20:47	05:51 20:01	06:53 18:07	07:55 16:01	08:48 15:38
20	08:35 16:20	07:33 18:28	06:21 18:28	07:35 (B22) 19:59	05:59 21:33	04:53 22:10	04:25 21:50	04:54 20:45	05:53 20:01	06:55 18:04	07:57 15:59	08:49 15:39
21	08:33 16:22	07:31 18:30	06:18 18:30	07:35 (B22) 19:59	05:57 21:35	04:52 22:10	04:25 21:48	04:56 20:42	05:55 20:01	06:57 18:02	07:59 15:58	08:50 15:39
22	08:32 16:24	07:28 18:32	06:16 18:32	07:35 (B22) 19:59	05:54 21:37	04:50 22:10	04:26 21:46	04:58 20:40	05:57 20:01	06:59 18:00	08:01 15:56	08:51 15:40
23	08:30 16:26	07:26 18:34	06:13 18:34	07:35 (B22) 19:59	05:52 21:38	04:48 22:10	04:26 21:45	04:59 20:37	05:59 20:01	07:01 17:57	08:03 15:53	08:52 15:40
24	08:29 16:28	07:23 18:36	06:10 18:36	07:35 (B22) 19:59	05:49 21:40	04:47 22:11	04:26 21:43	05:01 20:35	06:01 20:01	07:03 17:55	08:05 15:53	08:53 15:41
25	08:27 16:30	07:21 18:39	06:08 18:39	07:35 (B22) 19:59	05:47 21:42	04:45 22:11	04:26 21:41	05:03 20:32	06:03 20:01	07:05 16:52	08:07 15:52	08:54 15:41
26	08:26 16:32	07:18 18:41	06:05 18:41	07:35 (B22) 19:59	05:44 21:43	04:44 22:10	04:27 21:39	05:05 20:30	06:05 20:01	07:07 16:50	08:10 15:51	08:55 15:42
27	08:24 16:34	07:16 18:43	06:02 18:43	07:35 (B22) 19:59	05:42 21:45	04:42 22:10	04:27 21:38	05:06 20:27	06:07 20:01	07:09 16:48	08:12 15:50	08:56 15:43
28	08:22 16:37	07:13 18:45	06:00 18:45	07:35 (B22) 19:59	05:40 21:47	04:41 22:10	04:28 21:36	05:08 20:24	06:09 20:01	07:11 16:45	08:14 15:48	08:58 15:44
29	08:20 16:39	07:11 19:47	06:57 19:47	07:35 (B22) 19:59	05:37 21:48	04:40 22:10	04:29 21:34	05:10 20:22	06:11 20:01	07:13 16:43	08:16 15:47	08:61 15:45
30	08:19 16:41	07:09 19:49	06:54 19:49	07:35 (B22) 19:59	05:35 21:50	04:38 22:10	04:29 21:32	05:12 20:19	06:13 20:01	07:15 16:41	08:18 15:46	08:62 15:46
31	08:17 16:43	07:06 19:51	06:52 19:51	07:35 (B22) 19:59	05:31 21:51	04:37 22:10	04:27 21:30	05:14 20:17	06:15 20:01	07:20 16:38	08:21 15:47	08:63 15:47
Potential sun hours	235	266	366		426	508	529	469	385	324	247	216
Total, worst case	208			113						110	208	
Sun reduction	0.13			0.41						0.26	0.08	
Oper. time red.	0.98			0.98						0.98	0.98	
Wind dir. red.	0.59			0.62						0.62	0.59	
Total reduction	0.08			0.25						0.16	0.05	
Total, real	16			28						17	10	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Neretas 8 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (90)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:03 (B22) 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	08:00 (B22) 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:59 (B22) 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:57 (B22) 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:57 (B22) 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:56 (B22) 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 20:01	07:30 18:38	07:58 (B22) 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 20:06	07:32 18:35	08:01 (B22) 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 20:03	07:34 18:33	08:03 (B22) 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 20:00	07:36 18:30	08:05 (B22) 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 20:06	07:38 18:27	08:07 (B22) 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 20:04	07:40 18:25	08:09 (B22) 16:13	08:40 15:38
13	08:43 16:06	07:51 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 20:02	07:42 18:22	08:11 (B22) 16:11	08:42 15:38
14	08:42 16:08	07:50 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:12 (B22) 16:09	08:43 15:38
15	08:41 16:10	07:49 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:13 (B22) 16:08	08:44 15:38
16	08:40 16:12	07:48 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	08:14 (B22) 16:06	08:45 15:38
17	08:39 16:14	07:47 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:15 (B22) 16:04	08:46 15:38
18	08:38 16:16	07:46 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	08:16 (B22) 16:03	08:47 15:38
19	08:36 16:18	07:44 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:17 (B22) 16:01	08:48 15:38
20	08:35 16:20	07:43 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:18 (B22) 15:59	08:49 15:39
21	08:33 16:22	07:41 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:19 (B22) 15:58	08:50 15:39
22	08:32 16:24	07:40 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:20 (B22) 15:56	08:51 15:40
23	08:30 16:26	07:38 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:21 (B22) 15:55	08:52 15:40
24	08:29 16:28	07:36 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:22 (B22) 15:53	08:53 15:41
25	08:27 16:30	07:34 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:23 (B22) 15:52	08:54 15:41
26	08:26 16:32	07:32 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:24 (B22) 15:51	08:55 15:42
27	08:24 16:34	07:30 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:25 (B22) 15:49	08:56 15:43
28	08:22 16:37	07:28 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:26 (B22) 15:48	08:57 15:44
29	08:20 16:39	07:26 17:47	05:57 18:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:28 (B22) 15:47	08:58 15:45
30	08:19 16:41	07:24 17:49	05:54 18:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:29 (B22) 15:46	08:59 15:46
31	08:17 16:43	07:22 17:51	05:52 18:51	05:33 20:54	04:37 21:51	04:31 22:10	05:14 21:30	06:15 20:17	07:20 18:58	08:21 17:38	08:31 (B22) 15:45	09:00 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	257			134						133	259	
Sun reduction	0.13			0.41						0.26	0.08	
Oper. time red.	0.98			0.98						0.98	0.98	
Wind dir. red.	0.59			0.62						0.62	0.59	
Total reduction	0.08			0.25						0.16	0.05	
Total, real	20		33							21	12	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Mezares\_AB211223

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 04:58/4.0.531

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ogu purvs - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (103)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:07 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:41 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:17		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ozoli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (1)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:12	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ozolmuiža - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (148)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:05 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ozolsalina - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (106)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:58	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:34 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:21	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:29	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:34	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: OŠ ini (kad. apz. 76860060068001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (218)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: OŠ ini (kad. apz. 76860060068006) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (223)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Paegli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (41)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Palejas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (188)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	07:55 (B14) 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	07:57 (B14) 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	07:57 (B14) 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	07:57 (B14) 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	07:57 (B14) 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	07:57 (B14) 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	07:57 (B14) 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	07:57 (B14) 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	07:57 (B14) 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	07:57 (B14) 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	07:57 (B14) 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	07:57 (B14) 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	07:57 (B14) 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	07:57 (B14) 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	07:57 (B14) 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	07:57 (B14) 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	07:57 (B14) 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	07:57 (B14) 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	07:57 (B14) 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	07:57 (B14) 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	07:57 (B14) 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	07:57 (B14) 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	07:57 (B14) 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	07:57 (B14) 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 16:52	08:13 15:52	07:57 (B14) 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	07:57 (B14) 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:17 15:50	07:57 (B14) 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 16:45	08:19 15:48	07:57 (B14) 15:44
29	08:20 16:39	07:11 17:49	06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	07:57 (B14) 15:45
30	08:19 16:41	07:11 17:51	06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:41	08:23 15:46	07:57 (B14) 15:46
31	08:17 16:43	07:11 17:51	06:52 19:51	05:37 21:51	04:37 21:51	04:27 22:10	05:14 21:30	06:15 20:17	07:21 16:38	08:18 15:58	08:24 15:47	07:57 (B14) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		115								118	2	
Sun reduction		0.20								0.26	0.08	
Oper. time red.		0.98								0.98	0.98	
Wind dir. red.		0.62								0.62	0.62	
Total reduction		0.12								0.16	0.05	
Total, real		14								19	0	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Pilskalni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (32)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:40 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Pludmales - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (118)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

January		February		March		April		May		June	
1	08:51	14:34 (B24)	08:15	09:09 (B11)	07:11	07:52 (B18)	06:49	07:18 (B15)	05:32	04:36	05:30 (B4)
2	15:48	14:50 (B24)	16:45	09:22 (B11)	17:47	16:55 (B22)	19:53	07:41 (B15)	20:55	21:52	05:54 (B4)
3	08:50	14:34 (B24)	08:13	09:12 (B11)	07:08	07:52 (B18)	06:46	07:17 (B15)	05:30	04:35	05:29 (B4)
4	15:49	14:50 (B24)	16:47	09:20 (B11)	17:50	16:54 (B22)	19:55	07:41 (B15)	20:57	21:54	05:55 (B4)
5	08:50	14:35 (B24)	08:11		07:06	07:53 (B18)	06:43	07:16 (B15)	05:28	04:34	05:29 (B4)
6	15:51	14:51 (B24)	16:50		17:52	16:53 (B22)	19:57	07:41 (B15)	20:59	21:55	05:56 (B4)
7	08:50	14:36 (B24)	08:09		07:03	07:53 (B18)	06:41	07:16 (B15)	05:26	04:33	05:28 (B4)
8	15:52	14:50 (B24)	16:52		17:54	16:51 (B22)	19:59	07:41 (B15)	21:01	21:56	05:57 (B4)
9	08:49	14:37 (B24)	08:07		07:00	07:54 (B18)	06:38	07:15 (B15)	05:23	04:32	05:28 (B4)
10	15:53	14:51 (B24)	16:54		17:56	16:47 (B22)	20:01	07:41 (B15)	21:04	21:58	05:58 (B4)
11	08:49	14:38 (B24)	08:05		06:58	07:56 (B18)	06:35	07:15 (B15)	05:21	04:31	05:28 (B4)
12	15:55	14:51 (B24)	16:56		17:58	08:10 (B18)	20:03	07:41 (B15)	21:06	21:59	05:59 (B4)
13	08:48	14:39 (B24)	08:03		06:55	07:58 (B18)	06:33	07:15 (B15)	05:19	04:30	05:27 (B4)
14	15:56	14:51 (B24)	16:58		18:00	08:07 (B18)	20:05	07:40 (B15)	21:08	22:00	05:59 (B4)
15	08:47	14:40 (B24)	08:00		06:53		06:30	07:15 (B15)	05:17	04:29	05:27 (B4)
16	15:58	14:51 (B24)	17:01		18:03		20:07	07:39 (B15)	21:10	22:01	06:00 (B4)
17	08:47	14:41 (B24)	07:58		06:50	07:16 (B23)	06:27	07:16 (B15)	05:15	04:28	05:27 (B4)
18	15:59	14:50 (B24)	17:03		18:05	07:17 (B23)	20:10	07:39 (B15)	21:12	22:02	06:00 (B4)
19	08:46	14:43 (B24)	07:56		06:47	07:13 (B23)	06:25	07:16 (B15)	05:12	04:28	05:27 (B4)
20	16:01	14:49 (B24)	17:05		18:07	07:19 (B23)	20:12	07:37 (B15)	21:14	22:03	06:01 (B4)
21	08:45		07:54		06:45	07:10 (B23)	06:22	07:17 (B15)	05:10	04:27	05:26 (B4)
22	16:03		17:07		18:09	07:19 (B23)	20:14	07:36 (B15)	21:16	22:04	06:01 (B4)
23	08:44		07:52		06:42	07:07 (B23)	06:20	07:18 (B15)	05:08	04:27	05:26 (B4)
24	16:04		17:10		18:11	07:19 (B23)	20:16	07:33 (B15)	21:18	22:05	06:02 (B4)
25	08:43		07:49		06:39	07:05 (B23)	06:17	07:21 (B15)	05:06	04:26	05:27 (B4)
26	16:06		17:12		18:13	07:20 (B23)	20:18	07:31 (B15)	21:20	22:06	06:03 (B4)
27	08:42		07:47		06:37	07:03 (B23)	06:14		05:04	04:26	05:26 (B4)
28	16:08		17:14		18:15	07:19 (B23)	20:20		21:22	22:07	06:02 (B4)
29	08:41		07:45		06:34	07:03 (B23)	06:12		05:02	04:26	05:26 (B4)
30	16:10		17:16		18:17	07:19 (B23)	20:22		21:23	22:07	06:03 (B4)
31	08:40	09:15 (B11)	07:42		06:31	07:04 (B23)	06:09		05:00	04:25	05:26 (B4)
32	16:12	09:16 (B11)	17:19		18:19	07:18 (B23)	20:24		21:25	22:08	06:03 (B4)
33	08:39	09:13 (B11)	07:40	16:43 (B22)	06:29	07:04 (B23)	06:07		04:59	04:25	05:27 (B4)
34	16:14	09:17 (B11)	17:21	16:48 (B22)	18:22	07:17 (B23)	20:26		21:27	22:08	06:04 (B4)
35	08:37	09:12 (B11)	07:38	16:39 (B22)	06:26	07:05 (B23)	06:04		04:57	04:25	05:27 (B4)
36	16:16	09:19 (B11)	17:23	16:51 (B22)	18:24	07:14 (B23)	20:28		21:29	22:09	06:04 (B4)
37	08:36	09:10 (B11)	07:35	16:37 (B22)	06:23		06:02		04:55	04:25	05:27 (B4)
38	16:18	09:20 (B11)	17:25	16:54 (B22)	18:26		20:30		21:31	22:09	06:04 (B4)
39	08:35	09:09 (B11)	07:33	08:01 (B18)	06:21		05:59		04:53	04:25	05:27 (B4)
40	16:20	09:21 (B11)	17:28	16:55 (B22)	18:28		20:32		21:33	22:10	06:04 (B4)
41	08:33	09:07 (B11)	07:31	07:58 (B18)	06:18		05:57		04:52	04:25	05:27 (B4)
42	16:22	09:22 (B11)	17:30	16:56 (B22)	18:30		20:35		21:35	22:10	06:04 (B4)
43	08:32	09:05 (B11)	07:28	07:56 (B18)	06:15		05:54		04:50	04:25	05:28 (B4)
44	16:24	09:22 (B11)	17:32	16:56 (B22)	18:32		20:37		21:36	22:10	06:05 (B4)
45	08:30	09:04 (B11)	07:26	07:55 (B18)	06:13		05:52		04:48	04:26	05:28 (B4)
46	16:26	09:23 (B11)	17:34	16:57 (B22)	18:34		20:39		21:38	22:10	06:05 (B4)
47	08:29	09:04 (B11)	07:23	07:54 (B18)	06:10		05:49		04:47	04:26	05:28 (B4)
48	16:28	09:23 (B11)	17:36	16:57 (B22)	18:36		20:41		21:40	22:10	06:05 (B4)
49	08:27	09:05 (B11)	07:21	07:53 (B18)	06:07		05:47		04:45	04:26	05:29 (B4)
50	16:30	09:24 (B11)	17:39	16:57 (B22)	18:38		20:43		21:42	22:10	06:06 (B4)
51	08:25	09:05 (B11)	07:18	07:53 (B18)	06:05		05:44		04:44	04:27	05:28 (B4)
52	16:32	09:25 (B11)	17:41	16:57 (B22)	18:40		20:45		21:43	22:10	06:06 (B4)
53	08:24	09:06 (B11)	07:16	07:52 (B18)	06:02		05:42		04:42	04:27	05:29 (B4)
54	16:34	09:25 (B11)	17:43	16:56 (B22)	18:42		20:47	05:39 (B4)	21:45	22:10	06:06 (B4)
55	08:22	09:06 (B11)	07:13	07:52 (B18)	05:59	06:27 (B15)	05:39	05:36 (B4)	21:41	04:28	05:29 (B4)
56	16:36	09:25 (B11)	17:45	16:56 (B22)	18:45	06:33 (B15)	20:49	05:48 (B4)	21:46	22:10	06:06 (B4)
57	08:20	09:07 (B11)			06:57	07:24 (B15)	05:37	05:34 (B4)	21:43	04:28	05:30 (B4)
58	16:38	09:27 (B11)			19:47	07:37 (B15)	20:51	05:50 (B4)	21:48	22:10	06:06 (B4)
59	08:18	09:08 (B11)			06:54	07:21 (B15)	05:35	05:32 (B4)	21:40	04:29	05:31 (B4)
60	16:41	09:24 (B11)			19:49	07:39 (B15)	20:53	05:52 (B4)	21:50	22:09	06:06 (B4)
61	08:16	09:08 (B11)			06:51	07:19 (B15)		05:31 (B4)	21:47		
62	16:43	09:22 (B11)			19:51	07:40 (B15)		05:53 (B4)	21:51		
Potential sun hours	235		266		366		426		508	529	
Total, worst case	355		440		380		286		74		1032
Sun reduction	0.13		0.20		0.41		0.50		0.57		0.56
Oper. time red.	0.98		0.98		0.98		0.98		0.98		0.98
Wind dir. red.	0.61		0.65		0.64		0.66		0.67		0.67
Total reduction	0.08		0.13		0.26		0.32		0.37		0.36
Total, real	28		56		97		91		27		375

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Pludmales - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (118)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09 36	05:30 (B4) 06:06 (B4) 21:28	06:17 20:14 19	07:16 (B15) 07:35 (B15) 18:53	07:22 16:36 13	08:24 15:45
2	04:31 22:08 35	05:31 (B4) 06:06 (B4) 21:26	06:19 20:11 21	07:15 (B15) 07:36 (B15) 18:51	07:25 16:34 11	08:26 15:44 6
3	04:32 22:08 34	05:32 (B4) 06:06 (B4) 21:24	06:21 20:09 23	07:14 (B15) 07:37 (B15) 18:48	07:27 16:31 7	08:27 15:43 9
4	04:32 22:07 34	05:32 (B4) 06:06 (B4) 21:22	06:23 20:06 24	07:13 (B15) 07:37 (B15) 18:45	07:29 16:29 3	08:29 15:42 11
5	04:33 22:07 33	05:33 (B4) 06:06 (B4) 21:19	06:25 20:03 25	07:11 (B15) 07:36 (B15) 18:43	07:31 16:27 2	08:31 15:41 12
6	04:35 22:06 31	05:34 (B4) 06:05 (B4) 21:17	06:27 20:01 26	07:10 (B15) 07:36 (B15) 18:40	07:33 16:25 2	08:32 15:41 13
7	04:36 22:05 31	05:34 (B4) 06:05 (B4) 21:15	06:29 19:58 26	07:10 (B15) 07:36 (B15) 18:38	07:35 16:23 12	08:34 15:40 14
8	04:37 22:04 30	05:35 (B4) 06:05 (B4) 21:13	06:31 19:55 26	07:10 (B15) 07:36 (B15) 18:35	07:38 16:21 16	08:35 15:40 15
9	04:38 22:03 28	05:36 (B4) 06:04 (B4) 21:11	06:33 19:53 25	07:10 (B15) 07:35 (B15) 18:32	07:40 16:19 9	08:36 15:39 16
10	04:39 22:02 27	05:36 (B4) 06:03 (B4) 21:08	06:35 19:50 24	07:10 (B15) 07:34 (B15) 18:30	07:42 16:17 12	08:38 15:39 16
11	04:41 22:01 25	05:37 (B4) 06:02 (B4) 21:06	06:37 19:47 22	07:11 (B15) 07:33 (B15) 18:27	07:44 16:15 14	08:39 15:38 16
12	04:42 22:00 23	05:38 (B4) 06:01 (B4) 21:04	06:39 19:45 21	07:11 (B15) 07:32 (B15) 18:25	07:46 16:13 16	08:40 15:38 16
13	04:43 21:59 21	05:40 (B4) 06:01 (B4) 21:01	06:41 19:42 18	07:12 (B15) 07:30 (B15) 18:22	07:48 16:11 17	08:41 15:38 17
14	04:45 21:58 18	05:41 (B4) 06:01 (B4) 20:59	06:43 19:40 14	07:14 (B15) 07:28 (B15) 18:19	07:51 16:09 19	08:43 15:38 17
15	04:46 21:56 14	05:43 (B4) 06:01 (B4) 20:57	06:45 19:37 8	07:17 (B15) 07:25 (B15) 18:17	07:53 16:07 19	08:44 15:38 17
16	04:48 21:55 8	05:47 (B4) 06:01 (B4) 20:54	06:47 19:34 8	07:18 (B15) 18:14 48	07:55 16:06 20	08:45 15:38 17
17	04:49 21:54 8	05:47 (B4) 20:52 19:31	06:49 19:31 47	07:19 (B15) 18:12 47	07:57 16:04 19	08:46 15:38 17
18	04:51 21:52 8	05:49 20:49 19:28	06:51 19:28 45	07:20 (B15) 18:09 45	07:59 16:02 19	08:47 15:38 17
19	04:52 21:51 8	05:51 20:47 19:26	06:53 19:26 42	07:21 (B15) 18:07 42	08:01 16:01 19	08:48 15:38 17
20	04:54 21:49 8	05:53 20:44 19:23	06:55 19:23 38	07:22 (B15) 18:04 38	08:03 15:59 17	08:49 15:38 17
21	04:56 21:48 8	05:55 20:42 19:20	06:57 19:20 34	07:23 (B15) 18:02 34	08:05 15:57 15	08:50 15:39 18
22	04:57 21:46 8	05:57 20:40 19:18	06:59 19:18 24	07:24 (B15) 18:01 24	08:07 15:56 12	08:51 15:39 18
23	04:59 21:44 8	05:59 20:37 19:15	07:01 19:15 16	07:25 (B15) 18:03 16	08:09 15:55 10	08:52 15:40 17
24	05:01 21:43 8	06:01 20:34 19:12	07:03 19:12 11	07:26 (B15) 18:05 11	08:11 15:53 7	08:53 15:40 17
25	05:03 21:41 8	06:03 20:32 19:10	07:05 19:10 7	07:27 (B15) 18:04 7	08:13 15:52 4	08:54 15:41 17
26	05:04 21:39 8	06:05 20:29 19:07	07:07 19:07 12	07:28 (B15) 18:03 12	08:15 15:51 1	08:55 15:42 18
27	05:06 21:37 8	06:07 20:27 19:04	07:09 19:04 14	07:29 (B15) 18:02 14	08:17 15:49 15	08:56 15:43 17
28	05:08 21:36 8	06:09 20:24 19:01	07:11 19:02 15	07:30 (B15) 18:01 15	08:19 15:48 16	08:57 15:44 17
29	05:10 21:34 8	06:11 20:22 18:59	07:13 18:59 16	07:31 (B15) 18:00 16	08:21 15:47 17	08:58 15:44 17
30	05:12 21:32 8	06:13 20:19 18:56	07:15 18:56 16	07:32 (B15) 18:00 16	08:22 15:46 18	08:59 15:45 17
31	05:14 21:30 8	06:15 20:16 18:53	07:17 18:53 15	07:33 (B15) 18:01 15	08:23 15:45 19	09:00 15:46 16
Potential sun hours	529	469	385	324	247	216
Total, worst case	428	26	402	664	249	469
Sun reduction	0.49	0.50	0.43	0.26	0.08	0.07
Oper. time red.	0.98	0.98	0.98	0.98	0.98	0.98
Wind dir. red.	0.67	0.66	0.65	0.65	0.59	0.66
Total reduction	0.32	0.32	0.27	0.16	0.05	0.05
Total, real	137	8	108	108	12	21

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Pludmales 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (117)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

January		February		March		April		May		June	
1	08:51	14:33 (B24)	08:15	09:09 (B11)	07:11	07:52 (B18)	06:49	07:19 (B15)	05:32	04:36	05:30 (B4)
2	15:48	14:48 (B24)	16:45	09:21 (B11)	17:47	16:53 (B22)	19:53	07:42 (B15)	20:55	21:52	06:00 (B4)
3	08:50	14:33 (B24)	08:13	09:11 (B11)	07:08	07:52 (B18)	06:46	07:18 (B15)	05:30	04:35	05:30 (B4)
4	15:49	14:48 (B24)	16:47	09:19 (B11)	17:50	16:51 (B22)	19:55	07:42 (B15)	20:57	21:54	06:01 (B4)
5	08:50	14:34 (B24)	08:11		07:06	07:53 (B18)	06:43	07:17 (B15)	05:28	04:34	05:29 (B4)
6	15:51	14:49 (B24)	16:50		17:52	16:50 (B22)	19:57	07:42 (B15)	20:59	21:55	06:02 (B4)
7	08:50	14:34 (B24)	08:09		07:03	07:53 (B18)	06:41	07:17 (B15)	05:26	04:33	05:29 (B4)
8	15:52	14:49 (B24)	16:52		17:54	16:48 (B22)	19:59	07:42 (B15)	21:01	21:56	06:02 (B4)
9	08:49	14:36 (B24)	08:07		07:00	07:54 (B18)	06:38	07:16 (B15)	05:23	04:32	05:29 (B4)
10	15:53	14:49 (B24)	16:54		17:56	16:11 (B18)	20:01	07:42 (B15)	21:04	21:58	06:03 (B4)
11	08:49	14:37 (B24)	08:05		06:58	07:57 (B18)	06:35	07:16 (B15)	05:21	04:31	05:29 (B4)
12	15:55	14:49 (B24)	16:56		17:58	16:10 (B18)	20:03	07:42 (B15)	21:06	21:59	06:04 (B4)
13	08:48	14:38 (B24)	08:03		06:55	07:59 (B18)	06:33	07:16 (B15)	05:19	04:30	05:28 (B4)
14	15:56	14:49 (B24)	16:58		18:00	16:06 (B18)	20:05	07:41 (B15)	21:08	22:00	06:04 (B4)
15	08:47	14:39 (B24)	08:00		06:53		06:30	07:16 (B15)	05:17	04:29	05:29 (B4)
16	15:58	14:48 (B24)	17:01		18:03		20:07	07:39 (B15)	21:10	22:01	06:05 (B4)
17	08:47	14:40 (B24)	07:58		06:50	07:16 (B23)	06:27	07:17 (B15)	05:15	04:28	05:28 (B4)
18	15:59	14:48 (B24)	17:03		18:05	2	07:18 (B23)	20:10	22	07:39 (B15)	21:12
19	08:46	14:43 (B24)	07:56		06:47	07:13 (B23)	06:25	07:17 (B15)	05:12	04:28	05:28 (B4)
20	16:01	14:46 (B24)	17:05		18:07	6	07:19 (B23)	20:12	20	07:37 (B15)	21:14
21	08:45		07:54		06:45	07:10 (B23)	06:22	07:19 (B15)	05:10	04:27	05:28 (B4)
22	16:03		17:07		18:09	10	07:20 (B23)	20:14	17	07:36 (B15)	21:16
23	08:44		07:52		06:42	07:07 (B23)	06:20	07:20 (B15)	05:08	04:27	05:28 (B4)
24	16:04		17:10		18:11	13	07:20 (B23)	20:16	13	07:33 (B15)	21:18
25	08:43		07:49		06:39	07:05 (B23)	06:17	07:25 (B15)	05:06	04:26	05:28 (B4)
26	16:06		17:12		18:13	15	07:20 (B23)	20:18	4	07:29 (B15)	21:20
27	08:42		07:47		06:37	07:03 (B23)	06:14		05:04	04:26	05:28 (B4)
28	16:08		17:14		18:15	17	07:20 (B23)	20:20		21:22	05:28 (B4)
29	08:41		07:45		06:34	07:03 (B23)	06:12		05:02	04:26	05:28 (B4)
30	16:10		17:16		18:17	16	07:19 (B23)	20:22		21:23	05:28 (B4)
31	08:40		07:42		06:31		07:04 (B23)	06:09		05:00	04:25
1	16:12		17:19		18:19	14	07:18 (B23)	20:24		21:25	06:08 (B4)
2	08:39	09:13 (B11)	07:40	16:38 (B22)	06:29	07:05 (B23)	06:07		04:59	04:25	05:28 (B4)
3	16:14	09:16 (B11)	17:21	16:49 (B22)	18:22	12	07:17 (B23)	20:26		21:27	06:08 (B4)
4	08:37	09:12 (B11)	07:38	16:35 (B22)	06:26		07:06 (B23)	06:04		04:57	05:28 (B4)
5	16:16	09:18 (B11)	17:23	16:51 (B22)	18:24	8	07:14 (B23)	20:28		21:29	06:08 (B4)
6	08:36	09:10 (B11)	07:35	16:34 (B22)	06:23			06:02		04:55	05:29 (B4)
7	16:18	09:19 (B11)	17:25	16:53 (B22)	18:26			20:30		21:31	06:09 (B4)
8	08:35	09:09 (B11)	07:33	16:30 (B18)	06:21			05:59		04:53	05:29 (B4)
9	16:20	09:21 (B11)	17:28	16:54 (B22)	18:28			20:32		21:33	06:09 (B4)
10	08:33	09:07 (B11)	07:31	16:55 (B18)	06:18			05:57		04:52	05:29 (B4)
11	16:22	09:21 (B11)	17:30	16:55 (B22)	18:30			20:35		21:35	06:09 (B4)
12	08:32	09:05 (B11)	07:28	16:56 (B18)	06:15			05:54		04:50	05:30 (B4)
13	16:24	09:22 (B11)	17:32	16:55 (B22)	18:32			20:37		21:36	06:10 (B4)
14	08:30	09:04 (B11)	07:26	16:55 (B18)	06:13			05:52		04:48	05:30 (B4)
15	16:26	09:22 (B11)	17:34	16:56 (B22)	18:34			20:39		21:38	06:10 (B4)
16	08:29	09:04 (B11)	07:23	16:54 (B18)	06:10			05:49		04:47	05:30 (B4)
17	16:28	09:23 (B11)	17:36	16:56 (B22)	18:36			20:41		21:40	06:09 (B4)
18	08:27	09:05 (B11)	07:21	16:53 (B18)	06:07			05:47		04:45	05:30 (B4)
19	16:30	09:24 (B11)	17:39	16:55 (B22)	18:38			20:43		21:42	06:10 (B4)
20	08:25	09:05 (B11)	07:18	16:53 (B18)	06:05			05:44		04:44	05:30 (B4)
21	16:32	09:24 (B11)	17:41	16:55 (B22)	18:40			20:45		21:43	06:10 (B4)
22	08:24	09:05 (B11)	07:16	16:52 (B18)	06:02			05:42		04:42	05:31 (B4)
23	16:34	09:24 (B11)	17:43	16:55 (B22)	18:42			20:47		21:45	06:10 (B4)
24	08:22	09:06 (B11)	07:13	16:52 (B18)	05:59		06:26 (B15)	05:39		04:41	05:31 (B4)
25	16:36	09:24 (B11)	17:45	16:54 (B22)	18:45	10	06:36 (B15)	20:49		21:46	06:10 (B4)
26	08:20	09:06 (B11)			06:57		07:24 (B15)	05:37		04:39	05:32 (B4)
27	16:38	09:24 (B11)			19:47	15	07:39 (B15)	20:51		21:48	06:10 (B4)
28	08:18	09:07 (B11)			06:54		07:21 (B15)	05:35		04:38	05:32 (B4)
29	16:41	09:24 (B11)			19:49	19	07:40 (B15)	20:53		21:50	06:11 (B4)
30	08:16	09:07 (B11)			06:51		07:19 (B15)			04:37	05:31 (B4)
31	16:43	09:22 (B11)			19:51	22	07:41 (B15)			21:51	05:59 (B4)
Potential sun hours	235		266		366		426		508		529
Total, worst case	339		456		373		273		146		1130
Sun reduction	0.13		0.20		0.41		0.50		0.57		0.56
Oper. time red.	0.98		0.98		0.98		0.98		0.98		0.98
Wind dir. red.	0.61		0.65		0.64		0.66		0.67		0.67
Total reduction	0.08		0.13		0.25		0.32		0.37		0.36
Total, real	27		58		95		87		54		411

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Pludmales 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (117)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July		August		September		October		November		December	
1	04:30		05:32 (B4)	05:16	06:17	07:18 (B15)	07:17	07:46 (B23)	07:22		08:24	
	22:09	38	06:10 (B4)	21:28	20:14	17	07:35 (B15)	18:53	14	08:00 (B23)	16:36	
2	04:31		05:32 (B4)	05:17	06:19		07:16 (B15)	07:19		07:48 (B23)	07:25	
	22:08	38	06:10 (B4)	21:26	20:11	20	07:36 (B15)	18:51	11	07:59 (B23)	16:34	
3	04:32		05:33 (B4)	05:19	06:21		07:15 (B15)	07:21		07:50 (B23)	07:27	
	22:08	37	06:10 (B4)	21:24	20:09	22	07:37 (B15)	18:48	8	07:58 (B23)	16:31	
4	04:32		05:34 (B4)	05:21	06:23		07:14 (B15)	07:23		07:52 (B23)	07:29	
	22:07	36	06:10 (B4)	21:22	20:06	23	07:37 (B15)	18:45	4	07:56 (B23)	16:29	
5	04:33		05:34 (B4)	05:23	06:25		07:12 (B15)	07:25			07:31	
	22:07	36	06:10 (B4)	21:19	20:03	25	07:37 (B15)	18:43			16:27	
6	04:35		05:35 (B4)	05:25	06:27		07:12 (B15)	07:27			07:33	
	22:06	35	06:10 (B4)	21:17	20:01	25	07:37 (B15)	18:40			16:25	
7	04:36		05:35 (B4)	05:27	06:29		07:11 (B15)	07:29		08:33 (B18)	07:35	
	22:05	35	06:10 (B4)	21:15	19:58	26	07:37 (B15)	18:38	11	08:44 (B18)	16:23	
8	04:37		05:36 (B4)	05:29	06:31		07:11 (B15)	07:31		08:30 (B18)	07:38	
	22:04	34	06:10 (B4)	21:13	19:55	25	07:36 (B15)	18:35	16	08:46 (B18)	16:21	
9	04:38		05:36 (B4)	05:31	06:33		07:11 (B15)	07:34		08:28 (B18)	07:40	
	22:03	33	06:09 (B4)	21:11	19:53	25	07:36 (B15)	18:32	26	17:20 (B22)	16:19	8
10	04:39		05:37 (B4)	05:33	06:35		07:11 (B15)	07:36		08:28 (B18)	07:42	
	22:02	32	06:09 (B4)	21:08	19:50	24	07:35 (B15)	18:30	34	17:24 (B22)	16:17	12
11	04:41		05:38 (B4)	05:35	06:37		07:11 (B15)	07:38		08:27 (B18)	07:44	
	22:01	30	06:08 (B4)	21:06	19:47	23	07:34 (B15)	18:27	39	17:25 (B22)	16:15	15
12	04:42		05:38 (B4)	05:37	06:39		07:12 (B15)	07:40		08:26 (B18)	07:46	
	22:00	29	06:07 (B4)	21:04	19:45	21	07:33 (B15)	18:25	43	17:26 (B22)	16:13	16
13	04:43		05:40 (B4)	05:39	06:41		07:12 (B15)	07:42		08:25 (B18)	07:48	
	21:59	27	06:07 (B4)	21:01	19:42	20	07:32 (B15)	18:22	46	17:26 (B22)	16:11	18
14	04:45		05:41 (B4)	05:41	06:43		07:14 (B15)	07:44		08:24 (B18)	07:51	
	21:58	25	06:06 (B4)	20:59	19:39	16	07:30 (B15)	18:19	49	17:27 (B22)	16:09	18
15	04:46		05:42 (B4)	05:43	06:45		07:16 (B15)	07:46		08:25 (B18)	07:53	
	21:56	23	06:05 (B4)	20:57	19:37	11	07:27 (B15)	18:17	49	17:28 (B22)	16:07	19
16	04:48		05:44 (B4)	05:45	06:47			07:48		08:25 (B18)	07:55	
	21:55	20	06:04 (B4)	20:54	19:34			18:14	48	17:28 (B22)	16:06	19
17	04:49		05:45 (B4)	05:47	06:49			07:50		08:25 (B18)	07:57	
	21:54	18	06:03 (B4)	20:52	19:31			18:12	47	17:27 (B22)	16:04	19
18	04:51		05:48 (B4)	05:49	06:51			07:52		08:25 (B18)	07:59	
	21:52	13	06:01 (B4)	20:49	19:28			18:09	46	17:27 (B22)	16:02	19
19	04:52		05:51 (B4)	05:51	06:53			07:54		08:26 (B18)	08:01	
	21:51	6	05:57 (B4)	20:47	19:26			18:07	43	17:26 (B22)	16:01	18
20	04:54			05:53	06:55			07:57		08:28 (B18)	08:03	
	21:49			20:45	19:23			18:04	39	17:26 (B22)	15:59	17
21	04:56			05:55	06:57			07:59		08:29 (B18)	08:05	
	21:48			20:42	19:20			18:02	35	17:25 (B22)	15:57	14
22	04:57			05:57	06:59			08:01		08:32 (B18)	08:07	
	21:46			20:40	19:18			17:59	27	17:24 (B22)	15:56	12
23	04:59			05:59	07:01			08:03		17:05 (B22)	08:09	
	21:44			20:37	19:15			17:57	18	17:23 (B22)	15:55	9
24	05:01			06:01	07:03			08:05		17:06 (B22)	08:11	
	21:43			20:34	19:12			17:54	15	17:21 (B22)	15:53	6
25	05:03			06:03	07:05			07:50 (B23)		16:09 (B22)	08:13	
	21:41			20:32	19:10	5		07:55 (B23)		16:18 (B22)	15:52	3
26	05:04			06:05	07:07			07:47 (B23)			08:15	
	21:39			20:29	19:07	11		07:58 (B23)			15:51	
27	05:06			06:07	07:09			07:45 (B23)			08:17	
	21:37			20:27	19:04	14		07:59 (B23)			15:49	
28	05:08			06:09	07:11			07:44 (B23)			08:19	
	21:36			20:24	19:02	15		07:59 (B23)			15:48	
29	05:10			06:11	07:13			07:44 (B23)			08:21	
	21:34			20:22	18:59	17		08:01 (B23)			15:47	
30	05:12			06:13	07:15			07:44 (B23)			08:22	
	21:32			20:19	18:56	16		08:00 (B23)			15:46	
31	05:14			06:15								
	21:30			20:16	13	07:33 (B15)					16:38	
Potential sun hours	529			469		385				247		216
Total, worst case		545		18		401		677		242		448
Sun reduction		0.49		0.50		0.43		0.26		0.08		0.07
Oper. time red.		0.98		0.98		0.98		0.98		0.98		0.98
Wind dir. red.		0.67		0.66		0.65		0.65		0.59		0.66
Total reduction		0.32		0.32		0.27		0.16		0.05		0.05
Total, real		175		6		108		110		11		20

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Polakas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (52)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 17:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Polakas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (6)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 17:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Polakas 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (53)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:08 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Polakas 3 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (14)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	08:46 (B22) 09:01 (B22)	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:24 16:36
2	08:51 15:49	08:13 16:47	08:44 (B22) 09:00 (B22)	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	08:26 16:34
3	08:50 15:51	08:11 16:50	08:45 (B22) 09:00 (B22)	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:28 16:32
4	08:50 15:52	08:09 16:52	08:46 (B22) 09:00 (B22)	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	08:29 16:29
5	08:49 15:53	08:07 16:54	08:47 (B22) 08:59 (B22)	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	08:31 16:27
6	08:49 15:55	08:05 16:56	08:48 (B22) 08:58 (B22)	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:32 16:25
7	08:48 15:56	08:03 16:59	08:50 (B22) 08:56 (B22)	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:34 16:23
8	08:48 15:58	08:01 17:01	08:56 (B22)	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:35 16:21
9	08:47 15:59	07:58 17:03	07:58	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	08:37 16:19
10	08:46 16:01	07:56 17:05	07:56	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	08:38 16:17
11	08:45 16:03	07:54 17:08	07:54	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:39 16:15
12	08:44 16:05	07:52 17:10	07:52	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:41 16:13
13	08:43 16:06	07:50 17:12	07:50	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:42 16:11
14	08:42 16:08	07:47 17:14	07:47	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:43 16:09
15	08:41 16:10	07:45 17:17	07:45	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:44 16:08
16	08:40 16:12	07:43 17:19	07:43	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:14	08:45 16:06
17	08:39 16:14	07:40 17:21	07:40	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:46 16:04
18	08:38 16:16	07:38 17:23	07:38	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	08:47 16:02
19	08:36 16:18	07:36 17:26	07:36	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:47 16:01
20	08:35 16:20	07:33 17:28	07:33	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:48 15:59
21	08:33 16:22	07:31 17:30	07:31	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:49 15:58
22	08:32 16:24	07:28 17:32	07:28	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:49 15:56
23	08:30 16:26	07:26 17:34	07:26	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:50 15:55
24	08:29 16:28	07:23 17:37	07:23	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:50 15:53
25	08:27 16:30	07:21 17:39	07:21	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:50 15:52
26	08:26 16:32	07:18 17:41	07:18	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:51 15:51
27	08:24 16:34	07:16 17:43	07:16	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:51 15:49
28	08:22 16:36	07:13 17:45	07:13	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:51 15:48
29	08:20 16:39	07:11 17:48	07:11	05:57 18:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:51 15:47
30	08:19 16:41	07:09 17:50	07:09	05:54 18:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:51 15:46
31	08:17 16:43	07:07 17:51	07:07	05:51 18:51	05:33 20:51	04:37 21:51	05:14 21:30	06:15 20:17	07:20 16:38	07:20 16:38	07:20 16:38	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	34	88									125	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.98	0.98									0.98	
Wind dir. red.	0.60	0.60									0.60	
Total reduction	0.08	0.12									0.05	
Total, real	3	10									6	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Pumpuri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (199)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Pumpuri (kad. apz. 56960040091) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (76)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	06:49	05:33	04:36
	15:48	16:45	17:48	19:53	20:56	21:53
2	08:51	08:13	07:08	06:46	05:30	04:35
	15:50	16:48	17:50	19:55	20:58	21:54
3	08:50	08:11	07:06	06:44	05:28	04:34
	15:51	16:50	17:52	19:57	21:00	21:55
4	08:50	08:09	07:03	06:41	05:26	04:33
	15:52	16:52	17:54	19:59	21:02	21:57
5	08:49	08:07	07:01	06:38	05:24	04:32
	15:54	16:54	17:56	20:01	21:04	21:58
6	08:49	08:05	08:34 (B14)	06:36	05:21	04:31
	15:55	16:57	2 08:36 (B14)	20:04	21:06	21:59
7	08:48	08:03	08:32 (B14)	06:33	05:19	04:30
	15:56	16:59	5 08:37 (B14)	20:06	21:08	22:00
8	08:48	08:01	08:30 (B14)	06:30	05:17	04:29
	15:58	17:01	9 08:39 (B14)	20:08	21:10	22:01
9	08:47	07:58	08:27 (B14)	06:28	05:15	04:29
	16:00	17:03	12 08:39 (B14)	20:10	21:12	22:02
10	08:46	07:56	08:25 (B14)	06:25	05:13	04:28
	16:01	17:06	14 08:39 (B14)	20:12	21:14	22:03
11	08:45	07:54	08:23 (B14)	06:22	05:11	04:27
	16:03	17:08	17 08:40 (B14)	20:14	21:16	22:04
12	08:44	07:52	08:22 (B14)	06:20	05:09	04:27
	16:05	17:10	17 08:39 (B14)	20:16	21:18	22:05
13	08:43	07:50	08:22 (B14)	06:17	05:07	04:27
	16:06	17:12	17 08:39 (B14)	20:18	21:20	22:06
14	08:42	07:47	08:22 (B14)	06:15	05:05	04:26
	16:08	17:14	16 08:38 (B14)	20:20	21:22	22:07
15	08:41	07:45	08:24 (B14)	06:12	05:03	04:26
	16:10	17:17	14 08:38 (B14)	20:22	21:24	22:07
16	08:40	07:43	08:26 (B14)	06:57 (B22)	06:09	05:01
	16:12	17:19	11 08:37 (B14)	2 06:59 (B22)	20:24	21:26
17	08:39	07:40	08:27 (B14)	06:54 (B22)	06:07	04:59
	16:14	17:21	7 08:34 (B14)	5 06:59 (B22)	20:26	21:27
18	08:38	07:38		06:52 (B22)	06:04	04:57
	16:16	17:23		8 07:00 (B22)	20:28	21:29
19	08:36	07:36		06:49 (B22)	06:02	04:55
	16:18	17:26		11 07:00 (B22)	20:31	21:31
20	08:35	07:33		06:46 (B22)	05:59	04:53
	16:20	17:28		13 06:59 (B22)	20:33	21:33
21	08:33	07:31		06:44 (B22)	05:57	04:52
	16:22	17:30		14 06:58 (B22)	20:35	21:35
22	08:32	07:28		06:45 (B22)	05:54	04:50
	16:24	17:32		13 06:58 (B22)	20:37	21:37
23	08:30	07:26		06:46 (B22)	05:52	04:48
	16:26	17:35		10 06:56 (B22)	20:39	21:38
24	08:29	07:23		06:48 (B22)	05:49	04:47
	16:28	17:37		4 06:52 (B22)	20:41	21:40
25	08:27	07:21			05:47	04:45
	16:30	17:39			20:43	21:42
26	08:26	07:18			05:45	04:44
	16:32	17:41			20:45	21:43
27	08:24	07:16			05:42	04:42
	16:34	17:43			20:47	21:45
28	08:22	07:13			05:40	04:41
	16:37	17:45			20:49	21:47
29	08:20				05:37	04:40
	16:39				20:51	21:48
30	08:19				05:35	04:38
	16:41				20:53	21:50
31	08:17					04:37
	16:43					21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		141	80			
Sun reduction		0.20	0.41			
Oper. time red.		0.98	0.98			
Wind dir. red.		0.62	0.64			
Total reduction		0.12	0.26			
Total, real		17	21			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Pumpuri (kad. apz. 56960040091) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (76)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:23	07:55 (B14) 08:24
	22:09	21:28	20:14	18:54	16:36 14	08:09 (B14) 15:45
2	04:31	05:18	06:19	07:19	07:25	07:57 (B14) 08:26
	22:09	21:26	20:11	18:51	16:34 11	08:08 (B14) 15:44
3	04:32	05:20	06:21	07:21	07:27	08:00 (B14) 08:28
	22:08	21:24	20:09	18:48	16:32 8	08:08 (B14) 15:43
4	04:33	05:22	06:23	07:23	07:29	08:02 (B14) 08:29
	22:07	21:22	20:06	18:46	16:30 5	08:07 (B14) 15:43
5	04:34	05:24	06:25	07:26	07:31	08:05 (B14) 08:31
	22:07	21:20	20:04	18:43	16:27 1	08:06 (B14) 15:42
6	04:35	05:25	06:27	07:28	07:34	08:32
	22:06	21:17	20:01	18:40	16:25	15:41
7	04:36	05:27	06:29	07:30	07:36	08:34
	22:05	21:15	19:58	18:38	16:23	15:40
8	04:37	05:29	06:31	07:32	07:38	08:35
	22:04	21:13	19:56	18:35	16:21	15:40
9	04:38	05:31	06:33	07:34	07:40	08:37
	22:03	21:11	19:53	18:33	16:19	15:39
10	04:40	05:33	06:35	07:36	07:42	08:38
	22:02	21:09	19:50	18:30	16:17	15:39
11	04:41	05:35	06:37	07:38	07:44	08:39
	22:01	21:06	19:48	18:27	16:15	15:39
12	04:42	05:37	06:39	07:40	07:47	08:40
	22:00	21:04	19:45	18:25	16:13	15:38
13	04:44	05:39	06:41	07:42	07:49	08:42
	21:59	21:02	19:42	18:22	16:11	15:38
14	04:45	05:41	06:43	07:44	07:51	08:43
	21:58	20:59	19:39	18:20	16:10	15:38
15	04:46	05:43	06:45	07:46	07:53	08:44
	21:57	20:57	19:37	18:17	16:08	15:38
16	04:48	05:45	06:47	07:48	07:55	08:45
	21:55	20:54	19:34	18:15	16:06	15:38
17	04:49	05:47	06:49	07:50	07:57	08:46
	21:54	20:52	19:31	18:12	16:04	15:38
18	04:51	05:49	06:51	07:53	07:59	08:46
	21:53	20:50	19:29	18:09	16:03	15:38
19	04:53	05:51	06:53	07:55	08:01	08:47
	21:51	20:47	19:26	18:07	16:01	15:38
20	04:54	05:53	06:55	07:57	08:03	08:48
	21:50	20:45	19:23	9 07:42 (B22) 18:05	15:59	15:39
21	04:56	05:55	06:57	07:59	08:05	08:49
	21:48	20:42	19:21	12 07:43 (B22) 18:02	15:58	15:39
22	04:58	05:57	06:59	08:01	08:07	08:49
	21:46	20:40	19:18	14 07:44 (B22) 18:00	15:56	15:40
23	04:59	05:59	07:01	08:03	08:09	08:50
	21:45	20:37	19:15	14 07:44 (B22) 17:57	15:55	15:40
24	05:01	06:01	07:03	08:05	08:11	08:50
	21:43	20:35	19:13	12 07:44 (B22) 17:55	15:53	15:41
25	05:03	06:03	07:05	07:07	07:56 (B14) 08:13	08:50
	21:41	20:32	19:10	9 07:43 (B22) 16:52	8 08:04 (B14) 15:52	15:41
26	05:05	06:05	07:07	07:10	07:55 (B14) 08:15	08:51
	21:39	20:30	19:07	6 07:42 (B22) 16:50	12 08:07 (B14) 15:51	15:42
27	05:06	06:07	07:09	07:12	07:53 (B14) 08:17	08:51
	21:38	20:27	19:04	3 07:41 (B22) 16:48	15 08:08 (B14) 15:50	15:43
28	05:08	06:09	07:11	07:14	07:52 (B14) 08:19	08:51
	21:36	20:24	19:02	16 08:08 (B14) 15:48	15:44	15:44
29	05:10	06:11	07:13	07:16	07:52 (B14) 08:21	08:51
	21:34	20:22	18:59	16:43	17 08:09 (B14) 15:47	15:45
30	05:12	06:13	07:15	07:18	07:51 (B14) 08:23	08:51
	21:32	20:19	18:56	16:41	18 08:09 (B14) 15:46	15:46
31	05:14	06:15		07:20	07:53 (B14)	08:51
	21:30	20:17		16:38	16 08:09 (B14)	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			79	102	39	
Sun reduction			0.43	0.26	0.08	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.64	0.62	0.62	
Total reduction			0.27	0.16	0.05	
Total, real			21	16	2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Pumpuri (kad. apz. 76860060095) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (198)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Purvini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (20)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:56	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:56	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:02	04:32 21:57	04:32 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:50 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:34 16:25	08:33 15:41
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:02	04:37 22:05	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:28 22:04	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:02	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:20 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:08	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:07 20:26	04:58 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:47 15:38
19	08:36 16:17	07:36 17:25	06:23 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:19	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:34 16:21	07:31 17:30	06:18 18:30	05:57 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:25 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:42	04:26 22:11	05:02 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:44	04:26 22:11	05:04 21:40	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:50	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:44
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:23 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:17		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Pucsilavas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (193)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:43
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:24 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:28 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:05	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:54 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Rasas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (94)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	09:10 (B14) 09:14 (B14)	07:11 17:48	07:37 (B22) 19:53	05:33 20:56
2	08:51 15:49	08:13 16:48	07:08 17:50	07:34 (B22) 19:55	06:46 20:58	05:30 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:32 (B22) 19:57	06:44 21:00	05:28 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:29 (B22) 19:59	06:41 21:02	05:26 21:57
5	08:49 15:53	08:07 16:54	07:01 17:56	07:27 (B22) 20:01	06:38 21:04	05:24 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	07:25 (B22) 20:04	06:36 21:06	05:21 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	07:25 (B22) 20:06	06:33 21:08	05:19 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	07:25 (B22) 20:08	06:30 21:10	05:17 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	07:27 (B22) 20:10	06:28 21:12	05:15 22:02
10	08:46 16:01	07:56 17:05	06:48 18:07	07:30 (B22) 20:12	06:25 21:14	05:13 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	07:33 (B22) 20:14	06:22 21:16	05:11 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	20:16	06:20 21:18	05:09 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	20:18	06:17 21:20	05:07 22:06
14	08:42 16:08	07:47 17:14	06:37 18:16	20:20	06:15 21:22	05:05 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	20:22	06:12 21:24	05:03 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	20:24	06:09 21:26	05:01 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	20:26	06:07 21:27	04:59 22:09
18	08:38 16:16	09:12 (B14) 09:14 (B14)	07:38 17:23	06:26 18:24	06:04 21:29	04:57 22:09
19	08:36 16:18	09:10 (B14) 09:15 (B14)	07:36 17:26	06:24 18:26	06:02 21:31	04:55 22:09
20	08:35 16:20	09:09 (B14) 09:16 (B14)	07:33 17:28	06:21 18:28	05:59 21:33	04:53 22:10
21	08:33 16:22	09:07 (B14) 09:17 (B14)	07:31 17:30	06:18 18:30	05:57 21:35	04:52 22:10
22	08:32 16:24	09:05 (B14) 09:17 (B14)	07:28 17:32	06:16 18:32	05:54 21:37	04:50 22:10
23	08:30 16:26	09:03 (B14) 09:18 (B14)	07:26 17:34	06:13 18:34	05:52 21:38	04:48 22:10
24	08:29 16:28	09:02 (B14) 09:19 (B14)	07:23 17:37	06:10 18:36	05:49 21:40	04:47 22:11
25	08:27 16:30	09:02 (B14) 09:19 (B14)	07:21 17:39	06:08 18:39	05:47 21:42	04:45 22:11
26	08:26 16:32	09:02 (B14) 09:19 (B14)	07:18 17:41	06:05 18:41	05:44 21:43	04:44 22:10
27	08:24 16:34	09:03 (B14) 09:19 (B14)	07:16 17:43	06:02 18:43	05:42 21:45	04:42 22:10
28	08:22 16:37	09:03 (B14) 09:19 (B14)	07:13 17:45	06:00 18:45	05:40 21:47	04:41 22:10
29	08:20 16:39	09:04 (B14) 09:18 (B14)	07:11 17:47	06:57 19:47	05:37 20:51	04:40 21:48
30	08:19 16:41	09:05 (B14) 09:18 (B14)	07:10 17:49	06:54 19:49	05:35 21:50	04:38 22:10
31	08:17 16:43	09:07 (B14) 09:17 (B14)	07:09 17:51	06:52 19:51	05:33 21:51	04:37 22:10
Potential sun hours	235	266	366	426	508	529
Total, worst case	171	4	97			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.58	0.58	0.62			
Total reduction	0.07	0.11	0.25			
Total, real	13	0	24			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Rasas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (94)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November		December
1	04:30	05:16	06:17	07:17		07:23		08:24
	22:09	21:28	20:14	18:54		16:36		15:45
2	04:31	05:18	06:19	07:19		07:25		08:26
	22:09	21:26	20:11	18:51		16:34		15:44
3	04:32	05:20	06:21	07:21		07:27		08:28
	22:08	21:24	20:09	18:48		16:32		15:43
4	04:33	05:22	06:23	07:23	8	08:05 (B22)	07:29	08:29
	22:07	21:22	20:06	18:46		16:29		15:42
5	04:34	05:23	06:25	07:26		08:03 (B22)	07:31	08:31
	22:07	21:20	20:04	18:43	12	08:15 (B22)	16:27	15:42
6	04:35	05:25	06:27	07:28		08:01 (B22)	07:34	08:32
	22:06	21:17	20:01	18:40	14	08:15 (B22)	16:25	15:41
7	04:36	05:27	06:29	07:30		08:00 (B22)	07:36	08:34
	22:05	21:15	19:58	18:38	16	08:16 (B22)	16:23	15:40
8	04:37	05:29	06:31	07:32		08:01 (B22)	07:38	08:35
	22:04	21:13	19:56	18:35	15	08:16 (B22)	16:21	15:40
9	04:38	05:31	06:33	07:34		08:03 (B22)	07:40	08:37
	22:03	21:11	19:53	18:33	13	08:16 (B22)	16:19	15:39
10	04:39	05:33	06:35	07:36		08:05 (B22)	07:42	08:38
	22:02	21:09	19:50	18:30	10	08:15 (B22)	16:17	15:39
11	04:41	05:35	06:37	07:38		08:07 (B22)	07:44	08:39
	22:01	21:06	19:48	18:27	7	08:14 (B22)	16:15	15:39
12	04:42	05:37	06:39	07:40		08:09 (B22)	07:47	08:41
	22:00	21:04	19:45	18:25	4	08:13 (B22)	16:13	15:38
13	04:43	05:39	06:41	07:42		07:49	08:36 (B14)	08:42
	21:59	21:02	19:42	18:22		16:11	14	08:50 (B14)
14	04:45	05:41	06:43	07:44		07:51	08:35 (B14)	08:43
	21:58	20:59	19:39	18:20		16:09	16	08:51 (B14)
15	04:46	05:43	06:45	07:46		07:53	08:36 (B14)	08:44
	21:57	20:57	19:37	18:17		16:08	16	08:52 (B14)
16	04:48	05:45	06:47	07:48		07:55	08:35 (B14)	08:45
	21:55	20:54	19:34	18:15		16:06	17	08:52 (B14)
17	04:49	05:47	06:49	07:50		07:57	08:35 (B14)	08:46
	21:54	20:52	19:31	18:12		16:04	17	08:52 (B14)
18	04:51	05:49	06:51	07:53		07:59	08:36 (B14)	08:46
	21:53	20:50	19:29	18:09		16:03	17	08:53 (B14)
19	04:53	05:51	06:53	07:55		08:01	08:38 (B14)	08:47
	21:51	20:47	19:26	18:07		16:01	15	08:53 (B14)
20	04:54	05:53	06:55	07:57		08:03	08:40 (B14)	08:48
	21:50	20:45	19:23	18:04		15:59	12	08:52 (B14)
21	04:56	05:55	06:57	07:59		08:05	08:43 (B14)	08:49
	21:48	20:42	19:21	18:02		15:58	10	08:53 (B14)
22	04:58	05:57	06:59	08:01		08:07	08:45 (B14)	08:49
	21:46	20:40	19:18	18:00		15:56	7	08:52 (B14)
23	04:59	05:59	07:01	08:03		08:09	08:47 (B14)	08:50
	21:45	20:37	19:15	17:57		15:55	5	08:52 (B14)
24	05:01	06:01	07:03	08:05		08:11	08:49 (B14)	08:50
	21:43	20:35	19:12	17:55		15:53	2	08:51 (B14)
25	05:03	06:03	07:05	07:07		08:13		08:50
	21:41	20:32	19:10	16:52		15:52		15:41
26	05:05	06:05	07:07	07:10		08:15		08:51
	21:39	20:30	19:07	16:50		15:51		15:42
27	05:06	06:07	07:09	07:12		08:17		08:51
	21:38	20:27	19:04	16:48		15:50		15:43
28	05:08	06:09	07:11	07:14		08:19		08:51
	21:36	20:24	19:02	16:45		15:48		15:44
29	05:10	06:11	07:13	07:16		08:21		08:51
	21:34	20:22	18:59	16:43		15:47		15:45
30	05:12	06:13	07:15	07:18		08:23		08:51
	21:32	20:19	18:56	16:41		15:46		15:46
31	05:14	06:15		07:20				08:51
	21:30	20:17		16:38				15:47
Potential sun hours	529	469	385	324		247		216
Total, worst case				99		176		
Sun reduction				0.26		0.08		
Oper. time red.				0.98		0.98		
Wind dir. red.				0.62		0.58		
Total reduction				0.15		0.05		
Total, real				15		8		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Rijasvecumi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (206)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	08:31 15:41
6	08:49 15:54	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:09	04:28 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:13	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:16	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:37
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:16	07:53 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:44 15:37
17	08:39 16:13	07:40 17:21	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:55	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:56	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:41
27	08:24 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:07 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:21	07:13 18:58	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:28 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Robež nieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (220)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:49 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:13 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:51 17:10	06:42 18:11	06:20 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:58	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:57 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:18 15:48	08:50 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Rudzati - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (139)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	07:14 (B14) 07:26 (B14)	05:33 20:55
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:11 (B14) 07:26 (B14)	05:30 20:58
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	07:09 (B14) 07:28 (B14)	05:28 21:00
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:06 (B14) 07:28 (B14)	05:26 21:02
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:05 (B14) 07:27 (B14)	05:24 21:04
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:05 (B14) 07:28 (B14)	05:21 21:06
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	07:04 (B14) 07:27 (B14)	05:19 21:08
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:05 (B14) 07:27 (B14)	05:17 21:10
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:04 (B14) 07:26 (B14)	05:15 21:12
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	07:04 (B14) 07:25 (B14)	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:05 (B14) 07:24 (B14)	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:06 (B14) 07:22 (B14)	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:08 (B14) 07:21 (B14)	05:07 21:20
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	07:10 (B14) 07:17 (B14)	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22		05:03 21:24
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24		05:01 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26		04:59 21:27
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28		04:57 21:29
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31		04:55 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	06:00 20:33		04:54 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35		04:52 21:35
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37		04:50 21:37
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39		04:49 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41		04:47 21:40
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43		04:45 21:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45		04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47		04:42 21:45
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49		04:41 21:47
29	08:20 16:39		06:57 19:47	05:37 20:51		04:40 21:48
30	08:19 16:41		06:54 19:49	05:35 20:53		04:38 21:50
31	08:17 16:43		06:52 19:51	07:17 (B14) 07:24 (B14)		04:37 21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case			98	256	112	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.65	0.66	0.67	
Total reduction			0.26	0.32	0.37	
Total, real			25	82	42	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Rudzati - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (139)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October	November	December
1	04:30 22:09	05:16 21:28	06:01 (B22) 8 06:09 (B22)	06:17 20:14	07:04 (B14) 19 07:23 (B14)	07:17 18:54	07:23 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	05:59 (B22) 11 06:10 (B22)	06:19 20:11	07:03 (B14) 21 07:24 (B14)	07:19 18:51	07:25 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	05:58 (B22) 13 06:11 (B22)	06:21 20:09	07:02 (B14) 22 07:24 (B14)	07:21 18:48	07:27 16:32	08:28 15:43
4	04:33 22:07	05:22 21:22	05:58 (B22) 14 06:12 (B22)	06:23 20:06	07:02 (B14) 22 07:24 (B14)	07:23 18:46	07:29 16:30	08:29 15:43
5	04:34 22:07	05:24 21:20	05:57 (B22) 15 06:12 (B22)	06:25 20:04	07:01 (B14) 23 07:24 (B14)	07:26 18:43	07:31 16:27	08:31 15:42
6	04:35 22:06	05:26 21:17	05:58 (B22) 14 06:12 (B22)	06:27 20:01	07:01 (B14) 23 07:24 (B14)	07:28 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:00 (B22) 12 06:12 (B22)	06:29 19:58	07:00 (B14) 23 07:23 (B14)	07:30 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:02 (B22) 10 06:12 (B22)	06:31 19:56	07:00 (B14) 22 07:22 (B14)	07:32 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:04 (B22) 8 06:12 (B22)	06:33 19:53	07:02 (B14) 19 07:21 (B14)	07:34 18:33	07:40 16:19	08:37 15:39
10	04:40 22:02	05:33 21:08	06:06 (B22) 5 06:11 (B22)	06:35 19:50	07:04 (B14) 16 07:20 (B14)	07:36 18:30	07:42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:08 (B22) 3 06:11 (B22)	06:37 19:48	07:06 (B14) 12 07:18 (B14)	07:38 18:27	07:44 16:15	08:39 15:39
12	04:42 22:00	05:37 21:04		06:39 19:45	07:08 (B14) 8 07:16 (B14)	07:40 18:25	07:46 16:13	08:40 15:38
13	04:44 21:59	05:39 21:02		06:41 19:42	07:10 (B14) 1 07:11 (B14)	07:42 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59		06:43 19:39		07:44 18:20	07:51 16:10	08:43 15:38
15	04:46 21:57	05:43 20:57		06:45 19:37		07:46 18:17	07:53 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54		06:47 19:34		07:48 18:15	07:55 16:06	08:45 15:38
17	04:50 21:54	05:47 20:52		06:49 19:31		07:50 18:12	07:57 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50		06:51 19:29	07:33 (B24) 6 07:39 (B24)	07:53 18:10	07:59 16:03	08:46 15:38
19	04:53 21:51	05:51 20:47		06:53 19:26	07:30 (B24) 11 07:41 (B24)	07:55 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45		06:55 19:23	07:29 (B24) 13 07:42 (B24)	07:57 18:05	08:03 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42		06:57 19:21	07:28 (B24) 15 07:43 (B24)	07:59 18:02	08:05 15:58	08:48 15:39
22	04:58 21:46	05:57 20:40		06:59 19:18	07:28 (B24) 15 07:43 (B24)	08:01 18:00	08:07 15:56	08:49 15:40
23	04:59 21:45	05:59 20:37		07:01 19:15	07:30 (B24) 12 07:42 (B24)	08:03 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35		07:03 19:12	07:32 (B24) 10 07:42 (B24)	08:05 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32		07:05 19:10	07:34 (B24) 7 07:41 (B24)	08:07 16:52	08:13 15:52	08:51 15:40
26	05:05 21:39	06:05 20:30		07:07 19:07	07:36 (B24) 3 07:39 (B24)	08:10 16:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27		07:09 19:04		08:12 16:48	08:17 15:50	08:51 15:43
28	05:08 21:36	06:09 20:24		07:11 19:02		08:14 16:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:11 (B14) 7 07:18 (B14)	07:13 18:59		08:16 16:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:08 (B14) 13 07:21 (B14)	07:15 18:56		08:18 16:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17	07:06 (B14) 16 07:22 (B14)			08:20 16:38		08:51 15:47
Potential sun hours	529	2 06:04 (B22) 06:06 (B22)	469	385		324	247	216
Total, worst case	2		149	323				
Sun reduction	0.49		0.50	0.43				
Oper. time red.	0.98		0.98	0.98				
Wind dir. red.	0.67		0.67	0.65				
Total reduction	0.32		0.32	0.27				
Total, real	1		48	88				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Raceni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (184)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		13:46 (B22)	08:15		14:00 (B22)	07:11		06:49			05:32				04:36		
	15:48	51	14:37 (B14)	16:45	28	14:28 (B22)	17:47		19:53			20:55				21:53		
2	08:50		13:47 (B22)	08:13		14:02 (B22)	07:08		06:46			05:30				04:35		
	15:49	51	14:38 (B14)	16:47	25	14:27 (B22)	17:50		19:55			20:57				21:54		
3	08:50		13:46 (B22)	08:11		14:04 (B22)	07:06		06:43			05:28				04:34		
	15:51	52	14:38 (B14)	16:50	22	14:26 (B22)	17:52		19:57			20:59				21:55		
4	08:50		13:46 (B22)	08:09		14:07 (B22)	07:03		06:41			05:26				04:33		
	15:52	51	14:37 (B14)	16:52	17	14:24 (B22)	17:54		19:59			21:02				21:57		
5	08:49		13:47 (B22)	08:07		14:12 (B22)	07:00		06:38			05:23				04:32		
	15:53	51	14:38 (B14)	16:54	8	14:20 (B22)	17:56		20:01			21:04				21:58		
6	08:49		13:47 (B22)	08:05			06:58		06:35			05:21			05:50 (B2)	04:31		
	15:55	51	14:38 (B14)	16:56			17:58		20:03			21:06	4		05:54 (B2)	21:59		
7	08:48		13:47 (B22)	08:03			06:55		06:33			05:19			05:48 (B2)	04:30		
	15:56	49	14:37 (B14)	16:59			18:00		20:05			21:08	7		05:55 (B2)	22:00		
8	08:47		13:48 (B22)	08:00			06:53		06:30			05:17			05:46 (B2)	04:29		
	15:58	47	14:36 (B14)	17:01			18:03		20:07			21:10	10		05:56 (B2)	22:01		
9	08:47		13:48 (B22)	07:58			06:50		06:27			05:15			05:44 (B2)	04:28		
	15:59	45	14:35 (B14)	17:03			18:05		20:10	8	06:53 (B4)	05:12	12		05:56 (B2)	22:02		
10	08:46		13:48 (B22)	07:56			06:47		06:25			05:13			05:42 (B2)	04:28		
	16:01	40	14:28 (B22)	17:05			18:07		20:12	13	07:03 (B4)	05:14	15		05:57 (B2)	22:03		
11	08:45		13:49 (B22)	07:54			06:45		06:22			05:10			05:40 (B2)	04:27		
	16:03	40	14:29 (B22)	17:08			18:09		20:14	16	07:04 (B4)	05:16	17		05:57 (B2)	22:04		
12	08:44		13:48 (B22)	07:52			06:42		06:20			05:08			05:39 (B2)	04:27		
	16:04	41	14:29 (B22)	17:10			18:11		20:16	19	07:04 (B4)	05:18	18		05:57 (B2)	22:05		
13	08:43		13:48 (B22)	07:49			06:39		06:17			05:06			05:38 (B2)	04:26		
	16:06	42	14:30 (B22)	17:12			18:13		20:18	21	07:05 (B4)	05:20	19		05:57 (B2)	22:06		
14	08:42		13:49 (B22)	07:47			06:37		06:14			05:04			05:39 (B2)	04:26		
	16:08	41	14:30 (B22)	17:14			18:15		20:20	22	07:05 (B4)	05:22	18		05:57 (B2)	22:07		
15	08:41		13:49 (B22)	07:45			06:34		06:12			05:02			05:39 (B2)	04:26		
	16:10	41	14:30 (B22)	17:17			18:17		20:22	22	07:05 (B4)	05:24	18		05:57 (B2)	22:07		
16	08:40		13:50 (B22)	07:43			06:31		06:09			05:01			05:39 (B2)	04:25		
	16:12	41	14:31 (B22)	17:19			18:20		20:24	23	07:05 (B4)	05:25	17		05:56 (B2)	22:08		
17	08:39		13:49 (B22)	07:40			06:29		06:07			04:59			05:41 (B2)	04:25		
	16:14	42	14:31 (B22)	17:21			18:22		20:26	22	07:05 (B4)	05:27	15		05:56 (B2)	22:08		
18	08:37		13:50 (B22)	07:38			06:26		06:04			04:57			05:41 (B2)	04:25		
	16:16	42	14:32 (B22)	17:23			18:24		20:28	21	07:03 (B4)	05:29	14		05:55 (B2)	22:09		
19	08:36		13:50 (B22)	07:35			06:23		06:02			04:55			05:41 (B2)	04:25		
	16:18	42	14:32 (B22)	17:25			18:26		20:30	20	07:03 (B4)	05:31	13		05:54 (B2)	22:09		
20	08:35		13:51 (B22)	07:33			06:21		05:59			04:53			05:43 (B2)	04:25		
	16:20	42	14:33 (B22)	17:28			18:28	3	06:46 (B15)	05:59	06:43 (B4)	05:33	10		05:53 (B2)	22:10		
21	08:33		13:51 (B22)	07:31			06:18		05:57			04:52			05:44 (B2)	04:25		
	16:22	42	14:33 (B22)	17:30			18:30	6	06:49 (B15)	05:57	06:44 (B4)	05:35	7		05:51 (B2)	22:10		
22	08:32		13:52 (B22)	07:28			06:15		05:54			04:50				04:25		
	16:24	40	14:32 (B22)	17:32			18:32	10	06:51 (B15)	05:54	06:46 (B4)	05:36				22:10		
23	08:30		13:52 (B22)	07:26			06:13		05:52			04:48				04:26		
	16:26	40	14:32 (B22)	17:34			18:34	12	06:50 (B15)	05:52	06:48 (B4)	05:38				22:10		
24	08:29		13:52 (B22)	07:23			06:10		05:49			04:47				04:26		
	16:28	40	14:32 (B22)	17:37			18:36	15	06:50 (B15)	05:49	06:55 (B4)	05:40				22:10		
25	08:27		13:54 (B22)	07:21			06:07		05:47			04:45				04:26		
	16:30	39	14:33 (B22)	17:39			18:38	15	06:49 (B15)	05:47		04:42				22:10		
26	08:25		13:55 (B22)	07:18			06:05		05:44			04:44				04:27		
	16:32	38	14:33 (B22)	17:41			18:40	14	06:49 (B15)	05:45		04:43				22:10		
27	08:24		13:55 (B22)	07:16			06:02		05:42			04:42				04:27		
	16:34	37	14:32 (B22)	17:43			18:43	12	06:47 (B15)	05:42		04:41				22:10		
28	08:22		13:56 (B22)	07:13			05:59		05:39			04:41				04:28		
	16:36	36	14:32 (B22)	17:45			18:45	7	06:44 (B15)	05:39		04:41				22:10		
29	08:20		13:57 (B22)				06:57		05:37			04:39				04:28		
	16:39	35	14:32 (B22)				19:47		20:51			04:38				04:29		
30	08:18		13:58 (B22)				06:54		05:35			04:38				04:29		
	16:41	33	14:31 (B22)				19:49		20:53			04:37				22:09		
31	08:17		13:59 (B22)				06:51					04:37						
	16:43	30	14:29 (B22)				19:51					04:37						
Potential sun hours	235			266			366		426			508				529		
Total, worst case	1312			100			94		261			214						
Sun reduction	0.13			0.20			0.41		0.50			0.57						
Oper. time red.	0.98			0.98			0.98		0.98			0.98						
Wind dir. red.	0.66			0.66			0.65		0.66			0.67						
Total reduction	0.09			0.13			0.26		0.32			0.37						
Total, real	113			13			25		84			80						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Raceni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (184)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30 22:09	05:16 21:28	05:49 (B2) 18 06:07 (B2)	06:17 20:14	06:47 (B4) 16 07:03 (B4)	07:17 18:54	07:23 16:36			08:24 15:45	13:31 (B22) 40 14:11 (B22)
2	04:31 22:08	05:17 21:26	05:51 (B2) 16 06:07 (B2)	06:19 20:11	06:49 (B4) 12 07:01 (B4)	07:19 18:51	07:25 16:34			08:26 15:44	13:31 (B22) 40 14:11 (B22)
3	04:32 22:08	05:19 21:24	05:53 (B2) 14 06:07 (B2)	06:21 20:09	06:51 (B4) 8 06:59 (B4)	07:21 18:48	07:27 16:31			08:27 15:43	13:31 (B22) 44 14:18 (B14)
4	04:33 22:07	05:21 21:22	05:55 (B2) 12 06:07 (B2)	06:23 20:06		07:23 18:46	07:29 16:29			08:29 15:42	13:32 (B22) 47 14:20 (B14)
5	04:34 22:07	05:23 21:19	05:56 (B2) 9 06:05 (B2)	06:25 20:03		07:25 18:43	07:31 16:27			08:31 15:42	13:33 (B22) 48 14:22 (B14)
6	04:35 22:06	05:25 21:17	05:58 (B2) 6 06:04 (B2)	06:27 20:01		07:27 18:40	07:33 16:25	13:41 (B22) 9 13:50 (B22)		08:32 15:41	13:33 (B22) 51 14:24 (B14)
7	04:36 22:05	05:27 21:15	06:00 (B2) 3 06:03 (B2)	06:29 19:58		07:29 18:38	07:36 16:23	13:37 (B22) 17 13:54 (B22)		08:34 15:40	13:33 (B22) 51 14:24 (B14)
8	04:37 22:04	05:29 21:13		06:31 19:55		07:32 18:35	07:38 16:21	13:35 (B22) 22 13:57 (B22)		08:35 15:40	13:34 (B22) 51 14:25 (B14)
9	04:38 22:03	05:31 21:11		06:33 19:53		07:34 18:32	07:40 16:19	13:33 (B22) 25 13:58 (B22)		08:37 15:39	13:35 (B22) 51 14:26 (B14)
10	04:39 22:02	05:33 21:08		06:35 19:50		07:36 18:30	07:42 16:17	13:31 (B22) 28 13:59 (B22)		08:38 15:39	13:36 (B22) 51 14:27 (B14)
11	04:41 22:01	05:35 21:06		06:37 19:47		07:38 18:27	07:44 16:15	13:31 (B22) 30 14:01 (B22)		08:39 15:38	13:36 (B22) 51 14:27 (B14)
12	04:42 22:00	05:37 21:04		06:39 19:45		07:40 18:25	07:46 16:13	13:29 (B22) 33 14:02 (B22)		08:40 15:38	13:37 (B22) 52 14:29 (B14)
13	04:43 21:59	05:39 21:01		06:41 19:42		07:42 18:22	07:49 16:11	13:29 (B22) 34 14:03 (B22)		08:42 15:38	13:38 (B22) 51 14:29 (B14)
14	04:45 21:58	05:41 20:59		06:43 19:39		07:44 18:19	07:51 16:09	13:28 (B22) 36 14:04 (B22)		08:43 15:38	13:38 (B22) 52 14:30 (B14)
15	04:46 21:57	05:43 20:57		06:45 19:37	07:27 (B15) 7 07:34 (B15)	07:46 18:17	07:53 16:08	13:27 (B22) 37 14:04 (B22)		08:44 15:38	13:39 (B22) 51 14:30 (B14)
16	04:48 21:55	05:45 20:54		06:47 19:34	07:25 (B15) 11 07:36 (B15)	07:48 18:14	07:55 16:06	13:28 (B22) 38 14:06 (B22)		08:45 15:38	13:39 (B22) 52 14:31 (B14)
17	04:49 21:54	05:47 20:52		06:49 19:31	07:23 (B15) 14 07:37 (B15)	07:50 18:12	07:57 16:04	13:27 (B22) 39 14:06 (B22)		08:45 15:38	13:40 (B22) 51 14:31 (B14)
18	04:51 21:52	05:49 20:49		06:51 19:29	07:22 (B15) 15 07:37 (B15)	07:52 18:09	07:59 16:02	13:26 (B22) 40 14:06 (B22)		08:46 15:38	13:41 (B22) 51 14:32 (B14)
19	04:52 21:51	05:51 20:47		06:53 19:26	07:22 (B15) 15 07:37 (B15)	07:54 18:07	08:01 16:01	13:27 (B22) 40 14:07 (B22)		08:47 15:38	13:41 (B22) 51 14:32 (B14)
20	04:54 21:49	05:53 20:45	06:53 (B4) 9 07:02 (B4)	06:55 19:23	07:24 (B15) 13 07:37 (B15)	07:57 18:04	08:03 15:59	13:27 (B22) 40 14:07 (B22)		08:48 15:39	13:41 (B22) 52 14:33 (B14)
21	04:56 21:48	05:55 20:42	06:51 (B4) 13 07:04 (B4)	06:57 19:20	07:26 (B15) 10 07:39 (B15)	07:59 18:02	08:05 15:58	13:26 (B22) 42 14:08 (B22)		08:48 15:39	13:42 (B22) 51 14:33 (B14)
22	04:57 21:46	05:56 (B2) 5 06:01 (B2)	06:49 (B4) 16 07:05 (B4)	06:59 19:18	07:27 (B15) 7 07:34 (B15)	08:01 17:59	08:07 15:56	13:27 (B22) 42 14:09 (B22)		08:49 15:39	13:42 (B22) 51 14:33 (B14)
23	04:59 21:45	05:53 (B2) 9 06:02 (B2)	06:48 (B4) 18 07:06 (B4)	07:01 19:15	07:29 (B15) 4 07:33 (B15)	08:03 17:57	08:09 15:55	13:27 (B22) 42 14:09 (B22)		08:49 15:40	13:43 (B22) 51 14:34 (B14)
24	05:01 21:43	05:53 (B2) 11 06:04 (B2)	06:01 20:35	06:47 (B4) 20 07:07 (B4)	07:03 19:12	08:05 17:55	08:11 15:53	13:27 (B22) 42 14:09 (B22)		08:50 15:40	13:43 (B22) 52 14:35 (B14)
25	05:03 21:41	05:51 (B2) 14 06:05 (B2)	06:03 20:32	06:46 (B4) 21 07:07 (B4)	07:05 19:10	08:07 16:52	08:13 15:52	13:27 (B22) 42 14:09 (B22)		08:50 15:41	13:44 (B22) 51 14:35 (B14)
26	05:04 21:39	05:51 (B2) 15 06:06 (B2)	06:05 20:29	06:45 (B4) 21 07:06 (B4)	07:07 19:07	07:09 16:50	08:15 15:51	13:28 (B22) 41 14:09 (B22)		08:51 15:42	13:44 (B22) 51 14:35 (B14)
27	05:06 21:37	05:51 (B2) 16 06:07 (B2)	06:07 20:27	06:44 (B4) 22 07:06 (B4)	07:09 19:04	07:12 16:47	08:17 15:49	13:29 (B22) 41 14:10 (B22)		08:51 15:43	13:44 (B22) 51 14:35 (B14)
28	05:08 21:36	05:49 (B2) 17 06:06 (B2)	06:09 20:24	06:44 (B4) 22 07:06 (B4)	07:11 19:02	07:14 16:45	08:19 15:48	13:29 (B22) 41 14:10 (B22)		08:51 15:44	13:45 (B22) 51 14:36 (B14)
29	05:10 21:34	05:49 (B2) 18 06:07 (B2)	06:11 20:22	06:44 (B4) 22 07:06 (B4)	07:13 18:59	07:16 16:43	08:21 15:47	13:30 (B22) 41 14:11 (B22)		08:51 15:45	13:45 (B22) 51 14:36 (B14)
30	05:12 21:32	05:50 (B2) 18 06:08 (B2)	06:13 20:19	06:44 (B4) 21 07:05 (B4)	07:15 18:56	07:18 16:40	08:22 15:46	13:30 (B22) 41 14:11 (B22)		08:51 15:46	13:46 (B22) 51 14:37 (B14)
31	05:14 21:30	05:50 (B2) 18 06:08 (B2)	06:15 20:17	06:45 (B4) 19 07:04 (B4)		07:20 16:38		14:11 (B22)		08:51 15:47	13:46 (B22) 51 14:37 (B14)
Potential sun hours	529		469		385		324		247		216
Total, worst case	141		302		132			883			1550
Sun reduction	0.49		0.50		0.43			0.08			0.07
Oper. time red.	0.98		0.98		0.98			0.98			0.98
Wind dir. red.	0.67		0.66		0.65			0.66			0.66
Total reduction	0.32		0.32		0.27			0.05			0.05
Total, real	46		97		36			47			70

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ruki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (177)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Salvija - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (56)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	06:49	05:33	04:36
	15:48	16:45	17:48	19:53	20:56	21:53
2	08:51	08:13	08:43 (B14)	07:08	06:46	05:30
	15:49	16:48	3 08:46 (B14)	17:50	19:55	20:58
3	08:50	08:11	08:41 (B14)	07:06	06:44	05:28
	15:51	16:50	6 08:47 (B14)	17:52	19:57	21:00
4	08:50	08:09	08:39 (B14)	07:03	06:41	05:26
	15:52	16:52	10 08:49 (B14)	17:54	19:59	21:02
5	08:49	08:07	08:37 (B14)	07:01	06:38	05:24
	15:53	16:54	13 08:50 (B14)	17:56	20:01	21:04
6	08:49	08:05	08:34 (B14)	06:58	06:36	05:21
	15:55	16:57	15 08:49 (B14)	17:58	20:03	21:06
7	08:48	08:03	08:32 (B14)	06:55	06:33	05:19
	15:56	16:59	18 08:50 (B14)	18:01	20:06	21:08
8	08:48	08:01	08:32 (B14)	06:53	06:30	05:17
	15:58	17:01	19 08:51 (B14)	18:03	20:08	21:10
9	08:47	07:58	08:32 (B14)	06:50	06:28	05:15
	16:00	17:03	18 08:50 (B14)	18:05	20:10	21:12
10	08:46	07:56	08:32 (B14)	06:48	06:25	05:13
	16:01	17:05	18 08:50 (B14)	18:07	20:12	21:14
11	08:45	07:54	08:33 (B14)	06:45	06:22	05:11
	16:03	17:08	17 08:50 (B14)	18:09	20:14	21:16
12	08:44	07:52	08:34 (B14)	06:42	06:20	05:09
	16:05	17:10	14 08:48 (B14)	18:11	20:16	21:18
13	08:43	07:50	08:36 (B14)	06:40	06:17	05:07
	16:06	17:12	11 08:47 (B14)	18:13	20:18	21:20
14	08:42	07:47	08:37 (B14)	06:37	07:02 (B22)	06:15
	16:08	17:14	7 08:44 (B14)	18:16	1 07:03 (B22)	20:20
15	08:41	07:45	06:34	07:00 (B22)	06:12	05:03
	16:10	17:17	18:18	5 07:05 (B22)	20:22	21:24
16	08:40	07:43	06:32	06:57 (B22)	06:09	05:01
	16:12	17:19	18:20	8 07:05 (B22)	20:24	21:26
17	08:39	07:40	06:29	06:54 (B22)	06:07	04:59
	16:14	17:21	18:22	11 07:05 (B22)	20:26	21:27
18	08:38	07:38	06:26	06:52 (B22)	06:04	04:57
	16:16	17:23	18:24	14 07:06 (B22)	20:28	21:29
19	08:36	07:36	06:24	06:49 (B22)	06:02	04:55
	16:18	17:26	18:26	16 07:05 (B22)	20:31	21:31
20	08:35	07:33	06:21	06:49 (B22)	05:59	04:53
	16:20	17:28	18:28	15 07:04 (B22)	20:33	21:33
21	08:33	07:31	06:18	06:50 (B22)	05:57	04:52
	16:22	17:30	18:30	12 07:02 (B22)	20:35	21:35
22	08:32	07:28	06:16	06:52 (B22)	05:54	04:50
	16:24	17:32	18:32	9 07:01 (B22)	20:37	21:37
23	08:30	07:26	06:13	05:52	04:48	04:26
	16:26	17:34	18:34	20:39	21:38	22:10
24	08:29	07:23	06:10	05:49	04:47	04:26
	16:28	17:37	18:36	20:41	21:40	22:10
25	08:27	07:21	06:08	05:47	04:45	04:27
	16:30	17:39	18:39	20:43	21:42	22:10
26	08:26	07:18	06:05	05:44	04:44	04:27
	16:32	17:41	18:41	20:45	21:43	22:10
27	08:24	07:16	06:02	05:42	04:42	04:27
	16:34	17:43	18:43	20:47	21:45	22:10
28	08:22	07:13	06:00	05:40	04:41	04:28
	16:37	17:45	18:45	20:49	21:47	22:10
29	08:20		06:57	05:37	04:40	04:29
	16:39		19:47	20:51	21:48	22:10
30	08:19		06:54	05:35	04:38	04:29
	16:41		19:49	20:53	21:50	22:09
31	08:17		06:52		04:37	
	16:43		19:51		21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case		169	91			
Sun reduction		0.20	0.41			
Oper. time red.		0.98	0.98			
Wind dir. red.		0.61	0.64			
Total reduction		0.12	0.26			
Total, real		20	23			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Salvija - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (56)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:23	08:02 (B14)
	22:09	21:28	20:14	18:54	16:36	17 08:19 (B14)
2	04:31	05:18	06:19	07:19	07:25	08:01 (B14)
	22:09	21:26	20:11	18:51	16:34	18 08:19 (B14)
3	04:32	05:20	06:21	07:21	07:27	08:02 (B14)
	22:08	21:24	20:09	18:48	16:32	18 08:20 (B14)
4	04:33	05:22	06:23	07:23	07:29	08:02 (B14)
	22:07	21:22	20:06	18:46	16:30	18 08:20 (B14)
5	04:34	05:23	06:25	07:26	07:31	08:05 (B14)
	22:07	21:20	20:04	18:43	16:27	15 08:20 (B14)
6	04:35	05:25	06:27	07:28	07:34	08:07 (B14)
	22:06	21:17	20:01	18:40	16:25	12 08:19 (B14)
7	04:36	05:27	06:29	07:30	07:36	08:09 (B14)
	22:05	21:15	19:58	18:38	16:23	9 08:18 (B14)
8	04:37	05:29	06:31	07:32	07:38	08:12 (B14)
	22:04	21:13	19:56	18:35	16:21	6 08:18 (B14)
9	04:38	05:31	06:33	07:34	07:40	08:14 (B14)
	22:03	21:11	19:53	18:33	16:19	3 08:17 (B14)
10	04:39	05:33	06:35	07:36	07:42	08:17 (B14)
	22:02	21:09	19:50	18:30	16:17	08:38
11	04:41	05:35	06:37	07:38	07:44	08:39
	22:01	21:06	19:48	18:27	16:15	15:39
12	04:42	05:37	06:39	07:40	07:47	08:40
	22:00	21:04	19:45	18:25	16:13	15:38
13	04:44	05:39	06:41	07:42	07:49	08:42
	21:59	21:02	19:42	18:22	16:11	15:38
14	04:45	05:41	06:43	07:44	07:51	08:43
	21:58	20:59	19:39	18:20	16:10	15:38
15	04:46	05:43	06:45	07:46	07:53	08:44
	21:57	20:57	19:37	18:17	16:08	15:38
16	04:48	05:45	06:47	07:48	07:55	08:45
	21:55	20:54	19:34	18:15	16:06	15:38
17	04:49	05:47	06:49	07:50	07:57	08:46
	21:54	20:52	19:31	18:12	16:04	15:38
18	04:51	05:49	06:51	07:53	07:59	08:46
	21:53	20:50	19:29	18:09	16:03	15:38
19	04:53	05:51	06:53	07:55	08:01	08:47
	21:51	20:47	19:26	18:07	16:01	15:38
20	04:54	05:53	06:55	07:57	08:03	08:48
	21:50	20:45	19:23	18:04	15:59	15:39
21	04:56	05:55	06:57	07:59	08:05	08:49
	21:48	20:42	19:21	8 07:46 (B22)	18:02	15:58
22	04:58	05:57	06:59	07:36 (B22)	08:01	08:49
	21:46	20:40	19:18	12 07:48 (B22)	18:00	15:56
23	04:59	05:59	07:01	07:34 (B22)	08:03	08:50
	21:45	20:37	19:15	14 07:48 (B22)	17:57	15:55
24	05:01	06:01	07:03	07:33 (B22)	08:05	08:51
	21:43	20:35	19:12	16 07:49 (B22)	17:55	15:53
25	05:03	06:03	07:05	07:34 (B22)	07:07	08:13
	21:41	20:32	19:10	15 07:49 (B22)	16:52	15:52
26	05:05	06:05	07:07	07:36 (B22)	07:10	08:15
	21:39	20:30	19:07	12 07:48 (B22)	16:50	15:51
27	05:06	06:07	07:09	07:38 (B22)	07:12	08:17
	21:38	20:27	19:04	9 07:47 (B22)	16:48	15:50
28	05:08	06:09	07:11	07:40 (B22)	07:14	08:19
	21:36	20:24	19:02	6 07:46 (B22)	16:45	8 08:14 (B14)
29	05:10	06:11	07:13	07:42 (B22)	07:16	08:05 (B14)
	21:34	20:22	18:59	3 07:45 (B22)	16:43	12 08:17 (B14)
30	05:12	06:13	07:15	07:18	08:03 (B14)	08:23
	21:32	20:19	18:56	16:41	15 08:18 (B14)	15:46
31	05:14	06:15		07:20	08:03 (B14)	08:51
	21:30	20:17		16:38	16 08:19 (B14)	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			95	51	116	
Sun reduction			0.43	0.26	0.08	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.64	0.61	0.61	
Total reduction			0.26	0.15	0.05	
Total, real			25	8	6	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Sarkani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (179)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48 16:45	08:15 16:45 17:48	07:11 17:08 17:50	06:49 16:46 17:55	05:33 15:30 20:58	04:36 21:53 22:09	04:30 21:53 22:09	05:16 21:28 20:14	05:50 (B14) 05:52 (B14)	06:17 20:14 18:54	07:17 18:54 16:36	07:23 16:36 15:45
2	08:50 15:50 16:48	08:13 16:48 17:50	07:08 17:06 17:52	06:46 16:44 17:57	05:30 20:58 21:00	04:35 21:54 22:08	04:31 21:54 22:08	05:18 21:26 20:11	05:52 (B14)	06:19 20:11 18:51	07:19 18:51 16:34	07:25 16:34 15:44
3	08:50 15:51 16:50	08:11 16:50 17:52	07:06 17:03 17:52	06:44 16:41 17:59	05:28 20:56 21:02	04:34 21:55 22:08	04:32 21:55 22:08	05:20 21:24 20:09	05:22 20:09 18:48	06:21 20:09 18:48	07:21 18:48 16:32	07:27 16:32 15:43
4	08:50 15:52 16:52	08:09 16:52 17:54	07:03 17:01 17:54	06:41 16:38 17:59	05:26 21:02 21:04	04:33 21:57 22:07	04:33 21:57 22:07	05:22 21:22 20:06	05:22 20:06 18:46	06:23 20:06 18:46	07:23 18:46 16:30	07:29 16:30 15:43
5	08:49 15:54 16:54	08:07 16:54 17:56	07:01 17:01 17:56	06:38 16:36 17:56	05:24 21:04 21:04	04:32 21:58 22:07	04:34 21:58 22:07	05:24 21:20 20:04	05:24 20:04 18:43	06:25 20:04 18:43	07:26 18:43 16:27	07:31 16:27 15:42
6	08:49 15:55 16:57	08:05 16:57 17:59	06:58 17:59 18:03	06:36 20:03 20:03	05:21 21:06 21:06	04:31 21:59 22:06	04:35 21:59 22:06	05:26 21:17 20:01	05:26 20:01 18:40	06:27 20:01 18:40	07:28 18:40 16:25	07:33 16:25 15:41
7	08:48 15:57 16:59	08:03 16:59 18:01	06:55 18:01 18:03	06:33 20:06 20:06	05:19 21:08 21:08	04:30 22:00 22:05	04:36 22:00 22:05	05:28 21:15 20:01	05:28 20:01 18:38	06:29 20:01 18:38	07:30 18:38 16:23	07:36 16:23 15:41
8	08:48 15:58 17:01	08:01 17:01 18:03	06:53 18:03 18:03	06:30 20:08 20:08	05:17 21:10 21:10	04:30 22:01 22:04	04:37 22:01 22:04	05:30 21:13 20:01	05:30 20:01 18:35	06:31 20:01 18:35	07:32 18:35 16:21	07:38 16:21 15:40
9	08:47 16:00 17:03	07:58 17:03 18:05	06:50 18:05 18:05	06:28 20:10 20:10	05:15 21:12 21:12	04:29 22:02 22:03	04:38 22:02 22:03	05:31 21:11 20:01	05:31 20:01 18:33	06:33 20:01 18:33	07:34 18:33 16:19	07:40 16:19 15:40
10	08:46 16:01 17:06	07:56 17:06 18:07	06:48 18:07 18:07	06:25 20:12 20:12	05:13 21:14 21:14	04:28 22:03 22:02	04:40 22:03 22:02	05:33 21:08 20:01	05:33 20:01 18:30	06:35 20:01 18:30	07:36 18:30 16:17	07:42 16:17 15:39
11	08:45 16:03 17:08	07:54 17:08 18:09	06:45 18:09 18:09	06:22 20:14 20:14	05:11 21:16 21:16	04:28 22:04 22:01	04:41 22:04 22:01	05:35 21:06 20:01	05:35 20:01 18:27	06:37 20:01 18:27	07:38 18:27 16:15	07:44 16:15 15:39
12	08:44 16:05 17:10	07:52 17:10 18:11	06:42 18:11 18:11	06:20 20:16 20:16	05:09 21:18 21:18	04:27 22:05 22:05	04:42 22:05 22:00	05:37 21:04 20:01	05:37 20:01 18:25	06:39 20:01 18:25	07:40 18:25 16:13	07:46 16:13 15:39
13	08:43 16:07 17:12	07:50 17:12 18:13	06:40 18:13 18:13	06:17 20:18 20:18	05:07 21:20 21:20	04:27 22:06 22:06	04:44 22:06 21:59	05:39 21:02 20:01	05:39 20:01 18:22	06:41 20:01 18:22	07:42 18:22 16:11	07:49 16:11 15:38
14	08:42 16:08 17:15	07:47 17:15 18:16	06:37 18:16 18:16	06:15 20:20 20:20	05:05 21:22 21:22	04:26 22:07 22:07	04:45 22:07 21:58	05:41 20:59 20:01	05:41 20:59 18:20	06:43 20:59 18:20	07:44 18:20 16:10	07:51 16:10 15:38
15	08:41 16:10 17:17	07:45 17:17 18:18	06:34 18:18 18:18	06:12 20:22 20:22	05:03 21:24 21:24	04:26 22:07 22:07	04:47 22:07 21:57	05:43 20:57 20:01	05:43 20:57 18:17	06:45 20:57 18:17	07:46 18:17 16:08	07:53 16:08 15:38
16	08:40 16:12 17:19	07:43 17:19 18:20	06:32 18:20 18:20	06:10 20:24 20:24	05:01 21:25 21:25	04:26 22:08 22:08	04:48 22:08 21:55	05:45 20:54 20:01	05:45 20:54 18:15	06:47 20:54 18:15	07:48 18:15 16:06	07:55 16:06 15:38
17	08:39 16:14 17:21	07:40 17:21 18:22	06:29 18:22 18:22	06:07 20:26 20:26	04:59 21:27 21:27	04:26 22:08 22:08	04:50 22:08 21:54	05:47 20:52 20:01	05:47 20:52 18:12	06:49 20:52 18:12	07:50 18:12 16:04	07:57 16:04 15:38
18	08:37 16:16 17:23	07:38 17:23 18:24	06:26 18:24 18:24	06:04 20:28 20:28	04:57 21:29 21:29	04:26 22:09 22:09	04:51 22:09 21:52	05:49 20:51 20:01	05:49 20:51 18:10	06:51 20:51 18:10	07:53 18:10 16:03	07:59 16:03 15:38
19	08:36 16:18 17:26	07:36 17:26 18:26	06:24 18:26 18:26	06:02 20:31 20:31	04:55 21:31 21:31	04:25 22:09 22:09	04:53 22:09 21:51	05:51 20:47 20:01	05:51 20:47 18:07	06:53 20:47 18:07	07:55 18:07 16:01	08:01 16:01 15:39
20	08:35 16:20 17:28	07:33 17:28 18:28	06:21 18:28 18:28	05:59 20:33 20:33	04:54 21:33 21:33	04:26 22:10 22:10	04:54 22:10 21:49	05:53 20:45 20:01	05:53 20:45 18:05	06:55 20:45 18:05	07:57 18:05 15:59	08:03 15:59 15:39
21	08:33 16:22 17:30	07:31 17:30 18:30	06:18 18:30 18:30	05:57 20:35 20:35	04:52 21:35 21:35	04:26 22:10 22:10	04:56 22:10 21:48	05:55 20:42 20:01	05:55 20:42 18:02	06:57 20:42 18:02	07:59 18:02 15:58	08:05 15:58 15:39
22	08:32 16:24 17:32	07:28 17:32 18:32	06:16 18:32 18:32	05:54 20:37 20:37	04:50 21:36 21:36	04:26 22:10 22:10	04:58 22:10 21:46	05:57 20:40 20:01	05:57 20:40 18:00	06:59 20:40 18:00	08:01 18:00 15:56	08:07 15:56 15:40
23	08:30 16:26 17:35	07:26 17:35 18:34	06:13 18:34 18:34	05:52 20:39 20:39	04:49 21:38 21:38	04:26 22:10 22:10	04:59 22:10 21:45	05:59 20:37 20:01	05:59 20:37 18:03	07:01 20:37 18:03	08:03 18:03 15:55	08:09 15:55 15:40
24	08:29 16:28 17:37	07:23 17:37 18:36	06:10 18:36 18:36	05:49 20:41 20:41	04:47 21:40 21:40	04:26 22:10 22:10	05:01 22:10 21:43	06:01 20:35 20:01	06:01 20:35 18:03	07:03 20:35 18:03	08:05 18:03 15:54	08:11 15:54 15:41
25	08:27 16:30 17:39	07:21 17:39 18:39	06:08 18:39 18:39	05:47 20:43 20:43	04:46 21:42 21:42	04:27 22:10 22:10	05:03 22:10 21:41	06:03 20:32 20:01	06:03 20:32 18:03	07:05 20:32 18:03	08:13 18:03 15:52	08:50 15:52 15:42
26	08:26 16:32 17:41	07:18 17:41 18:41	06:05 18:41 18:41	05:45 20:45 20:45	04:44 21:43 21:43	04:27 22:10 22:10	05:05 22:10 21:39	06:05 20:30 20:01	06:05 20:30 18:05	07:07 20:30 18:05	08:15 18:05 15:51	08:51 15:51 15:42
27	08:24 16:35 17:43	07:16 17:43 18:43	06:02 18:43 18:43	05:42 20:47 20:47	04:43 21:45 21:45	04:28 22:10 22:10	05:07 22:10 21:38	06:07 20:27 20:01	06:07 20:27 18:04	07:09 20:27 18:04	08:17 18:04 15:50	08:51 15:50 15:43
28	08:22 16:37 17:46	07:13 17:46 18:45	06:00 18:45 18:45	05:40 20:49 20:49	04:41 21:47 21:47	04:28 22:10 22:10	05:08 22:10 21:36	06:09 20:24 20:01	06:09 20:24 18:04	07:11 20:24 18:04	08:19 18:04 15:49	08:51 15:49 15:44
29	08:20 16:39 17:49	07:07 17:49 18:49	05:57 18:49 18:49	05:37 20:51 20:51	04:40 21:48 21:48	04:29 22:10 22:10	05:10 22:10 21:34	06:11 20:22 20:01	06:11 20:22 18:05	07:13 20:22 18:05	08:21 18:05 15:47	08:51 15:47 15:45
30	08:19 16:41 17:51	07:06 17:51 18:51	05:54 18:51 18:51	05:35 20:53 20:53	04:39 21:50 21:50	04:30 22:09 22:09	05:12 22:09 21:32	06:13 20:19 20:01	06:13 20:19 18:06	07:15 20:19 18:06	08:22 18:06 15:46	08:51 15:46 15:46
31	08:17 16:43	07:04 17:51	05:52 19:51	05:37 21:51	04:37 21:51	05:14 21:30	05:14 21:30	06:15 20:17	06:15 20:17	07:20 16:38	08:22 16:38	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case					192							
Sun reduction					0.57							
Oper. time red.					0.98							
Wind dir. red.					0.67							
Total reduction					0.37							
Total, real					72							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Sarmas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (154)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	08:46 (B14) 08:55 (B14)	07:11 17:48	06:49 19:53	05:33 20:56
2	08:51 15:49	08:13 16:48	08:43 (B14) 08:55 (B14)	07:08 17:50	06:46 19:55	05:30 20:58
3	08:50 15:51	08:11 16:50	08:41 (B14) 08:56 (B14)	07:06 17:52	06:44 19:57	05:28 21:00
4	08:50 15:52	08:09 16:52	08:39 (B14) 08:56 (B14)	07:03 17:54	06:41 19:59	05:26 21:02
5	08:49 15:53	08:07 16:54	08:39 (B14) 08:56 (B14)	07:01 17:56	06:38 20:01	05:24 21:04
6	08:49 15:55	08:05 16:57	08:39 (B14) 08:55 (B14)	06:58 17:58	06:36 20:04	05:21 21:06
7	08:48 15:56	08:03 16:59	08:40 (B14) 08:55 (B14)	06:55 18:01	06:33 20:06	05:19 21:08
8	08:48 15:58	08:01 17:01	08:41 (B14) 08:55 (B14)	06:53 18:03	06:30 20:08	05:17 21:10
9	08:47 16:00	07:58 17:03	08:42 (B14) 08:53 (B14)	06:50 18:05	07:16 (B22) 07:17 (B22)	05:15 21:12
10	08:46 16:01	07:56 17:05	08:44 (B14) 08:52 (B14)	06:48 18:07	07:13 (B22) 07:18 (B22)	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	07:10 (B22) 07:18 (B22)	06:22 20:14	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11	07:08 (B22) 07:19 (B22)	06:20 20:16	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	07:05 (B22) 07:18 (B22)	06:17 20:18	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:16	07:03 (B22) 07:17 (B22)	06:15 20:20	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18	07:04 (B22) 07:17 (B22)	06:12 20:22	05:03 21:24
16	08:40 16:12	07:43 17:19	06:32 18:20	07:04 (B22) 07:15 (B22)	06:09 20:24	05:01 21:26
17	08:39 16:14	07:40 17:21	06:29 18:22	07:06 (B22) 07:13 (B22)	06:07 20:26	04:59 21:27
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:19 16:41	08:50 (B14) 08:53 (B14)	06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10
31	08:17 16:43	08:48 (B14) 08:54 (B14)	06:52 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case	9	134	83			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.61	0.61	0.63			
Total reduction	0.08	0.12	0.25			
Total, real	1	16	21			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Sarmas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (154)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:46 (B22) 16:36	08:13 (B14) 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:48 (B22) 16:34	08:11 (B14) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:50 (B22) 16:32	08:11 (B14) 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:52 (B22) 16:30	08:09 (B14) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:55 (B22) 16:27	08:10 (B14) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:56 (B22) 16:25	08:09 (B14) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:57 (B22) 16:23	08:09 (B14) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:58 (B22) 16:21	08:12 (B14) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:59 (B22) 16:19	08:14 (B14) 15:39
10	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	08:00 (B22) 16:17	08:17 (B14) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:01 (B22) 16:15	08:19 (B14) 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:02 (B22) 16:13	08:21 (B14) 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:03 (B22) 16:11	08:23 (B14) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:04 (B22) 16:10	08:24 (B14) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:05 (B22) 16:08	08:25 (B14) 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:06 (B22) 16:06	08:26 (B14) 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:07 (B22) 16:04	08:27 (B14) 15:38
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	08:08 (B22) 16:03	08:28 (B14) 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:09 (B22) 16:01	08:29 (B14) 15:38
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:10 (B22) 15:59	08:30 (B14) 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:11 (B22) 15:58	08:31 (B14) 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:12 (B22) 15:56	08:32 (B14) 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:13 (B22) 15:55	08:33 (B14) 15:40
24	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:14 (B22) 15:53	08:34 (B14) 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:15 (B22) 15:52	08:35 (B14) 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 16:50	08:16 (B22) 15:51	08:36 (B14) 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 16:48	08:17 (B22) 15:50	08:37 (B14) 15:43
28	05:08 21:36	06:09 20:25	07:11 19:02	08:13 16:45	08:18 (B22) 15:48	08:38 (B14) 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 16:43	08:19 (B22) 15:47	08:39 (B14) 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:41	08:20 (B22) 15:46	08:40 (B14) 15:46
31	05:14 21:30	06:15 20:17		08:19 16:38	08:21 (B22) 15:45	08:41 (B14) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			55	30	144	
Sun reduction			0.43	0.26	0.08	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.63	0.63	0.61	
Total reduction			0.26	0.16	0.05	
Total, real			14	5	7	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Saulkrasti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (112)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	09:01 (B22) 17:48	07:11 19:53	06:49 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	09:01 (B22) 17:50	07:08 19:55	06:46 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	09:02 (B22) 17:52	07:06 19:57	06:43 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	09:03 (B22) 17:54	07:03 19:59	06:41 21:02	04:33 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	09:04 (B22) 17:56	07:01 20:01	06:38 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	09:04 (B22) 17:58	06:58 20:03	06:35 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	09:06 (B22) 18:01	06:55 20:06	06:33 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	09:08 (B22) 18:03	06:53 20:08	06:30 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	09:11 (B22) 18:05	06:50 20:10	06:28 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	09:16 (B22) 18:05	06:47 20:12	06:25 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	09:16 (B22) 18:09	06:45 20:14	06:22 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	09:16 (B22) 18:11	06:42 20:16	06:20 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	09:16 (B22) 18:13	06:40 20:18	06:17 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	09:16 (B22) 18:13	06:37 20:18	06:15 21:20	04:26 22:06	04:45 21:59	05:41 21:02	06:43 19:42	07:44 18:22	07:51 16:11	08:43 15:38
15	08:41 16:10	07:45 17:17	09:16 (B22) 18:15	06:34 20:20	06:12 21:22	04:26 22:07	04:46 21:58	05:43 21:05	06:45 19:39	07:46 18:20	07:53 16:09	08:44 15:38
16	08:40 16:12	07:43 17:19	09:16 (B22) 18:18	06:32 20:22	06:09 21:24	04:25 22:07	04:48 21:57	05:45 21:05	06:47 19:37	07:48 18:17	07:55 16:08	08:45 15:38
17	08:39 16:14	07:40 17:21	09:16 (B22) 18:20	06:29 20:24	06:07 21:26	04:25 22:08	04:49 21:55	05:47 21:05	06:49 19:34	07:50 18:14	07:57 16:06	08:46 15:38
18	08:38 16:16	07:38 17:23	09:16 (B22) 18:22	06:26 20:26	06:04 21:27	04:25 22:09	04:51 21:54	05:49 21:05	06:51 19:31	07:52 18:12	07:59 16:04	08:46 15:38
19	08:36 16:18	07:36 17:26	09:16 (B22) 18:24	06:24 20:28	06:02 21:29	04:25 22:09	04:52 21:53	05:51 21:05	06:53 19:29	07:55 18:09	08:01 16:02	08:47 15:38
20	08:35 16:20	07:33 17:28	09:16 (B22) 18:26	06:21 20:31	05:59 21:31	04:25 22:09	04:54 21:51	05:53 21:05	06:55 19:26	07:57 18:07	08:03 16:01	08:48 15:38
21	08:33 16:22	07:31 17:30	09:16 (B22) 18:28	06:18 20:33	05:57 21:33	04:25 22:10	04:56 21:50	05:55 21:05	06:57 19:23	07:59 18:04	08:05 15:59	08:49 15:39
22	08:32 16:24	07:28 17:32	09:16 (B22) 18:30	06:16 20:35	05:54 21:35	04:25 22:10	04:57 21:48	05:57 21:05	06:59 19:21	08:01 18:02	08:07 15:58	08:49 15:39
23	08:30 16:26	07:26 17:34	09:16 (B22) 18:32	06:13 20:37	05:52 21:37	04:26 22:10	04:59 21:46	05:59 21:05	07:01 19:18	08:03 17:59	08:09 15:56	08:50 15:39
24	08:29 16:28	07:23 17:37	09:16 (B22) 18:34	06:10 20:39	05:49 21:38	04:26 22:10	05:01 21:45	06:01 21:05	07:03 19:15	08:05 17:57	08:11 15:55	08:50 15:40
25	08:27 16:30	07:21 17:39	09:16 (B22) 18:36	06:08 20:41	05:47 21:40	04:26 22:10	05:03 21:43	06:03 21:05	07:05 19:12	08:07 17:55	08:13 15:53	08:50 15:41
26	08:26 16:32	07:18 17:41	09:16 (B22) 18:38	06:05 20:43	05:44 21:42	04:27 22:10	05:05 21:41	06:05 21:05	07:07 19:10	08:09 17:52	08:15 15:52	08:51 15:41
27	08:24 16:34	07:16 17:43	09:16 (B22) 18:41	06:02 20:45	05:42 21:43	04:27 22:10	05:06 21:39	06:07 21:05	07:09 19:07	08:12 17:50	08:17 15:51	08:51 15:42
28	08:22 16:36	07:13 17:45	09:16 (B22) 18:43	05:59 20:47	05:40 21:45	04:28 22:10	05:08 21:38	06:09 21:05	07:11 19:04	08:19 17:47	08:25 15:49	08:51 15:43
29	08:20 16:39	07:11 17:48	09:16 (B22) 18:45	05:57 20:49	05:37 21:47	04:29 22:10	05:10 21:36	06:11 21:05	07:13 19:02	08:21 17:45	08:27 15:48	08:51 15:44
30	08:19 16:41	07:09 17:51	09:16 (B22) 18:47	05:54 20:53	05:35 21:50	04:30 22:09	05:12 21:32	06:13 21:05	07:15 18:56	08:22 17:41	08:28 15:46	08:51 15:46
31	08:17 16:43	07:07 17:55	09:16 (B22) 18:49	05:51 20:51	05:32 21:51	04:31 22:10	05:14 21:30	06:15 21:05	07:17 18:58	08:24 17:40	08:30 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	214	159									380	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.98	0.98									0.98	
Wind dir. red.	0.59	0.59									0.59	
Total reduction	0.08	0.12									0.05	
Total, real	16	18									18	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Saulites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (136)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B24) 07:50 (B24)	06:49 19:53	05:33 20:55
2	08:50 15:50	08:13 16:48	07:08 17:50	07:34 (B14) 07:49 (B24)	06:46 19:55	05:30 20:58
3	08:50 15:51	08:11 16:50	07:06 17:52	07:32 (B14) 07:50 (B24)	06:44 19:57	05:28 21:00
4	08:50 15:52	08:09 16:52	07:03 17:54	07:29 (B14) 07:48 (B24)	06:41 19:59	05:26 21:02
5	08:49 15:54	08:07 16:54	07:01 17:56	07:26 (B14) 07:47 (B24)	06:38 20:01	05:24 21:04
6	08:49 15:55	08:05 16:57	06:58 17:58	07:24 (B14) 07:45 (B14)	06:36 20:03	05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:01	07:21 (B14) 07:45 (B14)	06:33 20:06	05:19 21:08
8	08:48 15:58	08:01 17:01	06:53 18:03	07:20 (B14) 07:45 (B14)	06:30 20:08	05:17 21:10
9	08:47 16:00	07:58 17:03	06:50 18:05	07:20 (B14) 07:46 (B14)	06:28 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	06:48 18:07	07:19 (B14) 07:46 (B14)	06:25 20:12	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	07:19 (B14) 07:45 (B14)	06:22 20:14	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11	07:19 (B14) 07:45 (B14)	06:20 20:16	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	07:19 (B14) 07:44 (B14)	06:17 20:18	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	07:19 (B14) 07:43 (B14)	06:15 20:20	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18	07:21 (B14) 07:43 (B14)	06:12 20:22	05:03 21:24
16	08:40 16:12	07:43 17:19	06:32 18:20	07:21 (B14) 07:41 (B14)	06:09 20:24	05:01 21:26
17	08:39 16:14	07:40 17:21	06:29 18:22	07:22 (B14) 07:38 (B14)	06:07 20:26	04:59 21:27
18	08:38 16:16	07:38 17:23	06:26 18:24	07:25 (B14) 07:35 (B14)	06:04 20:28	04:57 21:29
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	06:28 (B22) 06:42 (B22)	04:55 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	06:26 (B22) 06:42 (B22)	04:54 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:23 (B22) 06:41 (B22)	04:52 21:35
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:23 (B22) 06:41 (B22)	04:50 21:37
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:23 (B22) 06:40 (B22)	04:48 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:24 (B22) 06:39 (B22)	04:47 21:40
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	06:25 (B22) 06:38 (B22)	04:45 21:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	06:26 (B22) 06:36 (B22)	04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:29 (B22) 06:32 (B22)	04:42 21:45
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49		04:41 21:47
29	08:20 16:39		05:57 19:47	05:37 20:51		04:40 21:48
30	08:19 16:41		06:54 19:49	05:35 20:53		04:38 21:50
31	08:17 16:43		06:52 19:51			04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case			378		150	
Sun reduction		0.20	0.41		0.50	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.62	0.62		0.65	
Total reduction		0.12	0.25		0.32	
Total, real		3	94	48		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Saulites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (136)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:59 (B14)	07:23
	22:09	21:28	20:14	18:54	25 08:24 (B14)	16:36
2	04:31	05:18	06:19	07:19	07:58 (B14)	07:25
	22:09	21:26	20:11	18:51	26 08:24 (B14)	16:34
3	04:32	05:20	06:21	07:21	07:57 (B14)	07:27
	22:08	21:24	20:09	18:48	27 08:24 (B14)	16:32
4	04:33	05:22	06:23	07:23	07:57 (B14)	07:29
	22:07	21:22	20:06	18:46	26 08:23 (B14)	16:30
5	04:34	05:24	06:25	07:25	07:57 (B14)	07:31
	22:07	21:20	20:04	18:43	26 08:23 (B14)	16:27
6	04:35	05:25	06:27	07:28	07:57 (B14)	07:33
	22:06	21:17	20:01	18:40	25 08:22 (B14)	16:25
7	04:36	05:27	06:29	07:30	07:58 (B14)	07:36
	22:05	21:15	19:58	18:38	23 08:21 (B14)	16:23
8	04:37	05:29	06:31	07:32	08:00 (B14)	07:38
	22:04	21:13	19:56	18:35	21 08:21 (B24)	16:21
9	04:38	05:31	06:33	07:34	08:03 (B14)	07:40
	22:03	21:11	19:53	18:33	20 08:23 (B24)	16:19
10	04:40	05:33	06:35	07:36	08:05 (B14)	07:42
	22:02	21:08	19:50	18:30	19 08:24 (B24)	16:17
11	04:41	05:35	06:37	07:38	08:07 (B14)	07:44
	22:01	21:06	19:48	18:27	17 08:24 (B24)	16:15
12	04:42	05:37	06:39	07:40	08:09 (B24)	07:46
	22:00	21:04	19:45	18:25	14 08:23 (B24)	16:13
13	04:44	05:39	06:41	07:42	08:11 (B24)	07:49
	21:59	21:02	19:42	18:22	12 08:23 (B24)	16:11
14	04:45	05:41	06:43	07:44	08:13 (B24)	07:51
	21:58	20:59	19:39	18:20	9 08:22 (B24)	16:10
15	04:46	05:43	06:45	07:46	08:16 (B24)	07:53
	21:57	20:57	19:37	18:17	6 08:22 (B24)	16:08
16	04:48	05:45	06:47	07:48	08:18 (B24)	07:55
	21:55	20:54	19:34	18:15	3 08:21 (B24)	16:06
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	19:31	18:12		16:04
18	04:51	05:49	06:51	07:52		07:59
	21:52	20:50	19:29	18:09		16:03
19	04:53	05:51	06:53	07:55		08:01
	21:51	20:47	19:26	18:07		16:01
20	04:54	05:53	06:55	07:57		08:03
	21:49	20:45	19:23	18:04		15:59
21	04:56	05:55	06:57	07:59		08:05
	21:48	20:42	19:21	18:02		15:58
22	04:58	05:57	06:59	08:01		08:07
	21:46	20:40	19:18	18:00		15:56
23	04:59	05:59	07:01	08:03		08:09
	21:45	20:37	19:15	17:57		15:55
24	05:01	06:01	07:03	08:05		08:11
	21:43	20:35	19:12	17:55		15:53
25	05:03	06:03	07:05	08:10 (B14)		08:13
	21:41	20:32	19:10	7 08:17 (B14)		15:52
26	05:05	06:05	07:07	08:06 (B14)		08:15
	21:39	20:30	19:07	14 08:20 (B14)		15:51
27	05:06	06:07	07:09	08:04 (B14)		08:17
	21:38	20:27	19:04	18 08:22 (B14)		15:50
28	05:08	06:09	07:11	08:02 (B14)		08:19
	21:36	20:24	19:02	21 08:23 (B14)		15:48
29	05:10	06:11	07:13	08:01 (B14)		08:21
	21:34	20:22	18:59	23 08:24 (B14)		15:47
30	05:12	06:13	07:15	07:59 (B14)		08:22
	21:32	20:19	18:56	25 08:24 (B14)		15:46
31	05:14	06:15		07:20		08:51
	21:30	20:17		16:38		15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		156	108		299	
Sun reduction		0.50	0.43		0.26	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.65	0.62		0.62	
Total reduction		0.32	0.26		0.16	
Total, real		49	28		47	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Seglini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (79)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B24) 19:53	05:33 20:55	04:36 21:53
2	08:50 15:50	08:13 16:48	07:08 17:50	07:34 (B24) 19:55	05:30 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:32 (B24) 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:29 (B24) 19:59	05:26 21:02	04:33 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	07:26 (B14) 20:01	05:24 21:04	04:32 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	07:24 (B14) 20:03	05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	07:21 (B14) 20:06	05:19 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	07:18 (B14) 20:08	05:17 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	07:16 (B14) 20:10	05:15 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05	06:48 18:07	07:13 (B14) 20:12	05:13 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	07:12 (B14) 20:14	05:11 21:16	04:27 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	07:12 (B14) 20:16	05:09 21:18	04:27 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	07:11 (B14) 20:18	05:07 21:20	04:27 22:06
14	08:42 16:08	07:47 17:14	06:37 18:16	07:11 (B14) 20:20	05:05 21:22	04:26 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	07:11 (B14) 20:22	05:03 21:24	04:26 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	07:11 (B14) 20:24	05:01 21:26	04:26 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	07:11 (B14) 20:26	05:00 21:27	04:25 22:08
18	08:38 16:16	07:38 17:23	06:26 18:24	07:12 (B14) 20:28	06:33 (B22) 21:29	04:25 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	07:13 (B14) 20:31	06:37 (B22) 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	07:15 (B14) 20:33	06:38 (B22) 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	07:18 (B14) 20:35	06:39 (B22) 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	07:24 (B14) 20:37	06:38 (B22) 21:37	04:26 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:19 (B22) 21:38	04:26 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:37 (B22) 21:40	04:26 22:10
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	06:21 (B22) 21:42	04:27 22:10
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	06:36 (B22) 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:34 (B22) 21:45	04:28 22:10
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	06:32 (B22) 21:47	04:28 22:10
29	08:20 16:39	07:11 17:47	05:57 19:47	05:37 20:51	06:29 (B22) 21:48	04:29 22:10
30	08:19 16:41		06:54 19:49	05:35 20:53		04:29 22:09
31	08:17 16:43		06:52 19:51			
Potential sun hours	235	266	366	426	508	528
Total, worst case		3	397	141		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.62	0.62	0.65		
Total reduction		0.12	0.25	0.32		
Total, real		0	99	45		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Seglini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (79)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:51 (B14)	07:23
	22:09	21:28	20:14	18:54	25 08:16 (B14)	16:36
2	04:31	05:18	06:19	07:19	07:50 (B14)	07:25
	22:09	21:26	20:11	18:51	26 08:16 (B14)	16:34
3	04:32	05:20	06:21	07:21	07:51 (B14)	07:27
	22:08	21:24	20:09	18:48	24 08:15 (B14)	16:32
4	04:33	05:22	06:23	07:23	07:52 (B14)	07:29
	22:07	21:22	20:06	18:46	22 08:14 (B14)	16:30
5	04:34	05:24	06:25	07:25	07:54 (B14)	07:31
	22:07	21:20	20:04	18:43	20 08:14 (B24)	16:27
6	04:35	05:25	06:27	07:28	07:56 (B14)	07:33
	22:06	21:17	20:01	18:40	20 08:16 (B24)	16:25
7	04:36	05:27	06:29	07:30	07:58 (B14)	07:36
	22:05	21:15	19:58	18:38	19 08:17 (B24)	16:23
8	04:37	05:29	06:31	07:32	08:00 (B14)	07:38
	22:04	21:13	19:56	18:35	18 08:18 (B24)	16:21
9	04:38	05:31	06:33	07:34	08:03 (B24)	07:40
	22:03	21:11	19:53	18:33	16 08:19 (B24)	16:19
10	04:40	05:33	06:35	07:36	08:05 (B24)	07:42
	22:02	21:08	19:50	18:30	14 08:19 (B24)	16:17
11	04:41	05:35	06:37	07:38	08:07 (B24)	07:44
	22:01	21:06	19:48	18:27	11 08:18 (B24)	16:15
12	04:42	05:37	06:39	07:40	08:09 (B24)	07:46
	22:00	21:04	19:45	18:25	9 08:18 (B24)	16:13
13	04:44	05:39	06:41	07:42	08:11 (B24)	07:49
	21:59	21:02	19:42	18:22	5 08:16 (B24)	16:11
14	04:45	05:41	06:43	07:44	08:13 (B24)	07:51
	21:58	20:59	19:39	18:20	2 08:15 (B24)	16:10
15	04:46	05:43	06:45	07:46		07:53
	21:57	20:57	6 06:38 (B22)	18:17		16:08
16	04:48	05:45	06:47	07:48		07:55
	21:55	20:54	10 06:40 (B22)	18:15		16:06
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	14 06:42 (B22)	18:12		16:04
18	04:51	05:49	06:51	07:53		07:59
	21:52	20:50	16 06:43 (B22)	18:09		16:03
19	04:53	05:51	06:53	07:55		08:01
	21:51	20:47	17 06:42 (B22)	18:07		16:01
20	04:54	05:53	06:55	07:57		08:03
	21:49	20:45	18 06:43 (B22)	18:04		15:59
21	04:56	05:55	06:57	07:59		08:05
	21:48	20:42	17 06:43 (B22)	18:02		15:58
22	04:58	05:57	06:59	08:01		08:07
	21:46	20:40	15 06:43 (B22)	18:00		15:56
23	04:59	05:59	07:01	08:03		08:09
	21:45	20:37	12 06:42 (B22)	17:57		15:55
24	05:01	06:01	07:03	08:05		08:11
	21:43	20:35	10 06:42 (B22)	17:55		15:53
25	05:03	06:03	07:05	08:07		08:13
	21:41	20:32	7 06:41 (B22)	17:52		15:52
26	05:05	06:05	07:07	08:09		08:15
	21:39	20:30	4 06:40 (B22)	17:50		15:51
27	05:06	06:07	07:09	08:11		08:17
	21:38	20:27	19:04	17:48		15:50
28	05:08	06:09	07:11	08:13		08:19
	21:36	20:24	19:02	17:46		15:48
29	05:10	06:11	07:13	08:15		08:21
	21:34	20:22	18:59	17:43		15:47
30	05:12	06:13	07:15	08:17		08:22
	21:32	20:19	18:56	17:41		15:46
31	05:14	06:15		07:20		08:51
	21:30	20:17		16:38		15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		146	170	231		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.65	0.62	0.62		
Total reduction		0.32	0.26	0.16		
Total, real		46	44	36		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Senlici - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (140)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	06:49	05:33	06:03 (B22)
	15:48	16:45	17:48	19:53	20:55	18 06:21 (B22)
2	08:50	08:13	07:08	06:46	05:30	06:04 (B22)
	15:50	16:48	17:50	19:55	20:58	17 06:21 (B22)
3	08:50	08:11	07:06	07:32 (B24)	05:28	06:04 (B22)
	15:51	16:50	17:52	3 07:35 (B24)	21:00	16 06:20 (B22)
4	08:50	08:09	07:03	07:29 (B24)	05:26	06:05 (B22)
	15:52	16:52	17:54	7 07:36 (B24)	21:02	14 06:19 (B22)
5	08:49	08:07	07:01	07:26 (B24)	05:24	06:07 (B22)
	15:54	16:54	17:56	10 07:36 (B24)	21:04	11 06:18 (B22)
6	08:49	08:05	06:58	07:24 (B24)	05:21	06:09 (B22)
	15:55	16:57	17:58	13 07:37 (B24)	21:06	7 06:16 (B22)
7	08:48	08:03	06:55	07:21 (B24)	05:19	04:30
	15:56	16:59	18:01	15 07:36 (B24)	21:08	22:00
8	08:48	08:01	06:53	07:18 (B24)	05:17	04:29
	15:58	17:01	18:03	18 07:36 (B24)	21:10	22:01
9	08:47	07:58	06:50	07:19 (B24)	05:15	04:29
	16:00	17:03	18:05	17 07:36 (B24)	21:12	22:02
10	08:46	07:56	06:48	07:19 (B24)	05:13	04:28
	16:01	17:05	18:07	16 07:35 (B24)	21:14	22:03
11	08:45	07:54	06:45	07:19 (B24)	05:11	04:27
	16:03	17:08	18:09	14 07:33 (B24)	21:16	22:04
12	08:44	07:52	06:42	07:08 (B14)	05:09	04:27
	16:05	17:10	18:11	18 07:31 (B24)	21:18	22:05
13	08:43	07:50	06:40	07:05 (B14)	05:07	04:27
	16:06	17:12	18:13	15 07:20 (B14)	21:20	22:06
14	08:42	07:47	06:37	07:02 (B14)	05:05	04:26
	16:08	17:14	18:15	19 07:21 (B14)	21:22	22:07
15	08:41	07:45	06:34	07:00 (B14)	05:03	04:26
	16:10	17:17	18:18	23 07:23 (B14)	21:24	22:07
16	08:40	07:43	06:32	06:58 (B14)	05:01	04:26
	16:12	17:19	18:20	25 07:23 (B14)	21:25	22:08
17	08:39	07:40	06:29	06:57 (B14)	04:59	04:25
	16:14	17:21	18:22	26 07:23 (B14)	21:27	22:08
18	08:38	07:38	06:26	06:55 (B14)	04:57	04:25
	16:16	17:23	18:24	28 07:23 (B14)	21:29	22:09
19	08:36	07:36	06:24	06:56 (B14)	04:55	04:25
	16:18	17:26	18:26	28 07:24 (B14)	21:31	22:09
20	08:35	07:33	06:21	06:55 (B14)	04:54	04:25
	16:20	17:28	18:28	28 07:23 (B14)	21:33	22:10
21	08:33	07:31	06:18	06:54 (B14)	04:52	04:25
	16:22	17:30	18:30	29 07:23 (B14)	21:35	22:10
22	08:32	07:28	06:16	06:55 (B14)	04:50	04:26
	16:24	17:32	18:32	28 07:23 (B14)	21:37	22:10
23	08:30	07:26	06:13	06:55 (B14)	05:52	06:18 (B22)
	16:26	17:34	18:34	27 07:22 (B14)	21:38	06:19 (B22)
24	08:29	07:23	06:10	06:55 (B14)	05:49	06:16 (B22)
	16:28	17:37	18:36	25 07:20 (B14)	21:40	06:21 (B22)
25	08:27	07:21	06:08	06:56 (B14)	05:47	06:14 (B22)
	16:30	17:39	18:39	24 07:20 (B14)	21:42	06:22 (B22)
26	08:26	07:18	06:05	06:56 (B14)	05:45	06:11 (B22)
	16:32	17:41	18:41	22 07:18 (B14)	21:43	06:22 (B22)
27	08:24	07:16	06:02	06:57 (B14)	05:42	06:09 (B22)
	16:34	17:43	18:43	19 07:16 (B14)	21:45	06:22 (B22)
28	08:22	07:13	06:00	07:00 (B14)	05:40	06:07 (B22)
	16:37	17:45	18:45	14 07:14 (B14)	21:47	06:23 (B22)
29	08:20		06:57	08:03 (B14)	05:37	06:05 (B22)
	16:39		19:47	6 08:09 (B14)	20:51	18 06:23 (B22)
30	08:19		06:54		05:35	06:04 (B22)
	16:41		19:49		20:53	19 06:23 (B22)
31	08:17		06:52			04:37
	16:43		19:51			21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case			517	91	83	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.63	0.66	0.66	
Total reduction			0.25	0.32	0.37	
Total, real			131	29	30	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Senlici - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (140)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:46 (B14)	07:23
	22:09	21:28	20:14	18:54	19	08:09 (B24)
2	04:31	05:18	06:19	07:19	07:48 (B14)	07:25
	22:09	21:26	20:11	18:51	17	08:11 (B24)
3	04:32	05:20	06:21	07:21	07:57 (B24)	07:27
	22:08	21:24	20:09	18:48	15	08:12 (B24)
4	04:33	05:22	06:23	07:23	07:56 (B24)	07:29
	22:07	21:22	20:06	18:46	17	08:13 (B24)
5	04:34	05:24	06:25	07:25	07:55 (B24)	07:31
	22:07	21:20	20:04	18:43	18	08:13 (B24)
6	04:35	05:25	06:27	07:28	07:56 (B24)	07:33
	22:06	21:17	20:01	18:40	17	08:13 (B24)
7	04:36	05:27	06:29	07:30	07:58 (B24)	07:36
	22:05	21:15	9 06:26 (B22)	19:58	14	08:12 (B24)
8	04:37	05:29	06:31	07:32	08:00 (B24)	07:38
	22:04	21:13	12 06:28 (B22)	19:56	11	08:11 (B24)
9	04:38	05:31	06:33	07:34	08:03 (B24)	07:40
	22:03	21:11	15 06:29 (B22)	19:53	8	08:11 (B24)
10	04:40	05:33	06:35	07:36	08:05 (B24)	07:42
	22:02	21:08	16 06:30 (B22)	19:50	5	08:10 (B24)
11	04:41	05:35	06:37	07:38	08:07 (B24)	07:44
	22:01	21:06	18 06:31 (B22)	19:47	1	08:08 (B24)
12	04:42	05:37	06:39	07:40		07:46
	22:00	21:04	18 06:30 (B22)	19:45		16:13
13	04:44	05:39	06:41	07:42		07:49
	21:59	21:02	19 06:30 (B22)	19:42		16:11
14	04:45	05:41	06:43	07:44		07:51
	21:58	20:59	17 06:30 (B22)	3 07:58 (B14)		16:10
15	04:46	05:43	06:45	07:46		07:53
	21:57	20:57	15 06:30 (B22)	13 08:03 (B14)		16:08
16	04:48	05:45	06:47	07:48		07:55
	21:55	20:54	13 06:30 (B22)	18 08:05 (B14)		16:06
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	10 06:29 (B22)	21 08:06 (B14)		16:04
18	04:51	05:49	06:51	07:52		07:59
	21:52	20:50	7 06:28 (B22)	23 08:07 (B14)		16:03
19	04:53	05:51	06:53	07:55		08:01
	21:51	20:47	4 06:26 (B22)	26 08:08 (B14)		16:01
20	04:54	05:53	06:55	07:57		08:03
	21:49	20:45	1 06:25 (B22)	27 08:08 (B14)		15:59
21	04:56	05:55	06:57	07:59		08:05
	21:48	20:42	27 08:08 (B14)	18:02		15:58
22	04:58	05:57	06:59	08:01		08:07
	21:46	20:40	28 08:08 (B14)	18:00		15:56
23	04:59	05:59	07:01	08:03		08:09
	21:45	20:37	28 08:08 (B14)	17:57		15:55
24	05:01	06:01	07:03	08:05		08:11
	21:43	20:35	28 08:07 (B14)	17:55		15:53
25	05:03	06:03	07:05	07:07		08:13
	21:41	20:32	28 08:07 (B14)	16:52		15:52
26	05:05	06:05	07:07	07:10		08:15
	21:39	20:30	27 08:06 (B14)	16:50		15:51
27	05:06	06:07	07:09	07:12		08:17
	21:38	20:27	26 08:05 (B14)	16:48		15:50
28	05:08	06:09	07:11	07:14		08:19
	21:36	20:24	24 08:04 (B14)	16:45		15:48
29	05:10	06:11	07:13	07:16		08:21
	21:34	20:22	20 08:02 (B14)	16:43		15:47
30	05:12	06:13	07:15	07:18		08:22
	21:32	20:19	16 08:00 (B14)	16:41		15:46
31	05:14	06:15		07:20		08:51
	21:30	20:17		16:38		15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		174	383	142		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.63	0.62		
Total reduction		0.32	0.26	0.16		
Total, real		56	101	22		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Silavinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (224)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:12 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:43
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:24 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:28 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:05	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:52 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:54 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:26 22:10	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (152)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	09:35 (B22)	07:11	06:49	05:33
	15:48	16:45	10:16 (B22)	17:48	19:53	20:55
2	08:50	08:13	09:36 (B22)	07:08	06:46	05:30
	15:49	16:47	10:16 (B22)	17:50	19:55	20:57
3	08:50	08:11	09:36 (B22)	07:06	06:43	05:28
	15:51	16:50	10:16 (B22)	17:52	19:57	21:00
4	08:50	08:09	09:37 (B22)	07:03	06:41	05:26
	15:52	16:52	10:16 (B22)	17:54	19:59	21:02
5	08:49	08:07	09:37 (B22)	07:00	06:38	05:23
	15:53	16:54	10:16 (B22)	17:56	20:01	21:04
6	08:49	08:05	09:37 (B22)	06:58	06:35	05:21
	15:55	16:56	10:15 (B22)	17:58	20:03	21:06
7	08:48	08:03	09:38 (B22)	06:55	06:33	05:19
	15:56	16:59	10:15 (B22)	18:00	20:05	21:08
8	08:48	08:01	09:39 (B22)	06:53	06:30	05:17
	15:58	17:01	10:15 (B22)	18:03	20:08	21:10
9	08:47	09:48 (B22)	07:58	09:39 (B22)	06:50	06:28
	15:59	09:51 (B22)	17:03	10:13 (B22)	18:05	20:10
10	08:46	09:45 (B22)	07:56	09:41 (B22)	06:47	06:25
	16:01	09:55 (B22)	17:05	10:13 (B22)	18:07	20:12
11	08:45	09:43 (B22)	07:54	09:42 (B22)	06:45	06:22
	16:03	09:58 (B22)	17:08	10:12 (B22)	18:09	20:14
12	08:44	09:42 (B22)	07:52	09:43 (B22)	06:42	06:20
	16:04	10:00 (B22)	17:10	10:10 (B22)	18:11	20:16
13	08:43	09:40 (B22)	07:49	09:45 (B22)	06:40	06:17
	16:06	10:01 (B22)	17:12	10:08 (B22)	18:13	20:18
14	08:42	09:40 (B22)	07:47	09:47 (B22)	06:37	06:14
	16:08	10:03 (B22)	17:14	10:05 (B22)	18:15	20:20
15	08:41	09:39 (B22)	07:45	09:51 (B22)	06:34	06:12
	16:10	10:03 (B22)	17:17	10:02 (B22)	18:18	20:22
16	08:40	09:38 (B22)	07:43		06:32	06:09
	16:12	10:05 (B22)	17:19		18:20	20:24
17	08:39	09:38 (B22)	07:40		06:29	06:07
	16:14	10:07 (B22)	17:21		18:22	20:26
18	08:37	09:37 (B22)	07:38		06:26	06:04
	16:16	10:08 (B22)	17:23		18:24	20:28
19	08:36	09:37 (B22)	07:36		06:24	06:02
	16:18	10:08 (B22)	17:26		18:26	20:30
20	08:35	09:37 (B22)	07:33		06:21	05:59
	16:20	10:10 (B22)	17:28		18:28	20:33
21	08:33	09:36 (B22)	07:31		06:18	05:57
	16:22	10:11 (B22)	17:30		18:30	20:35
22	08:32	09:36 (B22)	07:28		06:16	05:54
	16:24	10:11 (B22)	17:32		18:32	20:37
23	08:30	09:35 (B22)	07:26		06:13	05:52
	16:26	10:12 (B22)	17:34		18:34	20:39
24	08:29	09:36 (B22)	07:23		06:10	05:49
	16:28	10:14 (B22)	17:37		18:36	20:41
25	08:27	09:36 (B22)	07:21		06:07	05:47
	16:30	10:14 (B22)	17:39		18:38	20:43
26	08:26	09:36 (B22)	07:18		06:05	05:44
	16:32	10:15 (B22)	17:41		18:41	20:45
27	08:24	09:35 (B22)	07:16		06:02	05:42
	16:34	10:15 (B22)	17:43		18:43	20:47
28	08:22	09:35 (B22)	07:13		05:59	05:40
	16:36	10:16 (B22)	17:45		18:45	20:49
29	08:20	09:36 (B22)			06:57	05:37
	16:39	10:16 (B22)			19:47	20:51
30	08:18	09:36 (B22)			06:54	05:35
	16:41	10:16 (B22)			19:49	20:53
31	08:17	09:36 (B22)			06:51	
	16:43	10:17 (B22)			19:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case	689	485			254	
Sun reduction	0.13	0.20			0.57	
Oper. time red.	0.98	0.98			0.98	
Wind dir. red.	0.61	0.61			0.67	
Total reduction	0.08	0.12			0.36	
Total, real	53	56			92	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (152)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:16	05:54 (B1)	06:17	07:17			07:23	09:10 (B22)	08:24	09:25 (B22)
	22:09	21:28	20	06:14 (B1)	20:14	18:54		16:36	33	09:43 (B22)	15:45
2	04:31	05:18	05:55 (B1)	06:19	07:19			07:25	09:09 (B22)	08:26	09:27 (B22)
	22:09	21:26	19	06:14 (B1)	20:11	18:51		16:34	34	09:43 (B22)	15:44
3	04:32	05:19	05:55 (B1)	06:21	07:21			07:27	09:09 (B22)	08:28	09:30 (B22)
	22:08	21:24	19	06:14 (B1)	20:09	18:48		16:32	36	09:45 (B22)	15:43
4	04:33	05:21	05:55 (B1)	06:23	07:23			07:29	09:08 (B22)	08:29	09:34 (B22)
	22:07	21:22	19	06:14 (B1)	20:06	18:46		16:29	37	09:45 (B22)	15:42
5	04:34	05:23	05:56 (B1)	06:25	07:25			07:31	09:07 (B22)	08:31	
	22:07	21:20	17	06:13 (B1)	20:03	18:43		16:27	38	09:45 (B22)	15:42
6	04:35	05:25	05:58 (B1)	06:27	07:27			07:33	09:07 (B22)	08:32	
	22:06	21:17	15	06:13 (B1)	20:01	18:40		16:25	39	09:46 (B22)	15:41
7	04:36	05:27	06:00 (B1)	06:29	07:30			07:36	09:06 (B22)	08:34	
	22:05	21:15	12	06:12 (B1)	19:58	18:38		16:23	40	09:46 (B22)	15:40
8	04:37	05:29	06:02 (B1)	06:31	07:32			07:38	09:07 (B22)	08:35	
	22:04	21:13	9	06:11 (B1)	19:55	18:35		16:21	40	09:47 (B22)	15:40
9	04:38	05:31	06:04 (B1)	06:33	07:34			07:40	09:06 (B22)	08:37	
	22:03	21:11	6	06:10 (B1)	19:53	18:32		16:19	41	09:47 (B22)	15:39
10	04:39	05:33	06:06 (B1)	06:35	07:36			07:42	09:07 (B22)	08:38	
	22:02	21:08	2	06:08 (B1)	19:50	18:30		16:17	41	09:48 (B22)	15:39
11	04:41	05:35		06:37	07:38			07:44	09:07 (B22)	08:39	
	22:01	21:06		19:47	18:27			16:15	40	09:47 (B22)	15:38
12	04:42	05:37		06:39	07:40			07:46	09:07 (B22)	08:40	
	22:00	21:04		19:45	18:25			16:13	40	09:47 (B22)	15:38
13	04:43	05:39		06:41	07:42			07:49	09:07 (B22)	08:42	
	21:59	21:02		19:42	18:22			16:11	41	09:48 (B22)	15:38
14	04:45	05:41		06:43	07:44			07:51	09:07 (B22)	08:43	
	21:58	20:59		19:39	18:19			16:09	40	09:47 (B22)	15:38
15	04:46	05:43		06:45	07:46			07:53	09:07 (B22)	08:44	
	21:57	20:57		19:37	18:17			16:08	40	09:47 (B22)	15:38
16	04:48	05:45		06:47	07:48			07:55	09:08 (B22)	08:45	
	21:55	20:54		19:34	18:14			16:06	40	09:48 (B22)	15:38
17	04:49	05:47		06:49	07:50			07:57	09:09 (B22)	08:46	
	21:54	20:52		19:31	18:12			16:04	38	09:47 (B22)	15:38
18	04:51	05:49		06:51	07:52			07:59	09:10 (B22)	08:46	
	21:52	20:50		19:29	18:09			16:02	37	09:47 (B22)	15:38
19	04:52	05:51		06:53	07:55			08:01	09:10 (B22)	08:47	
	21:51	20:47		19:26	18:07			16:01	37	09:47 (B22)	15:38
20	04:54	05:53		06:55	07:57			08:03	09:11 (B22)	08:48	
	21:49	20:45		19:23	18:04			15:59	35	09:46 (B22)	15:39
21	04:56	05:55		06:57	07:59			08:05	09:11 (B22)	08:48	
	21:48	20:42		19:20	18:02			15:58	35	09:46 (B22)	15:39
22	04:57	05:57		06:59	08:01			08:07	09:13 (B22)	08:49	
	21:46	20:40		19:18	17:59			15:56	33	09:46 (B22)	15:39
23	04:59	05:59		07:01	08:03			08:09	09:14 (B22)	08:50	
	21:45	20:37		19:15	17:57			15:55	31	09:45 (B22)	15:40
24	05:01	06:01 (B1)	06:01	07:03	08:05			08:11	09:14 (B22)	08:50	
	21:43	7	06:08 (B1)	20:35	19:12	17:55		15:53	31	09:45 (B22)	15:41
25	05:03	06:00 (B1)	06:03	07:05	07:07			08:13	09:15 (B22)	08:50	
	21:41	10	06:10 (B1)	20:32	19:10	16:52		15:52	29	09:44 (B22)	15:41
26	05:04	05:58 (B1)	06:05	07:07	07:10			08:15	09:16 (B22)	08:51	
	21:39	13	06:11 (B1)	20:30	19:07	16:50		15:51	27	09:43 (B22)	15:42
27	05:06	05:57 (B1)	06:07	07:09	07:12		09:20 (B22)	08:17	09:19 (B22)	08:51	
	21:38	15	06:12 (B1)	20:27	19:04	16:47	12	09:32 (B22)	15:49	25	09:44 (B22)
28	05:08	05:56 (B1)	06:09	07:11	07:14		09:16 (B22)	08:19	09:20 (B22)	08:51	
	21:36	16	06:12 (B1)	20:24	19:02	16:45	19	09:35 (B22)	15:48	23	09:43 (B22)
29	05:10	05:56 (B1)	06:11	07:13	07:16		09:14 (B22)	08:21	09:21 (B22)	08:51	
	21:34	17	06:13 (B1)	20:22	18:59	16:43	24	09:38 (B22)	15:47	21	09:42 (B22)
30	05:12	05:56 (B1)	06:13	07:15	07:18		09:12 (B22)	08:22	09:23 (B22)	08:51	
	21:32	18	06:14 (B1)	20:19	18:56	16:40	28	09:40 (B22)	15:46	18	09:41 (B22)
31	05:14	05:55 (B1)	06:15		07:20		09:11 (B22)			08:51	
	21:30	19	06:14 (B1)	20:17		16:38	30	09:41 (B22)		15:47	
Potential sun hours	529		469		385	324		247		216	
Total, worst case	115		138			113		1040		30	
Sun reduction	0.49		0.50			0.26		0.08		0.07	
Oper. time red.	0.98		0.98			0.98		0.98		0.98	
Wind dir. red.	0.67		0.67			0.61		0.61		0.61	
Total reduction	0.31		0.32			0.15		0.05		0.04	
Total, real	36		44			17		49		1	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345002) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (144)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

January		February		March	April	May	June
1	08:51 15:48	08:15 16:45	09:37 (B22) 10:20 (B22)	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53
2	08:50 15:49	08:13 16:47	09:38 (B22) 10:20 (B22)	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50	09:38 (B22) 10:20 (B22)	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	09:39 (B22) 10:20 (B22)	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	09:40 (B22) 10:21 (B22)	07:00 17:56	06:38 20:01	05:23 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	09:39 (B22) 10:20 (B22)	06:58 17:58	06:35 20:03	05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	09:40 (B22) 10:19 (B22)	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	09:41 (B22) 10:19 (B22)	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01
9	08:47 15:59	09:49 (B22) 09:56 (B22)	07:58 17:03	09:41 (B22) 10:18 (B22)	06:50 18:05	05:15 21:12	04:29 22:02
10	08:46 16:01	09:47 (B22) 09:59 (B22)	07:56 17:05	09:42 (B22) 10:17 (B22)	06:47 18:07	05:13 21:14	04:28 22:03
11	08:45 16:03	09:45 (B22) 10:01 (B22)	07:54 17:08	09:44 (B22) 10:17 (B22)	06:45 18:09	05:11 21:16	04:27 22:04
12	08:44 16:04	09:44 (B22) 10:04 (B22)	07:52 17:10	09:44 (B22) 10:15 (B22)	06:42 18:11	05:08 21:18	04:27 22:05
13	08:43 16:06	09:43 (B22) 10:04 (B22)	07:49 17:12	09:46 (B22) 10:14 (B22)	06:40 18:13	05:06 21:20	04:26 22:06
14	08:42 16:08	09:42 (B22) 10:06 (B22)	07:47 17:14	09:48 (B22) 10:11 (B22)	06:37 18:15	05:04 21:22	04:26 22:07
15	08:41 16:10	09:41 (B22) 10:07 (B22)	07:45 17:17	09:51 (B22) 10:09 (B22)	06:34 18:18	05:03 21:24	04:26 22:07
16	08:40 16:12	09:41 (B22) 10:09 (B22)	07:43 17:19	09:54 (B22) 10:04 (B22)	06:32 18:20	05:01 21:25	04:25 22:08
17	08:39 16:14	09:41 (B22) 10:11 (B22)	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08
18	08:37 16:16	09:40 (B22) 10:11 (B22)	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	09:39 (B22) 10:12 (B22)	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09
20	08:35 16:20	09:39 (B22) 10:14 (B22)	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10
21	08:33 16:22	09:39 (B22) 10:14 (B22)	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	09:38 (B22) 10:15 (B22)	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10
23	08:30 16:26	09:38 (B22) 10:16 (B22)	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	09:38 (B22) 10:17 (B22)	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 16:30	09:38 (B22) 10:18 (B22)	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:42	04:26 22:10
26	08:26 16:32	09:38 (B22) 10:18 (B22)	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	09:38 (B22) 10:19 (B22)	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 16:36	09:38 (B22) 10:19 (B22)	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:47	04:28 22:10
29	08:20 16:39	09:38 (B22) 10:20 (B22)	07:11 17:47	05:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:18 16:41	09:38 (B22) 10:20 (B22)	07:09 17:49	06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09
31	08:17 16:43	09:38 (B22) 10:21 (B22)	07:07 17:51	06:51 19:51	05:33 21:51	04:37 21:51	04:29 22:09
Potential sun hours	235	266	366	426	508	529	
Total, worst case	721	542				273	
Sun reduction	0.13	0.20				0.57	
Oper. time red.	0.98	0.98				0.98	
Wind dir. red.	0.61	0.61				0.67	
Total reduction	0.08	0.12				0.36	
Total, real	55	63				99	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345002) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (144)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:16	05:51 (B1)	06:17	07:17	07:23	09:12 (B22)	08:24	09:27 (B22)		
	22:09	21:28	19 06:10 (B1)	20:14	18:54	16:36	35 09:47 (B22)	15:45	17 09:44 (B22)		
2	04:31	05:18	05:51 (B1)	06:19	07:19	07:25	09:11 (B22)	08:26	09:30 (B22)		
	22:09	21:26	19 06:10 (B1)	20:11	18:51	16:34	37 09:48 (B22)	15:44	12 09:42 (B22)		
3	04:32	05:19	05:53 (B1)	06:21	07:21	07:27	09:11 (B22)	08:28	09:32 (B22)		
	22:08	21:24	17 06:10 (B1)	20:09	18:48	16:32	38 09:49 (B22)	15:43	7 09:39 (B22)		
4	04:33	05:21	05:55 (B1)	06:23	07:23	07:29	09:10 (B22)	08:29			
	22:07	21:22	15 06:10 (B1)	20:06	18:46	16:29	39 09:49 (B22)	15:42			
5	04:34	05:23	05:56 (B1)	06:25	07:25	07:31	09:09 (B22)	08:31			
	22:07	21:20	12 06:08 (B1)	20:03	18:43	16:27	40 09:49 (B22)	15:42			
6	04:35	05:25	05:58 (B1)	06:27	07:27	07:33	09:09 (B22)	08:32			
	22:06	21:17	10 06:08 (B1)	20:01	18:40	16:25	41 09:50 (B22)	15:41			
7	04:36	05:27	06:00 (B1)	06:29	07:30	07:36	09:09 (B22)	08:34			
	22:05	21:15	7 06:07 (B1)	19:58	18:38	16:23	41 09:50 (B22)	15:40			
8	04:37	05:29	06:02 (B1)	06:31	07:32	07:38	09:09 (B22)	08:35			
	22:04	21:13	3 06:05 (B1)	19:55	18:35	16:21	42 09:51 (B22)	15:40			
9	04:38	05:31		06:33	07:34	07:40	09:09 (B22)	08:37			
	22:03	21:11		19:53	18:32	16:19	42 09:51 (B22)	15:39			
10	04:39	05:33		06:35	07:36	07:42	09:09 (B22)	08:38			
	22:02	21:08		19:50	18:30	16:17	43 09:52 (B22)	15:39			
11	04:41	05:35		06:37	07:38	07:44	09:09 (B22)	08:39			
	22:01	21:06		19:47	18:27	16:15	42 09:51 (B22)	15:38			
12	04:42	05:37		06:39	07:40	07:46	09:09 (B22)	08:40			
	22:00	21:04		19:45	18:25	16:13	42 09:51 (B22)	15:38			
13	04:43	05:39		06:41	07:42	07:49	09:10 (B22)	08:42			
	21:59	21:02		19:42	18:22	16:11	42 09:52 (B22)	15:38			
14	04:45	05:41		06:43	07:44	07:51	09:10 (B22)	08:43			
	21:58	20:59		19:39	18:19	16:09	41 09:51 (B22)	15:38			
15	04:46	05:43		06:45	07:46	07:53	09:10 (B22)	08:44			
	21:57	20:57		19:37	18:17	16:08	41 09:51 (B22)	15:38			
16	04:48	05:45		06:47	07:48	07:55	09:11 (B22)	08:45			
	21:55	20:54		19:34	18:14	16:06	40 09:51 (B22)	15:38			
17	04:49	05:47		06:49	07:50	07:57	09:11 (B22)	08:46			
	21:54	20:52		19:31	18:12	16:04	40 09:51 (B22)	15:38			
18	04:51	05:49		06:51	07:52	07:59	09:12 (B22)	08:46			
	21:52	20:50		19:29	18:09	16:02	39 09:51 (B22)	15:38			
19	04:52	05:51		06:53	07:55	08:01	09:13 (B22)	08:47			
	21:51	20:47		19:26	18:07	16:01	38 09:51 (B22)	15:38			
20	04:54	05:53		06:55	07:57	08:03	09:13 (B22)	08:48			
	21:49	20:45		19:23	18:04	15:59	37 09:50 (B22)	15:39			
21	04:56	05:57 (B1)		06:57	07:59	08:05	09:14 (B22)	08:48			
	21:48	6 06:03 (B1)		19:20	18:02	15:58	35 09:49 (B22)	15:39			
22	04:57	05:56 (B1)		06:59	08:01	08:07	09:15 (B22)	08:49			
	21:46	10 06:06 (B1)		19:18	17:59	15:56	35 09:50 (B22)	15:39			
23	04:59	05:54 (B1)		07:01	08:03	08:09	09:16 (B22)	08:50			
	21:45	13 06:07 (B1)		19:15	17:57	15:55	33 09:49 (B22)	15:40			
24	05:01	05:54 (B1)		07:03	08:05	08:11	09:17 (B22)	08:50			
	21:43	14 06:08 (B1)		19:12	17:55	15:53	32 09:49 (B22)	15:41			
25	05:03	05:53 (B1)		07:05	07:07	08:13	09:18 (B22)	08:51			
	21:41	16 06:09 (B1)		19:10	16:52	15:52	30 09:48 (B22)	15:41			
26	05:04	05:52 (B1)		07:07	07:10	08:15	09:19 (B22)	08:51			
	21:39	17 06:09 (B1)		19:07	16:50	15:51	28 09:47 (B22)	15:42			
27	05:06	05:52 (B1)		07:09	07:12	08:17	09:21 (B22)	08:51			
	21:38	18 06:10 (B1)		19:04	16:47	15:49	26 09:47 (B22)	15:43			
28	05:08	05:51 (B1)		07:11	07:14	08:19	09:22 (B22)	08:51			
	21:36	19 06:10 (B1)		19:02	16:45	15:48	25 09:47 (B22)	15:44			
29	05:10	05:51 (B1)		07:13	07:16	08:21	09:24 (B22)	08:51			
	21:34	19 06:10 (B1)		18:59	16:43	15:47	22 09:46 (B22)	15:45			
30	05:12	05:51 (B1)		07:15	07:18	08:22	09:25 (B22)	08:51			
	21:32	20 06:11 (B1)		18:56	16:40	15:46	20 09:45 (B22)	15:46			
31	05:14	05:51 (B1)			07:20	09:12 (B22)		08:51			
	21:30	20 06:11 (B1)			16:38	09:45 (B22)		15:47			
Potential sun hours	529	469		385	324	247		216			
Total, worst case	172	102			149	1086		36			
Sun reduction	0.49	0.50			0.26	0.08		0.07			
Oper. time red.	0.98	0.98			0.98	0.98		0.98			
Wind dir. red.	0.67	0.67			0.61	0.61		0.61			
Total reduction	0.31	0.32			0.15	0.05		0.04			
Total, real	54	32			22	52		1			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345005) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (143)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	09:44 (B22)	07:11	06:49	05:33
	15:48	16:45	10:26 (B22)	17:48	19:53	20:55
2	08:50	08:13	09:45 (B22)	07:08	06:46	05:30
	15:49	16:47	10:26 (B22)	17:50	19:55	20:57
3	08:50	08:11	09:45 (B22)	07:06	06:43	05:28
	15:51	16:50	10:26 (B22)	17:52	19:57	21:00
4	08:50	09:55 (B22)	08:09	09:46 (B22)	07:03	06:41
	15:52	3 09:58 (B22)	16:52	10:26 (B22)	17:54	19:59
5	08:49	09:53 (B22)	08:07	09:47 (B22)	07:00	06:38
	15:53	9 10:02 (B22)	16:54	10:26 (B22)	17:56	20:01
6	08:49	09:51 (B22)	08:05	09:47 (B22)	06:58	06:35
	15:55	13 10:04 (B22)	16:56	10:25 (B22)	17:58	20:03
7	08:48	09:50 (B22)	08:03	09:48 (B22)	06:55	06:33
	15:56	16 10:06 (B22)	16:59	10:25 (B22)	18:00	20:05
8	08:48	09:49 (B22)	08:01	09:49 (B22)	06:53	06:30
	15:58	19 10:08 (B22)	17:01	10:24 (B22)	18:03	20:08
9	08:47	09:48 (B22)	07:58	09:49 (B22)	06:50	06:28
	15:59	21 10:09 (B22)	17:03	10:23 (B22)	18:05	20:10
10	08:46	09:48 (B22)	07:56	09:51 (B22)	06:47	06:25
	16:01	23 10:11 (B22)	17:05	10:22 (B22)	18:07	20:12
11	08:45	09:47 (B22)	07:54	09:53 (B22)	06:45	06:22
	16:03	25 10:12 (B22)	17:08	10:21 (B22)	18:09	20:14
12	08:44	09:47 (B22)	07:52	09:54 (B22)	06:42	06:20
	16:04	27 10:14 (B22)	17:10	10:18 (B22)	18:11	20:16
13	08:43	09:46 (B22)	07:49	09:56 (B22)	06:40	06:17
	16:06	28 10:14 (B22)	17:12	10:16 (B22)	18:13	20:18
14	08:42	09:46 (B22)	07:47	09:59 (B22)	06:37	06:14
	16:08	30 10:16 (B22)	17:14	10:12 (B22)	18:15	20:20
15	08:41	09:45 (B22)	07:45		06:34	06:12
	16:10	31 10:16 (B22)	17:17		18:18	20:22
16	08:40	09:45 (B22)	07:43		06:32	06:09
	16:12	33 10:18 (B22)	17:19		18:20	20:24
17	08:39	09:45 (B22)	07:40		06:29	06:07
	16:14	34 10:19 (B22)	17:21		18:22	20:26
18	08:37	09:44 (B22)	07:38		06:26	06:04
	16:16	36 10:20 (B22)	17:23		18:24	20:28
19	08:36	09:44 (B22)	07:35		06:24	06:02
	16:18	36 10:20 (B22)	17:26		18:26	20:30
20	08:35	09:44 (B22)	07:33		06:21	05:59
	16:20	38 10:22 (B22)	17:28		18:28	20:33
21	08:33	09:44 (B22)	07:31		06:18	05:57
	16:22	38 10:22 (B22)	17:30		18:30	20:35
22	08:32	09:43 (B22)	07:28		06:16	05:54
	16:24	40 10:23 (B22)	17:32		18:32	20:37
23	08:30	09:43 (B22)	07:26		06:13	05:52
	16:26	40 10:23 (B22)	17:34		18:34	20:39
24	08:29	09:44 (B22)	07:23		06:10	05:49
	16:28	41 10:25 (B22)	17:37		18:36	20:41
25	08:27	09:44 (B22)	07:21		06:07	05:47
	16:30	41 10:25 (B22)	17:39		18:38	20:43
26	08:26	09:44 (B22)	07:18		06:05	05:44
	16:32	41 10:25 (B22)	17:41		18:41	20:45
27	08:24	09:44 (B22)	07:16		06:02	05:42
	16:34	42 10:26 (B22)	17:43		18:43	20:47
28	08:22	09:44 (B22)	07:13		05:59	05:40
	16:36	42 10:26 (B22)	17:45		18:45	20:49
29	08:20	09:44 (B22)			06:57	05:37
	16:39	42 10:26 (B22)			19:47	20:51
30	08:18	09:44 (B22)			06:54	05:35
	16:41	43 10:27 (B22)			19:49	20:53
31	08:17	09:45 (B22)			06:51	
	16:43	42 10:27 (B22)			19:51	21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	874	463			276	
Sun reduction	0.13	0.20			0.57	
Oper. time red.	0.98	0.98			0.98	
Wind dir. red.	0.61	0.61			0.67	
Total reduction	0.08	0.12			0.36	
Total, real	67	54			100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Skola (kad. apz. 56960040345005) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (143)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:16	05:51 (B1)	06:17	07:17	07:23	09:20 (B22)	08:24	09:29 (B22)		
	22:09	21:28	20	06:11 (B1)	20:14	16:36	32	09:52 (B22)	15:45	25	09:54 (B22)
2	04:31	05:18	05:52 (B1)	06:19	07:19	07:25	09:19 (B22)	08:26	09:31 (B22)		
	22:09	21:26	19	06:11 (B1)	20:11	16:34	33	09:52 (B22)	15:44	23	09:54 (B22)
3	04:32	05:19	05:53 (B1)	06:21	07:21	07:27	09:18 (B22)	08:28	09:31 (B22)		
	22:08	21:24	18	06:11 (B1)	20:09	16:32	36	09:54 (B22)	15:43	21	09:52 (B22)
4	04:33	05:21	05:55 (B1)	06:23	07:23	07:29	09:17 (B22)	08:29	09:33 (B22)		
	22:07	21:22	16	06:11 (B1)	20:06	16:29	37	09:54 (B22)	15:42	19	09:52 (B22)
5	04:34	05:23	05:56 (B1)	06:25	07:25	07:31	09:16 (B22)	08:31	09:35 (B22)		
	22:07	21:20	14	06:10 (B1)	20:03	16:27	39	09:55 (B22)	15:42	16	09:51 (B22)
6	04:35	05:25	05:58 (B1)	06:27	07:27	07:33	09:16 (B22)	08:32	09:37 (B22)		
	22:06	21:17	11	06:09 (B1)	20:01	16:25	40	09:56 (B22)	15:41	13	09:50 (B22)
7	04:36	05:27	06:00 (B1)	06:29	07:30	07:36	09:16 (B22)	08:34	09:39 (B22)		
	22:05	21:15	8	06:08 (B1)	19:58	16:23	40	09:56 (B22)	15:40	9	09:48 (B22)
8	04:37	05:29	06:02 (B1)	06:31	07:32	07:38	09:16 (B22)	08:35	09:43 (B22)		
	22:04	21:13	4	06:06 (B1)	19:55	16:21	41	09:57 (B22)	15:40	3	09:46 (B22)
9	04:38	05:31		06:33	07:34	07:40	09:15 (B22)	08:37			
	22:03	21:11		19:53	18:32	16:19	42	09:57 (B22)	15:39		
10	04:39	05:33		06:35	07:36	07:42	09:16 (B22)	08:38			
	22:02	21:08		19:50	18:30	16:17	42	09:58 (B22)	15:39		
11	04:41	05:35		06:37	07:38	07:44	09:15 (B22)	08:39			
	22:01	21:06		19:47	18:27	16:15	43	09:58 (B22)	15:38		
12	04:42	05:37		06:39	07:40	07:46	09:15 (B22)	08:40			
	22:00	21:04		19:45	18:25	16:13	43	09:58 (B22)	15:38		
13	04:43	05:39		06:41	07:42	07:49	09:16 (B22)	08:42			
	21:59	21:02		19:42	18:22	16:11	42	09:58 (B22)	15:38		
14	04:45	05:41		06:43	07:44	07:51	09:16 (B22)	08:43			
	21:58	20:59		19:39	18:19	16:09	42	09:58 (B22)	15:38		
15	04:46	05:43		06:45	07:46	07:53	09:16 (B22)	08:44			
	21:57	20:57		19:37	18:17	16:08	42	09:58 (B22)	15:38		
16	04:48	05:45		06:47	07:48	07:55	09:17 (B22)	08:45			
	21:55	20:54		19:34	18:14	16:06	41	09:58 (B22)	15:38		
17	04:49	05:47		06:49	07:50	07:57	09:17 (B22)	08:46			
	21:54	20:52		19:31	18:12	16:04	41	09:58 (B22)	15:38		
18	04:51	05:49		06:51	07:52	07:59	09:18 (B22)	08:46			
	21:52	20:50		19:29	18:09	16:02	41	09:59 (B22)	15:38		
19	04:52	05:51		06:53	07:55	08:01	09:18 (B22)	08:47			
	21:51	20:47		19:26	18:07	16:01	40	09:58 (B22)	15:38		
20	04:54	05:53		06:55	07:57	08:03	09:18 (B22)	08:48			
	21:49	20:45		19:23	18:04	15:59	40	09:58 (B22)	15:39		
21	04:56	05:55	05:58 (B1)	06:57	07:59	08:05	09:19 (B22)	08:48			
	21:48	20:42	6	06:04 (B1)	18:02	15:58	38	09:57 (B22)	15:39		
22	04:57	05:57 (B1)	05:57	06:59	08:01	08:07	09:20 (B22)	08:49			
	21:46	20:40	10	06:07 (B1)	17:59	15:56	38	09:58 (B22)	15:39		
23	04:59	05:55 (B1)	05:59	07:01	08:03	08:09	09:21 (B22)	08:50			
	21:45	20:37	12	06:07 (B1)	17:57	15:55	36	09:57 (B22)	15:40		
24	05:01	05:55 (B1)	06:01	07:03	08:05	08:11	09:21 (B22)	08:50			
	21:43	20:35	14	06:09 (B1)	17:55	15:53	36	09:57 (B22)	15:41		
25	05:03	05:54 (B1)	06:03	07:05	07:07	08:13	09:22 (B22)	08:50			
	21:41	20:32	16	06:10 (B1)	16:52	15:52	34	09:56 (B22)	15:41		
26	05:04	05:53 (B1)	06:05	07:07	07:10	08:15	09:23 (B22)	08:51			
	21:39	20:30	17	06:10 (B1)	16:50	15:51	33	09:56 (B22)	15:42		
27	05:06	05:53 (B1)	06:07	07:09	07:12	08:17	09:25 (B22)	08:51			
	21:38	20:27	18	06:11 (B1)	16:47	15:49	31	09:56 (B22)	15:43		
28	05:08	05:52 (B1)	06:09	07:11	07:14	08:19	09:26 (B22)	08:51			
	21:36	20:24	19	06:11 (B1)	16:45	15	09:43 (B22)	15:48	30	09:56 (B22)	15:44
29	05:10	05:52 (B1)	06:11	07:13	07:16	08:21	09:25 (B22)	08:51			
	21:34	20:22	19	06:11 (B1)	16:43	21	09:46 (B22)	15:47	28	09:55 (B22)	15:45
30	05:12	05:52 (B1)	06:13	07:15	07:18	08:22	09:23 (B22)	08:51			
	21:32	20:19	20	06:12 (B1)	16:40	25	09:48 (B22)	15:46	27	09:55 (B22)	15:46
31	05:14	05:52 (B1)	06:15		07:20	08:27	09:21 (B22)	08:51			
	21:30	20:17	20	06:12 (B1)	16:38	29	09:50 (B22)	15:47			
Potential sun hours	529	469		385	324	247		216			
Total, worst case	171	110			90	1128		129			
Sun reduction	0.49	0.50			0.26	0.08		0.07			
Oper. time red.	0.98	0.98			0.98	0.98		0.98			
Wind dir. red.	0.67	0.67			0.61	0.61		0.61			
Total reduction	0.31	0.32			0.15	0.05		0.04			
Total, real	54	35			13	54		5			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Smelceja - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (216)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	20:04 (B12) 21:52	04:36 22:08	04:30 21:27	05:15 22:08	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45	
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	20:04 (B12) 21:53	04:35 22:08	04:31 21:25	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:33	08:25 15:44	
3	08:50 15:50	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	20:05 (B12) 21:55	04:33 22:07	04:32 21:23	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43	
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	20:06 (B12) 21:56	04:32 22:07	04:32 21:21	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42	
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	20:07 (B12) 21:57	04:32 22:06	04:33 21:19	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41	
6	08:48 15:55	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	20:08 (B12) 21:58	04:31 22:05	04:34 21:17	05:25 21:17	20:19 (B12) 20:25 (B12)	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:19 21:07	20:11 (B12) 22:00	04:30 22:05	04:36 21:15	05:27 21:15	20:17 (B12) 20:27 (B12)	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	20:14 (B12) 22:01	04:29 22:04	04:37 21:12	05:29 21:12	20:16 (B12) 20:29 (B12)	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:38 22:03	05:31 21:10	05:31 21:10	20:14 (B12) 20:28 (B12)	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	05:33 21:08	20:13 (B12) 20:29 (B12)	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	05:35 21:06	20:13 (B12) 20:30 (B12)	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	05:37 21:03	20:13 (B12) 20:30 (B12)	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	05:39 21:01	20:13 (B12) 20:29 (B12)	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	05:41 20:59	20:13 (B12) 20:27 (B12)	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	05:43 20:56	20:13 (B12) 20:25 (B12)	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	05:45 20:54	20:12 (B12) 20:22 (B12)	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	05:47 20:52	20:13 (B12) 20:19 (B12)	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:15	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	05:49 20:49	20:15 (B12) 20:17 (B12)	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	05:51 20:47	06:53 19:25	07:54 18:07	08:01 16:01	08:47 15:38	
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38	
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39	
22	08:31 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39	
23	08:30 16:26	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:40	
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40	
25	08:27 16:30	07:20 17:38	06:07 18:38	05:47 20:43	04:45 21:41	20:08 (B12) 21:11 (B12)	05:02 21:41	06:03 20:32	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41	
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	20:07 (B12) 21:13 (B12)	05:04 21:39	06:05 20:29	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42	
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	20:06 (B12) 21:15 (B12)	05:06 21:37	06:07 20:27	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43	
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	20:05 (B12) 21:18 (B12)	05:08 21:35	06:09 20:24	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:43	
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	20:04 (B12) 21:19 (B12)	05:10 21:33	06:11 20:21	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44	
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	20:04 (B12) 21:21 (B12)	05:12 21:31	06:13 20:19	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45	
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16	06:15 20:16		07:20 16:38		08:50 15:46	
Potential sun hours	235	266	366	426	508		528	529	469	384	324	248	216	
Total, worst case				63	88				153					
Sun reduction				0.50	0.57				0.50					
Oper. time red.				0.98	0.98				0.98					
Wind dir. red.				0.63	0.63				0.63					
Total reduction				0.31	0.35				0.30					
Total, real				19	31				47					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Smelceju majas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (197)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:58	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:45
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Spridiš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (82)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	09:00 (B22)	07:11	06:49	05:33
	15:48	16:45	14 09:14 (B22)	17:48	19:53	20:55
2	08:50	08:13	08:58 (B22)	07:08	06:46	05:30
	15:49	16:47	19 09:17 (B22)	17:50	19:55	20:57
3	08:50	08:11	08:56 (B22)	07:06	06:43	05:28
	15:51	16:50	23 09:19 (B22)	17:52	19:57	21:00
4	08:50	08:09	08:55 (B22)	07:03	06:41	05:26
	15:52	16:52	26 09:21 (B22)	17:54	19:59	21:02
5	08:49	08:07	08:54 (B22)	07:00	06:38	05:23
	15:53	16:54	29 09:23 (B22)	17:56	20:01	21:04
6	08:49	08:05	08:53 (B22)	06:58	06:35	05:21
	15:55	16:56	30 09:23 (B22)	17:58	20:03	21:06
7	08:48	08:03	08:52 (B22)	06:55	06:33	05:19
	15:56	16:59	32 09:24 (B22)	18:01	20:05	21:08
8	08:48	08:01	08:52 (B22)	06:53	06:30	05:17
	15:58	17:01	34 09:26 (B22)	18:03	20:08	21:10
9	08:47	07:58	08:51 (B22)	06:50	06:28	05:15
	15:59	17:03	35 09:26 (B22)	18:05	20:10	21:12
10	08:46	07:56	08:50 (B22)	06:47	06:25	05:13
	16:01	17:05	37 09:27 (B22)	18:07	20:12	21:14
11	08:45	07:54	08:50 (B22)	06:45	06:22	05:11
	16:03	17:08	38 09:28 (B22)	18:09	20:14	21:16
12	08:44	07:52	08:49 (B22)	06:42	06:20	05:08
	16:05	17:10	38 09:27 (B22)	18:11	20:16	21:18
13	08:43	07:50	08:50 (B22)	06:40	06:17	05:06
	16:06	17:12	38 09:28 (B22)	18:13	20:18	21:20
14	08:42	07:47	08:49 (B22)	06:37	06:15	05:04
	16:08	17:14	39 09:28 (B22)	18:15	20:20	21:22
15	08:41	07:45	08:49 (B22)	06:34	06:12	05:03
	16:10	17:17	39 09:28 (B22)	18:18	20:22	21:24
16	08:40	07:43	08:49 (B22)	06:32	06:09	05:01
	16:12	17:19	38 09:27 (B22)	18:20	20:24	21:25
17	08:39	07:40	08:50 (B22)	06:29	06:07	04:59
	16:14	17:21	38 09:28 (B22)	18:22	20:26	21:27
18	08:37	07:38	08:49 (B22)	06:26	06:04	04:57
	16:16	17:23	38 09:27 (B22)	18:24	20:28	21:29
19	08:36	07:36	08:50 (B22)	06:24	06:02	04:55
	16:18	17:26	37 09:27 (B22)	18:26	20:30	21:31
20	08:35	07:33	08:50 (B22)	06:21	05:59	04:53
	16:20	17:28	36 09:26 (B22)	18:28	20:33	21:33
21	08:33	07:31	08:51 (B22)	06:18	05:57	04:52
	16:22	17:30	34 09:25 (B22)	18:30	20:35	21:35
22	08:32	07:28	08:52 (B22)	06:16	05:54	04:50
	16:24	17:32	32 09:24 (B22)	18:32	20:37	21:37
23	08:30	07:26	08:53 (B22)	06:13	05:52	04:48
	16:26	17:34	30 09:23 (B22)	18:34	20:39	21:38
24	08:29	07:23	08:54 (B22)	06:10	05:49	04:47
	16:28	17:37	27 09:21 (B22)	18:36	20:41	21:40
25	08:27	07:21	08:56 (B22)	06:07	05:47	04:45
	16:30	17:39	24 09:20 (B22)	18:38	20:43	21:42
26	08:26	07:18	08:58 (B22)	06:05	05:44	04:44
	16:32	17:41	19 09:17 (B22)	18:41	20:45	21:43
27	08:24	07:16	09:01 (B22)	06:02	05:42	04:42
	16:34	17:43	12 09:13 (B22)	18:43	20:47	21:45
28	08:22	07:13		05:59	05:40	04:41
	16:36	17:45		18:45	20:49	21:47
29	08:20			06:57	05:37	04:40
	16:39			19:47	20:51	21:48
30	08:18			06:54	05:35	04:38
	16:41			19:49	20:53	21:50
31	08:17	09:06 (B22)		06:51		04:37
	16:43	09:10 (B22)		19:51		21:51
Potential sun hours	235	4	266	366	426	508
Total, worst case		4	836			189
Sun reduction		0.13	0.20			0.57
Oper. time red.		0.98	0.98			0.98
Wind dir. red.		0.60	0.60			0.67
Total reduction		0.08	0.11			0.36
Total, real		0	96			69

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Spridiš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (82)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:16	05:51 (B1)	06:17	07:17			07:23	08:20 (B22)	08:24	
	22:09	21:28	18 06:09 (B1)	20:14	18:54			16:36	36 08:56 (B22)	15:45	
2	04:31	05:18	05:51 (B1)	06:19	07:19			07:25	08:20 (B22)	08:26	
	22:09	21:26	18 06:09 (B1)	20:11	18:51			16:34	35 08:55 (B22)	15:44	
3	04:32	05:19	05:53 (B1)	06:21	07:21			07:27	08:21 (B22)	08:28	
	22:08	21:24	16 06:09 (B1)	20:09	18:48			16:32	34 08:55 (B22)	15:43	
4	04:33	05:21	05:55 (B1)	06:23	07:23			07:29	08:22 (B22)	08:29	
	22:07	21:22	14 06:09 (B1)	20:06	18:46			16:29	32 08:54 (B22)	15:42	
5	04:34	05:23	05:56 (B1)	06:25	07:25			07:31	08:22 (B22)	08:31	
	22:07	21:20	12 06:08 (B1)	20:03	18:43			16:27	31 08:53 (B22)	15:42	
6	04:35	05:25	05:58 (B1)	06:27	07:27			07:33	08:24 (B22)	08:32	
	22:06	21:17	10 06:08 (B1)	20:01	18:40			16:25	28 08:52 (B22)	15:41	
7	04:36	05:27	06:00 (B1)	06:29	07:30			07:36	08:25 (B22)	08:34	
	22:05	21:15	7 06:07 (B1)	19:58	18:38			16:23	26 08:51 (B22)	15:40	
8	04:37	05:29	06:02 (B1)	06:31	07:32			07:38	08:27 (B22)	08:35	
	22:04	21:13	4 06:06 (B1)	19:55	18:35			16:21	23 08:50 (B22)	15:40	
9	04:38	05:31		06:33	07:34			07:40	08:29 (B22)	08:37	
	22:03	21:11		19:53	18:32			16:19	19 08:48 (B22)	15:39	
10	04:39	05:33		06:35	07:36			07:42	08:32 (B22)	08:38	
	22:02	21:08		19:50	18:30			16:17	14 08:46 (B22)	15:39	
11	04:41	05:35		06:37	07:38			07:44	08:38 (B22)	08:39	
	22:01	21:06		19:47	18:27			16:15	2 08:40 (B22)	15:38	
12	04:42	05:37		06:39	07:40			07:46		08:40	
	22:00	21:04		19:45	18:25			16:13		15:38	
13	04:43	05:39		06:41	07:42			07:49		08:42	
	21:59	21:02		19:42	18:22			16:11		15:38	
14	04:45	05:41		06:43	07:44			09:37 (B22)	07:51	08:43	
	21:58	20:59		19:39	18:20	4		09:41 (B22)	16:09	15:38	
15	04:46	05:43		06:45	07:46			09:32 (B22)	07:53	08:44	
	21:57	20:57		19:37	18:17	15		09:47 (B22)	16:08	15:38	
16	04:48	05:45		06:47	07:48			09:29 (B22)	07:55	08:45	
	21:55	20:54		19:34	18:14	21		09:50 (B22)	16:06	15:38	
17	04:49	05:47		06:49	07:50			09:27 (B22)	07:57	08:46	
	21:54	20:52		19:31	18:12	25		09:52 (B22)	16:04	15:38	
18	04:51	05:49		06:51	07:52			09:25 (B22)	07:59	08:46	
	21:52	20:50		19:29	18:09	28		09:53 (B22)	16:02	15:38	
19	04:52	05:51		06:53	07:55			09:24 (B22)	08:01	08:47	
	21:51	20:47		19:26	18:07	31		09:55 (B22)	16:01	15:38	
20	04:54	05:53		06:55	07:57			09:23 (B22)	08:03	08:48	
	21:49	20:45		19:23	18:04	32		09:55 (B22)	15:59	15:39	
21	04:56	05:55		06:57	07:59			09:21 (B22)	08:05	08:48	
	21:48	20:42		19:20	18:02	35		09:56 (B22)	15:58	15:39	
22	04:57	05:57		06:59	08:01			09:20 (B22)	08:07	08:49	
	21:46	20:40		19:18	17:59	36		09:56 (B22)	15:56	15:39	
23	04:59	05:59		07:01	08:03			09:20 (B22)	08:09	08:50	
	21:45	20:37		19:15	17:57	37		09:57 (B22)	15:55	15:40	
24	05:01	06:01		07:03	08:05			09:20 (B22)	08:11	08:50	
	21:43	20:35		19:12	17:55	37		09:57 (B22)	15:53	15:41	
25	05:03	06:03		07:05	07:07			08:19 (B22)	08:13	08:50	
	21:41	6 06:04 (B1)	20:32	19:10	16:52	38		08:57 (B22)	15:52	15:41	
26	05:04	05:55 (B1)	06:05	07:07	07:10			08:19 (B22)	08:15	08:51	
	21:39	10 06:05 (B1)	20:30	19:07	16:50	39		08:58 (B22)	15:51	15:42	
27	05:06	05:54 (B1)	06:07	07:09	07:12			08:19 (B22)	08:17	08:51	
	21:38	13 06:07 (B1)	20:27	19:04	16:47	38		08:57 (B22)	15:49	15:43	
28	05:08	05:54 (B1)	06:09	07:11	07:14			08:18 (B22)	08:19	08:51	
	21:36	14 06:08 (B1)	20:24	19:02	16:45	39		08:57 (B22)	15:48	15:44	
29	05:10	05:53 (B1)	06:11	07:13	07:16			08:19 (B22)	08:21	08:51	
	21:34	15 06:08 (B1)	20:22	18:59	16:43	38		08:57 (B22)	15:47	15:45	
30	05:12	05:52 (B1)	06:13	07:15	07:18			08:19 (B22)	08:22	08:51	
	21:32	17 06:09 (B1)	20:19	18:56	16:41	38		08:57 (B22)	15:46	15:46	
31	05:14	05:52 (B1)	06:15		07:20			08:20 (B22)		08:51	
	21:30	17 06:09 (B1)	20:17		16:38	37		08:57 (B22)		15:47	
Potential sun hours	529		469		385	324		247		216	
Total, worst case	92		99			568		280			
Sun reduction	0.49		0.50			0.26		0.08			
Oper. time red.	0.98		0.98			0.98		0.98			
Wind dir. red.	0.67		0.67			0.60		0.60			
Total reduction	0.32		0.32			0.15		0.05			
Total, real	29		32			84		13			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Spares - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (203)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:23	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:43
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:46 16:00	07:58 17:03	06:50 18:05	06:28 20:09	05:15 21:11	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:05	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:05 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:18 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Stacija Trepe 2 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (3)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:26 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:12	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:50 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:06 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Starumeni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (121)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	08:25 (B22) 08:29 (B22)	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:02	05:33 21:09	07:36 19:50	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	08:23 (B22) 08:32 (B22)	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	07:37 19:47	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	08:20 (B22) 08:34 (B22)	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	07:40 19:45	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	08:18 (B22) 08:35 (B22)	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	07:42 19:42	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	08:16 (B22) 08:36 (B22)	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	07:44 19:39	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	08:16 (B22) 08:37 (B22)	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	07:46 19:37	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	08:15 (B22) 08:37 (B22)	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:54	07:48 19:34	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	08:15 (B22) 08:37 (B22)	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	07:50 19:31	07:57 18:12	08:46 15:38
18	08:38 16:16	07:38 17:23	08:14 (B22) 08:37 (B22)	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	07:52 19:29	07:59 18:09	08:46 15:38
19	08:36 16:18	07:36 17:26	08:15 (B22) 08:37 (B22)	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	07:55 19:26	08:01 18:07	08:47 15:38
20	08:35 16:20	07:33 17:28	08:15 (B22) 08:36 (B22)	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	07:57 19:23	08:03 18:04	08:48 15:39
21	08:33 16:22	07:31 17:30	08:16 (B22) 08:36 (B22)	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	07:59 19:21	08:05 18:02	08:49 15:39
22	08:32 16:24	07:28 17:32	08:16 (B22) 08:35 (B22)	06:16 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:58 21:46	05:57 20:40	08:01 19:18	08:07 18:00	08:49 15:39
23	08:30 16:26	07:26 17:34	08:17 (B22) 08:34 (B22)	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:50 15:40
24	08:29 16:28	07:23 17:37	08:19 (B22) 08:32 (B22)	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:50 15:41
25	08:27 16:30	07:21 17:39	08:22 (B22) 08:30 (B22)	06:08 18:38	05:47 20:43	04:45 21:42	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:50 15:41
26	08:26 16:32	07:18 17:41	08:20 (B22)	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:15 17:52	08:51 15:42
27	08:24 16:34	07:16 17:43	08:19 (B22)	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:17 17:48	08:51 15:43
28	08:22 16:36	07:13 17:45	08:18 (B22)	05:59 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:19 17:45	08:51 15:44
29	08:20 16:39	07:11 17:48	08:17 (B22)	06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:21 17:43	08:51 15:45
30	08:19 16:41	07:09 17:54	08:16 (B22)	06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:22 17:41	08:51 15:46
31	08:17 16:43	07:07 17:51	08:15 (B22)	06:51 19:51	05:33 21:51	04:37 21:51	04:30 22:07	05:14 21:30	06:15 20:17	07:20 18:58	08:24 17:43	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		272								273		163
Sun reduction		0.20								0.26		0.07
Oper. time red.		0.98								0.98		0.98
Wind dir. red.		0.62								0.62		0.61
Total reduction		0.12								0.16		0.04
Total, real		33								43		7

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Stepi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (166)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	08:46 (B14) 17:48	07:11 19:53	06:49 20:56	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:17 16:36	08:12 (B14) 15:45
2	08:51 15:49	08:13 16:48	08:43 (B14) 17:50	07:08 19:55	06:46 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 18:51	07:19 16:34	08:10 (B14) 15:44
3	08:50 15:51	08:11 16:50	08:41 (B14) 17:52	07:06 19:57	06:44 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	07:21 16:32	08:09 (B14) 15:43
4	08:50 15:52	08:09 16:52	08:39 (B14) 17:54	07:03 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	06:23 18:46	07:23 16:30	08:08 (B14) 15:42
5	08:49 15:53	08:07 16:54	08:38 (B14) 17:56	07:01 19:59	06:38 21:04	05:24 21:58	04:34 22:07	04:34 21:20	05:23 20:04	06:25 18:43	07:26 16:27	08:08 (B14) 15:42
6	08:49 15:55	08:05 16:57	08:38 (B14) 17:58	06:58 20:04	06:36 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:28 16:25	08:08 (B14) 15:41
7	08:48 15:56	08:03 16:59	08:39 (B14) 18:01	06:55 20:06	06:33 21:08	05:19 22:00	04:36 22:05	04:36 21:15	05:27 19:58	06:29 18:38	07:30 16:23	08:09 (B14) 15:40
8	08:48 15:58	08:01 17:01	08:40 (B14) 18:03	06:53 20:08	06:30 21:10	05:17 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:32 16:21	08:12 (B14) 15:40
9	08:47 16:00	07:58 17:03	08:41 (B14) 18:05	06:50 20:10	06:28 21:12	05:15 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:14 (B14) 15:39
10	08:46 16:01	07:56 17:05	08:43 (B14) 18:07	06:48 20:12	06:25 21:14	05:13 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:17 (B14) 15:39
11	08:45 16:03	07:54 17:08	08:49 (B14) 18:09	06:45 20:14	06:22 21:16	05:11 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:19 (B14) 15:39
12	08:44 16:05	07:52 17:10	08:49 (B14) 18:11	06:42 20:16	06:20 21:18	05:09 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:22 (B14) 15:38
13	08:43 16:06	07:50 17:12	08:49 (B14) 18:13	06:40 20:18	06:17 21:20	05:07 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:22 (B14) 15:38
14	08:42 16:08	07:47 17:14	08:49 (B14) 18:16	06:37 20:20	06:15 21:22	05:05 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:22 (B14) 15:38
15	08:41 16:10	07:45 17:17	08:49 (B14) 18:18	06:34 20:22	06:12 21:24	05:03 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:22 (B14) 15:38
16	08:40 16:12	07:43 17:19	08:49 (B14) 18:20	06:32 20:24	06:09 21:26	05:01 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:22 (B14) 15:38
17	08:39 16:14	07:40 17:21	08:49 (B14) 18:22	06:29 20:26	06:07 21:27	04:59 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:22 (B14) 15:38
18	08:38 16:16	07:38 17:23	08:49 (B14) 18:24	06:26 20:29	06:04 21:29	04:57 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:22 (B14) 15:38
19	08:36 16:18	07:36 17:26	08:49 (B14) 18:26	06:24 20:31	06:02 21:31	04:55 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:22 (B14) 15:38
20	08:35 16:20	07:33 17:28	08:49 (B14) 18:28	06:21 20:33	05:59 21:33	04:53 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:22 (B14) 15:39
21	08:33 16:22	07:31 17:30	08:49 (B14) 18:30	06:18 20:35	05:57 21:35	04:52 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:22 (B14) 15:39
22	08:32 16:24	07:28 17:32	08:49 (B14) 18:32	06:16 20:37	05:54 21:37	04:50 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:22 (B14) 15:40
23	08:30 16:26	07:26 17:35	08:49 (B14) 18:34	06:13 20:39	05:52 21:38	04:48 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:22 (B14) 15:40
24	08:29 16:28	07:23 17:37	08:49 (B14) 18:36	06:10 20:41	05:49 21:40	04:47 22:11	04:59 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:22 (B14) 15:41
25	08:27 16:30	07:21 17:39	08:49 (B14) 18:38	06:08 20:43	05:47 21:42	04:45 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:22 (B14) 15:41
26	08:26 16:32	07:18 17:41	08:49 (B14) 18:40	06:05 20:45	05:45 21:43	04:44 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 16:50	08:15 15:51	08:22 (B14) 15:42
27	08:24 16:34	07:16 17:43	08:49 (B14) 18:42	06:02 20:47	05:42 21:45	04:42 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:48	08:17 15:50	08:22 (B14) 15:43
28	08:22 16:37	07:13 17:45	08:49 (B14) 18:44	06:00 20:49	05:40 21:47	04:41 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 16:45	08:19 15:48	08:22 (B14) 15:44
29	08:20 16:39	07:11 17:47	08:49 (B14) 18:45	05:57 20:51	05:37 21:48	04:40 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:21 16:43	08:21 15:47	08:22 (B14) 15:45
30	08:19 16:41	07:09 17:49	08:49 (B14) 18:46	05:54 20:53	05:35 21:50	04:38 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:22 16:41	08:23 15:46	08:22 (B14) 15:46
31	08:17 16:43	08:48 (B14) 08:52 (B14)	08:49 (B14) 18:47	06:52 20:51	05:37 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:21 16:38	08:24 15:47	08:24 15:47	08:22 (B14) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	4	118									124	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.98	0.98									0.98	
Wind dir. red.	0.61	0.61									0.61	
Total reduction	0.08	0.12									0.05	
Total, real	0	14									6	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Straumenini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (11)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January		February		March	April	May	June	
1	08:51	09:49 (B22)	08:15	07:11	06:49		05:33	06:22 (B1)	04:36
	15:48	28 10:17 (B22)	16:45	17:48	19:53		20:55	9 06:31 (B1)	21:53
2	08:51	09:50 (B22)	08:13	07:08	06:46		05:30		04:35
	15:49	28 10:18 (B22)	16:47	17:50	19:55		20:58		21:54
3	08:50	09:50 (B22)	08:11	07:06	06:43		05:28		04:34
	15:51	28 10:18 (B22)	16:50	17:52	19:57		21:00		21:55
4	08:50	09:50 (B22)	08:09	07:03	06:41		05:26		04:33
	15:52	29 10:19 (B22)	16:52	17:54	19:59		21:02		21:57
5	08:49	09:51 (B22)	08:07	07:00	06:38		05:23		04:32
	15:53	29 10:20 (B22)	16:54	17:56	20:01		21:04		21:58
6	08:49	09:51 (B22)	08:05	06:58	06:35		05:21		04:31
	15:55	30 10:21 (B22)	16:56	17:58	20:03		21:06		21:59
7	08:48	09:51 (B22)	08:03	06:55	06:33		05:19		04:30
	15:56	30 10:21 (B22)	16:59	18:00	20:05		21:08		22:00
8	08:48	09:51 (B22)	08:01	06:53	06:30		05:17		04:29
	15:58	31 10:22 (B22)	17:01	18:03	20:08		21:10		22:01
9	08:47	09:51 (B22)	07:58	06:50	06:28		05:15		04:28
	15:59	31 10:22 (B22)	17:03	18:05	20:10		21:12		22:02
10	08:46	09:52 (B22)	07:56	06:47	06:25		05:13		04:28
	16:01	31 10:23 (B22)	17:05	18:07	20:12		21:14		22:03
11	08:45	09:52 (B22)	07:54	06:45	06:22		05:11		04:27
	16:03	31 10:23 (B22)	17:08	18:09	20:14		21:16		22:04
12	08:44	09:52 (B22)	07:52	06:42	06:20		05:08		04:27
	16:04	32 10:24 (B22)	17:10	18:11	20:16		21:18		22:05
13	08:43	09:52 (B22)	07:50	06:40	06:17		05:06		04:26
	16:06	32 10:24 (B22)	17:12	18:13	20:18		21:20		22:06
14	08:42	09:53 (B22)	07:47	06:37	06:14		05:04		04:26
	16:08	32 10:25 (B22)	17:14	18:15	20:20		21:22		22:07
15	08:41	09:53 (B22)	07:45	06:34	06:12		05:03		04:26
	16:10	32 10:25 (B22)	17:17	18:18	20:22		21:24		22:07
16	08:40	09:53 (B22)	07:43	06:32	06:09		05:01		04:25
	16:12	32 10:25 (B22)	17:19	18:20	20:24		21:26		22:08
17	08:39	09:54 (B22)	07:40	06:29	06:07		04:59		04:25
	16:14	32 10:26 (B22)	17:21	18:22	20:26		21:27		22:08
18	08:38	09:54 (B22)	07:38	06:26	06:04	06:30 (B1)	04:57		04:25
	16:16	32 10:26 (B22)	17:23	18:24	20:28	3 06:33 (B1)	21:29		22:09
19	08:36	09:54 (B22)	07:36	06:24	06:02	06:28 (B1)	04:55		04:25
	16:18	32 10:26 (B22)	17:26	18:26	20:30	7 06:35 (B1)	21:31		22:09
20	08:35	09:56 (B22)	07:33	06:21	05:59	06:25 (B1)	04:53		04:25
	16:20	30 10:26 (B22)	17:28	18:28	20:33	11 06:36 (B1)	21:33		22:10
21	08:33	09:56 (B22)	07:31	06:18	05:57	06:23 (B1)	04:52		04:25
	16:22	30 10:26 (B22)	17:30	18:30	20:35	14 06:37 (B1)	21:35		22:10
22	08:32	09:56 (B22)	07:28	06:16	05:54	06:21 (B1)	04:50		04:25
	16:24	30 10:26 (B22)	17:32	18:32	20:37	17 06:38 (B1)	21:37		22:10
23	08:30	09:57 (B22)	07:26	06:13	05:52	06:18 (B1)	04:48		04:26
	16:26	28 10:25 (B22)	17:34	18:34	20:39	19 06:37 (B1)	21:38		22:10
24	08:29	09:59 (B22)	07:23	06:10	05:49	06:18 (B1)	04:47		04:26
	16:28	27 10:26 (B22)	17:37	18:36	20:41	19 06:37 (B1)	21:40		22:10
25	08:27	09:59 (B22)	07:21	06:07	05:47	06:18 (B1)	04:45		04:26
	16:30	26 10:25 (B22)	17:39	18:38	20:43	19 06:37 (B1)	21:42		22:10
26	08:26	10:00 (B22)	07:18	06:05	05:44	06:17 (B1)	04:44		04:27
	16:32	25 10:25 (B22)	17:41	18:41	20:45	19 06:36 (B1)	21:43		22:10
27	08:24	10:02 (B22)	07:16	06:02	05:42	06:18 (B1)	04:42		04:27
	16:34	22 10:24 (B22)	17:43	18:43	20:47	18 06:36 (B1)	21:45		22:10
28	08:22	10:03 (B22)	07:13	05:59	05:40	06:19 (B1)	04:41		04:28
	16:36	20 10:23 (B22)	17:45	18:45	20:49	16 06:35 (B1)	21:47		22:10
29	08:20	10:05 (B22)		06:57	05:37	06:20 (B1)	04:40		04:29
	16:39	16 10:21 (B22)		19:47	20:51	15 06:35 (B1)	21:48		22:10
30	08:18	10:08 (B22)		06:54	05:35	06:20 (B1)	04:38		04:29
	16:41	11 10:19 (B22)		19:49	20:53	12 06:32 (B1)	21:50		22:09
31	08:17			06:51			04:37		
	16:43			19:51			21:51		
Potential sun hours	235		266	366	426		508		529
Total, worst case	847				189		9		
Sun reduction	0.13				0.50		0.57		
Oper. time red.	0.98				0.98		0.98		
Wind dir. red.	0.61				0.65		0.65		
Total reduction	0.08				0.31		0.35		
Total, real	66				59		3		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Straumenini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (11)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45 32
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44 31
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43 31
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42 31
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42 30
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41 30
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40 29
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40 29
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39 29
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39 28
11	04:41 22:01	05:35 21:06	06:37 (B1) 19:47	07:38 18:27	07:44 16:15	08:39 15:38 28
12	04:42 22:00	05:37 21:04	06:29 (B1) 19:45	07:40 18:25	07:46 16:13	09:38 (B22) 15:38 27
13	04:43 21:59	05:39 21:02	06:28 (B1) 19:42	07:42 18:22	07:49 16:11	09:37 (B22) 15:38 27
14	04:45 21:58	05:41 20:59	06:27 (B1) 19:39	07:44 18:19	07:51 16:09	09:35 (B22) 15:38 26
15	04:46 21:57	05:43 20:57	06:26 (B1) 19:37	07:46 18:17	07:53 16:08	09:33 (B22) 15:38 26
16	04:48 21:55	05:45 20:54	06:25 (B1) 19:34	07:48 18:14	07:55 16:06	09:33 (B22) 15:38 26
17	04:49 21:54	05:47 20:52	06:25 (B1) 19:31	07:50 18:12	07:57 16:04	09:32 (B22) 15:38 26
18	04:51 21:52	05:49 20:50	06:24 (B1) 19:29	07:52 18:09	07:59 16:02	09:33 (B22) 15:38 26
19	04:52 21:51	05:51 20:47	06:24 (B1) 19:26	07:55 18:07	08:01 16:01	09:32 (B22) 15:38 25
20	04:54 21:49	05:53 20:45	06:24 (B1) 19:23	07:57 18:04	08:03 15:59	09:31 (B22) 15:39 25
21	04:56 21:48	05:55 20:42	06:26 (B1) 19:20	07:59 18:02	08:05 15:58	09:31 (B22) 15:39 25
22	04:57 21:46	05:57 20:40	06:28 (B1) 19:18	08:01 17:59	08:07 15:56	09:32 (B22) 15:39 25
23	04:59 21:45	05:59 20:37	06:30 (B1) 19:15	08:03 17:57	08:09 15:55	09:31 (B22) 15:40 25
24	05:01 21:43	06:01 20:35	06:32 (B1) 19:12	08:05 17:55	08:11 15:53	09:31 (B22) 15:41 25
25	05:03 21:41	06:03 20:32	06:34 (B1) 19:10	08:07 16:52	08:13 15:52	09:31 (B22) 15:41 26
26	05:04 21:39	06:05 20:30	06:36 (B1) 19:07	08:07 16:50	08:15 15:51	09:32 (B22) 15:42 26
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	09:33 (B22) 15:43 26
28	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	09:33 (B22) 15:44 26
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	09:33 (B22) 15:45 27
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	09:34 (B22) 15:46 27
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47 27
Potential sun hours	529	469	385	324	247	216
Total, worst case		203			522	847
Sun reduction		0.50			0.08	0.07
Oper. time red.		0.98			0.98	0.98
Wind dir. red.		0.65			0.61	0.61
Total reduction		0.31			0.05	0.04
Total, real		63			25	35

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Strauti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (57)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March	April	May	June		
1	08:51	09:54 (B22)	08:15	09:54 (B22)	07:11	06:49	05:33	06:00 (B1)	04:36			
	15:48	18	10:12 (B22)	16:45	37	10:31 (B22)	17:48	19:53	20:55	4	06:04 (B1)	21:53
2	08:50	09:54 (B22)	08:13	09:55 (B22)	07:08	06:46	05:30	05:58 (B1)	04:35			
	15:49	19	10:13 (B22)	16:47	36	10:31 (B22)	17:50	19:55	20:57	8	06:06 (B1)	21:54
3	08:50	09:54 (B22)	08:11	09:56 (B22)	07:06	06:43	05:28	05:56 (B1)	04:34			
	15:51	20	10:14 (B22)	16:50	35	10:31 (B22)	17:52	19:57	21:00	11	06:07 (B1)	21:55
4	08:50	09:53 (B22)	08:09	09:57 (B22)	07:03	06:41	05:26	05:54 (B1)	04:33			
	15:52	22	10:15 (B22)	16:52	33	10:30 (B22)	17:54	19:59	21:02	14	06:08 (B1)	21:57
5	08:49	09:53 (B22)	08:07	09:58 (B22)	07:00	06:38	05:23	05:52 (B1)	04:32			
	15:53	24	10:17 (B22)	16:54	32	10:30 (B22)	17:56	20:01	21:04	17	06:09 (B1)	21:58
6	08:49	09:53 (B22)	08:05	09:59 (B22)	06:58	06:35	05:21	05:50 (B1)	04:31			
	15:55	25	10:18 (B22)	16:56	29	10:28 (B22)	17:58	20:03	21:06	19	06:09 (B1)	21:59
7	08:48	09:53 (B22)	08:03	10:00 (B22)	06:55	06:33	05:19	05:50 (B1)	04:30			
	15:56	25	10:18 (B22)	16:59	27	10:27 (B22)	18:00	20:05	21:08	19	06:09 (B1)	22:00
8	08:48	09:52 (B22)	08:01	10:03 (B22)	06:53	06:30	05:17	05:49 (B1)	04:29			
	15:58	27	10:19 (B22)	17:01	22	10:25 (B22)	18:03	20:08	21:10	20	06:09 (B1)	22:01
9	08:47	09:52 (B22)	07:58	10:04 (B22)	06:50	06:28	05:15	05:49 (B1)	04:28			
	15:59	29	10:21 (B22)	17:03	18	10:22 (B22)	18:05	20:10	21:12	20	06:09 (B1)	22:02
10	08:46	09:52 (B22)	07:56	10:08 (B22)	06:47	06:25	05:13	05:49 (B1)	04:28			
	16:01	30	10:22 (B22)	17:05	11	10:19 (B22)	18:07	20:12	21:14	20	06:09 (B1)	22:03
11	08:45	09:52 (B22)	07:54			06:45	06:22	05:11	05:49 (B1)	04:27		
	16:03	31	10:23 (B22)	17:08		18:09	20:14	21:16	20	06:09 (B1)	22:04	
12	08:44	09:52 (B22)	07:52			06:42	06:20	05:08	05:49 (B1)	04:27		
	16:04	32	10:24 (B22)	17:10		18:11	20:16	21:18	19	06:08 (B1)	22:05	
13	08:43	09:51 (B22)	07:49			06:40	06:17	05:06	05:49 (B1)	04:26		
	16:06	33	10:24 (B22)	17:12		18:13	20:18	21:20	18	06:07 (B1)	22:06	
14	08:42	09:51 (B22)	07:47			06:37	06:14	05:04	05:51 (B1)	04:26		
	16:08	34	10:25 (B22)	17:14		18:15	20:20	21:22	17	06:08 (B1)	22:07	
15	08:41	09:51 (B22)	07:45			06:34	06:12	05:03	05:51 (B1)	04:26		
	16:10	34	10:25 (B22)	17:17		18:18	20:22	21:24	16	06:07 (B1)	22:07	
16	08:40	09:51 (B22)	07:43			06:32	06:09	05:01	05:52 (B1)	04:25		
	16:12	36	10:27 (B22)	17:19		18:20	20:24	21:25	13	06:05 (B1)	22:08	
17	08:39	09:52 (B22)	07:40			06:29	06:07	04:59	05:54 (B1)	04:25		
	16:14	36	10:28 (B22)	17:21		18:22	20:26	21:27	11	06:05 (B1)	22:08	
18	08:37	09:51 (B22)	07:38			06:26	06:04	04:57	05:55 (B1)	04:25		
	16:16	37	10:28 (B22)	17:23		18:24	20:28	21:29	7	06:02 (B1)	22:09	
19	08:36	09:51 (B22)	07:36			06:24	06:02	04:55		04:25		
	16:18	37	10:28 (B22)	17:26		18:26	20:30	21:31		22:09		
20	08:35	09:51 (B22)	07:33			06:21	05:59	04:53		04:25		
	16:20	39	10:30 (B22)	17:28		18:28	20:33	21:33		22:10		
21	08:33	09:51 (B22)	07:31			06:18	05:57	04:52		04:25		
	16:22	39	10:30 (B22)	17:30		18:30	20:35	21:35		22:10		
22	08:32	09:51 (B22)	07:28			06:16	05:54	04:50		04:25		
	16:24	39	10:30 (B22)	17:32		18:32	20:37	21:37		22:10		
23	08:30	09:51 (B22)	07:26			06:13	05:52	04:48		04:26		
	16:26	40	10:31 (B22)	17:34		18:34	20:39	21:38		22:10		
24	08:29	09:52 (B22)	07:23			06:10	05:49	04:47		04:26		
	16:28	40	10:32 (B22)	17:37		18:36	20:41	21:40		22:10		
25	08:27	09:52 (B22)	07:21			06:07	05:47	04:45		04:26		
	16:30	40	10:32 (B22)	17:39		18:38	20:43	21:42		22:10		
26	08:26	09:52 (B22)	07:18			06:05	05:44	04:44		04:27		
	16:32	40	10:32 (B22)	17:41		18:41	20:45	21:43		22:10		
27	08:24	09:53 (B22)	07:16			06:02	05:42	04:42		04:27		
	16:34	39	10:32 (B22)	17:43		18:43	20:47	21:45		22:10		
28	08:22	09:53 (B22)	07:13			05:59	05:40	04:41		04:28		
	16:36	39	10:32 (B22)	17:45		18:45	20:49	21:47		22:10		
29	08:20	09:53 (B22)				06:57	05:37	04:40		04:29		
	16:39	39	10:32 (B22)			19:47	20:51	21:48		22:10		
30	08:18	09:54 (B22)				06:54	05:35	04:38		04:29		
	16:41	38	10:32 (B22)			19:49	20:53	21:50		22:09		
31	08:17	09:54 (B22)				06:51		04:37				
	16:43	38	10:32 (B22)			19:51		21:51				
Potential sun hours	235		266			366	426	508		529		
Total, worst case	1019		280					273				
Sun reduction	0.13		0.20					0.57				
Oper. time red.	0.98		0.98					0.98				
Wind dir. red.	0.61		0.61					0.67				
Total reduction	0.08		0.12					0.36				
Total, real	79		33					98				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Strauti - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (57)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	05:59 (B1)	06:17	07:17	07:23
	22:09	21:28	20	06:19 (B1)	20:14	18:54
2	04:31	05:18	05:59 (B1)	06:19	07:19	07:25
	22:09	21:26	20	06:19 (B1)	20:11	18:51
3	04:32	05:19	05:59 (B1)	06:21	07:21	07:27
	22:08	21:24	20	06:19 (B1)	20:09	18:48
4	04:33	05:21	05:59 (B1)	06:23	07:23	07:29
	22:07	21:22	21	06:20 (B1)	20:06	18:46
5	04:34	05:23	05:59 (B1)	06:25	07:25	07:31
	22:07	21:20	20	06:19 (B1)	20:03	18:43
6	04:35	05:25	05:59 (B1)	06:27	07:27	07:33
	22:06	21:17	20	06:19 (B1)	20:01	18:40
7	04:36	05:27	06:00 (B1)	06:29	07:30	07:36
	22:05	21:15	18	06:18 (B1)	19:58	18:38
8	04:37	05:29	06:02 (B1)	06:31	07:32	07:38
	22:04	21:13	16	06:18 (B1)	19:55	18:35
9	04:38	05:31	06:04 (B1)	06:33	07:34	07:40
	22:03	21:11	13	06:17 (B1)	19:53	18:32
10	04:39	05:33	06:06 (B1)	06:35	07:36	07:42
	22:02	21:08	10	06:16 (B1)	19:50	18:30
11	04:41	05:35	06:07 (B1)	06:37	07:38	07:44
	22:01	21:06	7	06:14 (B1)	19:47	18:27
12	04:42	05:37	06:09 (B1)	06:39	07:40	07:46
	22:00	21:04	2	06:11 (B1)	19:45	18:25
13	04:43	05:39	06:11	06:41	07:42	07:49
	21:59	21:02		19:42	18:22	16:11
14	04:45	05:41	06:13	06:43	07:44	07:51
	21:58	20:59		19:39	18:19	16:09
15	04:46	05:43	06:15	06:45	07:46	07:53
	21:57	20:57		19:37	18:17	16:08
16	04:48	05:45	06:17	06:47	07:48	07:55
	21:55	20:54		19:34	18:14	16:06
17	04:49	05:47	06:19	06:49	07:50	07:57
	21:54	20:52		19:31	18:12	16:04
18	04:51	05:49	06:21	06:51	07:52	07:59
	21:52	20:50		19:29	18:09	16:02
19	04:52	05:51	06:23	06:53	07:55	08:01
	21:51	20:47		19:26	18:07	16:01
20	04:54	05:53	06:25	06:55	07:57	08:03
	21:49	20:45		19:23	18:04	15:59
21	04:56	05:55	06:27	06:57	07:59	08:05
	21:48	20:42		19:20	18:02	15:58
22	04:57	05:57	06:29	06:59	08:01	08:07
	21:46	20:40		19:18	17:59	15:56
23	04:59	05:59	06:31	07:01	08:03	08:09
	21:45	20:37		19:15	17:57	15:55
24	05:01	06:01	07:03	07:03	08:05	08:11
	21:43	20:35		19:12	17:55	15:53
25	05:03	06:08 (B1)	06:03	07:05	07:07	08:13
	21:41	3	06:11 (B1)	20:32	19:10	16:52
26	05:04	06:05 (B1)	06:05	07:07	07:10	08:15
	21:39	9	06:14 (B1)	20:30	19:07	16:50
27	05:06	06:04 (B1)	06:07	07:09	07:12	08:17
	21:38	12	06:16 (B1)	20:27	19:04	16:47
28	05:08	06:02 (B1)	06:09	07:11	07:14	08:19
	21:36	14	06:16 (B1)	20:24	19:02	16:45
29	05:10	06:01 (B1)	06:11	07:13	07:16	08:21
	21:34	16	06:17 (B1)	20:22	18:59	16:43
30	05:12	06:01 (B1)	06:13	07:15	07:18	08:22
	21:32	17	06:18 (B1)	20:19	18:56	16:40
31	05:14	06:01 (B1)	06:15		07:20	
	21:30	18	06:19 (B1)	20:17	16:38	
Potential sun hours	529	469		385	324	247
Total, worst case	89	187			1035	461
Sun reduction	0.49	0.50			0.08	0.07
Oper. time red.	0.98	0.98			0.98	0.98
Wind dir. red.	0.67	0.67			0.61	0.61
Total reduction	0.31	0.32			0.05	0.04
Total, real	28	59			50	19

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Strautini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (36)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	09:35 (B22)	07:11	06:49	05:33
	15:48	16:45	18 09:53 (B22)	17:48	19:53	20:55
2	08:51	08:13	09:37 (B22)	07:08	06:46	05:30
	15:49	16:47	14 09:51 (B22)	17:50	19:55	20:58
3	08:50	09:33 (B22)	08:11	09:40 (B22)	07:06	06:43
	15:51	4 09:37 (B22)	16:50	9 09:49 (B22)	17:52	19:57
4	08:50	09:31 (B22)	08:09		07:03	06:41
	15:52	8 09:39 (B22)	16:52		17:54	19:59
5	08:49	09:31 (B22)	08:07		07:01	06:38
	15:53	11 09:42 (B22)	16:54		17:56	20:01
6	08:49	09:30 (B22)	08:05		06:58	06:35
	15:55	13 09:43 (B22)	16:56		17:58	20:03
7	08:48	09:30 (B22)	08:03		06:55	06:33
	15:56	14 09:44 (B22)	16:59		18:01	20:05
8	08:48	09:29 (B22)	08:01		06:53	06:30
	15:58	16 09:45 (B22)	17:01		18:03	20:08
9	08:47	09:29 (B22)	07:58		06:50	06:28
	15:59	18 09:47 (B22)	17:03		18:05	20:10
10	08:46	09:28 (B22)	07:56		06:47	06:25
	16:01	20 09:48 (B22)	17:05		18:07	20:12
11	08:45	09:28 (B22)	07:54		06:45	06:22
	16:03	21 09:49 (B22)	17:08		18:09	20:14
12	08:44	09:28 (B22)	07:52		06:42	06:20
	16:04	22 09:50 (B22)	17:10		18:11	20:16
13	08:43	09:27 (B22)	07:50		06:40	06:17
	16:06	23 09:50 (B22)	17:12		18:13	20:18
14	08:42	09:28 (B22)	07:47		06:37	06:15
	16:08	23 09:51 (B22)	17:14		18:15	20:20
15	08:41	09:28 (B22)	07:45		06:34	06:12
	16:10	25 09:53 (B22)	17:17		18:18	20:22
16	08:40	09:27 (B22)	07:43		06:32	06:09
	16:12	26 09:53 (B22)	17:19		18:20	20:24
17	08:39	09:28 (B22)	07:40		06:29	06:07
	16:14	26 09:54 (B22)	17:21		18:22	20:26
18	08:38	09:28 (B22)	07:38		06:26	06:04
	16:16	26 09:54 (B22)	17:23		18:24	20:28
19	08:36	09:27 (B22)	07:36		06:24	06:02
	16:18	27 09:54 (B22)	17:26		18:26	20:30
20	08:35	09:28 (B22)	07:33		06:21	05:59
	16:20	28 09:56 (B22)	17:28		18:28	20:33
21	08:33	09:28 (B22)	07:31		06:18	05:57
	16:22	28 09:56 (B22)	17:30		18:30	20:35
22	08:32	09:28 (B22)	07:28		06:16	05:54
	16:24	28 09:56 (B22)	17:32		18:32	20:37
23	08:30	09:28 (B22)	07:26		06:13	05:52
	16:26	28 09:56 (B22)	17:34		18:34	20:39
24	08:29	09:29 (B22)	07:23		06:10	05:49
	16:28	28 09:57 (B22)	17:37		18:36	20:41
25	08:27	09:30 (B22)	07:21		06:07	05:47
	16:30	27 09:57 (B22)	17:39		18:38	20:43
26	08:26	09:30 (B22)	07:18		06:05	05:44
	16:32	27 09:57 (B22)	17:41		18:41	20:45
27	08:24	09:31 (B22)	07:16		06:02	05:42
	16:34	26 09:57 (B22)	17:43		18:43	20:47
28	08:22	09:31 (B22)	07:13		05:59	05:40
	16:36	25 09:56 (B22)	17:45		18:45	20:49
29	08:20	09:32 (B22)			06:57	05:37
	16:39	24 09:56 (B22)			19:47	20:51
30	08:19	09:33 (B22)			06:54	05:35
	16:41	23 09:56 (B22)			19:49	20:53
31	08:17	09:34 (B22)			06:51	
	16:43	21 09:55 (B22)			19:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case	636	41		142		
Sun reduction	0.13	0.20		0.50		
Oper. time red.	0.98	0.98		0.98		
Wind dir. red.	0.60	0.60		0.65		
Total reduction	0.08	0.12		0.31		
Total, real	49	5		44		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Strautini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (36)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:49 15:39
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	05:04 21:39	06:05 20:30	07:07 19:07	08:15 17:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:17 17:47	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:19 17:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:21 17:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:22 17:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		143			553	124
Sun reduction		0.50			0.08	0.07
Oper. time red.		0.98			0.98	0.98
Wind dir. red.		0.65			0.60	0.60
Total reduction		0.31			0.05	0.04
Total, real		44			26	5

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Suš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (10)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48 41	10:51 (B17) 11:32 (B17) 16:45	08:15 07:11 17:47	06:49 07:11 19:53	05:32 20:55 17:47	04:35 21:53 20:55	04:30 22:09 21:28	05:15 21:28 20:14	06:17 21:28 18:53	07:17 21:28 16:36	07:23 21:28 15:45	08:24 21:28 11:18 (B17)
2	08:51 15:49 41	10:52 (B17) 11:33 (B17) 16:47	08:13 07:08 17:50	06:46 06:43 19:55	05:30 20:57 17:50	04:34 21:54 20:57	04:30 22:09 21:26	05:17 21:26 20:11	06:19 21:26 18:51	07:19 21:26 16:34	07:25 21:26 15:44	08:26 21:26 11:19 (B17)
3	08:50 15:50 41	10:52 (B17) 11:33 (B17) 16:49	08:09 07:03 17:52	06:41 06:41 19:57	05:28 21:00 21:55	04:33 21:55 22:08	04:31 22:08 21:24	05:19 21:24 20:09	06:21 21:24 18:48	07:21 21:24 16:31	07:27 21:24 15:43	08:28 21:24 11:19 (B17)
4	08:50 15:52 41	10:52 (B17) 11:33 (B17) 16:52	08:09 07:03 17:54	06:41 06:38 19:59	05:25 21:02 21:57	04:32 21:57 22:07	04:32 22:07 21:22	05:21 21:22 20:06	06:23 21:22 18:45	07:23 21:22 16:29	07:29 21:22 15:42	08:29 21:22 11:19 (B17)
5	08:49 15:53 41	10:53 (B17) 11:34 (B17) 16:54	08:07 07:00 17:56	06:38 06:35 20:01	05:23 21:04 21:58	04:31 21:58 22:07	04:33 22:07 21:19	05:23 21:19 20:03	06:25 21:19 18:43	07:25 21:19 16:27	07:31 21:19 15:41	08:31 21:19 11:20 (B17)
6	08:49 15:54 41	10:53 (B17) 11:34 (B17) 16:56	08:05 07:58 17:58	06:35 06:33 20:03	05:21 21:06 21:59	04:30 22:06 22:06	04:34 22:06 21:17	05:25 22:06 20:01	06:27 22:06 18:40	07:27 22:06 16:25	07:33 22:06 15:41	08:32 22:06 11:20 (B17)
7	08:48 15:56 40	10:54 (B17) 11:34 (B17) 16:58	08:03 07:58 18:00	06:33 06:30 20:05	05:19 21:08 22:00	04:30 22:05 22:05	04:35 22:05 21:15	05:27 22:05 20:01	06:29 22:05 18:38	07:29 22:05 16:23	07:36 22:05 15:40	08:34 22:05 11:20 (B17)
8	08:48 15:58 41	10:54 (B17) 11:35 (B17) 17:01	08:00 07:58 18:02	06:30 06:27 20:07	05:17 21:10 22:01	04:29 22:04 22:04	04:37 22:04 21:13	05:29 22:04 20:01	06:31 22:04 18:35	07:31 22:04 16:21	07:38 22:04 15:39	08:35 22:04 11:21 (B17)
9	08:47 15:59 40	10:55 (B17) 11:35 (B17) 17:03	07:58 07:56 18:05	06:27 06:25 20:10	05:14 21:12 22:02	04:28 22:02 22:03	04:38 22:03 21:11	05:31 22:03 20:01	06:33 22:03 18:32	07:34 22:03 16:19	07:40 22:03 15:39	08:37 22:03 11:22 (B17)
10	08:46 16:01 40	10:55 (B17) 11:35 (B17) 17:05	07:56 07:54 18:07	06:25 06:22 20:12	05:12 21:14 22:03	04:28 22:03 22:03	04:39 22:03 21:11	05:33 22:03 20:01	06:35 22:03 18:30	07:36 22:03 16:17	07:42 22:03 15:38	08:38 22:03 11:22 (B17)
11	08:45 16:02 40	10:56 (B17) 11:36 (B17) 17:07	07:54 07:52 18:09	06:22 06:19 20:14	05:10 21:16 22:04	04:27 22:04 22:04	04:40 22:04 21:11	05:35 22:04 20:01	06:37 22:04 18:27	07:38 22:04 16:15	07:44 22:04 15:38	08:39 22:04 11:22 (B17)
12	08:44 16:04 39	10:57 (B17) 11:36 (B17) 17:10	07:52 07:49 18:11	06:19 06:17 20:16	05:08 21:18 22:05	04:26 22:05 22:05	04:42 22:05 21:11	05:37 22:05 20:01	06:39 22:05 18:24	07:40 22:05 16:13	07:46 22:05 15:38	08:40 22:05 11:23 (B17)
13	08:43 16:06 39	10:57 (B17) 11:36 (B17) 17:12	07:49 07:47 18:13	06:17 06:14 20:18	05:06 21:20 22:06	04:26 22:06 22:06	04:43 22:06 21:11	05:39 22:06 20:01	06:41 22:06 18:22	07:42 22:06 16:11	07:49 22:06 15:38	08:42 22:06 11:23 (B17)
14	08:42 16:08 38	10:58 (B17) 11:36 (B17) 17:14	07:47 07:45 18:15	06:14 06:12 20:20	05:04 21:22 22:07	04:26 22:07 22:07	04:44 22:07 21:11	05:41 22:07 20:01	06:43 22:07 18:19	07:44 22:07 16:09	07:51 22:07 15:38	08:43 22:07 11:24 (B17)
15	08:41 16:10 38	10:59 (B17) 11:37 (B17) 17:16	07:45 07:43 18:17	06:12 06:09 20:22	05:02 21:24 22:07	04:25 22:07 22:07	04:46 22:07 21:11	05:43 22:07 20:01	06:45 22:07 18:17	07:46 22:07 16:07	07:53 22:07 15:37	08:44 22:07 11:24 (B17)
16	08:40 16:12 37	11:00 (B17) 11:37 (B17) 17:19	07:43 07:41 18:19	06:09 06:07 20:24	05:00 21:25 22:08	04:25 22:08 22:08	04:47 22:08 21:11	05:45 22:08 20:01	06:47 22:08 18:14	07:48 22:08 16:06	07:55 22:08 15:37	08:45 22:08 11:24 (B17)
17	08:39 16:13 36	11:00 (B17) 11:36 (B17) 17:21	07:40 07:38 18:22	06:07 06:04 20:26	04:58 21:27 22:09	04:25 22:09 22:09	04:49 22:09 21:11	05:49 22:09 20:01	06:49 22:09 18:12	07:50 22:09 16:04	07:57 22:09 15:38	08:46 22:09 11:25 (B17)
18	08:37 16:15 36	11:00 (B17) 11:36 (B17) 17:23	07:38 07:35 18:24	06:04 06:01 20:28	04:57 21:29 22:09	04:25 22:09 22:09	04:51 22:09 21:11	05:49 22:09 20:01	06:51 22:09 18:09	07:52 22:09 16:02	07:59 22:09 15:38	08:46 22:09 11:25 (B17)
19	08:36 16:17 34	11:01 (B17) 11:35 (B17) 17:25	07:35 07:32 18:26	06:01 06:00 20:30	04:55 21:31 22:09	04:25 22:10 22:10	04:52 22:10 21:11	05:51 22:10 20:01	06:53 22:10 18:07	07:54 22:10 16:00	08:01 22:10 15:38	08:47 22:10 11:26 (B17)
20	08:35 16:19 32	11:03 (B17) 11:35 (B17) 17:28	07:33 07:28 18:28	06:21 06:19 20:32	05:59 21:33 22:10	04:53 22:10 22:10	04:54 22:10 21:11	05:53 22:10 20:01	06:55 22:10 18:04	07:57 22:10 15:59	08:03 22:10 15:38	08:48 22:10 11:26 (B17)
21	08:33 16:21 32	11:03 (B17) 11:35 (B17) 17:30	07:31 07:28 18:30	06:18 06:16 20:35	05:56 21:35 22:10	04:51 22:10 22:10	04:55 22:10 21:11	05:55 22:10 20:01	06:57 22:10 18:02	07:59 22:10 15:57	08:05 22:10 15:39	08:49 22:10 11:27 (B17)
22	08:32 16:23 30	11:04 (B17) 11:34 (B17) 17:32	07:28 07:25 18:32	06:15 06:13 20:37	05:54 21:37 22:10	04:50 22:10 22:10	04:57 22:10 21:11	05:57 22:10 20:01	06:59 22:10 18:01	08:01 22:10 15:56	08:07 22:10 15:39	08:49 22:10 11:27 (B17)
23	08:30 16:26 28	11:05 (B17) 11:33 (B17) 17:34	07:26 07:23 18:34	06:13 06:10 20:39	05:51 21:40 22:10	04:48 22:10 22:10	04:59 22:10 21:11	05:59 22:10 20:01	07:01 22:10 18:03	08:03 22:10 15:54	08:09 22:10 15:40	08:50 22:10 11:28 (B17)
24	08:29 16:28 25	11:08 (B17) 11:33 (B17) 17:36	07:23 07:20 18:36	06:10 06:08 20:41	05:49 21:40 22:10	04:46 22:10 22:10	04:59 22:10 21:11	06:01 22:10 20:01	07:03 22:10 18:05	08:05 22:10 15:53	08:11 22:10 15:40	08:51 22:10 11:28 (B17)
25	08:27 16:30 21	11:10 (B17) 11:31 (B17) 17:39	07:21 07:19 18:38	06:07 06:05 20:43	05:47 21:42 22:10	04:45 22:10 22:10	04:59 22:10 21:11	06:03 22:10 20:01	07:05 22:10 18:07	08:07 22:10 15:52	08:13 22:10 15:41	08:50 22:10 11:28 (B17)
26	08:26 16:32 17	11:12 (B17) 11:29 (B17) 17:41	07:18 07:16 18:40	06:05 06:02 20:45	05:44 21:43 22:10	04:43 22:10 22:10	04:59 22:10 21:11	06:05 22:10 20:01	07:07 22:10 18:09	08:09 22:10 15:50	08:15 22:10 15:42	08:51 22:10 11:29 (B17)
27	08:24 16:34 11	11:15 (B17) 11:26 (B17) 17:43	07:16 07:13 18:42	06:02 05:59 20:49	05:42 21:45 22:10	04:42 22:10 22:10	04:59 22:10 21:11	06:07 22:10 20:01	07:09 22:10 18:04	08:11 22:10 15:47	08:17 22:10 15:42	08:51 22:10 11:30 (B17)
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 16:45	08:19 15:48	08:25 15:43	08:51 11:30 (B17)
29	08:20 16:38	07:13 17:45	05:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 16:43	08:21 15:47	08:27 15:44	08:51 11:30 (B17)
30	08:18 16:41	07:13 17:45	05:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:22 15:46	08:28 11:17 (B17)	08:51 15:45
31	08:17 16:43	07:13 17:45	05:51 19:51	05:31 20:51	04:37 21:51	04:37 22:10	05:13 20:17	06:15 20:17	07:20 16:38	08:22 15:46	08:28 11:17 (B17)	08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	940									494		1270
Sun reduction	0.13									0.08		0.07
Oper. time red.	0.98									0.98		0.98
Wind dir. red.	0.60									0.60		0.60
Total reduction	0.08									0.05		0.04
Total, real	73									24		52

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Sipolini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (86)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	06:53 (B14) 06:59 (B14)	05:15 21:12
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	06:50 (B14) 07:02 (B14)	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	06:48 (B14) 07:04 (B14)	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	06:45 (B14) 07:05 (B14)	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	06:44 (B14) 07:06 (B14)	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	06:43 (B14) 07:06 (B14)	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	06:42 (B14) 07:07 (B14)	05:03 21:24
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	06:41 (B14) 07:06 (B14)	05:01 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	06:41 (B14) 07:07 (B14)	04:59 21:27
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	06:40 (B14) 07:06 (B14)	04:57 21:29
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	06:41 (B14) 07:06 (B14)	04:55 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	06:41 (B14) 07:06 (B14)	04:54 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:41 (B14) 07:04 (B14)	04:52 21:35
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:42 (B14) 07:04 (B14)	04:50 21:37
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	06:42 (B14) 07:02 (B14)	04:49 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:43 (B14) 07:01 (B14)	04:47 21:40
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	06:45 (B14) 06:59 (B14)	04:45 21:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	06:48 (B14) 06:56 (B14)	04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47		04:42 21:45
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49		04:41 21:47
29	08:20 16:39		06:57 19:47	05:37 20:51		04:40 21:48
30	08:19 16:41		06:54 19:49	05:35 20:53		04:38 21:50
31	08:17 16:43		06:52 19:51	05:32 20:50		04:37 21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case			117	356	168	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.65	0.66	0.67	
Total reduction			0.26	0.32	0.37	
Total, real			31	114	63	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Sipolini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (86)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October	November	December
1	04:30	05:16	05:50 (B22)	06:17	06:47 (B14)	07:17	07:23	08:24
	22:09	21:28	5 05:55 (B22)	20:14	16 07:03 (B14)	18:54	16:36	15:45
2	04:31	05:18	05:51 (B22)	06:19	06:49 (B14)	07:19	07:25	08:26
	22:08	21:26	3 05:54 (B22)	20:11	12 07:01 (B14)	18:51	16:34	15:44
3	04:32	05:20		06:21	06:51 (B14)	07:21	07:27	08:28
	22:08	21:24		20:09	6 06:57 (B14)	18:48	16:32	15:43
4	04:33	05:22		06:23		07:23	07:29	08:29
	22:07	21:22		20:06		18:46	16:30	15:43
5	04:34	05:24		06:25		07:25	07:31	08:31
	22:07	21:20		20:04		18:43	16:27	15:42
6	04:35	05:25		06:27		07:28	07:33	08:32
	22:06	21:17		20:01		18:40	16:25	15:41
7	04:36	05:27		06:29		07:30	07:36	08:34
	22:05	21:15		19:58		18:38	16:23	15:40
8	04:37	05:29		06:31		07:32	07:38	08:35
	22:04	21:13		19:56		18:35	16:21	15:40
9	04:38	05:31		06:33		07:34	07:40	08:37
	22:03	21:11		19:53		18:33	16:19	15:39
10	04:40	05:33		06:35		07:36	07:42	08:38
	22:02	21:08		19:50		18:30	16:17	15:39
11	04:41	05:35		06:37		07:38	07:44	08:39
	22:01	21:06		19:48		18:27	16:15	15:39
12	04:42	05:37		06:39	07:23 (B24)	07:40	07:46	08:40
	22:00	21:04		19:45	8 07:31 (B24)	18:25	16:13	15:38
13	04:44	05:39		06:41	07:21 (B24)	07:42	07:49	08:42
	21:59	21:02		19:42	12 07:33 (B24)	18:22	16:11	15:38
14	04:45	05:41		06:43	07:19 (B24)	07:44	07:51	08:43
	21:58	20:59		19:39	15 07:34 (B24)	18:20	16:10	15:38
15	04:46	05:43		06:45	07:18 (B24)	07:46	07:53	08:44
	21:57	20:57		19:37	16 07:34 (B24)	18:17	16:08	15:38
16	04:48	05:45		06:47	07:17 (B24)	07:48	07:55	08:45
	21:55	20:54		19:34	17 07:34 (B24)	18:15	16:06	15:38
17	04:50	05:47	06:54 (B14)	06:49	07:18 (B24)	07:50	07:57	08:46
	21:54	20:52	10 07:04 (B14)	19:31	16 07:34 (B24)	18:12	16:04	15:38
18	04:51	05:49	06:51 (B14)	06:51	07:20 (B24)	07:52	07:59	08:46
	21:52	20:50	15 07:06 (B14)	19:29	14 07:34 (B24)	18:09	16:03	15:38
19	04:53	05:51	06:49 (B14)	06:53	07:22 (B24)	07:55	08:01	08:47
	21:51	6 05:50 (B22)	20:47	17 07:06 (B14)	11 07:33 (B24)	18:07	16:01	15:38
20	04:54	05:43 (B22)	05:53	06:47 (B14)	06:55	07:24 (B24)	07:57	08:48
	21:49	9 05:52 (B22)	20:45	21 07:08 (B14)	8 07:32 (B24)	18:05	15:59	15:39
21	04:56	05:42 (B22)	05:55	06:46 (B14)	06:57	07:26 (B24)	07:59	08:48
	21:48	11 05:53 (B22)	20:42	22 07:08 (B14)	4 07:30 (B24)	18:02	15:58	15:39
22	04:58	05:41 (B22)	05:57	06:46 (B14)	06:59	08:01	08:07	08:49
	21:46	13 05:54 (B22)	20:40	23 07:09 (B14)		18:00	15:56	15:40
23	04:59	05:40 (B22)	05:59	06:45 (B14)	07:01	08:03	08:09	08:50
	21:45	14 05:54 (B22)	20:37	24 07:09 (B14)	19:15	17:57	15:55	15:40
24	05:01	05:40 (B22)	06:01	06:45 (B14)	07:03	08:05	08:11	08:50
	21:43	15 05:55 (B22)	20:35	25 07:10 (B14)	19:12	17:55	15:53	15:41
25	05:03	05:40 (B22)	06:03	06:44 (B14)	07:05	07:07	08:13	08:50
	21:41	16 05:56 (B22)	20:32	26 07:10 (B14)	19:10	16:52	15:52	15:41
26	05:05	05:40 (B22)	06:05	06:44 (B14)	07:07	07:10	08:15	08:51
	21:39	16 05:56 (B22)	20:30	25 07:09 (B14)	19:07	16:50	15:51	15:42
27	05:06	05:41 (B22)	06:07	06:44 (B14)	07:09	07:12	08:17	08:51
	21:38	15 05:56 (B22)	20:27	25 07:09 (B14)	19:04	16:48	15:50	15:43
28	05:08	05:43 (B22)	06:09	06:43 (B14)	07:11	07:14	08:19	08:51
	21:36	14 05:57 (B22)	20:24	25 07:08 (B14)	19:02	16:45	15:48	15:44
29	05:10	05:44 (B22)	06:11	06:43 (B14)	07:13	07:16	08:21	08:51
	21:34	12 05:56 (B22)	20:22	24 07:07 (B14)	18:59	16:43	15:47	15:45
30	05:12	05:46 (B22)	06:13	06:44 (B14)	07:15	07:18	08:22	08:51
	21:32	10 05:56 (B22)	20:19	22 07:06 (B14)	18:56	16:41	15:46	15:46
31	05:14	05:48 (B22)	06:15	06:45 (B14)		07:20		08:51
	21:30	8 05:56 (B22)	20:17	20 07:05 (B14)		16:38		15:47
Potential sun hours	529		469		385	324	247	216
Total, worst case	159		332		155			
Sun reduction	0.49		0.50		0.43			
Oper. time red.	0.98		0.98		0.98			
Wind dir. red.	0.67		0.66		0.65			
Total reduction	0.32		0.32		0.27			
Total, real	52		106		42			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Turaiki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (162)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January				February				March				April				May				June			
1	08:51		09:46 (B14)	08:15	07:11								06:49	05:33	04:36									
	15:48	28	10:14 (B14)	16:45	17:48								19:53	20:55	21:53									
2	08:50		09:47 (B14)	08:13	07:08								06:46	05:30	04:35									
	15:49	28	10:15 (B14)	16:48	17:50								19:55	20:58	21:54									
3	08:50		09:47 (B14)	08:11	07:06								06:43	05:28	04:34									
	15:51	28	10:15 (B14)	16:50	17:52								19:57	21:00	21:55									
4	08:50		09:47 (B14)	08:09	07:03								06:41	05:26	04:33									
	15:52	28	10:15 (B14)	16:52	17:54								19:59	21:02	21:57									
5	08:49		09:48 (B14)	08:07	07:01								06:38	05:23	04:32									
	15:53	29	10:17 (B14)	16:54	17:56								20:01	21:04	21:58									
6	08:49		09:48 (B14)	08:05	06:58								06:36	05:21	04:31									
	15:55	29	10:17 (B14)	16:56	17:58								20:03	21:06	21:59									
7	08:48		09:48 (B14)	08:03	06:55								06:33	05:19	04:30									
	15:56	29	10:17 (B14)	16:59	18:01								20:06	21:08	22:00									
8	08:48		09:49 (B14)	08:01	06:53								06:30	05:17	04:29									
	15:58	29	10:18 (B14)	17:01	18:03								20:08	21:10	22:01									
9	08:47		09:49 (B14)	07:58	06:50								06:28	05:15	04:29									
	16:00	29	10:18 (B14)	17:03	18:05								20:10	21:12	22:02									
10	08:46		09:50 (B14)	07:56	06:47								06:25	05:13	04:28									
	16:01	29	10:19 (B14)	17:05	18:07								20:12	21:14	22:03									
11	08:45		09:50 (B14)	07:54	06:45								06:22	05:11	04:27									
	16:03	29	10:19 (B14)	17:08	18:09								20:14	21:16	22:04									
12	08:44		09:51 (B14)	07:52	06:42							07:10 (B22)	06:20	05:09	04:27									
	16:05	29	10:20 (B14)	17:10	18:11	10	07:20 (B22)	20:16	21:18	22:05														
13	08:43		09:50 (B14)	07:50	06:40							07:06 (B22)	06:17	05:07	04:26									
	16:06	30	10:20 (B14)	17:12	18:13	16	07:22 (B22)	20:18	21:20	22:06														
14	08:42		09:18 (B24)	07:47	06:37							07:04 (B22)	06:15	05:05	04:26									
	16:08	32	10:20 (B14)	17:14	18:15	19	07:23 (B22)	20:20	21:22	22:07														
15	08:41		09:17 (B24)	07:45	06:34							07:03 (B22)	06:12	05:03	04:26									
	16:10	35	10:21 (B14)	17:17	18:18	22	07:25 (B22)	20:22	21:24	22:07														
16	08:40		09:15 (B24)	07:43	06:32							07:01 (B22)	06:09	05:01	04:26									
	16:12	36	10:20 (B14)	17:19	18:20	25	07:26 (B22)	20:24	21:26	22:08														
17	08:39		09:14 (B24)	07:40	06:29							07:00 (B22)	06:07	04:59	04:25									
	16:14	38	10:21 (B14)	17:21	18:22	26	07:26 (B22)	20:26	21:27	22:08														
18	08:38		09:12 (B24)	07:38	06:26							06:59 (B22)	06:04	04:57	04:25									
	16:16	41	10:21 (B14)	17:23	18:24	27	07:26 (B22)	20:28	21:29	22:09														
19	08:36		09:10 (B24)	07:36	06:24							06:59 (B22)	06:02	04:55	04:25									
	16:18	41	10:20 (B14)	17:26	18:26	27	07:26 (B22)	20:31	21:31	22:09														
20	08:35		09:09 (B24)	07:33	06:21							06:58 (B22)	05:59	04:53	04:25									
	16:20	43	10:21 (B14)	17:28	18:28	28	07:26 (B22)	20:33	21:33	22:10														
21	08:33		09:08 (B24)	07:31	06:18							06:58 (B22)	05:57	04:52	04:25									
	16:22	43	10:20 (B14)	17:30	18:30	27	07:25 (B22)	20:35	21:35	22:10														
22	08:32		09:08 (B24)	07:28	06:16							06:58 (B22)	05:54	04:50	04:26									
	16:24	41	10:19 (B14)	17:32	18:32	27	07:25 (B22)	20:37	21:37	22:10														
23	08:30		09:08 (B24)	07:26	06:13							06:58 (B22)	05:52	04:48	04:26									
	16:26	41	10:19 (B14)	17:34	18:34	26	07:24 (B22)	20:39	21:38	22:10														
24	08:29		09:09 (B24)	07:23	06:10							06:58 (B22)	05:49	04:47	04:26									
	16:28	38	10:19 (B14)	17:37	18:36	25	07:23 (B22)	20:41	21:40	22:10														
25	08:27		09:09 (B24)	07:21	06:08							07:00 (B22)	05:47	04:45	04:26									
	16:30	35	10:17 (B14)	17:39	18:38	22	07:22 (B22)	20:43	21:42	22:10														
26	08:26		09:10 (B24)	07:18	06:05							07:00 (B22)	05:44	04:44	04:27									
	16:32	31	10:16 (B14)	17:41	18:41	20	07:20 (B22)	20:45	21:43	22:10														
27	08:24		09:11 (B24)	07:16	06:02							07:01 (B22)	05:42	04:42	04:27									
	16:34	21	10:12 (B14)	17:43	18:43	17	07:18 (B22)	20:47	21:45	22:10														
28	08:22		09:12 (B24)	07:13	05:59							07:04 (B22)	05:40	04:41	04:28									
	16:37	15	09:27 (B24)	17:45	18:45	11	07:15 (B22)	20:49	21:47	22:10														
29	08:20		09:13 (B24)		06:57							05:37	04:40	04:29										
	16:39	13	09:26 (B24)		19:47							20:51	21:48	22:10										
30	08:19		09:15 (B24)		06:54							05:35	04:38	04:29										
	16:41	10	09:25 (B24)		19:49							20:53	21:50	22:09										
31	08:17		09:18 (B24)		06:51								04:37											
	16:43	4	09:22 (B24)		19:51								21:51											
Potential sun hours	235			266	366							426	508	529										
Total, worst case		932						375																
Sun reduction		0.13						0.41																
Oper. time red.		0.98						0.98																
Wind dir. red.		0.61						0.63																
Total reduction		0.08						0.25																
Total, real		73						94																

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Turaiki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (162)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:47 (B22)	07:23
	22:09	21:28	20:14	18:54	13	08:00 (B22)
2	04:31	05:18	06:19	07:19	07:52 (B22)	16:36
	22:09	21:26	20:11	18:51	3	07:55 (B22)
3	04:32	05:20	06:21	07:21		16:34
	22:08	21:24	20:09	18:48		07:27
4	04:33	05:21	06:23	07:23		16:32
	22:07	21:22	20:06	18:46		07:29
5	04:34	05:23	06:25	07:25		16:29
	22:07	21:20	20:03	18:43		07:31
6	04:35	05:25	06:27	07:28		16:27
	22:06	21:17	20:01	18:40		07:33
7	04:36	05:27	06:29	07:30		16:25
	22:05	21:15	19:58	18:38		07:36
8	04:37	05:29	06:31	07:32		16:23
	22:04	21:13	19:56	18:35		07:38
9	04:38	05:31	06:33	07:34		16:21
	22:03	21:11	19:53	18:32		07:40
10	04:39	05:33	06:35	07:36		16:19
	22:02	21:08	19:50	18:30		07:42
11	04:41	05:35	06:37	07:38		16:17
	22:01	21:06	19:47	18:27		07:44
12	04:42	05:37	06:39	07:40		16:15
	22:00	21:04	19:45	18:25	6	08:54 (B24)
13	04:43	05:39	06:41	07:42		16:13
	21:59	21:02	19:42	18:22	11	08:56 (B24)
14	04:45	05:41	06:43	07:44		16:11
	21:58	20:59	19:39	18:20	13	08:58 (B24)
15	04:46	05:43	06:45	07:46		16:09
	21:57	20:57	19:37	18:17	15	08:59 (B24)
16	04:48	05:45	06:47	07:51 (B22)		16:08
	21:55	20:54	19:34	18:14	23	09:45 (B14)
17	04:49	05:47	06:49	07:49 (B22)		16:06
	21:54	20:52	19:31	18:12	31	09:49 (B14)
18	04:51	05:49	06:51	07:47 (B22)		16:04
	21:52	20:50	19:29	18:09 (B22)	35	09:50 (B14)
19	04:53	05:51	06:53	07:46 (B22)		16:03
	21:51	20:47	19:26	18:07 (B22)	38	09:53 (B14)
20	04:54	05:53	06:55	07:45 (B22)		16:02
	21:49	20:45	19:23	18:04 (B22)	41	09:54 (B14)
21	04:56	05:55	06:57	07:44 (B22)		16:01
	21:48	20:42	19:21	18:02 (B22)	43	09:55 (B14)
22	04:58	05:57	06:59	07:43 (B22)		16:00
	21:46	20:40	19:18	18:00 (B22)	41	09:57 (B14)
23	04:59	05:59	07:01	07:43 (B22)		15:59
	21:45	20:37	19:15	17:57 (B22)	43	09:58 (B14)
24	05:01	06:01	07:03	07:43 (B22)		15:58
	21:43	20:35	19:12	17:55 (B22)	43	09:59 (B14)
25	05:03	06:03	07:05	07:43 (B22)		15:56
	21:41	20:32	19:10	17:52 (B22)	41	09:57 (B14)
26	05:05	06:05	07:07	07:43 (B22)		15:55
	21:39	20:30	19:07	17:50 (B22)	40	09:58 (B14)
27	05:06	06:07	07:09	07:43 (B22)		15:53
	21:38	20:27	19:04	17:48 (B22)	39	09:58 (B14)
28	05:08	06:09	07:11	07:43 (B22)		15:52
	21:36	20:24	19:02	17:46 (B22)	37	09:59 (B14)
29	05:10	06:11	07:13	07:44 (B22)		15:51
	21:34	20:22	18:59	17:43 (B22)	35	10:00 (B14)
30	05:12	06:13	07:15	07:45 (B22)		15:50
	21:32	20:19	18:56	17:41 (B22)	32	10:00 (B14)
31	05:14	06:15		07:20		15:48
	21:30	20:17		16:38	29	10:01 (B14)
Potential sun hours	529	469	385	324	247	216
Total, worst case			364	16	622	835
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.63	0.63	0.60	0.61
Total reduction			0.26	0.16	0.05	0.04
Total, real			95	3	30	35

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Tireli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (99)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	06:00 (B24) 21:52
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:46	04:28 22:10
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09
31	08:17 16:43		06:52 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	528
Total, worst case				32		376
Sun reduction				0.50	0.57	0.56
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.66	0.66	0.67
Total reduction				0.32	0.37	0.36
Total, real				10	32	137

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Tireli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (99)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:08 (B14) 21:28	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36
2	04:31 22:08	05:09 (B14) 21:26	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34
3	04:32 22:08	05:09 (B14) 21:24	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32
4	04:33 22:07	05:10 (B14) 21:22	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30
5	04:34 22:07	05:11 (B14) 21:19	05:24 21:19	06:25 20:03	07:25 18:43	07:31 16:27
6	04:35 22:06	05:12 (B14) 21:17	05:26 21:17	06:27 20:01	07:28 18:40	07:33 16:25
7	04:36 22:05	05:13 (B14) 21:15	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23
8	04:37 22:04	05:14 (B14) 21:13	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21
9	04:38 22:03	05:15 (B14) 21:11	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19
10	04:40 22:02	05:16 (B14) 21:08	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17
11	04:41 22:01	05:18 (B14) 21:06	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15
12	04:42 22:00	05:37 21:04	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13
13	04:44 21:59	05:39 21:02	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11
14	04:45 21:58	05:41 20:59	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10
15	04:47 21:57	05:43 20:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08
16	04:48 21:55	05:45 20:54	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06
17	04:50 21:54	05:47 20:52	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04
18	04:51 21:52	05:49 20:50	05:49 20:50	06:51 19:29	07:52 18:10	07:59 16:03
19	04:53 21:51	05:51 20:47	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01
20	04:54 21:49	05:53 20:45	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59
21	04:56 21:48	05:55 20:42	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58
22	04:58 21:46	05:57 20:40	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56
23	04:59 21:45	05:59 20:37	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55
24	05:01 21:43	06:01 20:35	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:54
25	05:03 21:41	06:03 20:32	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52
26	05:05 21:39	06:05 20:30	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51
27	05:07 21:37	06:07 20:27	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50
28	05:08 21:36	06:09 20:24	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48
29	05:10 21:34	06:11 20:22	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47
30	05:12 21:32	06:13 20:19	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46
31	05:14 21:30	06:15 20:17	06:15 20:17	07:17 16:38	07:20 16:38	08:24 15:47
Potential sun hours	529	469	384	324	248	216
Total, worst case	85	118				
Sun reduction	0.49	0.50				
Oper. time red.	0.98	0.98				
Wind dir. red.	0.67	0.66				
Total reduction	0.32	0.32				
Total, real	27	38				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Tudalinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (42)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March	April			May			June		
1	08:51		10:28 (B22)	08:15		07:11		06:49			05:32		06:19 (B1)	04:36		
	15:48	34	11:02 (B22)	16:45		17:48		19:53			20:55	17	06:36 (B1)	21:53		
2	08:50		10:29 (B22)	08:13		07:08		06:46			05:30		06:20 (B1)	04:35		
	15:49	34	11:03 (B22)	16:47		17:50		19:55			20:57	15	06:35 (B1)	21:54		
3	08:50		10:30 (B22)	08:11		07:06		06:43			05:28		06:21 (B1)	04:34		
	15:51	32	11:02 (B22)	16:50		17:52		19:57			21:00	12	06:33 (B1)	21:55		
4	08:50		10:30 (B22)	08:09		07:03		06:41			05:26		06:23 (B1)	04:33		
	15:52	32	11:02 (B22)	16:52		17:54		19:59			21:02	8	06:31 (B1)	21:57		
5	08:49		10:31 (B22)	08:07		07:00		06:38			05:23			04:32		
	15:53	33	11:04 (B22)	16:54		17:56		20:01			21:04			21:58		
6	08:49		10:31 (B22)	08:05		06:58		06:35			05:21			04:31		
	15:55	33	11:04 (B22)	16:56		17:58		20:03			21:06			21:59		
7	08:48		10:32 (B22)	08:03		06:55		06:33			05:19			04:30		
	15:56	32	11:04 (B22)	16:59		18:00		20:05			21:08			22:00		
8	08:48		10:32 (B22)	08:01		06:53		06:30			05:17			04:29		
	15:58	32	11:04 (B22)	17:01		18:03		20:08			21:10			22:01		
9	08:47		10:33 (B22)	07:58		06:50		06:28			05:15			04:28		
	15:59	31	11:04 (B22)	17:03		18:05		20:10			21:12			22:02		
10	08:46		10:34 (B22)	07:56		06:47		06:25			05:13			04:28		
	16:01	30	11:04 (B22)	17:05		18:07		20:12			21:14			22:03		
11	08:45		10:35 (B22)	07:54		06:45		06:22			05:10			04:27		
	16:03	30	11:05 (B22)	17:08		18:09		20:14			21:16			22:04		
12	08:44		10:36 (B22)	07:52		06:42		06:20			05:08			04:27		
	16:04	29	11:05 (B22)	17:10		18:11		20:16			21:18			22:05		
13	08:43		10:36 (B22)	07:50		06:40		06:17			05:06			04:26		
	16:06	28	11:04 (B22)	17:12		18:13		20:18			21:20			22:06		
14	08:42		10:37 (B22)	07:47		06:37		06:14			05:04			04:26		
	16:08	27	11:04 (B22)	17:14		18:15		20:20			21:22			22:07		
15	08:41		10:38 (B22)	07:45		06:34		06:12			05:02			04:26		
	16:10	26	11:04 (B22)	17:17		18:18		20:22			21:24			22:07		
16	08:40		10:39 (B22)	07:43		06:32		06:09			05:01			04:25		
	16:12	24	11:03 (B22)	17:19		18:20		20:24			21:25			22:08		
17	08:39		10:41 (B22)	07:40		06:29		06:07			04:59			04:25		
	16:14	22	11:03 (B22)	17:21		18:22		20:26			21:27			22:08		
18	08:37		10:42 (B22)	07:38		06:26		06:04			04:57			04:25		
	16:16	20	11:02 (B22)	17:23		18:24		20:28			21:29			22:09		
19	08:36		10:43 (B22)	07:36		06:24		06:02		06:28 (B1)	04:55			04:25		
	16:18	18	11:01 (B22)	17:25		18:26		20:30	7	06:35 (B1)	21:31			22:09		
20	08:35		10:45 (B22)	07:33		06:21		05:59		06:25 (B1)	04:53			04:25		
	16:20	15	11:00 (B22)	17:28		18:28		20:33	12	06:37 (B1)	21:33			22:10		
21	08:33		10:48 (B22)	07:31		06:18		05:57		06:23 (B1)	04:52			04:25		
	16:22	10	10:58 (B22)	17:30		18:30		20:35	15	06:38 (B1)	21:35			22:10		
22	08:32			07:28		06:16		05:54		06:21 (B1)	04:50			04:25		
	16:24			17:32		18:32		20:37	18	06:39 (B1)	21:37			22:10		
23	08:30			07:26		06:13		05:52		06:18 (B1)	04:48			04:26		
	16:26			17:34		18:34		20:39	21	06:39 (B1)	21:38			22:10		
24	08:29			07:23		06:10		05:49		06:18 (B1)	04:47			04:26		
	16:28			17:37		18:36		20:41	21	06:39 (B1)	21:40			22:10		
25	08:27			07:21		06:07		05:47		06:18 (B1)	04:45			04:26		
	16:30			17:39		18:38		20:43	22	06:40 (B1)	21:42			22:10		
26	08:26			07:18		06:05		05:44		06:17 (B1)	04:44			04:27		
	16:32			17:41		18:41		20:45	22	06:39 (B1)	21:43			22:10		
27	08:24			07:16		06:02		05:42		06:17 (B1)	04:42			04:27		
	16:34			17:43		18:43		20:47	22	06:39 (B1)	21:45			22:10		
28	08:22			07:13		05:59		05:40		06:18 (B1)	04:41			04:28		
	16:36			17:45		18:45		20:49	21	06:39 (B1)	21:47			22:10		
29	08:20					06:57		05:37		06:18 (B1)	04:39			04:28		
	16:39					19:47		20:51	20	06:38 (B1)	21:48			22:10		
30	08:18					06:54		05:35		06:18 (B1)	04:38			04:29		
	16:41					19:49		20:53	19	06:37 (B1)	21:50			22:09		
31	08:17					06:51					04:37					
	16:43					19:51					21:51					
Potential sun hours	235			266		366		426			508			529		
Total, worst case		572						220			52					
Sun reduction		0.13						0.50			0.57					
Oper. time red.		0.98						0.98			0.98					
Wind dir. red.		0.61						0.65			0.65					
Total reduction		0.08						0.31			0.35					
Total, real		44						68			18					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Tudalinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (42)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45 30 10:47 (B22)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44 30 10:47 (B22)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43 31 10:47 (B22)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42 31 10:48 (B22)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42 32 10:49 (B22)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41 32 10:50 (B22)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40 33 10:50 (B22)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40 33 10:51 (B22)
9	04:38 22:03	05:31 21:11	06:32 (B1) 06:41 (B1)	06:33 19:53	07:40 18:32	08:37 15:39 33 10:51 (B22)
10	04:39 22:02	05:33 21:08	06:30 (B1) 06:43 (B1)	06:35 19:50	07:42 18:30	08:38 15:39 33 10:52 (B22)
11	04:41 22:01	05:35 21:06	06:28 (B1) 06:44 (B1)	06:37 19:47	07:44 18:27	08:39 15:38 33 10:52 (B22)
12	04:42 22:00	05:37 21:04	06:27 (B1) 06:45 (B1)	06:39 19:45	07:46 18:25	08:40 15:38 33 10:53 (B22)
13	04:43 21:59	05:39 21:02	06:26 (B1) 06:46 (B1)	06:41 19:42	07:49 18:22	08:42 15:38 33 10:53 (B22)
14	04:45 21:58	05:41 20:59	06:25 (B1) 06:46 (B1)	06:43 19:39	07:51 18:19	08:43 15:38 34 10:54 (B22)
15	04:46 21:57	05:43 20:57	06:25 (B1) 06:46 (B1)	06:45 19:37	07:53 18:17	08:44 15:38 34 10:54 (B22)
16	04:48 21:55	05:45 20:54	06:25 (B1) 06:47 (B1)	06:47 19:34	07:55 18:14	08:45 15:38 33 10:54 (B22)
17	04:49 21:54	05:47 20:52	06:25 (B1) 06:47 (B1)	06:49 19:31	07:57 18:12	08:46 15:38 34 10:55 (B22)
18	04:51 21:52	05:49 20:50	06:24 (B1) 06:45 (B1)	06:51 19:29	07:59 18:09	08:46 15:38 34 10:56 (B22)
19	04:52 21:51	05:51 20:47	06:24 (B1) 06:45 (B1)	06:53 19:26	08:01 18:07	08:47 15:38 33 10:56 (B22)
20	04:54 21:49	05:53 20:45	06:24 (B1) 06:44 (B1)	06:55 19:23	08:03 18:04	08:48 15:39 33 10:56 (B22)
21	04:56 21:48	05:55 20:42	06:26 (B1) 06:44 (B1)	06:57 19:20	08:05 18:02	08:49 15:39 34 10:57 (B22)
22	04:57 21:46	05:57 20:40	06:28 (B1) 06:42 (B1)	06:59 19:18	08:07 17:59	08:49 15:39 34 10:57 (B22)
23	04:59 21:45	05:59 20:37	06:30 (B1) 06:41 (B1)	07:01 19:15	08:09 17:57	08:50 15:40 33 10:58 (B22)
24	05:01 21:43	06:01 20:35	06:32 (B1) 06:39 (B1)	07:03 19:12	08:11 17:55	08:50 15:41 33 10:58 (B22)
25	05:03 21:41	06:03 20:32		07:05 19:10	08:13 16:52	08:50 15:41 33 10:58 (B22)
26	05:04 21:39	06:05 20:30		07:07 19:07	08:15 16:50	08:51 15:42 34 10:59 (B22)
27	05:06 21:38	06:07 20:27		07:09 19:04	08:17 16:47	08:51 15:43 33 10:59 (B22)
28	05:08 21:36	06:09 20:24		07:11 19:02	08:19 16:45	08:51 15:44 34 11:00 (B22)
29	05:10 21:34	06:11 20:22		07:13 18:59	08:21 16:43	08:51 15:45 33 11:00 (B22)
30	05:12 21:32	06:13 20:19		07:15 18:56	08:22 16:40	08:51 15:46 33 11:01 (B22)
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47 34 11:02 (B22)
Potential sun hours	529	469	385	324	247	216
Total, worst case		274			219	1020
Sun reduction		0.50			0.08	0.07
Oper. time red.		0.98			0.98	0.98
Wind dir. red.		0.65			0.61	0.61
Total reduction		0.31			0.05	0.04
Total, real		85			10	42

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Tujas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (89)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	08:46 (B14) 17:48	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:24 15:45
2	08:51 15:50	08:13 16:48	08:43 (B14) 17:50	07:08 19:55	06:46 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 18:51	07:19 18:51	08:26 15:44
3	08:50 15:51	08:11 16:50	08:41 (B14) 17:52	07:06 19:57	06:44 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	07:21 18:48	08:28 15:43
4	08:50 15:52	08:09 16:52	08:39 (B14) 17:54	07:03 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	06:23 18:46	07:23 18:46	08:29 15:42
5	08:49 15:53	08:07 16:54	08:37 (B14) 17:56	07:01 19:59	06:38 21:04	05:24 21:58	04:32 22:07	04:34 21:20	05:23 20:04	06:25 18:43	07:26 18:43	08:31 15:42
6	08:49 15:55	08:05 16:57	08:34 (B14) 17:58	06:58 20:04	06:36 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:28 18:40	08:32 15:41
7	08:48 15:56	08:03 16:59	08:34 (B14) 18:01	06:55 20:06	06:33 21:08	05:19 22:00	04:30 22:05	04:36 21:15	05:27 19:58	06:29 18:38	07:30 18:38	08:34 15:40
8	08:48 15:58	08:01 17:01	08:34 (B14) 18:03	06:53 20:08	06:30 21:10	05:17 22:01	04:29 22:04	04:37 21:13	05:29 19:56	06:31 18:35	07:32 18:35	08:35 15:40
9	08:47 16:00	07:58 17:03	08:34 (B14) 18:05	06:50 20:10	06:28 21:12	05:15 22:02	04:29 22:03	04:38 21:11	05:31 19:53	06:33 18:33	07:34 18:33	08:37 15:39
10	08:46 16:01	07:56 17:05	08:35 (B14) 18:07	06:48 20:12	06:25 21:14	05:13 22:03	04:28 22:02	04:39 21:09	05:33 19:50	06:35 18:30	07:36 18:30	08:38 15:39
11	08:45 16:03	07:54 17:08	08:37 (B14) 18:09	06:45 20:14	06:22 21:16	05:11 22:04	04:27 22:01	04:41 21:06	05:35 19:48	06:37 18:27	07:38 18:27	08:39 15:39
12	08:44 16:05	07:52 17:10	08:38 (B14) 18:11	06:42 20:16	06:20 21:18	05:09 22:05	04:27 22:00	04:42 21:04	05:37 19:45	06:39 18:25	07:40 18:25	08:41 15:38
13	08:43 16:06	07:50 17:12	08:46 (B14) 18:13	06:40 20:18	06:17 21:20	05:07 22:06	04:26 21:59	04:44 21:02	05:39 19:42	06:41 18:22	07:42 18:22	08:42 15:38
14	08:42 16:08	07:47 17:14	08:46 (B14) 18:16	06:37 20:20	06:15 21:22	05:05 22:07	04:26 21:58	04:45 21:05	05:41 19:39	06:43 18:20	07:44 18:20	08:43 15:38
15	08:41 16:10	07:45 17:17	08:46 (B14) 18:18	06:34 20:22	06:12 21:24	05:03 22:07	04:26 21:57	04:46 21:05	05:49 19:37	06:45 18:17	07:46 18:17	08:44 15:38
16	08:40 16:12	07:43 17:19	08:46 (B14) 18:20	06:32 20:24	06:09 21:26	05:01 22:08	04:26 21:55	04:48 21:05	05:45 19:34	06:47 18:15	07:48 18:15	08:45 15:38
17	08:39 16:14	07:40 17:21	08:46 (B14) 18:22	06:29 20:26	06:07 21:27	04:59 22:09	04:25 21:54	04:49 21:05	05:47 19:31	06:49 18:12	07:50 18:12	08:46 15:38
18	08:38 16:16	07:38 17:23	08:46 (B14) 18:24	06:26 20:28	06:04 21:29	04:57 22:09	04:25 21:53	04:51 21:05	05:49 19:29	06:51 18:09	07:53 18:09	08:47 15:38
19	08:36 16:18	07:36 17:26	08:46 (B14) 18:26	06:24 20:31	06:02 21:31	04:55 22:09	04:25 21:51	04:53 21:07	05:51 19:26	06:53 18:07	07:55 18:07	08:47 15:38
20	08:35 16:20	07:33 17:28	08:46 (B14) 18:28	06:21 20:33	05:59 21:33	04:53 22:10	04:25 21:50	04:54 21:05	05:53 19:23	06:55 18:05	07:57 18:05	08:48 15:39
21	08:33 16:22	07:31 17:30	08:46 (B14) 18:30	06:18 20:35	05:57 21:35	04:52 22:10	04:25 21:48	04:56 21:05	05:55 19:21	06:57 18:02	07:59 18:02	08:49 15:39
22	08:32 16:24	07:28 17:32	08:46 (B14) 18:32	06:16 20:37	05:54 21:37	04:50 22:10	04:26 21:46	04:58 21:05	05:57 19:18	06:59 18:00	08:01 18:00	08:49 15:40
23	08:30 16:26	07:26 17:35	08:46 (B14) 18:34	06:13 20:39	05:52 21:38	04:48 22:10	04:26 21:45	04:59 21:05	05:59 19:15	07:01 17:57	08:03 17:57	08:50 15:40
24	08:29 16:28	07:23 17:37	08:46 (B14) 18:36	06:10 20:41	05:49 21:40	04:47 22:11	04:26 21:43	05:01 21:05	06:01 19:13	07:03 17:55	08:05 17:55	08:50 15:41
25	08:27 16:30	07:21 17:39	08:46 (B14) 18:39	06:08 20:43	05:47 21:42	04:45 22:11	04:27 21:41	05:03 21:05	06:03 19:10	07:05 16:52	08:07 16:52	08:50 15:41
26	08:26 16:32	07:18 17:41	08:46 (B14) 18:41	06:05 20:45	05:45 21:43	04:44 22:10	04:27 21:39	05:05 21:05	06:05 19:07	07:07 16:50	08:09 16:50	08:51 15:42
27	08:24 16:34	07:16 17:43	08:46 (B14) 18:43	06:02 20:47	05:42 21:45	04:42 22:10	04:27 21:38	05:06 21:05	06:07 19:04	07:09 16:48	08:12 16:48	08:51 15:43
28	08:22 16:37	07:13 17:45	08:46 (B14) 18:45	06:00 20:49	05:40 21:47	04:41 22:10	04:28 21:36	05:08 21:05	06:09 19:02	07:11 16:45	08:13 16:45	08:51 15:44
29	08:20 16:39	07:11 17:46	08:46 (B14) 18:47	05:57 20:51	05:37 21:48	04:40 22:10	04:29 21:34	05:10 21:05	06:11 18:59	07:16 16:43	08:14 16:43	08:51 15:45
30	08:19 16:41	07:11 17:46	08:46 (B14) 18:49	05:54 20:53	05:35 21:48	04:38 22:10	04:29 21:32	05:12 21:05	06:13 18:56	07:15 16:41	08:15 16:41	08:51 15:46
31	08:17 16:43	07:11 17:46	08:46 (B14) 18:51	05:52 20:53	05:37 21:48	04:37 22:10	04:29 21:32	05:14 21:05	06:15 18:56	07:16 16:41	08:16 16:41	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		139								23	115	
Sun reduction		0.20								0.26	0.08	
Oper. time red.		0.98								0.98	0.98	
Wind dir. red.		0.61								0.61	0.61	
Total reduction		0.12								0.15	0.05	
Total, real		17								4	6	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Upenes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (80)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	09:05 (B14) 17:48	07:11 17:53	06:49 20:56	04:36 21:53
2	08:51 15:49	08:13 16:48	09:07 (B14) 17:50	07:08 17:55	06:46 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:32 (B22) 19:57	06:44 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:29 (B22) 19:59	06:41 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	07:01 17:56	07:27 (B22) 20:01	06:38 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	07:24 (B22) 20:04	06:36 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	07:22 (B22) 20:06	06:33 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	07:22 (B22) 20:08	06:30 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	07:23 (B22) 20:10	06:28 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05	06:48 18:07	07:24 (B22) 20:12	06:25 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	07:27 (B22) 20:14	06:22 21:16	04:27 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	09:10 (B14) 17:26	07:36 18:26	06:02 20:31	04:55 21:31	04:25 22:09
20	08:35 16:20	09:09 (B14) 17:28	07:33 18:28	05:59 20:33	04:53 21:33	04:25 22:10
21	08:33 16:22	09:07 (B14) 17:30	07:31 18:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	09:05 (B14) 17:32	07:28 18:32	05:54 20:37	04:50 21:37	04:26 22:10
23	08:30 16:26	09:03 (B14) 17:34	07:26 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	09:02 (B14) 17:37	07:23 18:36	05:49 20:41	04:47 21:40	04:26 22:11
25	08:27 16:30	09:00 (B14) 17:39	07:21 18:39	05:47 20:43	04:45 21:42	04:26 22:11
26	08:26 16:32	09:00 (B14) 17:41	07:18 18:41	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	09:17 (B14) 17:43	07:16 18:43	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 16:37	09:00 (B14) 17:45	07:13 18:45	05:40 20:49	04:41 21:47	04:28 22:10
29	08:20 16:39	09:17 (B14) 17:47	07:11 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:19 16:41	09:02 (B14) 17:49	07:09 19:49	05:35 20:53	04:38 21:50	04:29 22:10
31	08:17 16:43	09:03 (B14) 17:51	07:07 19:51	05:33 20:55	04:36 21:52	04:29 22:10
Potential sun hours	235	266	366	426	508	529
Total, worst case	158	14	97			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.59	0.59	0.62			
Total reduction	0.08	0.11	0.25			
Total, real	12	2	24			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Upenes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (80)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November		December
1	04:30	05:16	06:17	07:17		07:23		08:24
	22:09	21:28	20:14	18:54		16:36		15:45
2	04:31	05:18	06:19	07:19		07:25		08:26
	22:09	21:26	20:11	18:51		16:34		15:44
3	04:32	05:20	06:21	07:21	8	08:03 (B22)	07:27	08:28
	22:08	21:24	20:09	18:48		08:11 (B22)	16:32	15:43
4	04:33	05:22	06:23	07:23		08:01 (B22)	07:29	08:29
	22:07	21:22	20:06	18:46	12	08:13 (B22)	16:30	15:42
5	04:34	05:23	06:25	07:26		07:59 (B22)	07:31	08:31
	22:07	21:20	20:04	18:43	14	08:13 (B22)	16:27	15:42
6	04:35	05:25	06:27	07:28		07:58 (B22)	07:34	08:32
	22:06	21:17	20:01	18:40	16	08:14 (B22)	16:25	15:41
7	04:36	05:27	06:29	07:30		07:58 (B22)	07:36	08:34
	22:05	21:15	19:58	18:38	15	08:13 (B22)	16:23	15:40
8	04:37	05:29	06:31	07:32		08:01 (B22)	07:38	08:35
	22:04	21:13	19:56	18:35	13	08:14 (B22)	16:21	15:40
9	04:38	05:31	06:33	07:34		08:03 (B22)	07:40	08:37
	22:03	21:11	19:53	18:33	10	08:13 (B22)	16:19	15:39
10	04:39	05:33	06:35	07:36		08:05 (B22)	07:42	08:38
	22:02	21:09	19:50	18:30	7	08:12 (B22)	16:17	15:39
11	04:41	05:35	06:37	07:38		08:07 (B22)	07:44	08:39
	22:01	21:06	19:48	18:27	4	08:11 (B22)	16:15	15:39
12	04:42	05:37	06:39	07:40		07:47	08:33 (B14)	08:41
	22:00	21:04	19:45	18:25		16:13	14	08:47 (B14)
13	04:43	05:39	06:41	07:42		07:49	08:33 (B14)	08:42
	21:59	21:02	19:42	18:22		16:11	16	08:49 (B14)
14	04:45	05:41	06:43	07:44		07:51	08:32 (B14)	08:43
	21:58	20:59	19:39	18:20		16:09	17	08:49 (B14)
15	04:46	05:43	06:45	07:46		07:53	08:33 (B14)	08:44
	21:57	20:57	19:37	18:17		16:08	17	08:50 (B14)
16	04:48	05:45	06:47	07:48		07:55	08:33 (B14)	08:45
	21:55	20:54	19:34	18:15		16:06	17	08:50 (B14)
17	04:49	05:47	06:49	07:50		07:57	08:33 (B14)	08:46
	21:54	20:52	19:31	18:12		16:04	17	08:50 (B14)
18	04:51	05:49	06:51	07:53		07:59	08:36 (B14)	08:46
	21:53	20:50	19:29	18:09		16:03	14	08:50 (B14)
19	04:53	05:51	06:53	07:55		08:01	08:38 (B14)	08:47
	21:51	20:47	19:26	18:07		16:01	12	08:50 (B14)
20	04:54	05:53	06:55	07:57		08:03	08:40 (B14)	08:48
	21:50	20:45	19:23	18:04		15:59	9	08:49 (B14)
21	04:56	05:55	06:57	07:59		08:05	08:43 (B14)	08:49
	21:48	20:42	19:21	18:02		15:58	7	08:50 (B14)
22	04:58	05:57	06:59	08:01		08:07	08:45 (B14)	08:49
	21:46	20:40	19:18	18:00		15:56	4	08:49 (B14)
23	04:59	05:59	07:01	08:03		08:09	08:47 (B14)	08:50
	21:45	20:37	19:15	17:57		15:55	1	08:48 (B14)
24	05:01	06:01	07:03	08:05		08:11		08:50
	21:43	20:35	19:12	17:55		15:53		15:41
25	05:03	06:03	07:05	07:07		08:13		08:50
	21:41	20:32	19:10	16:52		15:52		15:41
26	05:05	06:05	07:07	07:10		08:15		08:51
	21:39	20:30	19:07	16:50		15:51		15:42
27	05:06	06:07	07:09	07:12		08:17		08:51
	21:38	20:27	19:04	16:48		15:50		15:43
28	05:08	06:09	07:11	07:14		08:19		08:51
	21:36	20:24	19:02	16:45		15:48		15:44
29	05:10	06:11	07:13	07:16		08:21		08:51
	21:34	20:22	18:59	16:43		15:47		15:45
30	05:12	06:13	07:15	07:18		08:23		08:51
	21:32	20:19	18:56	16:41		15:46		15:46
31	05:14	06:15		07:20				08:51
	21:30	20:17		16:38				15:47
Potential sun hours	529	469	385	324		247		216
Total, worst case				99		175		
Sun reduction				0.26		0.08		
Oper. time red.				0.98		0.98		
Wind dir. red.				0.62		0.59		
Total reduction				0.15		0.05		
Total, real				15		8		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Uplejas (kad. apz. 56760080007) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (25)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:16	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:44 15:37
17	08:39 16:13	07:40 17:21	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:41
27	08:24 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:21	07:13 18:59	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Uplejas (kad. apz. 56960040385) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (66)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March	April	May	June		
1	08:51	09:54 (B22)	08:15	09:52 (B22)	07:11	06:49	05:33	06:00 (B1)	04:36			
	15:48	14	10:08 (B22)	16:45	37	10:29 (B22)	17:48	19:53	20:55	4	06:04 (B1)	21:53
2	08:50	09:54 (B22)	08:13	09:53 (B22)	07:08	06:46	05:30	05:58 (B1)	04:35			
	15:49	16	10:10 (B22)	16:47	36	10:29 (B22)	17:50	19:55	20:57	8	06:06 (B1)	21:54
3	08:50	09:53 (B22)	08:11	09:54 (B22)	07:06	06:43	05:28	05:56 (B1)	04:34			
	15:51	18	10:11 (B22)	16:50	35	10:29 (B22)	17:52	19:57	21:00	12	06:08 (B1)	21:55
4	08:50	09:52 (B22)	08:09	09:55 (B22)	07:03	06:41	05:26	05:54 (B1)	04:33			
	15:52	19	10:11 (B22)	16:52	33	10:28 (B22)	17:54	19:59	21:02	14	06:08 (B1)	21:57
5	08:49	09:52 (B22)	08:07	09:56 (B22)	07:00	06:38	05:23	05:52 (B1)	04:32			
	15:53	21	10:13 (B22)	16:54	32	10:28 (B22)	17:56	20:01	21:04	17	06:09 (B1)	21:58
6	08:49	09:52 (B22)	08:05	09:56 (B22)	06:58	06:35	05:21	05:50 (B1)	04:31			
	15:55	22	10:14 (B22)	16:56	30	10:26 (B22)	17:58	20:03	21:06	19	06:09 (B1)	21:59
7	08:48	09:51 (B22)	08:03	09:58 (B22)	06:55	06:33	05:19	05:50 (B1)	04:30			
	15:56	24	10:15 (B22)	16:59	27	10:25 (B22)	18:00	20:05	21:08	20	06:10 (B1)	22:00
8	08:48	09:51 (B22)	08:01	10:00 (B22)	06:53	06:30	05:17	05:50 (B1)	04:29			
	15:58	26	10:17 (B22)	17:01	24	10:24 (B22)	18:03	20:08	21:10	20	06:10 (B1)	22:01
9	08:47	09:51 (B22)	07:58	10:01 (B22)	06:50	06:28	05:15	05:50 (B1)	04:28			
	15:59	27	10:18 (B22)	17:03	20	10:21 (B22)	18:05	20:10	21:12	20	06:10 (B1)	22:02
10	08:46	09:51 (B22)	07:56	10:04 (B22)	06:47	06:25	05:13	05:49 (B1)	04:28			
	16:01	28	10:19 (B22)	17:05	15	10:19 (B22)	18:07	20:12	21:14	20	06:09 (B1)	22:03
11	08:45	09:51 (B22)	07:54	06:45	06:22	05:11	05:50 (B1)	04:27				
	16:03	29	10:20 (B22)	17:08		18:09	20:14	21:16	19	06:09 (B1)	22:04	
12	08:44	09:51 (B22)	07:52	06:42	06:20	05:08	05:50 (B1)	04:27				
	16:04	30	10:21 (B22)	17:10		18:11	20:16	21:18	18	06:08 (B1)	22:05	
13	08:43	09:50 (B22)	07:49	06:40	06:17	05:06	05:50 (B1)	04:26				
	16:06	31	10:21 (B22)	17:12		18:13	20:18	21:20	18	06:08 (B1)	22:06	
14	08:42	09:50 (B22)	07:47	06:37	06:14	05:04	05:51 (B1)	04:26				
	16:08	33	10:23 (B22)	17:14		18:15	20:20	21:22	17	06:08 (B1)	22:07	
15	08:41	09:49 (B22)	07:45	06:34	06:12	05:03	05:52 (B1)	04:26				
	16:10	34	10:23 (B22)	17:17		18:18	20:22	21:24	15	06:07 (B1)	22:07	
16	08:40	09:49 (B22)	07:43	06:32	06:09	05:01	05:53 (B1)	04:25				
	16:12	35	10:24 (B22)	17:19		18:20	20:24	21:25	12	06:05 (B1)	22:08	
17	08:39	09:50 (B22)	07:40	06:29	06:07	04:59	05:55 (B1)	04:25				
	16:14	35	10:25 (B22)	17:21		18:22	20:26	21:27	9	06:04 (B1)	22:08	
18	08:37	09:49 (B22)	07:38	06:26	06:04	04:57	05:57 (B1)	04:25				
	16:16	37	10:26 (B22)	17:23		18:24	20:28	21:29	4	06:01 (B1)	22:09	
19	08:36	09:49 (B22)	07:36	06:24	06:02	04:55		04:25				
	16:18	37	10:26 (B22)	17:26		18:26	20:30	21:31				
20	08:35	09:50 (B22)	07:33	06:21	05:59	04:53		04:25				
	16:20	37	10:27 (B22)	17:28		18:28	20:33	21:33				
21	08:33	09:49 (B22)	07:31	06:18	05:57	04:52		04:25				
	16:22	39	10:28 (B22)	17:30		18:30	20:35	21:35				
22	08:32	09:49 (B22)	07:28	06:16	05:54	04:50		04:25				
	16:24	39	10:28 (B22)	17:32		18:32	20:37	21:37				
23	08:30	09:49 (B22)	07:26	06:13	05:52	04:48		04:26				
	16:26	39	10:28 (B22)	17:34		18:34	20:39	21:38				
24	08:29	09:50 (B22)	07:23	06:10	05:49	04:47		04:26				
	16:28	39	10:29 (B22)	17:37		18:36	20:41	21:40				
25	08:27	09:50 (B22)	07:21	06:07	05:47	04:45		04:26				
	16:30	40	10:30 (B22)	17:39		18:38	20:43	21:42				
26	08:26	09:50 (B22)	07:18	06:05	05:44	04:44		04:27				
	16:32	40	10:30 (B22)	17:41		18:41	20:45	21:43				
27	08:24	09:50 (B22)	07:16	06:02	05:42	04:42		04:27				
	16:34	40	10:30 (B22)	17:43		18:43	20:47	21:45				
28	08:22	09:51 (B22)	07:13	05:59	05:40	04:41		04:28				
	16:36	39	10:30 (B22)	17:45		18:45	20:49	21:47				
29	08:20	09:51 (B22)		06:57	05:37	04:40		04:29				
	16:39	39	10:30 (B22)			19:47	20:51	21:48				
30	08:18	09:52 (B22)		06:54	05:35	04:38		04:29				
	16:41	38	10:30 (B22)			19:49	20:53	21:50				
31	08:17	09:52 (B22)		06:51		04:37						
	16:43	38	10:30 (B22)			19:51		21:51				
Potential sun hours	235		266		366	426	508		529			
Total, worst case	983		289				266					
Sun reduction	0.13		0.20				0.57					
Oper. time red.	0.98		0.98				0.98					
Wind dir. red.	0.61		0.61				0.67					
Total reduction	0.08		0.12				0.36					
Total, real	76		34				96					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Uplejas (kad. apz. 56960040385) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (66)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:16	06:00 (B1)	06:17	07:17			07:23	09:33 (B22)	08:24	09:33 (B22)
	22:09	21:28	19 06:19 (B1)	20:14	18:54			16:36	16 09:49 (B22)	15:45	29 10:02 (B22)
2	04:31	05:18	06:00 (B1)	06:19	07:19			07:25	09:30 (B22)	08:26	09:34 (B22)
	22:09	21:26	19 06:19 (B1)	20:11	18:51			16:34	21 09:51 (B22)	15:44	28 10:02 (B22)
3	04:32	05:19	06:00 (B1)	06:21	07:21			07:27	09:29 (B22)	08:28	09:34 (B22)
	22:08	21:24	20 06:20 (B1)	20:09	18:48			16:32	25 09:54 (B22)	15:43	27 10:01 (B22)
4	04:33	05:21	06:00 (B1)	06:23	07:23			07:29	09:27 (B22)	08:29	09:35 (B22)
	22:07	21:22	20 06:20 (B1)	20:06	18:46			16:29	28 09:55 (B22)	15:42	26 10:01 (B22)
5	04:34	05:23	05:59 (B1)	06:25	07:25			07:31	09:26 (B22)	08:31	09:36 (B22)
	22:07	21:20	20 06:19 (B1)	20:03	18:43			16:27	30 09:56 (B22)	15:42	25 10:01 (B22)
6	04:35	05:25	05:59 (B1)	06:27	07:27			07:33	09:25 (B22)	08:32	09:38 (B22)
	22:06	21:17	20 06:19 (B1)	20:01	18:40			16:25	33 09:58 (B22)	15:41	23 10:01 (B22)
7	04:36	05:27	06:00 (B1)	06:29	07:30			07:36	09:24 (B22)	08:34	09:38 (B22)
	22:05	21:15	19 06:19 (B1)	19:58	18:38			16:23	34 09:58 (B22)	15:40	22 10:00 (B22)
8	04:37	05:29	06:02 (B1)	06:31	07:32			07:38	09:24 (B22)	08:35	09:40 (B22)
	22:04	21:13	16 06:18 (B1)	19:55	18:35			16:21	35 09:59 (B22)	15:40	20 10:00 (B22)
9	04:38	05:31	06:04 (B1)	06:33	07:34			07:40	09:23 (B22)	08:37	09:41 (B22)
	22:03	21:11	14 06:18 (B1)	19:53	18:32			16:19	37 10:00 (B22)	15:39	18 09:59 (B22)
10	04:39	05:33	06:06 (B1)	06:35	07:36			07:42	09:24 (B22)	08:38	09:43 (B22)
	22:02	21:08	11 06:17 (B1)	19:50	18:30			16:17	37 10:01 (B22)	15:39	16 09:59 (B22)
11	04:41	05:35	06:07 (B1)	06:37	07:38			07:44	09:23 (B22)	08:39	09:44 (B22)
	22:01	21:06	7 06:14 (B1)	19:47	18:27			16:15	38 10:01 (B22)	15:38	14 09:58 (B22)
12	04:42	05:37	06:09 (B1)	06:39	07:40			07:46	09:22 (B22)	08:40	09:46 (B22)
	22:00	21:04	3 06:12 (B1)	19:45	18:25			16:13	39 10:01 (B22)	15:38	12 09:58 (B22)
13	04:43	05:39		06:41	07:42			07:49	09:23 (B22)	08:42	09:47 (B22)
	21:59	21:02		19:42	18:22			16:11	39 10:02 (B22)	15:38	10 09:57 (B22)
14	04:45	05:41		06:43	07:44			07:51	09:23 (B22)	08:43	09:48 (B22)
	21:58	20:59		19:39	18:19			16:09	39 10:02 (B22)	15:38	9 09:57 (B22)
15	04:46	05:43		06:45	07:46			07:53	09:22 (B22)	08:44	09:50 (B22)
	21:57	20:57		19:37	18:17			16:08	40 10:02 (B22)	15:38	6 09:56 (B22)
16	04:48	05:45		06:47	07:48			07:55	09:23 (B22)	08:45	
	21:55	20:54		19:34	18:14			16:06	40 10:03 (B22)	15:38	
17	04:49	05:47		06:49	07:50			07:57	09:23 (B22)	08:46	
	21:54	20:52		19:31	18:12			16:04	40 10:03 (B22)	15:38	
18	04:51	05:49		06:51	07:52			07:59	09:24 (B22)	08:46	
	21:52	20:50		19:29	18:09			16:02	39 10:03 (B22)	15:38	
19	04:52	05:51		06:53	07:55			08:01	09:24 (B22)	08:47	
	21:51	20:47		19:26	18:07			16:01	39 10:03 (B22)	15:38	
20	04:54	05:53		06:55	07:57			08:03	09:24 (B22)	08:48	
	21:49	20:45		19:23	18:04			15:59	39 10:03 (B22)	15:39	
21	04:56	05:55		06:57	07:59			08:05	09:24 (B22)	08:48	
	21:48	20:42		19:20	18:02			15:58	39 10:03 (B22)	15:39	
22	04:57	05:57		06:59	08:01			08:07	09:26 (B22)	08:49	
	21:46	20:40		19:18	17:59			15:56	37 10:03 (B22)	15:39	
23	04:59	05:59		07:01	08:03			08:09	09:26 (B22)	08:50	
	21:45	20:37		19:15	17:57			15:55	37 10:03 (B22)	15:40	
24	05:01	06:01		07:03	08:05			08:11	09:26 (B22)	08:50	
	21:43	20:35		19:12	17:55			15:53	37 10:03 (B22)	15:41	
25	05:03	06:03		07:05	07:07			08:13	09:27 (B22)	08:50	
	21:41	20:32		19:10	16:52			15:52	36 10:03 (B22)	15:41	
26	05:04	06:06 (B1)	06:05	07:07	07:10			08:15	09:27 (B22)	08:51	
	21:39	7 06:13 (B1)	20:30	19:07	16:50			15:51	35 10:02 (B22)	15:42	
27	05:06	06:04 (B1)	06:07	07:09	07:12			08:17	09:29 (B22)	08:51	
	21:38	11 06:15 (B1)	20:27	19:04	16:47			15:49	34 10:03 (B22)	15:43	
28	05:08	06:03 (B1)	06:09	07:11	07:14			08:19	09:30 (B22)	08:51	09:56 (B22)
	21:36	13 06:16 (B1)	20:24	19:02	16:45			15:48	33 10:03 (B22)	15:44	5 10:01 (B22)
29	05:10	06:02 (B1)	06:11	07:13	07:16			08:21	09:31 (B22)	08:51	09:56 (B22)
	21:34	15 06:17 (B1)	20:22	18:59	16:43			15:47	32 10:03 (B22)	15:45	7 10:03 (B22)
30	05:12	06:01 (B1)	06:13	07:15	07:18			08:22	09:32 (B22)	08:51	09:55 (B22)
	21:32	17 06:18 (B1)	20:19	18:56	16:40			15:46	30 10:02 (B22)	15:46	10 10:05 (B22)
31	05:14	06:01 (B1)	06:15		07:20	09:38 (B22)				08:51	09:55 (B22)
	21:30	18 06:19 (B1)	20:17		16:38	5 09:43 (B22)				15:47	12 10:07 (B22)
Potential sun hours	529		469		385	324		247		216	
Total, worst case	81		188			5		1038			319
Sun reduction	0.49		0.50			0.26		0.08			0.07
Oper. time red.	0.98		0.98			0.98		0.98			0.98
Wind dir. red.	0.67		0.67			0.61		0.61			0.61
Total reduction	0.31		0.32			0.15		0.05			0.04
Total, real	25		59			1		50			13

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmalas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (215)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:04	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:58	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:51	06:49 19:31	07:50 18:12	07:56 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:42	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmales - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (146)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	08:51 15:48	08:15 16:45	15:32 (B14) 15:47 (B14)	07:11 17:47	15:59 (B22) 19:53	06:49 19:53	05:32 21:52
2	08:50 15:49	08:13 16:47	15:33 (B14) 15:46 (B14)	07:08 17:50	15:59 (B22) 19:55	06:46 19:55	05:30 20:57
3	08:50 15:51	08:11 16:50	15:36 (B14) 15:44 (B14)	07:06 17:52	15:59 (B22) 19:57	06:43 19:57	05:28 20:59
4	08:50 15:52	08:09 16:52	07:03 17:54	15:59 (B22) 19:59	06:41 19:59	05:26 21:01	04:33 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	15:59 (B22) 19:59	06:38 20:01	05:23 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	16:00 (B22) 20:03	06:35 20:03	05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:00	16:00 (B22) 20:05	06:33 20:05	05:19 21:08	04:30 22:00
8	08:47 15:58	08:00 17:01	06:53 18:03	16:00 (B22) 20:07	06:30 20:07	05:17 21:10	04:29 22:01
9	08:47 15:59	07:58 17:03	08:27 (B11) 08:31 (B11)	06:50 18:05	07:16 (B18) 20:10	06:55 (B15) 21:12	05:15 21:12
10	08:46 16:01	07:56 17:05	08:25 (B11) 08:32 (B11)	06:47 18:07	07:13 (B18) 20:12	06:55 (B15) 21:14	05:13 21:14
11	08:45 16:03	07:54 17:08	08:23 (B11) 08:33 (B11)	06:45 18:09	07:10 (B18) 20:14	06:55 (B15) 21:16	05:10 21:16
12	08:44 16:04	07:52 17:10	08:20 (B11) 08:33 (B11)	06:42 18:11	07:08 (B18) 20:16	06:55 (B15) 21:18	05:08 21:18
13	08:43 16:06	07:49 17:12	08:18 (B11) 08:34 (B11)	06:39 18:13	07:07 (B18) 20:18	06:56 (B15) 21:20	05:06 21:20
14	08:42 16:08	07:47 17:14	08:17 (B11) 08:33 (B11)	06:37 18:15	07:07 (B18) 20:20	06:57 (B15) 21:22	05:04 21:22
15	08:41 16:10	07:45 17:17	08:18 (B11) 16:25 (B22)	06:34 18:17	07:07 (B18) 20:22	07:00 (B15) 21:23	05:02 21:23
16	08:40 16:12	07:43 17:19	08:18 (B11) 16:29 (B22)	06:31 18:20	07:08 (B18) 20:24	06:03 (B4) 21:25	04:25 21:25
17	08:39 16:14	07:40 15:30 (B14)	08:20 (B11) 16:32 (B22)	06:29 18:22	07:08 (B18) 20:26	06:03 (B4) 21:27	04:25 21:27
18	08:37 16:16	07:38 15:37 (B14)	08:21 (B11) 16:33 (B22)	06:26 18:24	07:09 (B18) 20:28	06:04 (B4) 21:29	04:25 21:29
19	08:36 16:18	07:35 15:29 (B14)	16:06 (B22) 17:25	06:23 18:26	06:02 20:30	05:37 (B4) 21:31	04:25 21:31
20	08:35 16:20	07:33 15:29 (B14)	16:04 (B22) 17:28	06:21 18:28	05:59 20:32	05:38 (B4) 21:33	04:25 21:33
21	08:33 16:22	07:31 15:44 (B14)	16:04 (B22) 17:30	06:18 18:30	05:57 20:35	06:05 (B4) 21:35	04:25 21:35
22	08:32 16:24	07:28 15:28 (B14)	16:02 (B22) 17:32	06:15 18:32	05:54 20:37	06:04 (B4) 21:36	04:25 21:36
23	08:30 16:26	07:26 15:28 (B14)	16:02 (B22) 17:34	06:13 18:34	05:52 20:39	05:37 (B4) 21:38	04:26 21:38
24	08:29 16:28	07:23 15:27 (B14)	16:01 (B22) 17:36	06:10 18:36	05:49 20:41	05:38 (B4) 21:40	04:26 21:40
25	08:27 16:30	07:21 15:28 (B14)	16:00 (B22) 17:39	06:07 18:38	05:47 20:43	06:04 (B4) 21:42	04:26 21:42
26	08:25 16:32	07:18 15:29 (B14)	16:00 (B22) 17:41	06:05 18:40	05:44 20:45	05:39 (B4) 21:43	04:27 21:43
27	08:24 16:34	07:16 15:29 (B14)	15:59 (B22) 17:43	06:02 18:43	05:42 20:47	06:05 (B4) 21:45	04:27 21:45
28	08:22 16:36	07:13 15:29 (B14)	15:59 (B22) 17:45	05:59 18:45	05:39 20:49	06:04 (B4) 21:46	04:28 21:46
29	08:20 16:39	07:10 15:30 (B14)	16:41 (B22) 17:49	05:57 19:47	05:37 20:51	05:39 (B4) 21:48	04:28 21:48
30	08:18 16:41	07:07 15:30 (B14)	19:49 19:49	06:54 19:49	05:35 20:53	06:03 (B4) 21:50	05:41 21:50
31	08:17 16:43	07:05 15:30 (B14)	19:51 19:51	06:51 19:51	05:33 20:51	06:03 (B4) 21:51	05:41 21:51
Potential sun hours	235	266	366	426	508	529	
Total, worst case	242	592	579	163	551	201	
Sun reduction	0.13	0.20	0.41	0.50	0.57	0.56	
Oper. time red.	0.98	0.98	0.98	0.98	0.98	0.98	
Wind dir. red.	0.65	0.66	0.66	0.66	0.67	0.67	
Total reduction	0.08	0.13	0.26	0.32	0.37	0.37	
Total, real	20	77	153	52	205	73	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmales - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (146)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December		
1	04:30	05:54 (B4)	05:16	05:51 (B4)	06:17	06:54 (B15)	07:17	07:47 (B18)	07:22	07:55 (B11)	08:24							
	22:09	7 06:01 (B4)	21:28	20 06:11 (B4)	20:14	18 07:12 (B15)	18:54	36 17:06 (B22)	16:36	7 08:02 (B11)	15:45							
2	04:31	05:54 (B4)	05:17	05:52 (B4)	06:19	06:54 (B15)	07:19	07:48 (B18)	07:25	07:57 (B11)	08:26							
	22:08	9 06:03 (B4)	21:26	18 06:10 (B4)	20:11	18 07:12 (B15)	18:51	39 17:08 (B22)	16:34	3 08:00 (B11)	15:44							
3	04:32	05:53 (B4)	05:19	05:54 (B4)	06:21	06:53 (B15)	07:21	07:50 (B18)	07:27		08:27							
	22:08	11 06:04 (B4)	21:24	15 06:09 (B4)	20:09	19 07:12 (B15)	18:48	41 17:10 (B22)	16:31		15:43							
4	04:33	05:53 (B4)	05:21	05:56 (B4)	06:23	06:53 (B15)	07:23	07:52 (B18)	07:29		08:29							
	22:07	12 06:05 (B4)	21:22	11 06:07 (B4)	20:06	18 07:11 (B15)	18:46	41 17:11 (B22)	16:29		15:42							
5	04:34	05:52 (B4)	05:23	05:59 (B4)	06:25	06:54 (B15)	07:25	07:54 (B18)	07:31		08:31							
	22:07	14 06:06 (B4)	21:19	3 06:02 (B4)	20:03	16 07:10 (B15)	18:43	39 17:12 (B22)	16:27		15:42							
6	04:35	05:52 (B4)	05:25		06:27	06:56 (B15)	07:27	16:37 (B22)	07:33		08:32							
	22:06	15 06:07 (B4)	21:17		20:01	13 07:09 (B15)	18:40	35 17:12 (B22)	16:25		15:41							
7	04:36	05:51 (B4)	05:27		06:29	06:58 (B15)	07:29	16:36 (B22)	07:36		08:34							
	22:05	17 06:08 (B4)	21:15		19:58	9 07:07 (B15)	18:38	37 17:13 (B22)	16:23		15:40							
8	04:37	05:51 (B4)	05:29		06:31	07:00 (B15)	07:31	16:35 (B22)	07:38		08:35							
	22:04	17 06:08 (B4)	21:13		19:55	5 07:05 (B15)	18:35	38 17:13 (B22)	16:21	9 15:15 (B14)	15:40							
9	04:38	05:50 (B4)	05:31		06:33		07:34	16:34 (B22)	07:40		15:04 (B14)	08:36						
	22:03	19 06:09 (B4)	21:11		19:53		18:32	39 17:13 (B22)	16:19	13 15:17 (B14)	15:39							
10	04:39	05:50 (B4)	05:33		06:35		07:36	16:34 (B22)	07:42		15:02 (B14)	08:38						
	22:02	19 06:09 (B4)	21:08		19:50		18:30	40 17:14 (B22)	16:17	16 15:18 (B14)	15:39							
11	04:41	05:49 (B4)	05:35		06:37		07:38	16:33 (B22)	07:44		15:02 (B14)	08:39						
	22:01	21 06:10 (B4)	21:06		19:47		18:27	41 17:14 (B22)	16:15	17 15:19 (B14)	15:38							
12	04:42	05:50 (B4)	05:37		06:39		07:40	16:32 (B22)	07:46		15:01 (B14)	08:40						
	22:00	21 06:11 (B4)	21:04		19:45		18:25	42 17:14 (B22)	16:13	19 15:20 (B14)	15:38							
13	04:43	05:49 (B4)	05:39		06:41		07:42	16:32 (B22)	07:48		15:02 (B14)	08:41						
	21:59	23 06:12 (B4)	21:01		19:42		18:22	41 17:13 (B22)	16:11	19 15:21 (B14)	15:38							
14	04:45	05:49 (B4)	05:41		06:43		07:44	16:31 (B22)	07:51		15:01 (B14)	08:43						
	21:58	23 06:12 (B4)	20:59		19:39		18:19	42 17:13 (B22)	16:09	20 15:21 (B14)	15:38							
15	04:46	05:48 (B4)	05:43		06:45		07:46	16:32 (B22)	07:53		15:01 (B14)	08:44						
	21:56	24 06:12 (B4)	20:57		19:37		18:17	41 17:13 (B22)	16:07	20 15:21 (B14)	15:38							
16	04:48	05:49 (B4)	05:45		06:47		07:48	16:32 (B22)	07:55		15:01 (B14)	08:45						
	21:55	24 06:13 (B4)	20:54		19:34		18:14	40 17:12 (B22)	16:06	21 15:22 (B14)	15:38							
17	04:49	05:48 (B4)	05:47		06:49		07:50	16:32 (B22)	07:57		15:01 (B14)	08:45						
	21:54	25 06:13 (B4)	20:52		19:31		18:12	39 17:11 (B22)	16:04	20 15:21 (B14)	15:38							
18	04:51	05:48 (B4)	05:49		06:51		07:52	16:32 (B22)	07:59		15:01 (B14)	08:46						
	21:52	26 06:14 (B4)	20:49		19:28		18:09	38 17:10 (B22)	16:02	20 15:21 (B14)	15:38							
19	04:52	05:48 (B4)	05:51		06:53		07:54	16:32 (B22)	08:01		15:03 (B14)	08:47						
	21:51	26 06:14 (B4)	20:47		19:26		18:07	37 17:09 (B22)	16:01	19 15:22 (B14)	15:38							
20	04:54	05:48 (B4)	05:53		06:55		07:57	16:34 (B22)	08:03		15:03 (B14)	08:48						
	21:49	27 06:15 (B4)	20:45		19:23		18:04	35 17:09 (B22)	15:59	18 15:21 (B14)	15:39							
21	04:56	05:48 (B4)	05:55		06:57		07:59	16:34 (B22)	08:05		15:03 (B14)	08:48						
	21:48	26 06:14 (B4)	20:42		19:20		18:02	34 17:08 (B22)	15:58	16 15:19 (B14)	15:39							
22	04:57	05:48 (B4)	05:57		06:59		08:01	16:35 (B22)	08:07		15:05 (B14)	08:49						
	21:46	27 06:15 (B4)	20:40		19:18		17:59	31 17:06 (B22)	15:56	13 15:18 (B14)	15:39							
23	04:59	05:48 (B4)	05:59		07:01		08:03	08:54 (B11)	08:09		15:06 (B14)	08:49						
	21:44	26 06:14 (B4)	20:37		19:15		17:57	31 17:05 (B22)	15:55	10 15:16 (B14)	15:40							
24	05:01	05:48 (B4)	06:01		07:03		08:05	08:51 (B11)	08:11		15:07 (B14)	08:50						
	21:43	27 06:15 (B4)	20:35		19:12		17:55	34 17:03 (B22)	15:53	7 15:14 (B14)	15:40							
25	05:03	05:48 (B4)	06:03		07:05		07:07	07:49 (B11)	08:13		15:08 (B14)	08:50						
	21:41	26 06:14 (B4)	20:32		19:10	8 08:01 (B18)	16:52	33 16:01 (B22)	15:52	4 15:12 (B14)	15:41							
26	05:04	05:48 (B4)	06:05		07:07		07:51 (B18)	07:09	07:48 (B11)		15:10 (B14)	08:50						
	21:39	26 06:14 (B4)	20:29		19:07	12 08:03 (B18)	16:50	30 15:58 (B22)	15:51	1 15:11 (B14)	15:42							
27	05:06	05:49 (B4)	06:07		07:09		07:49 (B18)	07:12	07:47 (B11)		08:51							
	21:37	25 06:14 (B4)	20:27		19:04	15 08:04 (B18)	16:47	19 15:52 (B22)	15:49		15:43							
28	05:08	05:49 (B4)	06:09		07:11		07:49 (B18)	07:14	07:47 (B11)		08:51							
	21:36	24 06:13 (B4)	20:24	7 07:07 (B15)	19:02	17 08:06 (B18)	16:45	16 08:03 (B11)	15:48		15:44							
29	05:10	05:49 (B4)	06:11	06:58 (B15)	07:13		07:48 (B18)	07:16	07:48 (B11)		08:51							
	21:34	24 06:13 (B4)	20:22	11 07:09 (B15)	18:59	18 08:06 (B18)	16:43	15 08:03 (B11)	15:47		15:45							
30	05:12	05:50 (B4)	06:13	06:56 (B15)	07:15		07:47 (B18)	07:18	07:50 (B11)		08:51							
	21:32	23 06:13 (B4)	20:19	15 07:11 (B15)	18:56	28 17:02 (B22)	16:40	13 08:03 (B11)	15:46		15:46							
31	05:14	05:51 (B4)	06:15	06:55 (B15)			07:20		07:52 (B11)		08:51							
	21:30	22 06:13 (B4)	20:17	16 07:11 (B15)			16:38	10 08:02 (B11)			15:47							
Potential sun hours	529		469		385		324		247		216							
Total, worst case	656		116		214		1047		292									
Sun reduction	0.49		0.50		0.43		0.26		0.08									
Oper. time red.	0.98		0.98		0.98		0.98		0.98									
Wind dir. red.	0.67		0.67		0.65		0.66		0.65									
Total reduction	0.32		0.32		0.27		0.17		0.05									
Total, real	212		38		58		176		15									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmalnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (209)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:50 15:48	08:14 16:45	07:10 17:47	16:23 (B3) 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44	
2	08:50 15:49	08:12 16:47	07:08 17:49	16:22 (B3) 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43	
3	08:50 15:50	08:10 16:49	07:05 17:51	16:23 (B3) 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43	
4	08:49 15:51	08:08 16:51	07:03 17:54	16:24 (B3) 19:59	05:25 21:01	04:32 21:56	05:21 22:07	06:23 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42	
5	08:49 15:53	08:06 16:54	07:00 17:56	16:24 (B3) 20:01	05:23 21:03	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:43	17:09 (B3) 17:18 (B3)	07:31 16:27	08:30 15:41
6	08:48 15:54	08:04 16:56	06:57 17:58	16:25 (B3) 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	17:05 (B3) 17:21 (B3)	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	16:28 (B3) 20:05	06:32 21:07	04:35 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	17:02 (B3) 17:22 (B3)	07:35 16:23	08:33 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	16:30 (B3) 20:07	05:16 21:09	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	17:00 (B3) 17:24 (B3)	07:37 16:20	08:35 15:39
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	16:59 (B3) 17:24 (B3)	07:40 16:18	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:13	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	16:57 (B3) 17:25 (B3)	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	16:56 (B3) 17:25 (B3)	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:15	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:03	06:39 19:44	07:39 18:24	16:56 (B3) 17:26 (B3)	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	16:55 (B3) 17:26 (B3)	07:48 16:11	08:41 15:37
14	08:42 16:08	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	16:55 (B3) 17:26 (B3)	07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:16	16:54 (B3) 17:25 (B3)	07:52 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	16:54 (B3) 17:25 (B3)	07:55 16:05	08:44 15:37
17	08:38 16:13	07:40 17:21	16:35 (B3) 18:21	06:28 20:26	06:06 21:27	04:58 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	16:55 (B3) 17:25 (B3)	07:57 16:04	08:45 15:37
18	08:37 16:15	07:38 17:23	16:31 (B3) 18:23	06:26 20:28	06:04 21:29	04:56 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	16:55 (B3) 17:24 (B3)	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	16:29 (B3) 18:25	06:23 20:30	06:01 21:31	04:55 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	16:55 (B3) 17:23 (B3)	08:01 16:00	08:47 15:38
20	08:34 16:19	07:33 17:27	16:27 (B3) 18:28	06:20 20:32	05:59 21:33	04:53 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	16:55 (B3) 17:22 (B3)	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	16:25 (B3) 18:30	06:18 20:34	05:56 21:34	04:55 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	16:57 (B3) 17:21 (B3)	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	16:25 (B3) 18:32	06:15 20:36	05:54 21:36	04:49 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	16:58 (B3) 17:20 (B3)	08:07 15:56	08:49 15:39
23	08:30 16:25	07:25 17:34	16:24 (B3) 18:34	06:12 20:38	05:51 21:38	04:48 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	16:59 (B3) 17:17 (B3)	08:09 15:54	08:49 15:39
24	08:28 16:27	07:23 17:36	16:24 (B3) 18:36	06:10 20:41	05:49 21:40	04:46 22:10	04:55 21:43	06:01 20:34	07:03 19:12	08:05 17:54	17:02 (B3) 17:16 (B3)	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	16:23 (B3) 18:38	06:07 20:43	05:46 21:41	04:45 22:10	04:52 21:41	06:03 20:32	07:05 19:09	07:07 16:52	16:06 (B3) 16:11 (B3)	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	16:23 (B3) 18:40	06:04 20:45	05:44 21:43	04:46 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49		08:15 15:50	08:50 15:41
27	08:23 16:34	07:15 17:43	16:22 (B3) 18:42	06:02 20:47	05:41 21:45	04:42 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47		08:17 15:49	08:50 15:42
28	08:22 16:36	07:13 17:45	16:22 (B3) 18:44	05:59 20:49	05:39 21:46	04:40 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45		08:18 15:47	08:51 15:43
29	08:20 16:38	07:11 17:46	16:21 (B3) 18:46	05:56 20:51	05:37 21:48	04:39 22:09	05:09 21:33	06:11 20:21	07:13 18:59	07:16 16:42		08:20 15:47	08:51 15:44
30	08:18 16:40	07:09 17:48	16:20 (B3) 18:48	05:54 20:53	05:34 21:49	04:38 22:09	05:11 21:31	06:13 18:56	07:15 16:40	07:18 16:40		08:22 15:45	08:51 15:45
31	08:16 16:42	07:07 17:49	16:19 (B3) 18:49	05:51 20:50	05:31 21:51	04:36 21:50	05:13 21:30	06:15 20:16	07:20 16:38	07:20 16:38		08:22 15:46	08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216	
Total, worst case		298	192							502			
Sun reduction		0.20	0.41							0.26			
Oper. time red.		0.98	0.98							0.98			
Wind dir. red.		0.67	0.67							0.67			
Total reduction		0.13	0.27							0.17			
Total, real		39	52							85			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (147)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
	1	08:51	14:05 (B24)	08:15	15:41 (B14)	07:11	16:18 (B22)	06:49		05:32			04:36	05:29 (B4)				
		15:48	8 14:13 (B24)	16:45	18 15:59 (B14)	17:47	35 16:53 (B22)	19:53		20:55			21:52	30 05:59 (B4)				
	2	08:50	14:07 (B24)	08:13	15:42 (B14)	07:08	16:17 (B22)	06:46		05:30			04:35	05:29 (B4)				
		15:49	4 14:11 (B24)	16:47	17 15:59 (B14)	17:50	36 16:53 (B22)	19:55		20:57			21:54	30 05:59 (B4)				
	3	08:50		08:11	15:43 (B14)	07:06	16:18 (B22)	06:43		05:28			04:34	05:29 (B4)				
		15:51		16:50	16 15:59 (B14)	17:52	36 16:54 (B22)	19:57		20:59			21:55	30 05:59 (B4)				
	4	08:50		08:09	15:44 (B14)	07:03	16:17 (B22)	06:41		05:26			04:33	05:29 (B4)				
		15:52		16:52	14 15:58 (B14)	17:54	36 16:53 (B22)	19:59	3 07:09 (B15)	21:01			21:56	30 05:59 (B4)				
	5	08:49		08:07	08:36 (B11)	07:00	16:17 (B22)	06:38		05:23			04:32	05:30 (B4)				
		15:53		16:54	12 15:56 (B14)	17:56	35 16:52 (B22)	20:01	8 07:11 (B15)	21:04			21:58	30 06:00 (B4)				
	6	08:49		08:05	08:34 (B11)	06:58	07:24 (B18)	06:35		05:21			04:31	05:30 (B4)				
		15:55		16:56	11 15:54 (B14)	17:58	36 16:52 (B22)	20:03	12 07:13 (B15)	21:06			21:59	30 06:00 (B4)				
	7	08:48		08:03	08:32 (B11)	06:55	07:21 (B18)	06:33		05:19			04:30	05:30 (B4)				
		15:56		16:59	9 08:41 (B11)	18:00	41 16:51 (B22)	20:05	16 07:14 (B15)	21:08			22:00	29 05:59 (B4)				
	8	08:47		08:00	08:30 (B11)	06:53	07:18 (B18)	06:30		05:17			04:29	05:31 (B4)				
		15:58		17:01	12 08:42 (B11)	18:03	44 16:50 (B22)	20:07	19 07:14 (B15)	21:10			22:01	29 06:00 (B4)				
	9	08:47		07:58	08:27 (B11)	06:50	07:16 (B18)	06:27		05:15			04:28	05:31 (B4)				
		15:59		17:03	15 08:42 (B11)	18:05	44 16:49 (B22)	20:10	19 07:14 (B15)	21:12			22:02	29 06:00 (B4)				
	10	08:46		07:56	08:25 (B11)	06:47	07:13 (B18)	06:25		05:13			04:28	05:32 (B4)				
		16:01		17:05	17 08:42 (B11)	18:07	46 16:47 (B22)	20:12	20 07:14 (B15)	21:14			22:03	28 06:00 (B4)				
	11	08:45		07:54	08:25 (B11)	06:45	07:12 (B18)	06:22		05:10			04:27	05:31 (B4)				
		16:03		17:08	17 08:42 (B11)	18:09	42 16:45 (B22)	20:14	20 07:14 (B15)	21:16			22:04	29 06:00 (B4)				
	12	08:44		07:52	08:25 (B11)	06:42	07:12 (B18)	06:20		05:08			04:27	05:32 (B4)				
		16:04		17:10	17 08:42 (B11)	18:11	40 16:44 (B22)	20:16	19 07:13 (B15)	21:18			22:05	28 06:00 (B4)				
	13	08:43		07:49	08:26 (B11)	06:39	07:12 (B18)	06:17		05:06			04:26	05:33 (B4)				
		16:06		17:12	16 08:42 (B11)	18:13	32 16:40 (B22)	20:18	19 07:13 (B15)	21:20			22:06	28 06:01 (B4)				
	14	08:42		07:47	08:27 (B11)	06:37	07:12 (B18)	06:14		05:04		05:40 (B4)	04:26	05:32 (B4)				
		16:08		17:14	14 08:41 (B11)	18:15	18 07:30 (B18)	20:20	17 07:11 (B15)	21:22	7 05:47 (B4)	22:07	28 06:00 (B4)					
	15	08:41		07:45	08:28 (B11)	06:34	07:12 (B18)	06:12		05:02		05:37 (B4)	04:26	05:33 (B4)				
		16:10		17:16	12 08:40 (B11)	18:17	17 07:29 (B18)	20:22	14 07:10 (B15)	21:23	12 05:49 (B4)	22:07	27 06:00 (B4)					
	16	08:40		07:42	08:30 (B11)	06:31	07:13 (B18)	06:09		05:01		05:35 (B4)	04:25	05:33 (B4)				
		16:12		17:19	7 08:37 (B11)	18:20	16 07:29 (B18)	20:24	10 07:07 (B15)	21:25	16 05:51 (B4)	22:08	27 06:00 (B4)					
	17	08:39		07:40		06:29	07:14 (B18)	06:07		04:59		05:34 (B4)	04:25	05:33 (B4)				
		16:14		17:21		18:22	12 07:26 (B18)	20:26	3 07:04 (B15)	21:27	19 05:53 (B4)	22:08	28 06:01 (B4)					
	18	08:37		07:38		06:26	07:16 (B18)	06:04		04:57		05:33 (B4)	04:25	05:34 (B4)				
		16:16		17:23		18:24	7 07:23 (B18)	20:28		21:29	21 05:54 (B4)	22:09	27 06:01 (B4)					
	19	08:36		07:35		16:32 (B22)	06:23		06:02		04:55	05:31 (B4)	04:25	05:34 (B4)				
		16:18		17:25	9 16:41 (B22)	18:26		20:30		21:31	23 05:54 (B4)	22:09	27 06:01 (B4)					
	20	08:35		07:33		16:28 (B22)	06:21		05:59		04:53	05:31 (B4)	04:25	05:34 (B4)				
		16:20		17:28	17 16:45 (B22)	18:28		20:32		21:33	24 05:55 (B4)	22:10	27 06:01 (B4)					
	21	08:33		07:31		16:26 (B22)	06:18		05:57		04:52	05:30 (B4)	04:25	05:35 (B4)				
		16:22		17:30	22 16:48 (B22)	18:30		20:35		21:35	25 05:55 (B4)	22:10	27 06:02 (B4)					
	22	08:32		07:28		16:24 (B22)	06:15		05:54		04:50	05:30 (B4)	04:25	05:35 (B4)				
		16:24	3 15:46 (B14)	17:32	25 16:49 (B22)	18:32		20:37		21:36	26 05:56 (B4)	22:10	27 06:02 (B4)					
	23	08:30		07:26		16:23 (B22)	06:13		05:52		04:48	05:29 (B4)	04:26	05:35 (B4)				
		16:26	6 15:48 (B14)	17:34	28 16:51 (B22)	18:34		20:39		21:38	27 05:56 (B4)	22:10	27 06:02 (B4)					
	24	08:29		07:23		16:21 (B22)	06:10		05:49		04:47	05:29 (B4)	04:26	05:35 (B4)				
		16:28	9 15:50 (B14)	17:36	30 16:51 (B22)	18:36		20:41		21:40	28 05:57 (B4)	22:10	27 06:02 (B4)					
	25	08:27		07:21		16:20 (B22)	06:07		05:47		04:45	05:29 (B4)	04:26	05:36 (B4)				
		16:30	13 15:54 (B14)	17:39	32 16:52 (B22)	18:38		20:43		21:42	29 05:58 (B4)	22:10	27 06:03 (B4)					
	26	08:25		07:18		16:20 (B22)	06:05		05:44		04:44	05:30 (B4)	04:27	05:35 (B4)				
		16:32	15 15:56 (B14)	17:41	33 16:53 (B22)	18:40		20:45		21:43	28 05:58 (B4)	22:10	28 06:03 (B4)					
	27	08:24		07:16		16:19 (B22)	06:02		05:42		04:42	05:29 (B4)	04:27	05:36 (B4)				
		16:34	17 15:58 (B14)	17:43	34 16:53 (B22)	18:43		20:47		21:45	29 05:58 (B4)	22:10	27 06:03 (B4)					
	28	08:22		07:13		16:19 (B22)	05:59		05:39		04:41	05:29 (B4)	04:28	05:35 (B4)				
		16:36	18 15:59 (B14)	17:45	35 16:54 (B22)	18:45		20:49		21:46	29 05:58 (B4)	22:10	28 06:03 (B4)					
	29	08:20				06:57		05:37		04:39		05:29 (B4)	04:28	05:36 (B4)				
		16:39	19 16:00 (B14)			19:47		20:51		21:48	30 05:59 (B4)	22:10	28 06:04 (B4)					
	30	08:18				06:54		05:35		04:38		05:29 (B4)	04:29	05:36 (B4)				
		16:41	19 16:00 (B14)			19:49		20:53		21:50	30 05:59 (B4)	22:09	28 06:04 (B4)					
	31	08:17				06:51				04:37		05:29 (B4)						
		16:43	18 15:59 (B14)			19:51				21:51	30 05:59 (B4)							
Potential sun hours		235		266		366		426		508			529					
Total, worst case		149		489		573		199		433			845					
Sun reduction		0.13		0.20		0.41		0.50		0.57			0.56					
Oper. time red.		0.98		0.98		0.98		0.98		0.98			0.98					
Wind dir. red.		0.66		0.65		0.66		0.66		0.67			0.67					
Total reduction		0.09		0.13		0.26		0.32		0.37			0.37					
Total, real		13		63		150		64		161			309					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Upmali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (147)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December			
1	04:30		05:36 (B4)	05:16			06:17		06:53 (B15)	07:17		07:51 (B18)	07:22		07:55 (B11)	08:24			
	22:09	28	06:04 (B4)	21:28			20:14	20	07:13 (B15)	18:54	38	17:22 (B22)	16:36	17	08:12 (B11)	15:45			
2	04:31		05:36 (B4)	05:17			06:19		06:53 (B15)	07:19		07:51 (B18)	07:25		07:57 (B11)	08:26			
	22:08	28	06:04 (B4)	21:26			20:11	20	07:13 (B15)	18:51	43	17:24 (B22)	16:34	14	08:11 (B11)	15:44			
3	04:32		05:36 (B4)	05:19			06:21		06:53 (B15)	07:21		07:51 (B18)	07:27		08:00 (B11)	08:27			
	22:08	29	06:05 (B4)	21:24			20:09	19	07:12 (B15)	18:48	45	17:25 (B22)	16:31	11	08:11 (B11)	15:43			
4	04:33		05:37 (B4)	05:21			06:23		06:53 (B15)	07:23		07:52 (B18)	07:29		08:02 (B11)	08:29			
	22:07	28	06:05 (B4)	21:22			20:06	19	07:12 (B15)	18:46	46	17:26 (B22)	16:29	8	08:10 (B11)	15:42			
5	04:34		05:37 (B4)	05:23			06:25		06:54 (B15)	07:25		07:54 (B18)	07:31		08:04 (B11)	08:31			
	22:07	29	06:06 (B4)	21:19			20:03	16	07:10 (B15)	18:43	44	17:26 (B22)	16:27	12	15:24 (B14)	15:42			
6	04:35		05:37 (B4)	05:25			06:27		06:56 (B15)	07:27		07:56 (B18)	07:33		08:07 (B11)	08:32			
	22:06	29	06:06 (B4)	21:17			20:01	12	07:08 (B15)	18:40	42	17:27 (B22)	16:25	12	15:27 (B14)	15:41			
7	04:36		05:37 (B4)	05:27			06:29		06:58 (B15)	07:29		07:58 (B18)	07:36		15:14 (B14)	08:34			
	22:05	29	06:06 (B4)	21:15			19:58	9	07:07 (B15)	18:38	39	17:27 (B22)	16:23	14	15:28 (B14)	15:40			
8	04:37		05:37 (B4)	05:29			06:31		07:00 (B15)	07:31		16:53 (B22)	07:38		15:14 (B14)	08:35			
	22:04	29	06:06 (B4)	21:13			19:55	4	07:04 (B15)	18:35	34	17:27 (B22)	16:21	16	15:30 (B14)	15:40			
9	04:38		05:37 (B4)	05:31			06:33		07:04	18:32	35	16:52 (B22)	07:40		15:13 (B14)	08:36			
	22:03	30	06:07 (B4)	21:11			19:53		18:32	17:27 (B22)	16:19	17	15:30 (B14)	15:39					
10	04:39		05:37 (B4)	05:33			06:35		07:06	18:30	36	16:52 (B22)	07:42		15:12 (B14)	08:38		13:57 (B24)	
	22:02	30	06:07 (B4)	21:08			19:50		18:30	17:28 (B22)	16:17	18	15:30 (B14)	15:39	4	14:01 (B24)			
11	04:41		05:37 (B4)	05:35			06:37		07:08	18:38	36	16:52 (B22)	07:44		15:12 (B14)	08:39		13:56 (B24)	
	22:01	30	06:07 (B4)	21:06			19:47		18:27	17:27 (B22)	16:15	19	15:31 (B14)	15:38	7	14:03 (B24)			
12	04:42		05:38 (B4)	05:37			06:39		07:10	18:40	37	16:51 (B22)	07:46		15:12 (B14)	08:40		13:55 (B24)	
	22:00	30	06:08 (B4)	21:04			19:45		18:25	17:27 (B22)	16:13	19	15:31 (B14)	15:38	9	14:04 (B24)			
13	04:43		05:38 (B4)	05:39			06:41		07:12	18:42	37	16:51 (B22)	07:48		15:13 (B14)	08:41		13:55 (B24)	
	21:59	29	06:07 (B4)	21:01			19:42		18:22	17:26 (B22)	16:11	19	15:32 (B14)	15:38	11	14:06 (B24)			
14	04:45		05:38 (B4)	05:41			06:43		07:14	18:44	37	16:51 (B22)	07:51		15:13 (B14)	08:43		13:55 (B24)	
	21:58	29	06:07 (B4)	20:59			19:39		18:19	17:26 (B22)	16:09	18	15:31 (B14)	15:38	11	14:06 (B24)			
15	04:46		05:37 (B4)	05:43			06:45		07:16	18:46	37	16:52 (B22)	07:53		15:13 (B14)	08:44		13:55 (B24)	
	21:56	30	06:07 (B4)	20:57			19:37		18:17	17:26 (B22)	16:07	17	15:30 (B14)	15:38	12	14:07 (B24)			
16	04:48		05:38 (B4)	05:45			06:47		07:18	18:48	37	16:52 (B22)	07:55		15:14 (B14)	08:45		13:55 (B24)	
	21:55	30	06:08 (B4)	20:54			19:34		18:14	17:25 (B22)	16:06	15	15:29 (B14)	15:38	13	14:08 (B24)			
17	04:49		05:38 (B4)	05:47			06:49		07:20	18:50	37	16:52 (B22)	07:57		15:14 (B14)	08:45		13:56 (B24)	
	21:54	29	06:07 (B4)	20:52			19:31		18:12	17:23 (B22)	16:04	13	15:27 (B14)	15:38	13	14:09 (B24)			
18	04:51		05:39 (B4)	05:49			06:51		07:22	18:52	37	16:53 (B22)	07:59		15:15 (B14)	08:46		13:56 (B24)	
	21:52	29	06:08 (B4)	20:49			19:28		18:09	17:22 (B22)	16:02	9	15:24 (B14)	15:38	13	14:09 (B24)			
19	04:52		05:39 (B4)	05:51			06:53		07:24	18:54	37	16:54 (B22)	08:01		15:17 (B14)	08:47		13:56 (B24)	
	21:51	28	06:07 (B4)	20:47			19:26		18:07	17:20 (B22)	16:01	6	15:23 (B14)	15:38	13	14:09 (B24)			
20	04:54		05:40 (B4)	05:53			06:55		07:26	18:56	37	16:56 (B22)	08:03		15:18 (B14)	08:48		13:56 (B24)	
	21:49	27	06:07 (B4)	20:45			19:23		18:04	17:19 (B22)	15:59	3	15:21 (B14)	15:38	14	14:10 (B24)			
21	04:56		05:40 (B4)	05:55			06:57		07:28	18:58	37	16:57 (B22)	08:05		15:19 (B14)	08:48		13:57 (B24)	
	21:48	26	06:06 (B4)	20:42			19:20		18:02	17:17 (B22)	15:58			15:39	14	14:11 (B24)			
22	04:57		05:41 (B4)	05:57			06:59		07:30	19:00	37	16:59 (B22)	08:07		15:20 (B14)	08:49		13:57 (B24)	
	21:46	25	06:06 (B4)	20:40			19:18		17:59	17:14 (B22)	15:56			15:39	14	14:11 (B24)			
23	04:59		05:41 (B4)	05:59			07:01		08:03	17:05 (B22)	08:09			15:40		13:57 (B24)			
	21:44	24	06:05 (B4)	20:37			19:15		17:57	17:10 (B22)	15:55			15:40	14	14:11 (B24)			
24	05:01		05:42 (B4)	06:01			07:03		08:05		08:11			15:41		13:59 (B24)			
	21:43	23	06:05 (B4)	20:35			19:12		17:55		15:53			15:40	13	14:12 (B24)			
25	05:03		05:42 (B4)	06:03			07:05		08:01 (B18)	16:52			15:52		15:40	13	14:12 (B24)		
	21:41	22	06:04 (B4)	20:32			19:10	3	08:04 (B18)	16:52			15:52		15:41	13	14:12 (B24)		
26	05:04		05:43 (B4)	06:05		07:02 (B15)	07:07		07:57 (B18)	16:50		08:00 (B11)	08:15		15:42	14	14:13 (B24)		
	21:39	20	06:03 (B4)	20:29	4	07:06 (B15)	19:07	10	08:07 (B18)	16:50	8	08:08 (B11)	15:51		15:42	14	14:13 (B24)		
27	05:06		05:45 (B4)	06:07		06:58 (B15)	07:09		07:54 (B18)	16:51		07:57 (B11)	08:17		15:43	13	14:13 (B24)		
	21:37	18	06:03 (B4)	20:27	11	07:09 (B15)	19:04	15	08:09 (B18)	16:47	13	08:10 (B11)	15:49		15:43	13	14:13 (B24)		
28	05:08		05:46 (B4)	06:09		06:57 (B15)	07:11		07:54 (B18)	16:52		07:56 (B11)	08:19		15:44	12	14:13 (B24)		
	21:36	14	06:00 (B4)	20:24	14	07:11 (B15)	19:02	17	08:11 (B18)	16:45	14	08:10 (B11)	15:48		15:44	12	14:13 (B24)		
29	05:10		05:48 (B4)	06:11		06:55 (B15)	07:13		07:53 (B18)	16:56		07:56 (B11)	08:21		15:45	11	14:13 (B24)		
	21:34	11	05:59 (B4)	20:22	17	07:12 (B15)	18:59	18	08:11 (B18)	16:43	16	08:12 (B11)	15:47		15:44	11	14:13 (B24)		
30	05:12			06:13		06:54 (B15)	07:15		07:52 (B18)	16:58		07:55 (B11)	08:22		15:45	10	14:13 (B24)		
	21:32			20:19	19	07:13 (B15)	18:56	30	17:19 (B22)	16:40	17	08:12 (B11)	15:46		15:46	10	14:13 (B24)		
31	05:14			06:15		06:54 (B15)			07:54 (B18)	16:59		08:13 (B11)			15:47	10	14:13 (B24)		
	21:30			20:16	19	07:13 (B15)			07:56 (B18)	16:59	17	08:13 (B11)			15:47	10	14:13 (B24)		
Potential sun hours	529			469			385			324			247			216			
Total, worst case	763			84			212			844			277			258			
Sun reduction	0.49			0.50			0.43			0.26			0.08			0.07			
Oper. time red.	0.98			0.98			0.98			0.98			0.98			0.98			
Wind dir. red.	0.67			0.66			0.64			0.66			0.65			0.66			
Total reduction	0.32			0.32			0.27			0.17			0.05			0.05			
Total, real	246			27			57			140			14			12			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)
--------------	------------------	-----------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Upiš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (210)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:16	05:08 21:17	04:27 22:05	04:42 22:00	05:37 21:03	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:52 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:40	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Urbani 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (108)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:49	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:27 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:56	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:19	06:25 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:12	08:41 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:25 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:50 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:08 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:10 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Urgas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (55)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B22) 19:53	05:33 20:56	04:36 21:53
2	08:51 15:49	08:13 16:48	07:08 17:50	07:34 (B22) 19:55	05:30 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:32 (B22) 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:30 (B22) 19:59	06:41 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	07:01 17:56	07:31 (B22) 20:01	06:38 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	07:31 (B22) 20:03	06:36 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	07:32 (B22) 20:06	06:33 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	07:33 (B22) 20:08	06:30 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	07:41 (B22) 20:28	06:28 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05	06:48 18:07	20:10 20:12	21:12 21:14	22:02 22:03
11	08:45 16:03	09:22 (B14) 09:23 (B14)	07:54 18:09	06:22 20:14	05:11 21:16	04:27 22:04
12	08:44 16:05	09:21 (B14) 09:25 (B14)	07:52 18:11	06:20 20:16	05:09 21:18	04:27 22:05
13	08:43 16:06	09:19 (B14) 09:25 (B14)	07:50 18:13	06:17 20:18	05:07 21:20	04:26 22:06
14	08:42 16:08	09:18 (B14) 09:26 (B14)	07:47 18:16	06:15 20:20	05:05 21:22	04:26 22:07
15	08:41 16:10	09:17 (B14) 09:27 (B14)	07:45 18:18	06:12 20:22	05:03 21:24	04:26 22:07
16	08:40 16:12	09:15 (B14) 09:28 (B14)	07:43 18:20	06:09 20:24	05:01 21:26	04:26 22:08
17	08:39 16:14	09:14 (B14) 09:29 (B14)	07:40 18:22	06:07 20:26	04:59 21:27	04:25 22:09
18	08:38 16:16	09:12 (B14) 09:29 (B14)	07:38 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	09:11 (B14) 09:29 (B14)	07:36 18:26	06:02 20:31	04:55 21:31	04:25 22:09
20	08:35 16:20	09:12 (B14) 09:30 (B14)	07:33 18:28	05:59 20:33	04:53 21:33	04:25 22:10
21	08:33 16:22	09:12 (B14) 09:30 (B14)	07:31 18:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	09:12 (B14) 09:30 (B14)	07:28 18:32	05:54 20:37	04:50 21:37	04:26 22:10
23	08:30 16:26	09:13 (B14) 09:29 (B14)	07:26 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	09:14 (B14) 09:30 (B14)	07:23 18:36	05:49 20:41	04:47 21:40	04:26 22:11
25	08:27 16:30	09:15 (B14) 09:29 (B14)	07:21 18:39	05:47 20:43	04:45 21:42	04:26 22:11
26	08:26 16:32	09:16 (B14) 09:29 (B14)	07:18 18:41	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	09:18 (B14) 09:28 (B14)	07:16 18:43	06:02 20:47	04:42 21:45	04:27 22:10
28	08:22 16:37	09:20 (B14) 09:26 (B14)	07:13 18:45	06:00 20:49	04:41 21:47	04:28 22:10
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10
31	08:17 16:43		06:52 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case	221	8	106			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.59	0.62	0.62			
Total reduction	0.08	0.12	0.25			
Total, real	17	1	26			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Urgas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (55)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November		December
1	04:30	05:16	06:17	07:17		07:23		08:24
	22:09	21:28	20:14	18:54		16:36	2	09:04 (B14)
2	04:31	05:18	06:19	07:19		07:25		08:26
	22:09	21:26	20:11	18:51		16:34		15:44
3	04:32	05:20	06:21	07:21		07:27		08:28
	22:08	21:24	20:09	18:48		16:32		15:43
4	04:33	05:22	06:23	07:23		07:29		08:29
	22:07	21:22	20:06	18:46		16:29		15:42
5	04:34	05:23	06:25	07:26	08:12 (B22)	07:31		08:31
	22:07	21:20	20:04	18:43	5	08:17 (B22)		15:42
6	04:35	05:25	06:27	07:28		08:09 (B22)		08:32
	22:06	21:17	20:01	18:40	10	08:19 (B22)		15:41
7	04:36	05:27	06:29	07:30		08:07 (B22)		08:34
	22:05	21:15	19:58	18:38	13	08:20 (B22)		15:40
8	04:37	05:29	06:31	07:32		08:06 (B22)		08:35
	22:04	21:13	19:56	18:35	16	08:22 (B22)		15:40
9	04:38	05:31	06:33	07:34		08:06 (B22)		08:37
	22:03	21:11	19:53	18:33	16	08:22 (B22)		15:39
10	04:39	05:33	06:35	07:36		08:05 (B22)		08:38
	22:02	21:09	19:50	18:30	17	08:22 (B22)		15:39
11	04:41	05:35	06:37	07:38		08:07 (B22)		08:39
	22:01	21:06	19:48	18:27	14	08:21 (B22)		15:39
12	04:42	05:37	06:39	07:40		08:09 (B22)		08:41
	22:00	21:04	19:45	18:25	11	08:20 (B22)		15:38
13	04:43	05:39	06:41	07:42		08:11 (B22)		08:42
	21:59	21:02	19:42	18:22	8	08:19 (B22)		15:38
14	04:45	05:41	06:43	07:44		08:14 (B22)	08:52 (B14)	08:43
	21:58	20:59	19:39	18:20	5	08:19 (B22)	6	08:58 (B14)
15	04:46	05:43	06:45	07:46		08:16 (B22)		08:44
	21:57	20:57	19:37	18:17	1	08:17 (B22)	11	09:01 (B14)
16	04:48	05:45	06:47	07:48		07:55		08:45
	21:55	20:54	19:34	18:15		16:06	13	09:02 (B14)
17	04:49	05:47	06:49	07:50		07:57		08:46
	21:54	20:52	19:31	18:12		16:04	14	09:02 (B14)
18	04:51	05:49	06:51	07:53		07:59		08:46
	21:53	20:50	19:29	18:09		16:03	16	09:04 (B14)
19	04:53	05:51	06:53	07:55		08:01		08:47
	21:51	20:47	19:26	18:07		16:01	16	09:04 (B14)
20	04:54	05:53	06:55	07:57		08:03		08:48
	21:50	20:45	19:23	18:04		15:59	18	09:05 (B14)
21	04:56	05:55	06:57	07:59		08:05		08:49
	21:48	20:42	19:21	18:02		15:58	18	09:06 (B14)
22	04:58	05:57	06:59	08:01		08:07		08:49
	21:46	20:40	19:18	18:00		15:56	18	09:06 (B14)
23	04:59	05:59	07:01	08:03		08:09		08:50
	21:45	20:37	19:15	17:57		15:55	18	09:06 (B14)
24	05:01	06:01	07:03	08:05		08:11		08:50
	21:43	20:35	19:12	17:55		15:53	17	09:06 (B14)
25	05:03	06:03	07:05	07:07		08:13		08:50
	21:41	20:32	19:10	16:52		15:52	15	09:06 (B14)
26	05:05	06:05	07:07	07:10		08:15		08:51
	21:39	20:30	19:07	16:50		15:51	13	09:07 (B14)
27	05:06	06:07	07:09	07:12		08:17		08:51
	21:38	20:27	19:04	16:48		15:49	11	09:07 (B14)
28	05:08	06:09	07:11	07:14		08:19		08:51
	21:36	20:24	19:02	16:45		15:48	8	09:06 (B14)
29	05:10	06:11	07:13	07:16		08:21		08:51
	21:34	20:22	18:59	16:43		15:47	6	09:06 (B14)
30	05:12	06:13	07:15	07:18		08:23		08:51
	21:32	20:19	18:56	16:41		15:46	4	09:06 (B14)
31	05:14	06:15		07:20				08:51
	21:30	20:17		16:38				15:47
Potential sun hours	529	469	385	324		247		216
Total, worst case				116		222		2
Sun reduction				0.26		0.08		0.07
Oper. time red.				0.98		0.98		0.98
Wind dir. red.				0.62		0.59		0.59
Total reduction				0.16		0.05		0.04
Total, real				18		10		0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Uzkalnini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (211)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:10 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:42
4	08:49 15:51	08:08 16:51	07:03 17:53	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	08:30 15:41
6	08:48 15:54	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:33 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:09	04:28 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:20	08:35 15:39
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:13	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:15	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:12	08:40 15:37
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:41 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:09	07:44 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:16	07:52 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:33	07:48 18:14	07:55 16:05	08:44 15:37
17	08:38 16:13	07:40 17:20	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:03	08:45 15:37
18	08:37 16:15	07:37 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	06:01 20:30	04:54 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:25	07:54 18:06	08:01 16:00	08:47 15:38
20	08:34 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:09	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:00 17:59	08:07 15:55	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	04:58 21:44	05:59 20:37	07:01 19:15	08:03 17:56	08:09 15:54	08:49 15:39
24	08:28 16:27	07:23 17:36	06:10 18:36	05:49 20:40	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:31	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:06	07:09 16:49	08:15 15:50	08:50 15:41
27	08:23 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:07 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:09 21:33	06:11 20:21	07:13 18:58	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:28 22:09	05:11 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:50		04:36 21:51		05:13 21:29	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vaivarini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (171)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52 05:16 (B14)
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54 05:16 (B14)
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55 05:17 (B14)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57 05:17 (B14)
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58 05:17 (B14)
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59 05:17 (B14)
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00 05:18 (B14)
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01 05:18 (B14)
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02 05:19 (B14)
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03 05:19 (B14)
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04 05:19 (B14)
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05 05:19 (B14)
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06 05:20 (B14)
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07 05:20 (B14)
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07 05:21 (B14)
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08 05:21 (B14)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08 05:20 (B14)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09 05:21 (B14)
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09 05:22 (B14)
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10 05:22 (B14)
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10 05:22 (B14)
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10 05:22 (B14)
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10 05:22 (B14)
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10 05:23 (B14)
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10 05:22 (B14)
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10 05:23 (B14)
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10 05:23 (B14)
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10 05:23 (B14)
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10 05:23 (B14)
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09 05:23 (B14)
31	08:17 16:43		06:52 19:51		04:37 21:51	04:30 22:09 05:23 (B14)
Potential sun hours	235	266	366	426	508	528
Total, worst case				116	206	591
Sun reduction				0.50	0.57	0.56
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.65	0.67	0.67
Total reduction				0.32	0.37	0.37
Total, real				37	77	217

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vaivarini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (171)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:24 (B14)	05:16	06:17	07:17	07:23	08:24				
	22:09	19 05:43 (B14)	21:28	20:14	18:54	16:36	15:45				
2	04:31	05:23 (B14)	05:18	06:19	07:19	07:25	08:26				
	22:08	20 05:43 (B14)	21:26	20:11	18:51	16:34	15:44				
3	04:32	05:23 (B14)	05:20	06:21	07:21	07:27	08:28				
	22:08	21 05:44 (B14)	21:24	20:09	18:48	16:32	15:43				
4	04:33	05:23 (B14)	05:22	06:23	07:23	07:29	08:29				
	22:07	21 05:44 (B14)	21:22	20:06	18:46	16:30	15:43				
5	04:34	05:23 (B14)	05:24	06:25	07:25	07:31	08:31				
	22:07	21 05:44 (B14)	21:19	20:03	18:43	16:27	15:42				
6	04:35	05:23 (B14)	05:26	06:27	07:28	07:33	08:32				
	22:06	22 05:45 (B14)	21:17	20:01	18:40	16:25	15:41				
7	04:36	05:24 (B14)	05:27	06:29	07:30	07:36	08:34				
	22:05	21 05:45 (B14)	21:15	19:58	18:38	16:23	15:41				
8	04:37	05:24 (B14)	05:29	06:31	07:32	07:38	08:35				
	22:04	21 05:45 (B14)	21:13	19:56	18:35	16:21	15:40				
9	04:38	05:24 (B14)	05:31	06:33	07:34	07:40	08:37				
	22:03	21 05:45 (B14)	21:11	19:53	18:33	16:19	15:39				
10	04:40	05:24 (B14)	05:33	06:35	07:36	07:42	08:38				
	22:02	21 05:45 (B14)	21:08	19:50	18:30	16:17	15:39				
11	04:41	05:24 (B14)	05:35	06:37	07:38	07:44	08:39				
	22:01	22 05:46 (B14)	21:06	19:47	18:27	16:15	15:39				
12	04:42	05:24 (B14)	05:37	06:39	07:40	07:46	08:40				
	22:00	22 05:46 (B14)	21:04	19:45	18:25	16:13	15:38				
13	04:44	05:24 (B14)	05:39	06:41	07:42	07:49	08:41				
	21:59	22 05:46 (B14)	21:02	19:42	18:22	16:11	15:38				
14	04:45	05:24 (B14)	05:41	06:31 (B24)	06:43	07:44	07:51	08:43			
	21:58	22 05:46 (B14)	20:59	3 06:34 (B24)	19:39	18:20	16:10	15:38			
15	04:47	05:25 (B14)	05:43	06:28 (B24)	06:45	07:46	07:53	08:44			
	21:57	21 05:46 (B14)	20:57	9 06:37 (B24)	19:37	18:17	16:08	15:38			
16	04:48	05:25 (B14)	05:45	06:26 (B24)	06:47	07:48	07:55	08:45			
	21:55	21 05:46 (B14)	20:54	12 06:38 (B24)	19:34	18:15	16:06	15:38			
17	04:50	05:26 (B14)	05:47	06:25 (B24)	06:49	07:50	07:57	08:45			
	21:54	20 05:46 (B14)	20:52	14 06:39 (B24)	19:31	18:12	16:04	15:38			
18	04:51	05:27 (B14)	05:49	06:24 (B24)	06:51	07:52	07:59	08:46			
	21:52	19 05:46 (B14)	20:50	16 06:40 (B24)	19:29	18:10	16:03	15:38			
19	04:53	05:28 (B14)	05:51	06:23 (B24)	06:53	07:55	08:01	08:47			
	21:51	17 05:45 (B14)	20:47	16 06:39 (B24)	19:26	18:07	16:01	15:39			
20	04:54	05:30 (B14)	05:53	06:24 (B24)	06:55	07:57	08:03	08:48			
	21:49	15 05:45 (B14)	20:45	15 06:39 (B24)	19:23	18:05	15:59	15:39			
21	04:56	05:31 (B14)	05:55	06:26 (B24)	06:57	07:59	08:05	08:48			
	21:48	13 05:44 (B14)	20:42	13 06:39 (B24)	19:21	18:02	15:58	15:39			
22	04:58	05:33 (B14)	05:57	06:28 (B24)	06:59	08:01	08:07	08:49			
	21:46	11 05:44 (B14)	20:40	10 06:38 (B24)	19:18	18:00	15:56	15:40			
23	04:59	05:35 (B14)	05:59	06:30 (B24)	07:01	08:03	08:09	08:49			
	21:45	8 05:43 (B14)	20:37	7 06:37 (B24)	19:15	17:57	15:55	15:40			
24	05:01	05:36 (B14)	06:01	06:32 (B24)	07:03	08:05	08:11	08:50			
	21:43	5 05:41 (B14)	20:35	4 06:36 (B24)	19:12	17:55	15:54	15:41			
25	05:03	05:38 (B14)	06:03		07:05	07:07	08:13	08:50			
	21:41	2 05:40 (B14)	20:32		19:10	16:52	15:52	15:41			
26	05:05		06:05		07:07	07:10	08:15	08:51			
	21:39		20:30		19:07	16:50	15:51	15:42			
27	05:07		06:07		07:09	07:12	08:17	08:51			
	21:37		20:27		19:04	16:48	15:50	15:43			
28	05:08		06:09		07:11	07:14	08:19	08:51			
	21:36		20:24		19:02	16:45	15:48	15:44			
29	05:10		06:11		07:13	07:16	08:21	08:51			
	21:34		20:22		18:59	16:43	15:47	15:45			
30	05:12		06:13		07:15	07:18	08:22	08:51			
	21:32		20:19		18:56	16:41	15:46	15:46			
31	05:14		06:15			07:20	08:51				
	21:30		20:17			16:38	15:47				
Potential sun hours	529		469		384	324	248	216			
Total, worst case		448		119							
Sun reduction		0.49		0.50							
Oper. time red.		0.98		0.98							
Wind dir. red.		0.67		0.65							
Total reduction		0.32		0.32							
Total, real		145		38							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vecleiš upi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (181)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48 16:45	08:15 16:45 17:48	07:11 17:08 19:55	06:49 17:50 19:55	05:33 20:55 20:55	04:36 21:53 22:09	04:30 21:53 22:09	05:16 21:28 22:09	05:58 (B14) 06:16 (B14) 20:14	06:17 20:14 18:54	07:17 18:54 16:36	07:23 16:36 15:45
2	08:50 15:50 16:48	08:13 16:48 17:50	07:08 17:50 19:55	06:46 17:50 19:55	05:30 20:58 20:58	04:35 21:54 22:08	04:31 21:54 22:08	05:18 21:26 22:09	05:57 (B14) 06:16 (B14) 20:11	06:19 20:11 18:51	07:19 18:51 16:34	07:25 16:34 15:44
3	08:50 15:51 16:50	08:11 16:50 17:52	07:06 17:52 19:57	06:44 17:52 19:57	05:28 21:00 21:00	04:34 21:55 22:08	04:32 21:55 22:08	05:20 21:24 22:09	05:57 (B14) 06:16 (B14) 20:09	06:21 20:09 18:48	07:21 18:48 16:32	07:27 16:32 15:43
4	08:50 15:52 16:52	08:09 16:52 17:54	07:03 17:54 19:59	06:41 17:54 19:59	05:26 21:02 21:02	04:33 21:57 22:07	04:33 21:57 22:07	05:22 21:22 22:09	05:57 (B14) 06:17 (B14) 20:06	06:23 20:06 18:46	07:23 18:46 16:30	07:29 16:30 15:43
5	08:49 15:54 16:54	08:07 16:54 17:56	07:01 17:56 20:01	06:38 20:01 21:04	05:24 21:04 21:04	04:32 21:58 22:07	04:34 21:58 22:07	05:24 21:20 22:09	05:58 (B14) 06:17 (B14) 20:04	06:25 20:04 18:43	07:26 18:43 16:27	07:31 16:27 15:42
6	08:49 15:55 16:57	08:05 16:57 17:58	06:58 17:58 20:03	06:36 20:03 21:06	05:21 21:06 21:06	04:31 21:59 22:06	04:35 21:59 22:06	05:26 21:17 22:09	05:58 (B14) 06:15 (B14) 20:01	06:27 20:01 18:40	07:28 18:40 16:25	07:33 16:25 15:41
7	08:48 15:57 16:59	08:03 16:59 18:01	06:55 18:01 20:06	06:33 20:06 21:08	05:19 21:08 21:08	04:36 22:00 22:05	04:36 22:00 22:05	05:28 21:15 22:09	06:00 (B14) 06:15 (B14) 19:58	06:29 19:58 18:38	07:30 18:38 16:23	07:36 16:23 15:41
8	08:48 15:58 17:01	08:01 17:01 18:03	06:53 18:03 20:08	06:30 20:08 21:10	05:17 21:10 21:10	04:30 22:01 22:04	04:37 22:01 22:04	05:29 21:13 22:09	06:02 (B14) 06:15 (B14) 19:56	06:31 19:56 18:35	07:32 18:35 16:21	07:38 16:21 15:40
9	08:47 16:00 17:03	07:58 17:03 18:05	06:50 18:05 20:10	06:28 20:10 21:12	05:15 21:12 21:12	04:29 22:02 22:03	04:38 22:02 22:03	05:31 21:11 22:09	06:04 (B14) 06:14 (B14) 19:53	06:33 19:53 18:33	07:34 18:33 16:19	07:40 16:19 15:40
10	08:46 16:01 17:06	07:56 17:06 18:07	06:48 18:07 20:12	06:25 20:12 21:14	05:13 21:14 21:14	04:28 22:03 22:03	04:40 22:03 22:02	05:33 21:08 22:09	06:06 (B14) 06:13 (B14) 19:50	06:35 19:50 18:30	07:36 18:30 16:17	07:42 16:17 15:39
11	08:45 16:03 17:08	07:54 17:08 18:09	06:45 18:09 20:14	06:22 20:14 21:16	05:11 21:16 21:16	04:28 22:03 22:02	04:41 22:02 22:01	05:35 21:06 22:09	06:08 (B14) 06:11 (B14) 19:48	06:37 19:48 18:27	07:38 18:27 16:15	07:44 16:15 15:39
12	08:44 16:05 17:10	07:52 17:10 18:11	06:42 18:11 20:16	06:20 20:16 21:18	05:09 21:18 21:18	04:27 22:05 22:05	04:42 22:05 22:00	05:37 21:04 22:09	06:06 (B14) 06:11 (B14) 19:45	06:35 19:45 18:25	07:36 18:25 16:13	07:42 16:13 15:38
13	08:43 16:07 17:12	07:50 17:12 18:13	06:40 18:13 20:18	06:17 20:18 21:20	05:07 21:20 21:20	04:27 22:06 22:06	04:44 22:06 21:59	05:39 21:02 22:09	06:04 (B14) 06:11 (B14) 19:42	06:33 19:42 18:22	07:34 18:22 16:11	07:49 16:11 15:38
14	08:42 16:08 17:15	07:47 17:15 18:16	06:37 18:16 20:20	06:15 20:20 21:22	05:05 21:22 21:22	04:26 22:07 22:07	04:45 22:07 21:58	05:41 21:05 22:09	06:04 (B14) 06:11 (B14) 19:39	06:32 19:39 18:20	07:44 18:20 16:10	07:51 16:10 15:38
15	08:41 16:10 17:17	07:45 17:17 18:18	06:34 18:18 20:22	06:12 20:22 21:24	05:03 21:24 21:24	04:26 22:07 22:07	04:47 22:07 21:57	05:43 21:05 22:09	06:04 (B14) 06:11 (B14) 19:37	06:31 19:37 18:17	07:46 18:17 16:08	07:53 16:08 15:38
16	08:40 16:12 17:19	07:43 17:19 18:20	06:32 18:20 20:24	06:10 20:24 21:25	05:01 21:25 21:25	04:26 22:08 22:08	04:48 22:08 21:55	05:45 21:05 22:09	06:04 (B14) 06:11 (B14) 19:34	06:30 19:34 18:15	07:48 18:15 16:06	07:55 16:06 15:38
17	08:39 16:14 17:21	07:40 17:21 18:22	06:29 18:22 20:26	06:07 20:26 21:27	04:59 21:27 21:27	04:26 22:08 22:08	04:50 22:08 21:54	05:47 21:05 22:09	06:04 (B14) 06:11 (B14) 19:31	06:29 19:31 18:12	07:50 18:12 16:04	07:57 16:04 15:38
18	08:37 16:16 17:23	07:38 17:23 18:24	06:26 18:24 20:28	06:04 20:28 21:29	04:57 21:29 21:29	04:25 22:09 22:09	04:51 22:09 21:52	05:49 21:05 22:09	06:04 (B14) 06:11 (B14) 19:29	06:28 19:29 18:10	07:53 18:10 16:03	07:59 16:03 15:38
19	08:36 16:18 17:26	07:36 17:26 18:26	06:24 18:26 20:31	06:02 20:31 21:31	04:55 21:31 21:31	04:25 22:09 22:09	04:53 22:09 21:51	05:51 21:05 22:09	06:04 (B14) 06:11 (B14) 19:26	06:27 19:26 18:07	07:55 18:07 16:01	08:01 16:01 15:39
20	08:35 16:20 17:28	07:33 17:28 18:28	06:21 18:28 20:33	05:59 20:33 21:33	04:54 21:33 21:33	04:25 22:10 22:10	04:54 22:10 21:49	05:53 21:05 22:09	06:04 (B14) 06:11 (B14) 19:23	06:25 19:23 18:05	07:57 18:05 15:59	08:03 15:59 15:39
21	08:33 16:22 17:30	07:31 17:30 18:30	06:18 18:30 20:35	05:57 20:35 21:35	04:52 21:35 21:35	04:26 22:10 22:10	04:56 22:10 21:48	05:55 21:05 22:09	06:04 (B14) 06:11 (B14) 19:21	06:24 19:21 18:02	07:59 18:02 15:58	08:05 15:58 15:39
22	08:32 16:24 17:32	07:28 17:32 18:32	06:16 18:32 20:37	05:54 20:37 21:36	04:50 21:36 21:36	04:26 22:10 22:10	04:58 22:10 21:46	05:57 21:05 22:09	06:04 (B14) 06:11 (B14) 19:20	06:23 19:20 18:00	08:01 18:00 15:56	08:07 15:56 15:40
23	08:30 16:26 17:35	07:26 17:35 18:34	06:13 18:34 20:39	05:52 20:39 21:38	04:49 21:38 21:38	04:26 22:10 22:10	04:59 22:10 21:45	05:59 21:05 22:09	06:04 (B14) 06:11 (B14) 19:15	06:22 19:15 17:57	08:09 17:57 15:55	08:50 15:55 15:40
24	08:29 16:28 17:37	07:23 17:37 18:36	06:10 18:36 20:41	05:49 20:41 21:40	04:47 21:40 21:40	04:26 22:10 22:10	05:01 22:10 21:43	06:01 21:05 22:09	06:04 (B14) 06:11 (B14) 19:13	06:21 19:13 17:55	08:11 17:55 15:54	08:50 15:54 15:41
25	08:27 16:30 17:39	07:21 17:39 18:39	06:08 18:39 20:43	05:47 20:43 21:42	04:45 21:42 21:42	04:27 22:10 22:10	05:03 22:10 21:41	06:03 21:05 22:09	06:04 (B14) 06:11 (B14) 19:10	06:20 19:10 16:52	08:13 16:52 15:52	08:50 15:52 15:41
26	08:26 16:32 17:41	07:18 17:41 18:41	06:05 18:41 20:45	05:45 20:45 21:43	04:44 21:43 21:43	04:27 22:10 22:10	05:05 22:10 21:39	06:05 21:05 22:09	06:04 (B14) 06:11 (B14) 19:07	06:19 19:07 16:50	08:15 16:50 15:51	08:51 15:51 15:42
27	08:24 16:35 17:43	07:16 17:43 18:43	06:02 18:43 20:47	05:42 20:47 21:45	04:43 21:45 21:45	04:28 22:10 22:10	05:07 22:10 21:38	06:07 21:05 22:09	06:04 (B14) 06:11 (B14) 19:04	06:12 19:04 16:48	08:17 16:48 15:50	08:51 15:50 15:43
28	08:22 16:37 17:46	07:13 17:46 18:45	06:00 18:45 20:49	05:40 20:49 21:47	04:41 21:47 21:47	04:28 22:10 22:10	05:08 22:10 21:36	06:09 21:05 22:09	06:04 (B14) 06:11 (B14) 19:02	06:13 19:02 16:45	08:19 16:45 15:48	08:51 15:48 15:44
29	08:20 16:39 17:49	07:07 17:49 18:49	05:57 18:49 20:51	05:37 20:51 21:48	04:40 21:48 21:48	04:29 22:10 22:10	05:10 22:10 21:34	06:11 21:05 22:09	06:04 (B14) 06:11 (B14) 19:01	06:14 19:01 16:43	08:21 16:43 15:47	08:51 15:47 15:45
30	08:19 16:41 17:51	07:06 17:51 18:51	05:54 18:51 20:53	05:35 20:53 21:50	04:39 21:50 21:50	04:30 22:09 22:09	05:12 22:09 21:32	06:13 21:05 22:09	06:04 (B14) 06:11 (B14) 19:01	06:13 19:01 16:41	08:22 16:41 15:46	08:51 15:46 15:46
31	08:17 16:43	07:04 17:51	05:52 19:51	05:37 21:51	04:37 21:51	05:14 21:30	06:15 21:30	06:15 21:30	06:04 (B14) 06:11 (B14)	06:15 21:30	08:23 16:38	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case					231							
Sun reduction					0.57							
Oper. time red.					0.98							
Wind dir. red.					0.67							
Total reduction					0.37							
Total, real					86							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vecumi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (18)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:42 15:37
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:04	08:46 15:37
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:43		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vecveveri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (45)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	06:40 (B14) 21:53
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	06:40 (B14) 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 21:00	06:41 (B14) 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	06:42 (B14) 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	06:44 (B14) 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	06:45 (B14) 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	06:47 (B14) 22:00
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	06:50 (B14) 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	06:51 (B14) 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	06:52 (B14) 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	06:53 (B14) 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	06:54 (B14) 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	07:05 (B25) 20:17	05:07 21:20	06:55 (B14) 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	07:02 (B25) 20:20	05:05 21:22	06:56 (B14) 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	07:00 (B25) 20:22	05:03 21:24	06:57 (B14) 22:08
16	08:40 16:12	07:43 17:19	06:32 18:20	06:57 (B25) 20:24	05:01 21:25	06:58 (B14) 22:09
17	08:39 16:14	07:40 17:21	06:29 18:22	06:54 (B25) 20:26	04:59 21:27	06:59 (B14) 22:10
18	08:37 16:16	07:38 17:23	06:26 18:24	06:51 (B24) 20:28	04:57 21:29	06:42 (B14) 22:11
19	08:36 16:18	07:36 17:26	06:24 18:26	06:49 (B24) 20:30	04:55 21:31	06:41 (B14) 22:12
20	08:35 16:20	07:33 17:28	06:21 18:28	06:46 (B24) 20:33	04:54 21:33	05:25 (B22) 22:13
21	08:33 16:22	07:31 17:30	06:18 18:30	06:43 (B24) 20:35	04:52 21:35	05:24 (B22) 22:14
22	08:32 16:24	07:28 17:32	06:16 18:32	06:41 (B24) 20:37	04:50 21:36	05:22 (B22) 22:15
23	08:30 16:26	07:26 17:34	06:13 18:34	06:40 (B24) 20:39	04:48 21:38	05:21 (B22) 22:16
24	08:29 16:28	07:23 17:37	06:10 18:36	06:39 (B24) 20:41	04:47 21:40	05:19 (B22) 22:17
25	08:27 16:30	07:21 17:39	06:08 18:39	06:39 (B24) 20:43	04:45 21:42	05:18 (B22) 22:18
26	08:26 16:32	07:18 17:41	06:05 18:41	06:39 (B24) 20:45	04:44 21:43	05:17 (B22) 22:19
27	08:24 16:34	07:16 17:43	06:02 18:43	06:39 (B24) 20:47	04:42 21:45	05:16 (B22) 22:20
28	08:22 16:37	07:13 17:45	06:00 18:45	06:40 (B24) 20:49	04:41 21:47	05:14 (B22) 22:21
29	08:20 16:39	07:11 17:47	05:57 18:47	06:41 (B24) 20:51	04:40 21:48	05:13 (B22) 22:22
30	08:18 16:41	07:09 17:49	05:55 18:49	06:42 (B24) 20:53	04:38 21:50	05:13 (B22) 22:23
31	08:17 16:43	07:08 17:51	05:54 18:51	06:43 (B24) 20:54	04:37 21:51	05:13 (B22) 22:24
Potential sun hours	235	266	366	426	508	528
Total, worst case			291	595	349	539
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.64	0.66	0.66	0.67
Total reduction			0.26	0.32	0.37	0.37
Total, real			75	191	129	198

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vecveveri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (45)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September			October			November			December
1	04:30		05:21 (B22)	05:16			06:17			07:17		07:46 (B25)	07:23		08:24	
	22:09	18	05:39 (B22)	21:28			20:14			18:54	2	07:48 (B25)	16:36		15:45	
2	04:31		05:20 (B22)	05:18			06:19			07:19			07:25		08:26	
	22:08	19	05:39 (B22)	21:26			20:11			18:51			16:34		15:44	
3	04:32		05:20 (B22)	05:20			06:21			07:21			07:27		08:28	
	22:08	19	05:39 (B22)	21:24			20:09			18:48			16:32		15:43	
4	04:33		05:21 (B22)	05:22		07:04 (B14)	06:23			07:23			07:29		08:29	
	22:07	19	05:40 (B22)	21:22	2	07:06 (B14)	20:06			18:46			16:30		15:43	
5	04:34		05:21 (B22)	05:24			06:25			07:25			07:31		08:31	
	22:07	19	05:40 (B22)	21:19	13	07:12 (B14)	20:03			18:43			16:27		15:42	
6	04:35		05:21 (B22)	05:25			06:27			07:28			07:33		08:32	
	22:06	19	05:40 (B22)	21:17	18	07:13 (B14)	20:01			18:40			16:25		15:41	
7	04:36		05:21 (B22)	05:27			06:29			07:30			07:36		08:34	
	22:05	20	05:41 (B22)	21:15	21	07:15 (B14)	19:58			18:38			16:23		15:40	
8	04:37		05:21 (B22)	05:29			06:31			07:32			07:38		08:35	
	22:04	20	05:41 (B22)	21:13	25	07:17 (B14)	19:56			18:35			16:21		15:40	
9	04:38		05:21 (B22)	05:31			06:33			07:34			07:40		08:37	
	22:03	20	05:41 (B22)	21:11	27	07:18 (B14)	19:53			18:33			16:19		15:39	
10	04:40		05:21 (B22)	05:33			06:35			07:36			07:42		08:38	
	22:02	20	05:41 (B22)	21:08	29	07:19 (B14)	19:50			18:30			16:17		15:39	
11	04:41		05:22 (B22)	05:35			06:37			07:38			07:44		08:39	
	22:01	20	05:42 (B22)	21:06	30	07:20 (B14)	19:47			18:27			16:15		15:39	
12	04:42		05:22 (B22)	05:37			06:39			07:40			07:46		08:40	
	22:00	20	05:42 (B22)	21:04	32	07:20 (B14)	19:45			18:25			16:13		15:38	
13	04:44		05:21 (B22)	05:39			06:41		07:34 (B24)	07:42			07:49		08:42	
	21:59	21	05:42 (B22)	21:02	34	07:21 (B14)	19:42	10	07:44 (B24)	18:22			16:11		15:38	
14	04:45		05:21 (B22)	05:41			06:43		07:31 (B24)	07:44			07:51		08:43	
	21:58	21	05:42 (B22)	20:59	34	07:21 (B14)	19:39	15	07:46 (B24)	18:20			16:10		15:38	
15	04:46		05:23 (B22)	05:43			06:45		07:30 (B24)	07:46			07:53		08:44	
	21:57	19	05:42 (B22)	20:57	35	07:21 (B14)	19:37	17	07:47 (B24)	18:17			16:08		15:38	
16	04:48		05:24 (B22)	05:45			06:47		07:29 (B24)	07:48			07:55		08:45	
	21:55	18	05:42 (B22)	20:54	36	07:22 (B14)	19:34	19	07:48 (B24)	18:15			16:06		15:38	
17	04:49		05:25 (B22)	05:47			06:49		07:28 (B24)	07:50			07:57		08:46	
	21:54	16	05:41 (B22)	20:52	36	07:22 (B14)	19:31	20	07:48 (B24)	18:12			16:04		15:38	
18	04:51		05:27 (B22)	05:49			06:51		07:27 (B24)	07:52			07:59		08:46	
	21:52	15	05:42 (B22)	20:50	37	07:22 (B14)	19:29	21	07:48 (B24)	18:09			16:03		15:38	
19	04:53		05:28 (B22)	05:51			06:53		07:26 (B24)	07:55			08:01		08:47	
	21:51	13	05:41 (B22)	20:47	37	07:21 (B14)	19:26	22	07:48 (B24)	18:07			16:01		15:38	
20	04:54		05:30 (B22)	05:53			06:55		07:26 (B24)	07:57			08:03		08:48	
	21:49	11	05:41 (B22)	20:45	37	07:21 (B14)	19:23	21	07:47 (B24)	18:04			15:59		15:39	
21	04:56		05:31 (B22)	05:55			06:57		07:26 (B24)	07:59			08:05		08:48	
	21:48	9	05:40 (B22)	20:42	36	07:20 (B14)	19:21	21	07:47 (B24)	18:02			15:58		15:39	
22	04:58		05:33 (B22)	05:57			06:59		07:28 (B24)	08:01			08:07		08:49	
	21:46	7	05:40 (B22)	20:40	35	07:20 (B14)	19:18	18	07:46 (B24)	18:00			15:56		15:40	
23	04:59		05:34 (B22)	05:59			06:59		07:30 (B24)	08:03			08:09		08:49	
	21:45	4	05:38 (B22)	20:37	34	07:19 (B14)	19:15	20	07:50 (B25)	17:57			15:55		15:40	
24	05:01		05:36 (B22)	06:01			06:45 (B14)	07:03	07:32 (B24)	08:05			08:11		08:50	
	21:43	1	05:37 (B22)	20:35	34	07:19 (B14)	19:12	19	07:51 (B25)	17:55			15:53		15:41	
25	05:03			06:03			06:46 (B14)	07:05	07:34 (B24)	07:07			08:13		08:50	
	21:41			20:32	32		07:18 (B14)	19:10	07:52 (B25)	16:52			15:52		15:41	
26	05:05			06:05			06:46 (B14)	07:07	07:37 (B25)	07:10			08:15		08:51	
	21:39			20:30	31		07:17 (B14)	19:07	07:52 (B25)	16:50			15:51		15:42	
27	05:06			06:07			06:47 (B14)	07:09	07:38 (B25)	07:12			08:17		08:51	
	21:38			20:27	29		07:16 (B14)	19:04	07:52 (B25)	16:48			15:50		15:43	
28	05:08			06:09			06:47 (B14)	07:11	07:40 (B25)	07:14			08:19		08:51	
	21:36			20:24	26		07:13 (B14)	19:02	07:51 (B25)	16:45			15:48		15:44	
29	05:10			06:11			06:49 (B14)	07:13	07:42 (B25)	07:16			08:21		08:51	
	21:34			20:22	22		07:11 (B14)	18:59	07:51 (B25)	16:43			15:47		15:45	
30	05:12			06:13			06:51 (B14)	07:15	07:44 (B25)	07:18			08:22		08:51	
	21:32			20:19	18		07:09 (B14)	18:56	07:49 (B25)	16:41			15:46		15:46	
31	05:14			06:15			06:54 (B14)			07:20					08:51	
	21:30			20:17	12		07:06 (B14)			16:38					15:47	
Potential sun hours	529			469			385			324			247		216	
Total, worst case		388			792			295			2					
Sun reduction		0.49			0.50			0.43			0.26					
Oper. time red.		0.98			0.98			0.98			0.98					
Wind dir. red.		0.67			0.66			0.64			0.64					
Total reduction		0.32			0.32			0.27			0.16					
Total, real		125			253			79			0					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Viduslejas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (5)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	08:50 (B22) 17:48	07:11 19:53	06:49 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:23 16:36	08:25 (B22) 15:45
2	08:51 15:49	08:13 16:47	08:51 (B22) 17:50	07:08 19:55	06:46 20:58	05:30 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:23 (B22) 15:44
3	08:50 15:51	08:11 16:50	08:51 (B22) 17:52	07:06 19:57	06:43 21:00	05:28 21:55	04:34 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:23 (B22) 15:43
4	08:50 15:52	08:09 16:52	08:51 (B22) 17:54	07:03 19:59	06:41 21:02	05:26 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:22 (B22) 15:42
5	08:49 15:53	08:07 16:54	08:52 (B22) 17:56	07:01 19:56	06:38 20:01	05:23 21:04	04:32 21:58	05:23 22:07	06:25 21:20	07:25 18:43	07:31 16:27	08:22 (B22) 15:42
6	08:49 15:55	08:05 16:56	08:51 (B22) 17:58	06:58 20:03	06:35 21:06	05:21 21:59	04:31 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:21 (B22) 15:41
7	08:48 15:56	08:03 16:59	08:52 (B22) 18:01	06:55 20:06	06:33 21:08	05:19 22:00	04:36 22:05	05:27 21:15	06:29 20:01	07:30 18:38	07:36 16:23	08:21 (B22) 15:40
8	08:48 15:58	08:01 17:01	08:53 (B22) 18:03	06:53 20:08	06:30 21:10	05:17 22:01	04:37 22:04	05:29 21:13	06:31 20:06	07:32 18:35	07:38 16:21	08:22 (B22) 15:40
9	08:47 15:59	07:58 17:03	08:54 (B22) 18:05	06:50 20:10	06:28 21:12	05:15 22:02	04:38 22:03	05:31 21:11	06:33 20:03	07:34 18:32	07:40 16:19	08:21 (B22) 15:39
10	08:46 16:01	07:56 17:05	08:56 (B22) 18:07	06:47 20:12	06:25 21:14	05:13 22:03	04:39 22:02	05:33 21:09	06:35 20:01	07:36 18:30	07:42 16:17	08:22 (B22) 15:39
11	08:45 16:03	07:54 17:08	08:58 (B22) 18:09	06:45 20:14	06:22 21:16	05:11 22:04	04:41 22:01	05:35 21:06	06:37 20:01	07:38 18:27	07:44 16:15	08:22 (B22) 15:38
12	08:44 16:05	07:52 17:10	09:08 (B22) 18:11	06:42 20:16	06:20 21:18	05:08 22:05	04:42 22:00	05:37 21:04	06:39 20:01	07:40 18:25	07:46 16:13	08:23 (B22) 15:38
13	08:43 16:06	07:50 17:12	09:08 (B22) 18:13	06:40 20:18	06:17 21:20	05:06 22:06	04:43 22:01	05:39 21:02	06:41 20:01	07:42 18:22	07:49 16:11	08:24 (B22) 15:38
14	08:42 16:08	07:47 17:14	09:08 (B22) 18:15	06:37 20:20	06:15 21:22	05:05 22:07	04:45 21:58	05:41 20:59	06:43 20:01	07:44 18:20	07:51 16:09	08:26 (B22) 15:38
15	08:41 16:10	07:45 17:17	09:08 (B22) 18:18	06:34 20:22	06:12 21:24	05:03 22:07	04:46 21:57	05:43 20:57	06:45 20:01	07:46 18:17	07:53 16:08	08:29 (B22) 15:38
16	08:40 16:12	07:43 17:19	09:08 (B22) 18:20	06:32 20:24	06:09 21:26	05:01 22:08	04:48 21:55	05:45 20:54	06:47 20:01	07:48 18:14	07:55 16:06	08:31 (B22) 15:38
17	08:39 16:14	07:40 17:21	09:08 (B22) 18:22	06:29 20:26	06:07 21:27	04:59 22:09	04:49 21:54	05:47 20:52	06:49 20:01	07:50 18:12	07:57 16:04	08:33 (B22) 15:38
18	08:38 16:16	07:38 17:23	09:08 (B22) 18:24	06:26 20:28	06:04 21:29	04:57 22:09	04:51 21:53	05:49 20:50	06:51 20:01	07:52 18:09	07:59 16:02	08:37 (B22) 15:38
19	08:36 16:18	07:36 17:26	09:08 (B22) 18:26	06:24 20:31	06:02 21:31	04:55 22:09	04:52 21:51	05:51 20:47	06:53 20:01	07:55 18:07	08:01 16:01	08:42 (B22) 15:38
20	08:35 16:20	07:33 17:28	09:08 (B22) 18:28	06:21 20:33	05:59 21:33	04:53 22:10	04:54 21:50	05:53 20:45	06:55 20:01	07:57 18:04	08:03 15:59	08:48 (B22) 15:39
21	08:33 16:22	07:31 17:30	09:08 (B22) 18:30	06:18 20:35	05:57 21:35	04:52 22:10	04:56 21:48	05:55 20:42	06:57 20:01	07:59 18:02	08:05 15:58	08:49 (B22) 15:39
22	08:32 16:24	07:28 17:32	09:08 (B22) 18:32	06:16 20:37	05:54 21:37	04:50 22:10	04:57 21:46	05:57 20:40	06:59 20:01	08:01 17:59	08:07 15:56	08:49 (B22) 15:39
23	08:30 16:26	07:26 17:34	09:08 (B22) 18:34	06:13 20:39	05:52 21:38	04:48 22:10	04:59 21:45	05:59 20:37	07:01 20:01	08:03 17:57	08:09 15:55	08:50 (B22) 15:40
24	08:29 16:28	07:23 17:37	09:08 (B22) 18:36	06:10 20:41	05:49 21:40	04:47 22:10	04:59 21:43	06:01 20:35	07:03 20:01	08:05 17:55	08:11 15:53	08:51 (B22) 15:41
25	08:27 16:30	09:00 (B22) 09:04 (B22)	07:21 17:39	06:08 20:43	05:47 21:42	04:45 22:10	04:59 21:41	06:03 20:32	07:05 20:01	08:07 17:52	08:13 15:52	08:51 (B22) 15:41
26	08:26 16:32	08:58 (B22) 09:07 (B22)	07:18 17:41	06:05 20:45	05:44 21:43	04:44 22:10	04:59 21:39	06:05 20:30	07:07 20:01	08:09 17:50	08:15 15:51	08:51 (B22) 15:42
27	08:24 16:34	08:56 (B22) 09:08 (B22)	07:16 17:43	06:02 20:47	05:42 21:45	04:42 22:10	04:59 21:38	06:07 20:27	07:09 20:01	08:11 17:47	08:17 15:49	08:51 (B22) 15:43
28	08:22 16:36	08:54 (B22) 09:10 (B22)	07:13 17:45	05:59 20:49	05:40 21:47	04:41 22:10	04:58 21:36	06:09 20:24	07:11 20:01	08:13 17:45	08:19 15:48	08:51 (B22) 15:44
29	08:20 16:39	08:52 (B22) 09:11 (B22)	07:11 17:47	05:57 20:51	05:37 21:48	04:40 22:10	04:59 21:34	06:11 20:22	07:13 20:01	08:15 17:43	08:21 15:47	08:51 (B22) 15:45
30	08:19 16:41	08:52 (B22) 09:12 (B22)	07:11 17:47	05:54 20:53	05:35 21:50	04:38 22:09	04:59 21:32	06:13 20:19	07:15 20:01	08:18 17:41	08:22 15:46	08:51 (B22) 15:46
31	08:17 16:43	08:51 (B22) 09:12 (B22)	07:11 17:47	06:51 21:51	04:37 21:51	04:37 21:30	05:14 20:17	06:15 20:17	07:20 20:01	08:27 (B22) 08:38 (B22)	08:27 (B22) 15:46	08:51 (B22) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	101	213								11	302	
Sun reduction	0.13	0.20								0.26	0.08	
Oper. time red.	0.98	0.98								0.98	0.98	
Wind dir. red.	0.60	0.60								0.60	0.60	
Total reduction	0.08	0.12								0.15	0.05	
Total, real	8	25								2	15	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vijas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (29)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:49	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:44
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:24 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:26 20:04	07:26 18:43	07:31 16:28	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:33 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 20:04	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 20:06	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:32 21:11	06:33 20:06	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 20:06	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:23 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 20:06	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 20:06	07:40 18:25	07:46 16:13	08:40 15:39
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 20:06	07:42 18:22	07:49 16:12	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 20:06	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 20:06	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 20:06	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 20:06	07:50 18:12	07:57 16:04	08:46 15:38
18	08:37 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 20:06	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 20:06	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 20:06	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 20:06	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 20:06	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 20:06	08:03 18:00	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:50 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 20:06	08:05 18:00	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 20:06	08:07 18:00	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:06 20:30	07:07 20:06	08:08 18:00	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 20:06	08:12 18:00	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:24	07:11 20:06	08:14 18:00	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 20:06	08:16 18:00	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 20:06	08:18 18:00	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 18:00		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vilbaude - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (17)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:22 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:28 18:41	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:28 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:30 22:01	04:37 22:04	05:30 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:47 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:24	06:26 18:24	06:04 20:28	04:57 21:29	04:26 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	06:21 20:33	05:59 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vilniš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (138)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		13:29 (B22)	08:15		13:45 (B22)	07:11		13:45 (B22)	06:49		19:53	05:32					04:36
	15:48	55	14:30 (B14)	16:45	29	14:14 (B22)	17:47		14:14 (B22)	19:53		20:55	20:55					21:53
2	08:50		13:30 (B22)	08:13		13:47 (B22)	07:08		13:47 (B22)	06:46		20:50	05:30					04:35
	15:49	55	14:31 (B14)	16:47	26	14:13 (B22)	17:50		14:13 (B22)	19:55		20:57	20:57					21:54
3	08:50		13:30 (B22)	08:11		13:49 (B22)	07:06		13:49 (B22)	06:43		20:58	05:28					04:34
	15:51	54	14:30 (B14)	16:50	22	14:11 (B22)	17:52		14:11 (B22)	19:57		20:59	20:59					21:55
4	08:50		13:30 (B22)	08:09		13:53 (B22)	07:03		13:53 (B22)	06:41		20:56	05:26					04:33
	15:52	53	14:30 (B14)	16:52	16	14:09 (B22)	17:54		14:09 (B22)	19:59		21:02	21:02					21:57
5	08:49		13:31 (B22)	08:07		13:58 (B22)	07:00		13:58 (B22)	06:38		20:53	05:23			05:52 (B2)		04:32
	15:53	52	14:30 (B14)	16:54	7	14:05 (B22)	17:56		14:05 (B22)	20:01		21:04	21:04	2		05:54 (B2)		21:58
6	08:49		13:31 (B22)	08:05			06:58			06:35		20:51	05:21			05:50 (B2)		04:31
	15:55	51	14:30 (B14)	16:56			17:58			20:03		21:06	21:06	5		05:55 (B2)		21:59
7	08:48		13:31 (B22)	08:03			06:55			06:33		20:59	05:19			05:48 (B2)		04:30
	15:56	48	14:29 (B14)	16:59			18:00			20:05		21:08	21:08	8		05:56 (B2)		22:00
8	08:47		13:31 (B22)	08:00			06:53			06:30		20:57	05:17			05:46 (B2)		04:29
	15:58	43	14:14 (B22)	17:01			18:03			20:07		21:10	21:10	11		05:57 (B2)		22:01
9	08:47		13:31 (B22)	07:58			06:50			06:27		20:55	05:15			05:44 (B2)		04:28
	15:59	43	14:14 (B22)	17:03			18:05			20:10	4	06:57 (B4)	21:12	13		05:57 (B2)		22:02
10	08:46		13:32 (B22)	07:56			06:47			06:25		20:53	05:13			05:42 (B2)		04:28
	16:01	43	14:15 (B22)	17:05			18:07			20:12	9	06:59 (B4)	21:14	15		05:57 (B2)		22:03
11	08:45		13:32 (B22)	07:54			06:45			06:22		20:50	05:10			05:40 (B2)		04:27
	16:03	44	14:16 (B22)	17:08			18:09			20:14	13	07:01 (B4)	21:16	17		05:57 (B2)		22:04
12	08:44		13:32 (B22)	07:52			06:42			06:20		20:58	05:08			05:39 (B2)		04:27
	16:04	43	14:15 (B22)	17:10			18:11			20:16	16	07:01 (B4)	21:18	18		05:57 (B2)		22:05
13	08:43		13:32 (B22)	07:49			06:39			06:17		20:56	05:06			05:39 (B2)		04:26
	16:06	44	14:16 (B22)	17:12			18:13			20:18	19	07:02 (B4)	21:20	17		05:56 (B2)		22:06
14	08:42		13:33 (B22)	07:47			06:37			06:14		20:54	05:04			05:40 (B2)		04:26
	16:08	44	14:17 (B22)	17:14			18:15			20:20	21	07:02 (B4)	21:22	17		05:57 (B2)		22:07
15	08:41		13:33 (B22)	07:45			06:34			06:12		20:52	05:02			05:40 (B2)		04:26
	16:10	44	14:17 (B22)	17:17			18:17			20:22	22	07:03 (B4)	21:24	16		05:56 (B2)		22:07
16	08:40		13:33 (B22)	07:43			06:31			06:09		20:51	05:01			05:41 (B2)		04:25
	16:12	45	14:18 (B22)	17:19			18:20			20:24	21	07:02 (B4)	21:25	14		05:55 (B2)		22:08
17	08:39		13:33 (B22)	07:40			06:29			06:07		20:59	04:59			05:42 (B2)		04:25
	16:14	44	14:17 (B22)	17:21			18:22			20:26	21	07:02 (B4)	21:27	13		05:55 (B2)		22:08
18	08:37		13:34 (B22)	07:38			06:26			06:04		20:57	04:57			05:43 (B2)		04:25
	16:16	44	14:18 (B22)	17:23			18:24			20:28	20	07:01 (B4)	21:29	11		05:54 (B2)		22:09
19	08:36		13:34 (B22)	07:35			06:23			06:02		20:56	04:55			05:43 (B2)		04:25
	16:18	44	14:18 (B22)	17:25			18:26			20:30	19	07:00 (B4)	21:31	9		05:52 (B2)		22:09
20	08:35		13:35 (B22)	07:33			06:21			05:59		20:54	04:53			05:46 (B2)		04:25
	16:20	44	14:19 (B22)	17:28			18:28			20:32	18	06:59 (B4)	21:33	5		05:51 (B2)		22:10
21	08:33		13:36 (B22)	07:31			06:18			05:57		20:52	04:52					04:25
	16:22	43	14:19 (B22)	17:30			18:30	2	06:43 (B15)	20:35	15	06:58 (B4)	21:35					22:10
22	08:32		13:36 (B22)	07:28			06:15			06:41 (B15)	05:54	06:44 (B4)	04:50					04:25
	16:24	43	14:19 (B22)	17:32			18:32	6	06:47 (B15)	20:37	12	06:56 (B4)	21:36					22:10
23	08:30		13:36 (B22)	07:26			06:13			06:38 (B15)	05:52	06:46 (B4)	04:48					04:26
	16:26	43	14:19 (B22)	17:34			18:34	9	06:47 (B15)	20:39	6	06:52 (B4)	21:38					22:10
24	08:29		13:37 (B22)	07:23			06:10			06:35 (B15)	05:49		04:47					04:26
	16:28	41	14:18 (B22)	17:37			18:36	12	06:47 (B15)	20:41		21:40						22:10
25	08:27		13:38 (B22)	07:21			06:07			06:32 (B15)	05:47		04:45					04:26
	16:30	41	14:19 (B22)	17:39			18:38	14	06:46 (B15)	20:43		21:42						22:10
26	08:25		13:39 (B22)	07:18			06:05			06:32 (B15)	05:44		04:44					04:27
	16:32	40	14:19 (B22)	17:41			18:40	14	06:46 (B15)	20:45		21:43						22:10
27	08:24		13:40 (B22)	07:16			06:02			06:32 (B15)	05:42		04:42					04:27
	16:34	38	14:18 (B22)	17:43			18:43	13	06:45 (B15)	20:47		21:45						22:10
28	08:22		13:41 (B22)	07:13			05:59			06:32 (B15)	05:40		04:41					04:28
	16:36	37	14:18 (B22)	17:45			18:45	11	06:43 (B15)	20:49		21:47						22:10
29	08:20		13:42 (B22)				06:57			07:35 (B15)	05:37		04:39					04:28
	16:39	35	14:17 (B22)				19:47	6	07:41 (B15)	20:51		21:48						22:10
30	08:18		13:43 (B22)				06:54			05:35		20:53	04:38					04:29
	16:41	34	14:17 (B22)				19:49						21:50					22:09
31	08:17		13:43 (B22)				06:51						04:37					
	16:43	32	14:15 (B22)				19:51						21:51					
Potential sun hours	235			266			366			426			508					529
Total, worst case	1364			100			87			236			191					
Sun reduction	0.13			0.20			0.41			0.50			0.57					
Oper. time red.	0.98			0.98			0.98			0.98			0.98					
Wind dir. red.	0.65			0.65			0.65			0.66			0.67					
Total reduction	0.08			0.13			0.26			0.32			0.37					
Total, real	116			13			23			75			71					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vilniš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (138)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	05:16	05:50 (B2)	06:17	06:47 (B4)	07:17	07:23			08:24	13:14 (B22)
	22:09	21:28	17 06:07 (B2)	20:14	13 07:00 (B4)	18:54	16:36			15:45	13:58 (B22)
2	04:31	05:17	05:51 (B2)	06:19	06:49 (B4)	07:19	07:25			08:26	13:15 (B22)
	22:08	21:26	16 06:07 (B2)	20:11	9 06:58 (B4)	18:51	16:34			15:44	13:58 (B22)
3	04:32	05:19	05:53 (B2)	06:21	06:51 (B4)	07:21	07:27			08:28	13:14 (B22)
	22:08	21:24	14 06:07 (B2)	20:09	4 06:55 (B4)	18:48	16:31			15:43	13:58 (B22)
4	04:33	05:21	05:55 (B2)	06:23		07:23	07:29			08:29	13:15 (B22)
	22:07	21:22	12 06:07 (B2)	20:06		18:46	16:29			15:42	13:58 (B22)
5	04:34	05:23	05:56 (B2)	06:25		07:25	07:31			08:31	13:16 (B22)
	22:07	21:19	10 06:06 (B2)	20:03		18:43	16:27			15:42	14:13 (B14)
6	04:35	05:25	05:58 (B2)	06:27		07:27	07:33	13:27 (B22)		08:32	13:17 (B22)
	22:06	21:17	7 06:05 (B2)	20:01		18:40	16:25	8 13:35 (B22)		15:41	14:16 (B14)
7	04:36	05:27	06:00 (B2)	06:29		07:29	07:36	13:22 (B22)		08:34	13:17 (B22)
	22:05	21:15	4 06:04 (B2)	19:58		18:38	16:23	17 13:39 (B22)		15:40	14:16 (B14)
8	04:37	05:29		06:31		07:32	07:38	13:20 (B22)		08:35	13:18 (B22)
	22:04	21:13		19:55		18:35	16:21	22 13:42 (B22)		15:40	14:18 (B14)
9	04:38	05:31		06:33		07:34	07:40	13:18 (B22)		08:37	13:18 (B22)
	22:03	21:11		19:53		18:32	16:19	26 13:44 (B22)		15:39	14:19 (B14)
10	04:39	05:33		06:35		07:36	07:42	13:16 (B22)		08:38	13:19 (B22)
	22:02	21:08		19:50		18:30	16:17	29 13:45 (B22)		15:39	14:20 (B14)
11	04:41	05:35		06:37		07:38	07:44	13:15 (B22)		08:39	13:19 (B22)
	22:01	21:06		19:47		18:27	16:15	32 13:47 (B22)		15:38	14:20 (B14)
12	04:42	05:37		06:39		07:40	07:46	13:14 (B22)		08:40	13:20 (B22)
	22:00	21:04		19:45		18:25	16:13	34 13:48 (B22)		15:38	14:22 (B14)
13	04:43	05:39		06:41		07:42	07:49	13:14 (B22)		08:42	13:21 (B22)
	21:59	21:01		19:42		18:22	16:11	35 13:49 (B22)		15:38	14:22 (B14)
14	04:45	05:41		06:43	07:26 (B15)	07:44	07:51	13:13 (B22)		08:43	13:21 (B22)
	21:58	20:59		19:39	4 07:30 (B15)	18:19	16:09	37 13:50 (B22)		15:38	14:23 (B14)
15	04:46	05:43		06:45	07:23 (B15)	07:46	07:53	13:12 (B22)		08:44	13:22 (B22)
	21:57	20:57		19:37	10 07:33 (B15)	18:17	16:08	38 13:50 (B22)		15:38	14:23 (B14)
16	04:48	05:45		06:47	07:21 (B15)	07:48	07:55	13:12 (B22)		08:45	13:22 (B22)
	21:55	20:54		19:34	13 07:34 (B15)	18:14	16:06	40 13:52 (B22)		15:38	14:24 (B14)
17	04:49	05:47		06:49	07:20 (B15)	07:50	07:57	13:11 (B22)		08:45	13:23 (B22)
	21:54	20:52		19:31	14 07:34 (B15)	18:12	16:04	41 13:52 (B22)		15:38	14:25 (B14)
18	04:51	05:49		06:51	07:20 (B15)	07:52	07:59	13:11 (B22)		08:46	13:24 (B22)
	21:52	20:49		19:29	15 07:35 (B15)	18:09	16:02	41 13:52 (B22)		15:38	14:25 (B14)
19	04:52	05:51		06:53	07:22 (B15)	07:54	08:01	13:11 (B22)		08:47	13:23 (B22)
	21:51	20:47		19:26	12 07:34 (B15)	18:07	16:01	43 13:54 (B22)		15:38	14:25 (B14)
20	04:54	05:53	06:51 (B4)	06:55	07:24 (B15)	07:57	08:03	13:11 (B22)		08:48	13:24 (B22)
	21:49	20:45	8 06:59 (B4)	19:23	10 07:34 (B15)	18:04	15:59	43 13:54 (B22)		15:39	14:26 (B14)
21	04:56	05:55	06:49 (B4)	06:57	07:26 (B15)	07:59	08:05	13:11 (B22)		08:48	13:25 (B22)
	21:48	20:42	12 07:01 (B4)	19:20	7 07:33 (B15)	18:02	15:58	43 13:54 (B22)		15:39	14:27 (B14)
22	04:57	05:57	06:47 (B4)	06:59	07:27 (B15)	08:01	08:07	13:11 (B22)		08:49	13:25 (B22)
	21:46	20:40	16 07:03 (B4)	19:18	3 07:30 (B15)	17:59	15:56	44 13:55 (B22)		15:39	14:27 (B14)
23	04:59	05:59	06:46 (B4)	07:01		08:03	08:09	13:11 (B22)		08:49	13:26 (B22)
	21:45	20:37	18 07:04 (B4)	19:15		17:57	15:55	44 13:55 (B22)		15:40	14:28 (B14)
24	05:01	06:01	06:45 (B4)	07:03		08:05	08:11	13:11 (B22)		08:50	13:26 (B22)
	21:43	7 06:02 (B2)	20:35	19 07:04 (B4)	19:12	17:55	15:53	44 13:55 (B22)		15:40	14:28 (B14)
25	05:03	05:53 (B2)	06:03	06:44 (B4)	07:05	07:07	08:13	13:11 (B22)		08:50	13:27 (B22)
	21:41	10 06:03 (B2)	20:32	21 07:05 (B4)	19:10	16:52	15:52	45 13:56 (B22)		15:41	14:28 (B14)
26	05:04	05:52 (B2)	06:05	06:43 (B4)	07:07	07:09	08:15	13:12 (B22)		08:51	13:27 (B22)
	21:39	13 06:05 (B2)	20:29	21 07:04 (B4)	19:07	16:50	15:51	44 13:56 (B22)		15:42	14:29 (B14)
27	05:06	05:52 (B2)	06:07	06:42 (B4)	07:09	07:12	08:17	13:13 (B22)		08:51	13:27 (B22)
	21:37	14 06:06 (B2)	20:27	22 07:04 (B4)	19:04	16:47	15:49	44 13:57 (B22)		15:43	14:29 (B14)
28	05:08	05:51 (B2)	06:09	06:42 (B4)	07:11	07:14	08:19	13:13 (B22)		08:51	13:28 (B22)
	21:36	15 06:06 (B2)	20:24	21 07:03 (B4)	19:02	16:45	15:48	44 13:57 (B22)		15:44	14:29 (B14)
29	05:10	05:50 (B2)	06:11	06:42 (B4)	07:13	07:16	08:21	13:13 (B22)		08:51	13:28 (B22)
	21:34	17 06:07 (B2)	20:22	21 07:03 (B4)	18:59	16:43	15:47	44 13:57 (B22)		15:45	14:30 (B14)
30	05:12	05:50 (B2)	06:13	06:43 (B4)	07:15	07:18	08:22	13:14 (B22)		08:51	13:29 (B22)
	21:32	17 06:07 (B2)	20:19	19 07:02 (B4)	18:56	16:40	15:46	44 13:58 (B22)		15:46	14:30 (B14)
31	05:14	05:50 (B2)	06:15	06:45 (B4)		07:20				08:51	13:29 (B22)
	21:30	18 06:08 (B2)	20:17	16 07:01 (B4)		16:38				15:47	14:31 (B14)
Potential sun hours	529	469		385		324	247			216	
Total, worst case	111	294		114			926			1669	
Sun reduction	0.49	0.50		0.43			0.08			0.07	
Oper. time red.	0.98	0.98		0.98			0.98			0.98	
Wind dir. red.	0.67	0.66		0.65			0.65			0.66	
Total reduction	0.32	0.32		0.27			0.05			0.04	
Total, real	36	94		31			49			75	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vizbuli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (7)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	08:23 (B22) 08:25 (B22)	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	05:35 22:01	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	08:20 (B22) 08:26 (B22)	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	05:07 22:00	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	08:18 (B22) 08:27 (B22)	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	05:39 21:59	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	08:15 (B22) 08:26 (B22)	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	08:13 (B22) 08:27 (B22)	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	08:12 (B22) 08:27 (B22)	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	05:45 20:55	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	08:12 (B22) 08:26 (B22)	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	08:13 (B22) 08:26 (B22)	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	08:14 (B22) 08:24 (B22)	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	08:16 (B22) 08:21 (B22)	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:46 (B22) 08:54 (B22)	08:07 15:56
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:44 (B22) 08:55 (B22)	08:09 15:55
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:42 (B22) 08:56 (B22)	08:11 15:53
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	07:41 (B22) 07:56 (B22)	08:13 15:52
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:10 16:50	07:41 (B22) 07:57 (B22)	08:15 15:51
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	07:43 (B22) 07:56 (B22)	08:17 15:49
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	07:46 (B22) 07:57 (B22)	08:19 15:48
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	07:48 (B22) 07:56 (B22)	08:21 15:47
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	07:50 (B22) 07:55 (B22)	08:23 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38	07:53 (B22) 07:54 (B22)	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		99										
Sun reduction		0.20								102		
Oper. time red.		0.98								0.26		
Wind dir. red.		0.62								0.98		
Total reduction		0.12								0.62		
Total, real		12								0.16		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vizuli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (74)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	08:45 (B14)	07:11	06:49	05:33
	15:48	16:45	4 08:49 (B14)	17:48	19:53	20:56
2	08:51	08:13	08:43 (B14)	07:08	06:46	05:30
	15:49	16:48	7 08:50 (B14)	17:50	19:55	20:58
3	08:50	08:11	08:41 (B14)	07:06	06:44	05:28
	15:51	16:50	10 08:51 (B14)	17:52	19:57	21:00
4	08:50	08:09	08:39 (B14)	07:03	06:41	05:26
	15:52	16:52	13 08:52 (B14)	17:54	19:59	21:02
5	08:49	08:07	08:37 (B14)	07:01	06:38	05:24
	15:53	16:54	16 08:53 (B14)	17:56	20:01	21:04
6	08:49	08:05	08:34 (B14)	06:58	06:36	05:21
	15:55	16:57	18 08:52 (B14)	17:58	20:04	21:06
7	08:48	08:03	08:35 (B14)	06:55	06:33	05:19
	15:56	16:59	18 08:53 (B14)	18:01	20:06	21:08
8	08:48	08:01	08:35 (B14)	06:53	06:30	05:17
	15:58	17:01	18 08:53 (B14)	18:03	20:08	21:10
9	08:47	07:58	08:35 (B14)	06:50	06:28	05:15
	16:00	17:03	17 08:52 (B14)	18:05	20:10	21:12
10	08:46	07:56	08:36 (B14)	06:48	06:25	05:13
	16:01	17:05	16 08:52 (B14)	18:07	20:12	21:14
11	08:45	07:54	08:38 (B14)	06:45	06:22	05:11
	16:03	17:08	13 08:51 (B14)	18:09	20:14	21:16
12	08:44	07:52	08:38 (B14)	06:42	06:20	05:09
	16:05	17:10	11 08:49 (B14)	18:11	20:16	21:18
13	08:43	07:50	08:42 (B14)	06:40	07:05 (B22)	06:17
	16:06	17:12	5 08:47 (B14)	18:13	2 07:07 (B22)	06:18
14	08:42	07:47	06:37	2 07:02 (B22)	06:15	05:05
	16:08	17:14	18:16	6 07:08 (B22)	20:20	21:22
15	08:41	07:45	06:34	07:00 (B22)	06:12	05:03
	16:10	17:17	18:18	9 07:09 (B22)	20:22	21:24
16	08:40	07:43	06:32	06:57 (B22)	06:09	05:01
	16:12	17:19	18:20	12 07:09 (B22)	20:24	21:26
17	08:39	07:40	06:29	06:54 (B22)	06:07	04:59
	16:14	17:21	18:22	14 07:08 (B22)	20:26	21:27
18	08:38	07:38	06:26	06:53 (B22)	06:04	04:57
	16:16	17:23	18:24	15 07:08 (B22)	20:28	21:29
19	08:36	07:36	06:24	06:53 (B22)	06:02	04:55
	16:18	17:26	18:26	14 07:07 (B22)	20:31	21:31
20	08:35	07:33	06:21	06:53 (B22)	05:59	04:53
	16:20	17:28	18:28	13 07:06 (B22)	20:33	21:33
21	08:33	07:31	06:18	06:55 (B22)	05:57	04:52
	16:22	17:30	18:30	8 07:03 (B22)	20:35	21:35
22	08:32	07:28	06:16	05:54	04:50	04:26
	16:24	17:32	18:32	20:37	21:37	22:10
23	08:30	07:26	06:13	05:52	04:48	04:26
	16:26	17:34	18:34	20:39	21:38	22:10
24	08:29	07:23	06:10	05:49	04:47	04:26
	16:28	17:37	18:36	20:41	21:40	22:10
25	08:27	07:21	06:08	05:47	04:45	04:27
	16:30	17:39	18:39	20:43	21:42	22:10
26	08:26	07:18	06:05	05:44	04:44	04:27
	16:32	17:41	18:41	20:45	21:43	22:10
27	08:24	07:16	06:02	05:42	04:42	04:27
	16:34	17:43	18:43	20:47	21:45	22:10
28	08:22	07:13	06:00	05:40	04:41	04:28
	16:37	17:45	18:45	20:49	21:47	22:10
29	08:20		06:57	05:37	04:40	04:29
	16:39		19:47	20:51	21:48	22:10
30	08:19		06:54	05:35	04:38	04:29
	16:41		19:49	20:53	21:50	22:09
31	08:17		06:52		04:37	
	16:43		19:51		21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case		166	93			
Sun reduction		0.20	0.41			
Oper. time red.		0.98	0.98			
Wind dir. red.		0.61	0.64			
Total reduction		0.12	0.25			
Total, real		20	24			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vizuli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (74)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:06 (B14) 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:05 (B14) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:05 (B14) 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:04 (B14) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:05 (B14) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:07 (B14) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:09 (B14) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:12 (B14) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:14 (B14) 15:39
10	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:17 (B14) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:20 (B14) 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:22 (B14) 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:24 (B14) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:26 (B14) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:28 (B14) 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:30 (B14) 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:32 (B14) 15:38
18	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:34 (B14) 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:36 (B14) 15:38
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:38 (B14) 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:40 (B14) 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:42 (B14) 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:44 (B14) 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:46 (B14) 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:48 (B14) 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:50 (B14) 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:17 15:50	08:52 (B14) 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:46	08:19 15:48	08:54 (B14) 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:44	08:21 15:47	08:56 (B14) 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:42	08:23 15:46	08:58 (B14) 15:46
31	05:14 21:30	06:15 20:17		08:19 17:40	08:25 15:45	09:00 (B14) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			96	32	137	
Sun reduction			0.43	0.26	0.08	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.64	0.61	0.61	
Total reduction			0.26	0.15	0.05	
Total, real			25	5	7	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vuš karnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (219)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

		January	February		March	April	May	June	July	August	September	October		November	December
	1	08:50 15:47	08:14 16:45		07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:14	07:17 18:53		07:22 16:35	08:24 15:44
	2	08:50 15:49	08:12 16:47		07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11	07:19 18:50		07:24 16:33	08:26 15:43
	3	08:50 15:50	08:10 16:49		07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48		07:27 16:31	08:27 15:43
	4	08:49 15:51	08:08 16:51		07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45		07:29 16:29	08:29 15:42
	5	08:49 15:53	08:06 16:54		07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:42		07:31 16:27	08:30 15:41
	6	08:48 15:54	08:04 16:56		06:57 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40		07:33 16:25	08:32 15:40
	7	08:48 15:56	08:02 16:58		06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37		07:35 16:22	08:33 15:40
	8	08:47 15:57	08:00 17:00		06:52 18:02	06:30 20:07	05:16 21:09	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35		07:37 16:20	08:35 15:39
	9	08:46 15:59	07:58 17:03		06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32		07:40 16:18	08:36 15:39
	10	08:46 16:00	07:56 17:05		06:47 18:06	06:24 20:11	05:12 21:13	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29		07:42 16:16	08:38 15:38
	11	08:45 16:02	07:54 17:07		06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27		07:44 16:14	08:39 15:38
	12	08:44 16:04	07:51 17:09		06:42 18:11	06:19 20:15	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:03	06:39 19:44	07:39 18:24		07:46 16:13	08:40 15:38
	13	08:43 16:06	07:49 17:12		06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:41 18:22		07:48 16:11	08:41 15:37
	14	08:42 16:07	07:47 17:14		06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	8	17:20 (B3) 17:18 (B3)	07:50 07:52
	15	08:41 16:09	07:44 17:16		06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:16	12	17:28 (B3) 17:30 (B3)	08:43 15:37
	16	08:40 16:11	07:42 17:18		06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:33	07:48 18:14	15	17:16 (B3) 17:31 (B3)	08:44 15:37
	17	08:38 16:13	07:40 17:20	1	16:49 (B3) 16:50 (B3)	06:28 18:21	06:06 20:26	04:58 21:27	04:25 22:08	05:49 21:54	05:47 20:52	07:49 18:11	16	17:16 (B3) 17:32 (B3)	07:57 16:03
	18	08:37 16:15	07:37 17:23	6	16:46 (B3) 16:52 (B3)	06:26 18:23	06:04 20:28	04:56 21:29	04:24 22:09	05:49 21:52	06:51 19:28	07:52 18:09	17	17:15 (B3) 17:32 (B3)	07:59 16:02
	19	08:36 16:17	07:35 17:25	10	16:44 (B3) 16:54 (B3)	06:23 18:25	06:01 20:30	04:54 21:31	04:24 22:09	05:51 21:51	06:53 19:25	07:54 18:06	18	17:14 (B3) 17:32 (B3)	08:01 16:00
	20	08:34 16:19	07:33 17:27	13	16:44 (B3) 16:57 (B3)	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:09	05:53 21:49	06:55 19:23	07:56 18:04	17	17:14 (B3) 17:31 (B3)	08:03 15:59
	21	08:33 16:21	07:30 17:29	16	16:43 (B3) 16:59 (B3)	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:10	05:55 21:48	06:57 19:20	07:58 18:01	14	17:15 (B3) 17:29 (B3)	08:05 15:57
	22	08:32 16:23	07:28 17:32	18	16:43 (B3) 17:01 (B3)	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	05:57 21:46	06:59 19:17	08:01 17:59	11	17:15 (B3) 17:26 (B3)	08:07 15:56
	23	08:30 16:25	07:25 17:34	18	16:43 (B3) 17:01 (B3)	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	05:59 20:37	07:01 19:15	08:03 17:56	8	17:15 (B3) 17:23 (B3)	08:09 15:54
	24	08:28 16:27	07:23 17:36	17	16:44 (B3) 17:01 (B3)	06:10 18:36	05:49 20:40	04:46 21:40	04:25 22:10	06:01 21:43	07:03 19:12	08:05 17:54	5	17:17 (B3) 17:22 (B3)	08:11 15:53
	25	08:27 16:29	07:20 17:38	16	16:44 (B3) 17:00 (B3)	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10	06:03 20:32	07:05 19:09	08:07 16:52		08:13 15:51	08:50 15:41
	26	08:25 16:32	07:18 17:40	14	16:44 (B3) 16:58 (B3)	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	06:05 20:29	07:07 19:07	08:09 16:49		08:15 15:50	08:50 15:41
	27	08:23 16:34	07:15 17:43	11	16:46 (B3) 16:57 (B3)	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	06:07 21:37	07:09 20:27	08:11 16:47		08:17 15:49	08:50 15:42
	28	08:22 16:36	07:13 17:45	5	16:49 (B3) 16:54 (B3)	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	06:09 21:35	07:11 19:01	08:13 16:45		08:18 15:48	08:51 15:43
	29	08:20 16:38				06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:09 21:33	06:11 20:21	07:13 18:58		08:20 15:46	08:51 15:44
	30	08:18 16:40				06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:31	06:13 20:19	07:18 18:56		08:22 15:45	08:51 15:45
	31	08:16 16:42				06:51 19:50		04:36 21:51		05:13 21:29	06:15 20:16	07:20 16:38		08:51 15:46	
Potential sun hours		235	266		366	426	508	529	529	469	385	324		247	216
Total, worst case			145										141		
Sun reduction			0.20										0.26		
Oper. time red.			0.98										0.98		
Wind dir. red.			0.67										0.67		
Total reduction			0.13										0.17		
Total, real			19										24		

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Valodzes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (72)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April		May		June
1	08:51 15:48	08:15 16:45	07:11 17:48	5	07:37 (B24) 07:42 (B24)	06:49 19:53	05:33 20:55	06:00 (B22) 19 06:19 (B22)	04:36 21:53
2	08:50 15:50	08:13 16:48	07:08 17:50	9	07:34 (B24) 07:43 (B24)	06:46 19:55	05:30 20:58	05:58 (B22) 21 06:19 (B22)	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	12	07:32 (B24) 07:44 (B24)	06:43 19:57	05:28 21:00	05:58 (B22) 21 06:19 (B22)	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	15	07:29 (B24) 07:44 (B24)	06:41 19:59	05:26 21:02	05:59 (B22) 20 06:19 (B22)	04:33 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	18	07:26 (B24) 07:44 (B24)	06:38 20:01	05:24 21:04	05:59 (B22) 19 06:18 (B22)	04:32 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	19	07:25 (B24) 07:44 (B24)	06:36 20:03	05:21 21:06	05:59 (B22) 19 06:18 (B22)	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	19	07:25 (B24) 07:44 (B24)	06:33 20:06	05:19 21:08	06:00 (B22) 17 06:17 (B22)	04:30 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03	17	07:25 (B24) 07:42 (B24)	06:30 20:08	05:17 21:10	06:01 (B22) 15 06:16 (B22)	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	16	07:26 (B24) 07:42 (B24)	06:28 20:10	05:15 21:12	06:02 (B22) 13 06:15 (B22)	04:29 22:02
10	08:46 16:01	07:56 17:05	06:48 18:07	25	07:15 (B14) 07:40 (B24)	06:25 20:12	05:13 21:14	06:03 (B22) 10 06:13 (B22)	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	27	07:11 (B14) 07:38 (B24)	06:22 20:14	05:11 21:16	06:06 (B22) 3 06:09 (B22)	04:27 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	22	07:10 (B14) 07:32 (B14)	06:20 20:16	05:09 21:18		04:27 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	25	07:08 (B14) 07:33 (B14)	06:17 20:18	05:07 21:20		04:27 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	27	07:06 (B14) 07:33 (B14)	06:15 20:20	05:05 21:22		04:26 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	30	07:05 (B14) 07:35 (B14)	06:12 20:22	05:03 21:24		04:26 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	31	07:04 (B14) 07:35 (B14)	06:09 20:24	05:01 21:25		04:26 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	32	07:03 (B14) 07:35 (B14)	06:07 20:26	04:59 21:27		04:25 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	32	07:02 (B14) 07:34 (B14)	06:04 20:28	04:57 21:29		04:25 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	32	07:03 (B14) 07:35 (B14)	06:02 20:31	04:55 21:31		04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	32	07:02 (B14) 07:34 (B14)	05:59 20:33	04:53 21:33		04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	31	07:02 (B14) 07:33 (B14)	05:57 20:35	04:52 21:35		04:25 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	31	07:02 (B14) 07:33 (B14)	05:54 20:37	04:50 21:37		04:26 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	30	07:02 (B14) 07:32 (B14)	05:52 20:39	04:48 21:38		04:26 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	29	07:02 (B14) 07:31 (B14)	05:49 20:41	04:47 21:40		04:26 22:10
25	08:27 16:30	07:21 17:39	06:08 18:39	26	07:04 (B14) 07:30 (B14)	05:47 20:43	04:45 21:42	06:14 (B22) 1 06:15 (B22)	04:27 22:10
26	08:26 16:32	07:18 17:41	06:05 18:41	24	07:04 (B14) 07:28 (B14)	05:44 20:45	04:44 21:43	06:11 (B22) 5 06:16 (B22)	04:27 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	21	07:05 (B14) 07:26 (B14)	05:42 20:47	04:42 21:45	06:09 (B22) 9 06:18 (B22)	04:27 22:10
28	08:22 16:37	07:13 17:45	06:00 18:45	17	07:07 (B14) 07:24 (B14)	05:40 20:49	04:41 21:47	06:07 (B22) 12 06:19 (B22)	04:28 22:10
29	08:20 16:39		06:57 19:47	10	08:10 (B14) 08:20 (B14)	05:37 20:51	04:40 21:48	06:05 (B22) 14 06:19 (B22)	04:29 22:10
30	08:18 16:41		06:54 19:49			05:35 20:53	04:38 21:50	06:03 (B22) 17 06:20 (B22)	04:29 22:09
31	08:17 16:43		06:51 19:51				04:37 21:51		
Potential sun hours	235	266	366		426		508		528
Total, worst case			664		58		177		
Sun reduction			0.41		0.50		0.57		
Oper. time red.			0.98		0.98		0.98		
Wind dir. red.			0.63		0.66		0.66		
Total reduction			0.25		0.32		0.37		
Total, real			167		19		65		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Valodzes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (72)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:48 (B14)	07:23
	22:09	21:28	20:14	18:54	24	08:12 (B14)
2	04:31	05:18	06:15 (B22)	07:19	07:49 (B14)	07:25
	22:08	21:26	7	18:51	26	08:15 (B24)
3	04:32	05:20	06:13 (B22)	07:21	07:51 (B14)	07:27
	22:08	21:24	11	18:48	26	08:17 (B24)
4	04:33	05:22	06:12 (B22)	07:23	07:55 (B14)	07:29
	22:07	21:22	14	18:46	23	08:19 (B24)
5	04:34	05:24	06:11 (B22)	07:25	08:02 (B24)	07:31
	22:07	21:20	16	18:43	17	08:19 (B24)
6	04:35	05:25	06:09 (B22)	07:28	08:01 (B24)	07:33
	22:06	21:17	18	18:40	18	08:19 (B24)
7	04:36	05:27	06:09 (B22)	07:30	08:00 (B24)	07:36
	22:05	21:15	18	18:38	19	08:19 (B24)
8	04:37	05:29	06:08 (B22)	07:32	08:00 (B24)	07:38
	22:04	21:13	20	18:35	19	08:19 (B24)
9	04:38	05:31	06:08 (B22)	07:34	08:03 (B24)	07:40
	22:03	21:11	20	18:33	17	08:20 (B24)
10	04:40	05:33	06:08 (B22)	07:36	08:05 (B24)	07:42
	22:02	21:08	21	18:30	14	08:19 (B24)
11	04:41	05:35	06:08 (B22)	07:38	08:07 (B24)	07:44
	22:01	21:06	21	18:27	11	08:18 (B24)
12	04:42	05:37	06:09 (B22)	07:40	08:09 (B24)	07:46
	22:00	21:04	18	18:25	7	08:16 (B24)
13	04:44	05:39	06:11 (B22)	07:42	08:11 (B24)	07:49
	21:59	21:02	16	18:22	3	08:14 (B24)
14	04:45	05:41	06:13 (B22)	07:44	08:14 (B24)	07:51
	21:58	20:59	14	08:10 (B14)	18:20	16:10
15	04:46	05:43	06:15 (B22)	07:57 (B14)	07:46	07:53
	21:57	20:57	11	08:13 (B14)	18:17	16:08
16	04:48	05:45	06:17 (B22)	07:55 (B14)	07:48	07:55
	21:55	20:54	8	08:15 (B14)	18:15	16:06
17	04:49	05:47	06:19 (B22)	07:53 (B14)	07:50	07:57
	21:54	20:52	4	08:16 (B14)	18:12	16:04
18	04:51	05:49	06:51	07:51 (B14)	07:52	07:59
	21:52	20:50	19:29	08:17 (B14)	18:09	16:03
19	04:53	05:51	06:53	07:50 (B14)	07:55	08:01
	21:51	20:47	19:26	08:18 (B14)	18:07	16:01
20	04:54	05:53	06:55	07:49 (B14)	07:57	08:03
	21:49	20:45	19:23	08:19 (B14)	18:04	15:59
21	04:56	05:55	06:57	07:48 (B14)	07:59	08:05
	21:48	20:42	19:21	08:19 (B14)	18:02	15:58
22	04:58	05:57	06:59	07:47 (B14)	08:01	08:07
	21:46	20:40	19:18	08:19 (B14)	18:00	15:56
23	04:59	05:59	07:01	07:47 (B14)	08:03	08:09
	21:45	20:37	19:15	08:19 (B14)	17:57	15:55
24	05:01	06:01	07:03	07:46 (B14)	08:05	08:11
	21:43	20:35	19:12	08:18 (B14)	17:55	15:53
25	05:03	06:03	07:05	07:46 (B14)	07:07	08:13
	21:41	20:32	19:10	08:18 (B14)	16:52	15:52
26	05:05	06:05	07:07	07:46 (B14)	07:10	08:15
	21:39	20:30	19:07	08:17 (B14)	16:50	15:51
27	05:06	06:07	07:09	07:46 (B14)	07:12	08:17
	21:38	20:27	19:04	08:17 (B14)	16:48	15:50
28	05:08	06:09	07:11	07:46 (B14)	07:14	08:19
	21:36	20:24	19:02	08:16 (B14)	16:45	15:48
29	05:10	06:11	07:13	07:46 (B14)	07:16	08:21
	21:34	20:22	18:59	08:15 (B14)	16:43	15:47
30	05:12	06:13	07:15	07:47 (B14)	07:18	08:22
	21:32	20:19	18:56	08:13 (B14)	16:41	15:46
31	05:14	06:15			07:20	08:51
	21:30	20:17			16:38	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		237	458	224		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.63	0.62		
Total reduction		0.32	0.26	0.16		
Total, real		76	120	35		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Valodzite - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (141)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:43 (B22) 19:53	05:33 20:56	04:36 21:53
2	08:51 15:49	09:30 (B14) 16:48	07:08 17:50	07:44 (B22) 19:55	05:30 20:58	04:35 21:54
3	08:50 15:51	09:29 (B14) 16:50	07:06 17:52	07:46 (B22) 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	09:28 (B14) 16:52	07:03 17:54	07:49 (B22) 19:59	06:41 21:02	04:33 21:57
5	08:49 15:53	09:28 (B14) 16:54	07:01 17:56	07:52 (B22) 20:01	19:59 21:04	21:57 21:58
6	08:49 15:55	09:27 (B14) 16:56	06:58 17:58	20:01 21:06	21:04 21:59	21:58 21:59
7	08:48 15:56	09:26 (B14) 16:59	06:55 18:01	20:03 21:08	21:06 22:00	21:59 22:00
8	08:48 15:58	09:25 (B14) 17:01	06:53 18:03	20:06 21:10	21:08 22:01	22:00 22:01
9	08:47 16:00	09:24 (B14) 17:03	06:50 18:05	20:08 21:12	21:10 22:02	22:01 22:02
10	08:46 16:01	09:23 (B14) 17:05	06:48 18:07	20:10 21:14	21:12 22:03	22:02 22:03
11	08:45 16:03	09:22 (B14) 17:08	06:45 18:09	20:12 21:16	21:14 22:04	22:03 22:04
12	08:44 16:05	09:21 (B14) 17:10	06:42 18:11	20:14 21:18	21:16 22:05	22:04 22:05
13	08:43 16:06	09:20 (B14) 17:12	06:40 18:13	20:16 21:20	21:18 22:06	22:05 22:06
14	08:42 16:08	09:19 (B14) 17:14	06:37 18:15	20:18 21:22	21:20 22:07	22:06 22:07
15	08:41 16:10	09:18 (B14) 17:17	06:34 18:18	20:20 21:24	21:22 22:07	22:07 22:07
16	08:40 16:12	09:17 (B14) 17:19	06:32 18:20	20:22 21:26	21:24 22:08	22:07 22:08
17	08:39 16:14	09:16 (B14) 17:21	06:29 18:22	20:24 21:27	21:26 22:09	22:08 22:09
18	08:38 16:16	09:15 (B14) 17:23	06:26 18:24	20:26 21:29	21:27 22:09	22:09 22:09
19	08:36 16:18	09:14 (B14) 17:26	06:24 18:26	20:28 21:31	21:29 22:09	22:09 22:09
20	08:35 16:20	09:13 (B14) 17:28	06:21 18:28	20:30 21:33	21:31 22:10	22:09 22:10
21	08:33 16:22	09:12 (B14) 17:30	06:18 18:30	20:32 21:35	21:33 22:10	22:10 22:10
22	08:32 16:24	09:11 (B14) 17:32	07:55 (B22) 18:32	20:34 21:37	21:35 22:10	22:10 22:10
23	08:30 16:26	09:10 (B14) 17:34	07:53 (B22) 18:34	20:36 21:39	21:37 22:10	22:10 22:10
24	08:29 16:28	09:09 (B14) 17:37	07:50 (B22) 18:36	20:38 21:41	21:39 22:11	22:10 22:11
25	08:27 16:30	09:08 (B14) 17:39	07:48 (B22) 18:39	20:40 21:43	21:41 22:11	22:11 22:11
26	08:26 16:32	09:07 (B14) 17:41	07:45 (B22) 18:41	20:42 21:45	21:43 22:10	22:11 22:10
27	08:24 16:34	09:06 (B14) 17:43	07:43 (B22) 18:43	20:44 21:47	21:45 22:10	22:10 22:10
28	08:22 16:37	09:05 (B14) 17:45	07:40 (B22) 18:45	20:46 21:49	21:47 22:10	22:10 22:10
29	08:20 16:39		06:57 19:47	20:48 21:51	21:49 22:10	22:10 22:10
30	08:19 16:41		06:54 19:49	20:50 21:53	21:51 22:10	22:10 22:10
31	08:17 16:43		06:52 19:51	20:52 21:54	21:53 22:10	22:10 22:10
Potential sun hours	235	266	366	426	508	529
Total, worst case	258	77	42			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.60	0.63	0.63			
Total reduction	0.08	0.12	0.25			
Total, real	20	9	10			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Valodzite - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (141)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November		December
1	04:30	05:16	06:17	07:17		07:23		08:24
	22:09	21:28	20:14	18:54		16:36	16	09:20 (B14)
2	04:31	05:18	06:19	07:19		07:25		08:26
	22:09	21:26	20:11	18:51		16:34	14	09:20 (B14)
3	04:32	05:20	06:21	07:21		07:27		08:28
	22:08	21:24	20:09	18:48		16:32	13	09:21 (B14)
4	04:33	05:22	06:23	07:23		07:29		08:29
	22:07	21:22	20:06	18:46		16:29	11	09:20 (B14)
5	04:34	05:23	06:25	07:26		07:31		08:31
	22:07	21:20	20:04	18:43		16:27	9	09:20 (B14)
6	04:35	05:25	06:27	07:28		07:34		08:32
	22:06	21:17	20:01	18:40		16:25	8	09:21 (B14)
7	04:36	05:27	06:29	07:30		07:36		08:34
	22:05	21:15	19:58	18:38		16:23	6	09:20 (B14)
8	04:37	05:29	06:31	07:32		07:38		08:35
	22:04	21:13	19:56	18:35		16:21	5	09:21 (B14)
9	04:38	05:31	06:33	07:34		07:40		08:37
	22:03	21:11	19:53	18:33		16:19	3	09:21 (B14)
10	04:39	05:33	06:35	07:36	8	08:21 (B22)		08:38
	22:02	21:09	19:50	18:30	8	08:29 (B22)	16:17	15:39
11	04:41	05:35	06:37	07:38	8	08:19 (B22)	07:44	08:39
	22:01	21:06	19:48	18:27	12	08:31 (B22)	16:15	15:39
12	04:42	05:37	06:39	07:40		08:17 (B22)	07:47	08:41
	22:00	21:04	19:45	18:25	14	08:31 (B22)	16:13	15:38
13	04:43	05:39	06:41	07:42		08:16 (B22)	07:49	08:42
	21:59	21:02	19:42	18:22	16	08:32 (B22)	16:11	15:38
14	04:45	05:41	06:43	07:44		08:16 (B22)	07:51	08:43
	21:58	20:59	19:39	18:20	17	08:33 (B22)	16:09	15:38
15	04:46	05:43	06:45	07:46		08:16 (B22)	07:53	08:44
	21:57	20:57	19:37	18:17	17	08:33 (B22)	16:08	15:38
16	04:48	05:45	06:47	07:48		08:18 (B22)	07:55	08:45
	21:55	20:54	19:34	18:14	14	08:32 (B22)	16:06	15:38
17	04:49	05:47	06:49	07:50		08:20 (B22)	07:57	08:46
	21:54	20:52	19:31	18:12	11	08:31 (B22)	16:04	15:38
18	04:51	05:49	06:51	07:53		08:22 (B22)	07:59	08:46
	21:53	20:50	19:29	18:09	8	08:30 (B22)	16:02	15:38
19	04:53	05:51	06:53	07:55		08:25 (B22)	08:01	09:06 (B14)
	21:51	20:47	19:26	18:07	4	08:29 (B22)	16:01	09:09 (B14)
20	04:54	05:53	06:55	07:57		08:03	09:03 (B14)	08:48
	21:50	20:45	19:23	18:04		15:59	9	09:12 (B14)
21	04:56	05:55	06:57	07:59		08:05	09:03 (B14)	08:49
	21:48	20:42	19:21	18:02		15:58	11	09:14 (B14)
22	04:58	05:57	06:59	08:01		08:07	09:02 (B14)	08:49
	21:46	20:40	19:18	18:00		15:56	13	09:15 (B14)
23	04:59	05:59	07:01	08:03		08:09	09:01 (B14)	08:50
	21:45	20:37	19:15	17:57		15:55	15	09:16 (B14)
24	05:01	06:01	07:03	08:05		08:11	09:01 (B14)	08:50
	21:43	20:35	19:12	17:55		15:53	15	09:16 (B14)
25	05:03	06:03	07:05	07:07		08:13	09:01 (B14)	08:50
	21:41	20:32	19:10	16:52		15:52	16	09:17 (B14)
26	05:05	06:05	07:07	07:10		08:15	09:01 (B14)	08:51
	21:39	20:30	19:07	16:50		15:51	17	09:18 (B14)
27	05:06	06:07	07:09	07:12		08:17	09:01 (B14)	08:51
	21:38	20:27	19:04	16:48		15:49	18	09:19 (B14)
28	05:08	06:09	07:11	07:14		08:19	09:02 (B14)	08:51
	21:36	20:24	19:02	16:45		15:48	17	09:19 (B14)
29	05:10	06:11	07:13	07:16		08:21	09:02 (B14)	08:51
	21:34	20:22	18:59	16:43		15:47	17	09:19 (B14)
30	05:12	06:13	07:15	07:18		08:23	09:02 (B14)	08:51
	21:32	20:19	18:56	16:41		15:46	18	09:20 (B14)
31	05:14	06:15		07:20				08:51
	21:30	20:17		16:38				15:47
Potential sun hours	529	469	385	324		247		216
Total, worst case				121		169		88
Sun reduction				0.26		0.08		0.07
Oper. time red.				0.98		0.98		0.98
Wind dir. red.				0.63		0.60		0.60
Total reduction				0.16		0.05		0.04
Total, real				19		8		4

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Varkali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (123)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:02 (B14) 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:01 (B14) 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:01 (B14) 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:02 (B14) 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:05 (B14) 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:07 (B14) 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:09 (B14) 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:12 (B14) 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:15 (B14) 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:15 (B14) 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:15 (B14) 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:15 (B14) 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:15 (B14) 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:15 (B14) 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:49 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:15 (B14) 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:15 (B14) 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:15 (B14) 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:15 (B14) 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:15 (B14) 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:15 (B14) 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:15 (B14) 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:15 (B14) 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:15 (B14) 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:15 (B14) 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:15 (B14) 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:15 (B14) 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:15 (B14) 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:15 (B14) 15:44
29	08:20 16:39	07:11 17:46	06:57 18:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:15 (B14) 15:45
30	08:19 16:41	07:09 17:49	06:54 18:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:15 (B14) 15:46
31	08:17 16:43	07:07 17:51	06:52 18:51	05:33 20:57	04:37 21:51	04:30 22:10	05:14 21:30	06:15 20:17	07:21 18:38	08:03 (B14) 17:42	08:19 15:47	08:15 (B14) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		112								25	90	
Sun reduction		0.20								0.26	0.08	
Oper. time red.		0.98								0.98	0.98	
Wind dir. red.		0.61								0.61	0.61	
Total reduction		0.12								0.15	0.05	
Total, real		13								4	4	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Veji - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (130)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March		April		May	June
1	08:51	08:15	07:11		07:37 (B24)	06:49	05:33	04:36
	15:48	16:45	17:48	3	07:40 (B24)	19:53	20:55	21:53
2	08:50	08:13	07:08		07:34 (B24)	06:46	05:30	04:35
	15:50	16:48	17:50	7	07:41 (B24)	19:55	20:58	21:54
3	08:50	08:11	07:06		07:32 (B24)	06:44	05:28	04:34
	15:51	16:50	17:52	10	07:42 (B24)	19:57	21:00	21:55
4	08:50	08:09	07:03		07:29 (B24)	06:41	05:26	04:33
	15:52	16:52	17:54	12	07:41 (B24)	19:59	21:02	21:57
5	08:49	08:07	07:01		07:26 (B24)	06:38	05:24	04:32
	15:54	16:54	17:56	15	07:41 (B24)	20:01	21:04	21:58
6	08:49	08:05	06:58		07:25 (B24)	06:36	05:21	04:31
	15:55	16:57	17:58	16	07:41 (B24)	20:03	21:06	21:59
7	08:48	08:03	06:55		07:21 (B14)	06:33	05:19	04:30
	15:56	16:59	18:01	19	07:40 (B24)	20:06	21:08	22:00
8	08:48	08:01	06:53		07:18 (B14)	06:30	05:17	04:29
	15:58	17:01	18:03	20	07:38 (B24)	20:08	21:10	22:01
9	08:47	07:58	06:50		07:16 (B14)	06:28	05:15	04:29
	16:00	17:03	18:05	20	07:36 (B24)	20:10	21:12	22:02
10	08:46	07:56	06:48		07:13 (B14)	06:25	05:13	04:28
	16:01	17:06	18:07	19	07:32 (B14)	20:12	21:14	22:03
11	08:45	07:54	06:45		07:10 (B14)	06:22	05:11	04:27
	16:03	17:08	18:09	22	07:32 (B14)	20:14	21:16	22:04
12	08:44	07:52	06:42		07:09 (B14)	06:20	05:09	04:27
	16:05	17:10	18:11	24	07:33 (B14)	20:16	21:18	22:05
13	08:43	07:50	06:40		07:08 (B14)	06:17	05:07	04:27
	16:06	17:12	18:13	25	07:33 (B14)	20:18	21:20	22:06
14	08:42	07:47	06:37		07:07 (B14)	06:15	05:05	04:26
	16:08	17:14	18:16	26	07:33 (B14)	20:20	21:22	22:07
15	08:41	07:45	06:34		07:08 (B14)	06:12	05:03	04:26
	16:10	17:17	18:18	25	07:33 (B14)	20:22	21:24	22:07
16	08:40	07:43	06:32		07:07 (B14)	06:09	05:01	04:26
	16:12	17:19	18:20	25	07:32 (B14)	20:24	21:26	22:08
17	08:39	07:40	06:29		07:07 (B14)	06:07	06:33 (B22)	04:59
	16:14	17:21	18:22	24	07:31 (B14)	20:26	06:35 (B22)	21:27
18	08:38	07:38	06:26		07:07 (B14)	06:04	06:30 (B22)	04:57
	16:16	17:23	18:24	23	07:30 (B14)	20:28	06:35 (B22)	21:29
19	08:36	07:36	06:24		07:09 (B14)	06:02	06:28 (B22)	04:55
	16:18	17:26	18:26	20	07:29 (B14)	20:31	06:36 (B22)	21:31
20	08:35	07:33	06:21		07:09 (B14)	05:59	06:26 (B22)	04:54
	16:20	17:28	18:28	18	07:27 (B14)	20:33	06:37 (B22)	21:33
21	08:33	07:31	06:18		07:11 (B14)	05:57	06:23 (B22)	04:52
	16:22	17:30	18:30	14	07:25 (B14)	20:35	06:37 (B22)	21:35
22	08:32	07:28	06:16		07:14 (B14)	05:54	06:21 (B22)	04:50
	16:24	17:32	18:32	8	07:22 (B14)	20:37	06:37 (B22)	21:37
23	08:30	07:26	06:13			05:52	06:18 (B22)	04:48
	16:26	17:34	18:34			20:39	06:36 (B22)	21:38
24	08:29	07:23	06:10			05:49	06:19 (B22)	04:47
	16:28	17:37	18:36			20:41	06:35 (B22)	21:40
25	08:27	07:21	06:08			05:47	06:19 (B22)	04:45
	16:30	17:39	18:39			20:43	06:35 (B22)	21:42
26	08:26	07:18	06:05			05:45	06:19 (B22)	04:44
	16:32	17:41	18:41			20:45	06:33 (B22)	21:43
27	08:24	07:16	06:02			05:42	06:21 (B22)	04:42
	16:34	17:43	18:43			20:47	06:32 (B22)	21:45
28	08:22	07:13	06:00			05:40	06:23 (B22)	04:41
	16:37	17:45	18:45			20:49	06:29 (B22)	21:47
29	08:20		06:57			05:37		04:40
	16:39		19:47			20:51		21:48
30	08:19		06:54			05:35		04:38
	16:41		19:49			20:53		21:50
31	08:17		06:52					04:37
	16:43		19:51					21:51
Potential sun hours	235	266	366		426		508	528
Total, worst case				395		137		
Sun reduction				0.41		0.50		
Oper. time red.				0.98		0.98		
Wind dir. red.				0.62		0.65		
Total reduction				0.25		0.32		
Total, real				99		43		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Veji - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (130)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:48 (B14) 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:48 (B14) 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:50 (B14) 16:32	08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:52 (B14) 16:30	08:29 15:43
5	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	07:54 (B14) 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:56 (B14) 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:58 (B14) 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:00 (B24) 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:03 (B24) 16:19	08:37 15:39
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:05 (B24) 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:07 (B24) 16:15	08:39 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:09 (B24) 16:13	08:40 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:11 (B24) 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:13 (B24) 16:10	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:15 (B24) 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:17 (B24) 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:19 (B24) 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	08:21 (B24) 16:03	08:46 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:23 (B24) 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:25 (B24) 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	08:02 (B14) 18:02	08:27 (B24) 15:58	08:49 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:04 (B14) 18:00	08:29 (B24) 15:56	08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:06 (B14) 17:57	08:31 (B24) 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:08 (B14) 17:55	08:33 (B24) 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:10 (B14) 17:52	08:35 (B24) 15:52	08:51 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:12 (B14) 17:50	08:37 (B24) 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:14 (B14) 17:48	08:39 (B24) 15:50	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:16 (B14) 17:46	08:41 (B24) 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:18 (B14) 17:43	08:43 (B24) 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:20 (B14) 17:41	08:45 (B24) 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		08:22 (B14) 17:38	08:47 (B24) 15:44	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		138	199	200		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.65	0.62	0.62		
Total reduction		0.32	0.26	0.16		
Total, real		44	52	31		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vejini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (91)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	06:49	05:33	04:36
	15:48	16:45	17:48	19:53	20:55	21:53
2	08:50	08:13	07:08	07:34 (B24)	06:46	05:30
	15:50	16:48	17:50	4 07:38 (B24)	19:55	20:58
3	08:50	08:11	07:06	07:32 (B24)	06:44	05:28
	15:51	16:50	17:52	7 07:39 (B24)	19:57	21:00
4	08:50	08:09	07:03	07:29 (B24)	06:41	05:26
	15:52	16:52	17:54	10 07:39 (B24)	19:59	21:02
5	08:49	08:07	07:01	07:26 (B24)	06:38	05:24
	15:54	16:54	17:56	13 07:39 (B24)	20:01	21:04
6	08:49	08:05	06:58	07:24 (B24)	06:36	05:21
	15:55	16:57	17:58	15 07:39 (B24)	20:03	21:06
7	08:48	08:03	06:55	07:23 (B24)	06:33	05:19
	15:56	16:59	18:01	15 07:38 (B24)	20:06	21:08
8	08:48	08:01	06:53	07:18 (B14)	06:30	05:17
	15:58	17:01	18:03	18 07:37 (B24)	20:08	21:10
9	08:47	07:58	06:50	07:16 (B14)	06:28	05:15
	16:00	17:03	18:05	20 07:36 (B24)	20:10	21:12
10	08:46	07:56	06:48	07:13 (B14)	06:25	05:13
	16:01	17:06	18:07	19 07:32 (B24)	20:12	21:14
11	08:45	07:54	06:45	07:10 (B14)	06:22	05:11
	16:03	17:08	18:09	18 07:28 (B14)	20:14	21:16
12	08:44	07:52	06:42	07:08 (B14)	06:20	05:09
	16:05	17:10	18:11	21 07:29 (B14)	20:16	21:18
13	08:43	07:50	06:40	07:05 (B14)	06:17	05:07
	16:06	17:12	18:13	24 07:29 (B14)	20:18	21:20
14	08:42	07:47	06:37	07:04 (B14)	06:15	05:05
	16:08	17:14	18:16	25 07:29 (B14)	20:20	21:22
15	08:41	07:45	06:34	07:04 (B14)	06:12	05:03
	16:10	17:17	18:18	26 07:30 (B14)	20:22	21:24
16	08:40	07:43	06:32	07:04 (B14)	06:09	05:01
	16:12	17:19	18:20	25 07:29 (B14)	20:24	21:26
17	08:39	07:40	06:29	07:04 (B14)	06:07	04:59
	16:14	17:21	18:22	24 07:28 (B14)	20:26	21:27
18	08:38	07:38	06:26	07:03 (B14)	06:04	06:30 (B22)
	16:16	17:23	18:24	24 07:27 (B14)	20:28	4 06:34 (B22)
19	08:36	07:36	06:24	07:04 (B14)	06:02	06:28 (B22)
	16:18	17:26	18:26	23 07:27 (B14)	20:31	7 06:35 (B22)
20	08:35	07:33	06:21	07:05 (B14)	05:59	06:26 (B22)
	16:20	17:28	18:28	20 07:25 (B14)	20:33	10 06:36 (B22)
21	08:33	07:31	06:18	07:05 (B14)	05:57	06:23 (B22)
	16:22	17:30	18:30	18 07:23 (B14)	20:35	12 06:35 (B22)
22	08:32	07:28	06:16	07:08 (B14)	05:54	06:21 (B22)
	16:24	17:32	18:32	14 07:22 (B14)	20:37	14 06:35 (B22)
23	08:30	07:26	06:13	07:10 (B14)	05:52	06:18 (B22)
	16:26	17:34	18:34	8 07:18 (B14)	20:39	17 06:35 (B22)
24	08:29	07:23	06:10		05:49	06:17 (B22)
	16:28	17:37	18:36		20:41	17 06:34 (B22)
25	08:27	07:21	06:08		05:47	06:18 (B22)
	16:30	17:39	18:39		20:43	16 06:34 (B22)
26	08:26	07:18	06:05		05:45	06:18 (B22)
	16:32	17:41	18:41		20:45	14 06:32 (B22)
27	08:24	07:16	06:02		05:42	06:19 (B22)
	16:34	17:43	18:43		20:47	12 06:31 (B22)
28	08:22	07:13	06:00		05:40	06:21 (B22)
	16:37	17:45	18:45		20:49	8 06:29 (B22)
29	08:20		06:57		05:37	
	16:39		19:47		20:51	
30	08:19		06:54		05:35	
	16:41		19:49		20:53	
31	08:17		06:52			
	16:43		19:51			
Potential sun hours	235	266	366	426	508	528
Total, worst case			391		131	
Sun reduction			0.41		0.50	
Oper. time red.			0.98		0.98	
Wind dir. red.			0.63		0.65	
Total reduction			0.25		0.32	
Total, real			98		42	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vejini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (91)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:46 (B14) 08:08 (B14)	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:48 (B14) 08:07 (B14)	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:50 (B14) 08:06 (B14)	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:52 (B14) 08:12 (B24)	07:29 16:30
5	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	07:54 (B14) 08:13 (B24)	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:59 (B24) 08:14 (B24)	07:34 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:58 (B24) 08:14 (B24)	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:00 (B24) 08:14 (B24)	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:03 (B24) 08:14 (B24)	07:40 16:19
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:05 (B24) 08:14 (B24)	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:07 (B24) 08:13 (B24)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:09 (B24) 08:11 (B24)	07:46 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:11 (B24)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20		07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17		07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15		07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12		07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09		07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07		08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:58 (B14) 08:03 (B14)	07:57 18:04	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:54 (B14) 08:07 (B14)	07:59 18:02	08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	07:52 (B14) 08:09 (B14)	08:01 18:00	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	07:50 (B14) 08:10 (B14)	08:03 17:57	08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	07:48 (B14) 08:10 (B14)	08:05 17:55	08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	07:47 (B14) 08:11 (B14)	07:07 16:52	08:13 15:52
26	05:05 21:39	06:05 20:30	07:07 19:07	07:46 (B14) 08:11 (B14)	07:10 16:50	08:15 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	07:46 (B14) 08:11 (B14)	07:12 16:48	08:17 15:50
28	05:08 21:36	06:09 20:24	07:11 19:02	07:45 (B14) 08:10 (B14)	07:14 16:45	08:19 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	07:45 (B14) 08:10 (B14)	07:16 16:43	08:21 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	07:45 (B14) 08:09 (B14)	07:18 16:41	08:22 15:46
31	05:14 21:30	06:15 20:17			07:20 16:38	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		132	225		169	
Sun reduction		0.50	0.43		0.26	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.65	0.63		0.62	
Total reduction		0.32	0.26		0.16	
Total, real		42	59		27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vejkalni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (163)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		09:31 (B14)	08:15		08:58 (B24)	07:11		06:49		07:46 (B22)	05:33		04:36				
	15:48	17	09:48 (B14)	16:45	30	09:56 (B14)	17:48		19:53	13	07:59 (B22)	20:55		21:53				
2	08:50		09:31 (B14)	08:13		08:59 (B24)	07:08		06:46		07:50 (B22)	05:30		04:35				
	15:49	18	09:49 (B14)	16:48	22	09:53 (B14)	17:50		19:55	5	07:55 (B22)	20:58		21:54				
3	08:50		09:31 (B14)	08:11		09:00 (B24)	07:06		06:43			05:28		04:34				
	15:51	19	09:50 (B14)	16:50	13	09:13 (B24)	17:52		19:57			21:00		21:55				
4	08:50		09:30 (B14)	08:09		09:03 (B24)	07:03		06:41			05:26		04:33				
	15:52	20	09:50 (B14)	16:52	8	09:11 (B24)	17:54		19:59			21:02		21:57				
5	08:49		09:31 (B14)	08:07			07:01		06:38			05:23		04:32				
	15:53	21	09:52 (B14)	16:54			17:56		20:01			21:04		21:58				
6	08:49		09:31 (B14)	08:05			06:58		06:36			05:21		04:31				
	15:55	22	09:53 (B14)	16:56			17:58		20:03			21:06		21:59				
7	08:48		09:31 (B14)	08:03			06:55		06:33			05:19		04:30				
	15:56	22	09:53 (B14)	16:59			18:01		20:06			21:08		22:00				
8	08:48		09:31 (B14)	08:01			06:53		06:30			05:17		04:29				
	15:58	23	09:54 (B14)	17:01			18:03		20:08			21:10		22:01				
9	08:47		09:31 (B14)	07:58			06:50		06:28			05:15		04:29				
	16:00	24	09:55 (B14)	17:03			18:05		20:10			21:12		22:02				
10	08:46		09:31 (B14)	07:56			06:47		06:25			05:13		04:28				
	16:01	25	09:56 (B14)	17:05			18:07		20:12			21:14		22:03				
11	08:45		09:31 (B14)	07:54			06:45		06:22			05:11		04:27				
	16:03	26	09:57 (B14)	17:08			18:09		20:14			21:16		22:04				
12	08:44		09:31 (B14)	07:52			06:42		06:20			05:09		04:27				
	16:05	27	09:58 (B14)	17:10			18:11		20:16			21:18		22:05				
13	08:43		09:30 (B14)	07:50			06:40		06:17			05:07		04:26				
	16:06	28	09:58 (B14)	17:12			18:13		20:18			21:20		22:06				
14	08:42		09:31 (B14)	07:47			06:37		06:15			05:05		04:26				
	16:08	28	09:59 (B14)	17:14			18:15		20:20			21:22		22:07				
15	08:41		09:31 (B14)	07:45			06:34		06:12			05:03		04:26				
	16:10	29	10:00 (B14)	17:17			18:18		20:22			21:24		22:07				
16	08:40		09:31 (B14)	07:43			06:32		06:09			05:01		04:26				
	16:12	29	10:00 (B14)	17:19			18:20		20:24			21:26		22:08				
17	08:39		09:32 (B14)	07:40			06:29		06:07			04:59		04:25				
	16:14	29	10:01 (B14)	17:21			18:22	8	07:02 (B22)	20:26		21:27		22:08				
18	08:38		09:31 (B14)	07:38			06:26		06:51 (B22)	06:04		04:57		04:25				
	16:16	30	10:01 (B14)	17:23			18:24	13	07:04 (B22)	20:28		21:29		22:09				
19	08:36		09:31 (B14)	07:36			06:24		06:49 (B22)	06:02		04:55		04:25				
	16:18	30	10:01 (B14)	17:26			18:26	18	07:07 (B22)	20:31		21:31		22:09				
20	08:35		09:32 (B14)	07:33			06:21		06:46 (B22)	05:59		04:53		04:25				
	16:20	30	10:02 (B14)	17:28			18:28	21	07:07 (B22)	20:33		21:33		22:10				
21	08:33		09:07 (B24)	07:31			06:18		06:44 (B22)	05:57		04:52		04:25				
	16:22	33	10:02 (B14)	17:30			18:30	24	07:08 (B22)	20:35		21:35		22:10				
22	08:32		09:05 (B24)	07:28			06:16		06:44 (B22)	05:54		04:50		04:26				
	16:24	36	10:02 (B14)	17:32			18:32	25	07:09 (B22)	20:37		21:37		22:10				
23	08:30		09:03 (B24)	07:26			06:13		06:43 (B22)	05:52		04:48		04:26				
	16:26	38	10:02 (B14)	17:34			18:34	26	07:09 (B22)	20:39		21:38		22:10				
24	08:29		09:02 (B24)	07:23			06:10		06:42 (B22)	05:49		04:47		04:26				
	16:28	41	10:03 (B14)	17:37			18:36	26	07:08 (B22)	20:41		21:40		22:10				
25	08:27		09:00 (B24)	07:21			06:08		06:42 (B22)	05:47		04:45		04:26				
	16:30	41	10:02 (B14)	17:39			18:38	27	07:09 (B22)	20:43		21:42		22:10				
26	08:26		08:58 (B24)	07:18			06:05		06:42 (B22)	05:44		04:44		04:27				
	16:32	44	10:02 (B14)	17:41			18:41	26	07:08 (B22)	20:45		21:43		22:10				
27	08:24		08:56 (B24)	07:16			06:02		06:42 (B22)	05:42		04:42		04:27				
	16:34	45	10:02 (B14)	17:43			18:43	25	07:07 (B22)	20:47		21:45		22:10				
28	08:22		08:56 (B24)	07:13			05:59		06:43 (B22)	05:40		04:41		04:28				
	16:37	43	10:01 (B14)	17:45			18:45	24	07:07 (B22)	20:49		21:47		22:10				
29	08:20		08:57 (B24)				06:57		07:43 (B22)	05:37		04:40		04:29				
	16:39	41	10:01 (B14)				19:47	22	08:05 (B22)	20:51		21:48		22:10				
30	08:19		08:57 (B24)				06:54		07:43 (B22)	05:35		04:38		04:29				
	16:41	39	10:00 (B14)				19:49	20	08:03 (B22)	20:53		21:50		22:09				
31	08:17		08:58 (B24)				06:51		07:45 (B22)			04:37						
	16:43	35	09:59 (B14)				19:51	17	08:02 (B22)			21:51						
Potential sun hours	235			266			366		426			508		529				
Total, worst case	933			73			322		18									
Sun reduction	0.13			0.20			0.41		0.50									
Oper. time red.	0.98			0.98			0.98		0.98									
Wind dir. red.	0.60			0.59			0.64		0.64									
Total reduction	0.08			0.11			0.25		0.31									
Total, real	72			8			82		6									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vejkalni - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (163)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:17	07:23	08:24
	22:09	21:28	20:14	18:54	16:36	15:45
2	04:31	05:18	06:19	07:19	07:25	08:26
	22:09	21:26	20:11	18:51	16:34	15:44
3	04:32	05:20	06:21	07:21	07:27	08:28
	22:08	21:24	20:09	18:48	16:32	15:43
4	04:33	05:21	06:23	07:23	07:29	08:29
	22:07	21:22	20:06	18:46	16:29	15:42
5	04:34	05:23	06:25	07:25	07:31	08:31
	22:07	21:20	20:03	18:43	16:27	15:42
6	04:35	05:25	06:27	07:28	07:33	08:32
	22:06	21:17	20:01	18:40	16:25	15:41
7	04:36	05:27	06:29	07:30	07:36	08:34
	22:05	21:15	19:58	18:38	16:23	15:40
8	04:37	05:29	06:31	07:32	07:38	08:35
	22:04	21:13	19:56	18:35	16:21	15:40
9	04:38	05:31	06:33	07:34	07:40	08:37
	22:03	21:11	19:53	18:33	16:19	15:39
10	04:39	05:33	06:35	07:36	07:42	08:38
	22:02	21:08	19:50	18:30	16:17	15:39
11	04:41	05:35	06:37	07:39	07:44	08:39
	22:01	21:06	19:47	18:27	16:15	15:39
12	04:42	05:37	06:39	07:36	07:40	08:34
	22:00	21:04	19:45	18:25	16:13	15:38
13	04:43	05:39	06:41	07:35	07:42	08:37
	21:59	21:02	19:42	18:22	16:11	15:38
14	04:45	05:41	06:43	07:33	07:44	08:43
	21:58	20:59	19:39	18:20	16:09	15:38
15	04:46	05:43	06:45	07:32	07:46	08:44
	21:57	20:57	19:37	18:17	16:08	15:38
16	04:48	05:45	06:47	07:31	07:48	08:45
	21:55	20:54	19:34	18:14	16:06	15:38
17	04:49	05:47	06:49	07:31	07:50	08:46
	21:54	20:52	19:31	18:12	16:04	15:38
18	04:51	05:49	06:51	07:30	07:52	08:46
	21:52	20:50	19:29	18:09	16:02	15:38
19	04:53	05:51	06:53	07:30	07:55	08:47
	21:51	20:47	19:26	18:07	16:01	15:38
20	04:54	05:53	06:55	07:30	07:57	08:48
	21:49	20:45	19:23	18:04	15:59	15:39
21	04:56	05:55	06:57	07:30	07:59	08:49
	21:48	20:42	19:21	18:02	15:58	15:39
22	04:58	05:57	06:59	07:30	08:01	08:49
	21:46	20:40	19:18	18:00	15:56	15:40
23	04:59	05:59	07:01	07:30	08:03	08:50
	21:45	20:37	19:15	17:52	15:55	15:40
24	05:01	06:01	07:03	07:32	08:05	08:50
	21:43	20:35	19:12	17:51	15:53	15:41
25	05:03	06:03	07:05	07:34	08:07	08:50
	21:41	20:32	19:10	17:49	15:52	15:41
26	05:05	06:05	07:07	07:36	08:10	08:51
	21:39	20:30	19:07	17:46	15:51	15:42
27	05:06	06:07	07:09	07:37	08:11	08:51
	21:38	20:27	19:04	17:44	15:49	15:43
28	05:08	06:09	07:11	07:38	08:13	08:51
	21:36	20:24	19:02	17:41	15:48	15:44
29	05:10	06:11	07:13	07:39	08:15	08:51
	21:34	20:22	18:59	17:38	15:47	15:45
30	05:12	06:13	07:15	07:40	08:17	08:51
	21:32	20:19	18:56	17:36	15:46	15:46
31	05:14	06:15		07:41		08:51
	21:30	20:17		17:34		15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			340		775	466
Sun reduction			0.43		0.08	0.07
Oper. time red.			0.98		0.98	0.98
Wind dir. red.			0.64		0.60	0.61
Total reduction			0.26		0.05	0.04
Total, real			90		37	19

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vetras - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (161)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B22) 19:53	06:49 20:56	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 17:50	07:08 18:00	07:34 (B22) 19:55	06:46 20:58	05:30 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 17:52	07:06 18:01	07:32 (B22) 19:57	06:44 21:00	05:28 21:55	04:34 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 17:54	07:03 18:04	07:29 (B22) 19:59	06:41 21:02	05:26 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 17:56	07:01 18:06	07:27 (B22) 19:59	06:38 21:04	05:24 21:58	04:32 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 17:58	06:58 18:05	07:27 (B22) 19:59	06:36 21:06	05:21 21:59	04:31 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 18:01	06:55 18:08	07:27 (B22) 19:59	06:33 21:08	05:19 22:00	04:30 22:05	05:27 21:15	06:29 20:01	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 18:03	06:53 18:06	07:28 (B22) 19:59	06:30 21:10	05:17 22:01	04:29 22:04	05:29 21:13	06:31 20:01	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 18:05	06:50 18:07	07:31 (B22) 19:59	06:28 21:12	05:15 22:02	04:28 22:03	05:31 21:11	06:33 20:01	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 18:07	06:48 18:07	07:37 (B22) 19:59	06:25 21:14	05:13 22:03	04:28 22:02	05:33 21:09	06:35 20:01	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 18:09	06:45 18:09	07:38 (B22) 19:59	06:22 21:16	05:11 22:04	04:27 22:01	05:35 21:06	06:37 20:01	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 18:11	06:42 18:11	07:39 (B22) 19:59	06:20 21:18	05:09 22:05	04:27 22:00	05:37 21:04	06:39 20:01	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 18:13	06:40 18:13	07:40 (B22) 19:59	06:17 21:20	05:07 22:06	04:26 22:02	05:39 21:59	06:41 21:02	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 18:14	06:37 18:16	07:41 (B22) 19:59	06:15 21:22	05:05 22:07	04:26 22:01	05:41 21:58	06:43 20:59	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 18:17	06:34 18:18	07:42 (B22) 19:59	06:12 21:24	05:03 22:07	04:26 22:01	05:43 21:57	06:45 20:57	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 18:20	06:32 18:20	07:43 (B22) 19:59	06:09 21:26	05:01 22:08	04:26 22:05	05:45 21:55	06:47 20:54	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 18:22	06:29 18:22	07:44 (B22) 19:59	06:07 21:27	04:59 22:09	04:25 22:04	05:47 21:54	06:49 20:52	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 18:24	06:26 18:24	07:45 (B22) 19:59	06:04 21:29	04:57 22:09	04:25 22:01	05:49 21:53	06:51 20:50	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 18:26	06:24 18:26	07:46 (B22) 19:59	06:02 21:31	04:55 22:09	04:25 22:01	05:51 21:51	06:53 20:47	07:55 18:07	08:01 16:01	08:48 15:38
20	08:35 16:20	07:33 18:28	06:21 18:28	07:47 (B22) 19:59	05:59 21:33	04:53 22:10	04:25 22:05	05:53 21:50	06:55 20:45	07:57 18:04	08:03 15:59	08:49 15:39
21	08:33 16:22	07:31 18:30	06:18 18:30	07:48 (B22) 19:59	05:57 21:35	04:52 22:10	04:25 22:06	05:55 21:48	06:57 20:42	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 18:32	06:16 18:32	07:49 (B22) 19:59	05:54 21:37	04:50 22:10	04:26 22:06	05:57 21:46	06:59 20:40	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 18:34	06:13 18:34	07:50 (B22) 19:59	05:52 21:38	04:48 22:10	04:26 22:07	05:59 21:45	07:01 20:37	08:03 18:05	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 18:36	06:10 18:36	07:51 (B22) 19:59	05:49 21:40	04:47 22:11	04:26 22:08	06:01 21:43	07:03 20:35	08:05 18:02	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 18:39	06:08 18:39	07:52 (B22) 19:59	05:47 21:42	04:45 22:11	04:26 22:09	06:03 21:41	07:05 20:32	08:07 18:00	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 18:41	06:05 18:41	07:53 (B22) 19:59	05:44 21:43	04:44 22:10	04:27 22:07	06:05 21:39	07:07 20:30	08:09 18:00	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 18:43	06:02 18:43	07:54 (B22) 19:59	05:42 21:45	04:42 22:10	04:27 22:08	06:06 21:38	07:09 20:27	08:11 18:00	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 18:45	06:00 18:45	07:55 (B22) 19:59	05:40 21:47	04:41 22:10	04:28 22:06	06:09 21:36	07:11 20:24	08:13 18:00	08:19 15:48	08:51 15:44
29	08:20 16:39	07:07 18:47	05:57 18:47	07:56 (B22) 19:59	05:37 21:48	04:40 22:10	04:29 22:07	06:11 21:34	07:13 20:22	08:15 18:00	08:21 15:47	08:51 15:45
30	08:19 16:41	07:08 18:49	06:54 18:49	07:57 (B22) 19:59	05:35 21:50	04:38 22:10	04:29 22:08	06:13 21:32	07:15 20:19	08:17 18:00	08:23 15:46	08:51 15:46
31	08:17 16:43	07:06 18:51	06:52 18:51	07:58 (B22) 19:59	05:31 21:51	04:37 22:10	04:27 22:09	06:15 21:30	07:20 20:17	08:19 18:00	08:24 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	178		99							96	176	
Sun reduction	0.13		0.41							0.26	0.08	
Oper. time red.	0.98		0.98							0.98	0.98	
Wind dir. red.	0.59		0.62							0.62	0.59	
Total reduction	0.08		0.25							0.16	0.05	
Total, real	13		24							15	8	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Veveri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (120)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	07:14 (B24) 20:55	04:36 21:52
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:11 (B24) 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	07:09 (B24) 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:08 (B24) 21:02	04:33 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:07 (B24) 21:04	04:32 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:08 (B24) 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	07:07 (B24) 21:08	04:30 22:00
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:08 (B24) 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:08 (B24) 21:12	04:29 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	07:08 (B24) 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:10 (B24) 21:16	04:28 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:12 (B24) 21:18	04:27 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:21 (B24) 21:20	04:27 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:07 21:22	04:26 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:05 21:24	04:26 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	05:00 21:27	04:25 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	05:00 21:29	04:25 22:09
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	05:00 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	05:00 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	06:43 (B25) 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	06:41 (B25) 20:37	04:50 21:36	04:26 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	06:38 (B25) 20:39	04:49 21:38	04:26 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	06:35 (B25) 20:41	04:47 21:40	04:26 22:10
25	08:27 16:30	07:21 17:39	06:08 18:38	06:33 (B25) 20:43	04:45 21:42	04:27 22:10
26	08:26 16:32	07:18 17:41	06:05 18:41	06:31 (B25) 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	06:29 (B25) 20:47	04:42 21:45	04:28 22:10
28	08:22 16:37	07:13 17:45	06:00 18:45	06:27 (B25) 20:49	04:41 21:47	04:28 22:10
29	08:20 16:39	07:11 17:47	05:57 18:47	06:25 (B25) 20:51	04:40 21:48	04:29 22:10
30	08:18 16:41	07:09 17:49	05:54 18:49	06:23 (B24) 20:53	04:38 21:50	04:29 22:09
31	08:17 16:43	07:07 17:51	05:51 18:51	07:17 (B24) 07:28 (B24)	04:37 21:51	05:53 (B14) 06:25 (B14)
Potential sun hours	235	266	366	426	508	528
Total, worst case			115	221	887	875
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.65	0.66	0.67	0.67
Total reduction			0.26	0.32	0.37	0.36
Total, real			30	71	329	319

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Veveri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (120)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July				August				September				October		November		December	
1	04:30		05:08 (B22)	05:16		06:03 (B14)	06:17		07:09 (B24)	07:17		07:23		07:23		08:24		
2	22:09	29	06:27 (B14)	21:28	32	06:35 (B14)	20:14	14	07:23 (B24)	18:54		16:36		16:36		15:45		
3	04:31		05:08 (B22)	05:18		06:03 (B14)	06:19		07:07 (B24)	07:19		07:25		07:25		08:26		
4	22:08	29	06:27 (B14)	21:26	31	06:34 (B14)	20:11	17	07:24 (B24)	18:51		16:34		16:34		15:44		
5	04:32		05:09 (B22)	05:20		06:04 (B14)	06:21		07:06 (B24)	07:21		07:27		07:27		08:28		
6	22:08	29	06:28 (B14)	21:24	29	06:33 (B14)	20:09	19	07:25 (B24)	18:48		16:32		16:32		15:43		
7	04:33		05:10 (B22)	05:22		06:05 (B14)	06:23		07:05 (B24)	07:23		07:29		07:29		08:29		
8	22:07	29	06:29 (B14)	21:22	27	06:32 (B14)	20:06	20	07:25 (B24)	18:46		16:30		16:30		15:43		
9	04:34		06:02 (B14)	05:24		06:06 (B14)	06:25		07:04 (B24)	07:25		07:31		07:31		08:31		
10	22:07	27	06:29 (B14)	21:19	26	06:32 (B14)	20:03	22	07:26 (B24)	18:43		16:27		16:27		15:42		
11	04:35		06:02 (B14)	05:25		06:06 (B14)	06:27		07:04 (B24)	07:28		07:33		07:33		08:32		
12	22:06	28	06:30 (B14)	21:17	23	06:29 (B14)	20:01	22	07:26 (B24)	18:40		16:25		16:25		15:41		
13	04:36		06:02 (B14)	05:27		06:08 (B14)	06:29		07:02 (B24)	07:30		07:36		07:36		08:34		
14	22:05	28	06:30 (B14)	21:15	20	06:28 (B14)	19:58	22	07:24 (B24)	18:38		16:23		16:23		15:40		
15	04:37		06:02 (B14)	05:29		06:10 (B14)	06:31		07:02 (B24)	07:32		07:38		07:38		08:35		
16	22:04	29	06:31 (B14)	21:13	16	06:26 (B14)	19:55	22	07:24 (B24)	18:35		16:21		16:21		15:40		
17	04:38		06:01 (B14)	05:31		06:13 (B14)	06:33		07:03 (B24)	07:34		07:40		07:40		08:37		
18	22:03	30	06:31 (B14)	21:11	10	06:23 (B14)	19:53	20	07:23 (B24)	18:33		16:19		16:19		15:39		
19	04:40		06:01 (B14)	05:33			06:35		07:04 (B24)	07:36		07:42		07:42		08:38		
20	22:02	31	06:32 (B14)	21:08			19:50	18	07:22 (B24)	18:30		16:17		16:17		15:39		
21	04:41		06:02 (B14)	05:35			06:37		07:06 (B24)	07:38		07:44		07:44		08:39		
22	22:01	31	06:33 (B14)	21:06			19:47	15	07:21 (B24)	18:27		16:15		16:15		15:39		
23	04:42		06:01 (B14)	05:37			06:39		07:08 (B24)	07:40		07:46		07:46		08:40		
24	22:00	32	06:33 (B14)	21:04			19:45	11	07:19 (B24)	18:25		16:13		16:13		15:38		
25	04:44		06:01 (B14)	05:39			06:41		07:10 (B24)	07:42		07:49		07:49		08:41		
26	21:59	32	06:33 (B14)	21:02			19:42	7	07:17 (B24)	18:22		16:11		16:11		15:38		
27	04:45		06:00 (B14)	05:41			06:43		07:24 (B25)	07:44		07:51		07:51		08:43		
28	21:58	34	06:34 (B14)	20:59			19:39	9	07:33 (B25)	18:20		16:10		16:10		15:38		
29	04:46		06:01 (B14)	05:43			06:45		07:22 (B25)	07:46		07:53		07:53		08:44		
30	21:57	34	06:35 (B14)	20:57			19:37	12	07:34 (B25)	18:17		16:08		16:08		15:38		
31	04:48		06:01 (B14)	05:45			06:47		07:21 (B25)	07:48		07:55		07:55		08:45		
32	21:55	34	06:35 (B14)	20:54			19:34	14	07:35 (B25)	18:15		16:06		16:06		15:38		
33	04:49		06:00 (B14)	05:47			06:49		07:20 (B25)	07:50		07:57		07:57		08:45		
34	21:54	35	06:35 (B14)	20:52			19:31	15	07:35 (B25)	18:12		16:04		16:04		15:38		
35	04:51		06:00 (B14)	05:49			06:51		07:20 (B25)	07:52		07:59		07:59		08:46		
36	21:52	36	06:36 (B14)	20:50			19:29	15	07:35 (B25)	18:09		16:03		16:03		15:38		
37	04:53		06:00 (B14)	05:51			06:53		07:22 (B25)	07:55		08:01		08:01		08:47		
38	21:51	35	06:35 (B14)	20:47			19:26	13	07:35 (B25)	18:07		16:01		16:01		15:38		
39	04:54		06:00 (B14)	05:53			06:55		07:24 (B25)	07:57		08:03		08:03		08:48		
40	21:49	36	06:36 (B14)	20:45			19:23	10	07:34 (B25)	18:04		15:59		15:59		15:39		
41	04:56		06:00 (B14)	05:55			06:57		07:26 (B25)	07:59		08:05		08:05		08:48		
42	21:48	36	06:36 (B14)	20:42			19:21	7	07:33 (B25)	18:02		15:58		15:58		15:39		
43	04:58		06:00 (B14)	05:57			06:59		07:28 (B25)	08:01		08:07		08:07		08:49		
44	21:46	36	06:36 (B14)	20:40			19:18	4	07:32 (B25)	18:00		15:56		15:56		15:40		
45	04:59		06:00 (B14)	05:59			07:01			08:03		08:09		08:09		08:49		
46	21:45	36	06:36 (B14)	20:37			19:15			17:57		15:55		15:55		15:40		
47	05:01		06:00 (B14)	06:01			07:03			08:05		08:11		08:11		08:50		
48	21:43	36	06:36 (B14)	20:35			19:12			17:55		15:53		15:53		15:41		
49	05:03		06:01 (B14)	06:03			07:05			07:07		08:13		08:13		08:50		
50	21:41	36	06:37 (B14)	20:32			19:10			16:52		15:52		15:52		15:41		
51	05:05		06:00 (B14)	06:05			07:07			07:10		08:15		08:15		08:51		
52	21:39	36	06:36 (B14)	20:30			19:07			16:50		15:51		15:51		15:42		
53	05:06		06:01 (B14)	06:07			07:09			07:12		08:17		08:17		08:51		
54	21:37	35	06:36 (B14)	20:27			19:04			16:48		15:50		15:50		15:43		
55	05:08		06:01 (B14)	06:09			07:11			07:14		08:19		08:19		08:51		
56	21:36	35	06:36 (B14)	20:24			19:02			16:45		15:48		15:48		15:44		
57	05:10		06:01 (B14)	06:11			07:13			07:16		08:21		08:21		08:51		
58	21:34	35	06:36 (B14)	20:22			18:59			16:43		15:47		15:47		15:45		
59	05:12		06:01 (B14)	06:13			07:15			07:18		08:22		08:22		08:51		
60	21:32	34	06:35 (B14)	20:19			18:56			16:41		15:46		15:46		15:46		
61	05:14		06:02 (B14)	06:15		07:11 (B24)				07:20						08:51		
62	21:30	33	06:35 (B14)	20:17	10	07:21 (B24)				16:38						15:47		
Potential sun hours	529			469			385			324		248				216		
Total, worst case		1016			224		328											
Sun reduction		0.49			0.50		0.43											
Oper. time red.		0.98			0.98		0.98											
Wind dir. red.		0.67			0.67		0.66											
Total reduction		0.32			0.32		0.27											
Total, real		327			73		90											

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Veveri 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (92)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	07:34 (B24) 07:50 (B24)	05:33 20:55
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:35 (B24) 07:48 (B24)	05:30 20:57
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	07:39 (B24) 07:45 (B24)	05:28 21:00
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59		05:26 21:02
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01		05:24 21:04
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03		05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06		05:19 21:08
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08		05:17 21:10
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10		05:15 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12		05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14		05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16		05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18		05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	07:02 (B25) 07:04 (B25)	05:05 21:22	06:29 (B14) 06:57 (B14)
15	08:41 16:10	07:45 17:17	06:34 18:18	07:00 (B25) 07:06 (B25)	05:03 21:24	06:30 (B14) 06:55 (B14)
16	08:40 16:12	07:43 17:19	06:32 18:20	06:57 (B25) 07:06 (B25)	05:01 21:25	06:30 (B14) 06:54 (B14)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:54 (B25) 07:06 (B25)	04:59 21:27	06:32 (B14) 06:53 (B14)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:51 (B25) 07:06 (B25)	04:57 21:29	06:34 (B14) 06:51 (B14)
19	08:36 16:18	07:36 17:26	06:24 18:26	06:50 (B25) 07:06 (B25)	04:55 21:31	06:36 (B14) 06:50 (B14)
20	08:35 16:20	07:33 17:28	06:21 18:28	06:50 (B25) 07:05 (B25)	04:54 21:33	06:39 (B14) 06:46 (B14)
21	08:33 16:22	07:31 17:30	06:18 18:30	06:43 (B24) 07:03 (B25)	04:52 21:35	
22	08:32 16:24	07:28 17:32	06:16 18:32	06:41 (B24) 07:02 (B25)	04:50 21:36	
23	08:30 16:26	07:26 17:34	06:13 18:34	06:38 (B24) 06:58 (B25)	04:48 21:38	
24	08:29 16:28	07:23 17:37	06:10 18:36	06:35 (B24) 06:54 (B24)	04:47 21:40	
25	08:27 16:30	07:21 17:39	06:08 18:38	06:34 (B24) 06:55 (B24)	04:45 21:42	
26	08:26 16:32	07:18 17:41	06:05 18:41	06:33 (B24) 06:55 (B24)	04:44 21:43	05:17 (B22)
27	08:24 16:34	07:16 17:43	06:02 18:43	06:32 (B24) 06:55 (B24)	04:42 21:45	05:16 (B22)
28	08:22 16:37	07:13 17:45	06:00 18:45	06:33 (B24) 06:55 (B24)	04:41 21:47	05:20 (B22)
29	08:20 16:39		06:57 19:47	07:32 (B24) 07:54 (B24)	04:40 21:48	05:13 (B22)
30	08:18 16:41		06:54 19:49	07:32 (B24) 07:53 (B24)	04:38 21:50	05:12 (B22)
31	08:17 16:43		06:51 19:51	07:34 (B24) 07:52 (B24)	04:37 21:51	05:11 (B22)
Potential sun hours	235	266	366	426	508	528
Total, worst case			303	415	649	597
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.65	0.65	0.65	0.67
Total reduction			0.26	0.32	0.36	0.37
Total, real			79	132	235	218

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Veveri 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (92)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October	November	December
1	04:30	05:11 (B22)	05:16	06:37 (B14)	06:17	07:17	07:23	08:24
	22:09	20 05:31 (B22)	21:28	32 07:09 (B14)	20:14	18:54	16:36	15:45
2	04:31	05:10 (B22)	05:18	06:36 (B14)	06:19	07:19	07:25	08:26
	22:08	21 05:31 (B22)	21:26	34 07:10 (B14)	20:11	18:51	16:34	15:44
3	04:32	05:10 (B22)	05:20	06:36 (B14)	06:21	07:21	07:27	08:28
	22:08	21 05:31 (B22)	21:24	34 07:10 (B14)	20:09	18:48	16:32	15:43
4	04:33	05:11 (B22)	05:22	06:35 (B14)	06:23	07:23	07:29	08:29
	22:07	20 05:31 (B22)	21:22	36 07:11 (B14)	20:06	18:46	16:30	15:43
5	04:34	05:11 (B22)	05:24	06:35 (B14)	06:25	07:25	07:31	08:31
	22:07	21 05:32 (B22)	21:19	37 07:12 (B14)	20:03	18:43	16:27	15:42
6	04:35	05:12 (B22)	05:25	06:34 (B14)	06:27	07:28	07:33	08:32
	22:06	20 05:32 (B22)	21:17	37 07:11 (B14)	20:01	18:40	16:25	15:41
7	04:36	05:13 (B22)	05:27	06:34 (B14)	06:29	07:30	07:36	08:34
	22:05	19 05:32 (B22)	21:15	38 07:12 (B14)	19:58	18:38	16:23	15:40
8	04:37	05:14 (B22)	05:29	06:34 (B14)	06:31	07:32	07:38	08:35
	22:04	18 05:32 (B22)	21:13	38 07:12 (B14)	19:55	18:35	16:21	15:40
9	04:38	05:15 (B22)	05:31	06:34 (B14)	06:33	07:33 (B24)	07:34	08:37
	22:03	17 05:32 (B22)	21:11	38 07:12 (B14)	19:53	4 07:37 (B24)	18:33	16:19
10	04:40	05:16 (B22)	05:33	06:33 (B14)	06:35	07:29 (B24)	07:36	08:38
	22:02	15 05:31 (B22)	21:08	39 07:12 (B14)	19:50	12 07:41 (B24)	18:30	16:17
11	04:41	05:18 (B22)	05:35	06:34 (B14)	06:37	07:27 (B24)	07:38	08:39
	22:01	14 05:32 (B22)	21:06	38 07:12 (B14)	19:47	15 07:42 (B24)	18:27	16:15
12	04:42	05:19 (B22)	05:37	06:33 (B14)	06:39	07:25 (B24)	07:40	08:40
	22:00	13 05:32 (B22)	21:04	38 07:11 (B14)	19:45	18 07:43 (B24)	18:25	16:13
13	04:44	05:20 (B22)	05:39	06:33 (B14)	06:41	07:24 (B24)	07:42	08:42
	21:59	11 05:31 (B22)	21:02	38 07:11 (B14)	19:42	20 07:44 (B24)	18:22	16:11
14	04:45	05:21 (B22)	05:41	06:33 (B14)	06:43	07:23 (B24)	07:44	08:43
	21:58	9 05:30 (B22)	20:59	38 07:11 (B14)	19:39	21 07:44 (B24)	18:20	16:10
15	04:46	05:23 (B22)	05:43	06:33 (B14)	06:45	07:22 (B24)	07:46	08:44
	21:57	8 05:31 (B22)	20:57	37 07:10 (B14)	19:37	22 07:44 (B24)	18:17	16:08
16	04:48	05:24 (B22)	05:45	06:34 (B14)	06:47	07:22 (B24)	07:48	08:45
	21:55	5 05:29 (B22)	20:54	36 07:10 (B14)	19:34	22 07:44 (B24)	18:15	16:06
17	04:49	05:25 (B22)	05:47	06:34 (B14)	06:49	07:22 (B24)	07:50	08:45
	21:54	3 05:28 (B22)	20:52	35 07:09 (B14)	19:31	22 07:44 (B24)	18:12	16:04
18	04:51		05:49	06:35 (B14)	06:51	07:22 (B24)	07:52	08:46
	21:52		20:50	34 07:09 (B14)	19:29	21 07:43 (B24)	18:09	16:03
19	04:53		05:51	06:35 (B14)	06:53	07:22 (B24)	07:55	08:47
	21:51		20:47	32 07:07 (B14)	19:26	20 07:42 (B24)	18:07	16:01
20	04:54		05:53	06:35 (B14)	06:55	07:24 (B24)	07:57	08:48
	21:49		20:45	31 07:06 (B14)	19:23	17 07:41 (B24)	18:04	15:59
21	04:56		05:55	06:37 (B14)	06:57	07:26 (B24)	07:59	08:48
	21:48		20:42	27 07:04 (B14)	19:21	21 07:47 (B25)	18:02	15:58
22	04:58		05:57	06:38 (B14)	06:59	07:28 (B24)	08:01	08:49
	21:46		20:40	25 07:03 (B14)	19:18	20 07:48 (B25)	18:00	15:56
23	04:59		05:59	06:40 (B14)	07:01	07:30 (B24)	08:03	08:49
	21:45		20:37	20 07:00 (B14)	19:15	18 07:49 (B25)	17:57	15:55
24	05:01	06:48 (B14)	06:01	06:42 (B14)	07:03	07:34 (B25)	08:05	08:51
	21:43	10 06:58 (B14)	20:35	16 06:58 (B14)	19:12	15 07:49 (B25)	17:55	15:53
25	05:03	06:46 (B14)	06:03	06:47 (B14)	07:05	07:34 (B25)	07:07	08:13
	21:41	15 07:01 (B14)	20:32	6 06:53 (B14)	19:10	15 07:49 (B25)	16:52	15:52
26	05:05	06:43 (B14)	06:05		07:07	07:36 (B25)	07:10	08:15
	21:39	19 07:02 (B14)	20:30		19:07	13 07:49 (B25)	16:50	15:51
27	05:06	06:42 (B14)	06:07		07:09	07:38 (B25)	07:12	08:17
	21:37	22 07:04 (B14)	20:27		19:04	10 07:48 (B25)	16:48	15:50
28	05:08	06:41 (B14)	06:09		07:11	07:40 (B25)	07:14	08:19
	21:36	25 07:06 (B14)	20:24		19:02	7 07:47 (B25)	16:45	15:48
29	05:10	06:39 (B14)	06:11		07:13	07:42 (B25)	07:16	08:21
	21:34	27 07:06 (B14)	20:22		18:59	4 07:46 (B25)	16:43	15:47
30	05:12	06:39 (B14)	06:13		07:15		07:18	08:22
	21:32	28 07:07 (B14)	20:19		18:56		16:41	15:46
31	05:14	06:38 (B14)	06:15				07:20	08:51
	21:30	31 07:09 (B14)	20:17				16:38	15:47
Potential sun hours	529		469		385	324	247	216
Total, worst case	432		814		337			
Sun reduction	0.49		0.50		0.43			
Oper. time red.	0.98		0.98		0.98			
Wind dir. red.	0.66		0.65		0.65			
Total reduction	0.32		0.32		0.27			
Total, real	138		258		91			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Viksnes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (19)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:57	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:37 22:03	05:31 21:11	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:07	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:04	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:12 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:46	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vipes skola 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (187)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March	April	May	June
1	08:51	10:03 (B22)	08:15	10:12 (B22)	07:11	06:49	05:32			04:36
	15:48	31	10:34 (B22)	16:45	33	10:45 (B22)	17:48	19:53	20:55	21:53
2	08:50	10:04 (B22)	08:13	10:13 (B22)	07:08	06:46	05:30		05:58 (B1)	04:35
	15:49	32	10:36 (B22)	16:47	32	10:45 (B22)	17:50	19:55	20:57	21:54
3	08:50	10:04 (B22)	08:11	10:15 (B22)	07:06	06:43	05:28		05:56 (B1)	04:34
	15:51	32	10:36 (B22)	16:50	29	10:44 (B22)	17:52	19:57	21:00	21:55
4	08:50	10:03 (B22)	08:09	10:16 (B22)	07:03	06:41	05:26		05:54 (B1)	04:33
	15:52	33	10:36 (B22)	16:52	27	10:43 (B22)	17:54	19:59	21:02	21:57
5	08:49	10:04 (B22)	08:07	10:18 (B22)	07:00	06:38	05:23		05:52 (B1)	04:32
	15:53	34	10:38 (B22)	16:54	23	10:41 (B22)	17:56	20:01	21:04	21:58
6	08:49	10:04 (B22)	08:05	10:20 (B22)	06:58	06:35	05:21		05:50 (B1)	04:31
	15:55	34	10:38 (B22)	16:56	18	10:38 (B22)	17:58	20:03	21:06	21:59
7	08:48	10:04 (B22)	08:03	10:24 (B22)	06:55	06:33	05:19		05:48 (B1)	04:30
	15:56	35	10:39 (B22)	16:59	11	10:35 (B22)	18:00	20:05	21:08	22:00
8	08:48	10:04 (B22)	08:01		06:53	06:30	05:17		05:48 (B1)	04:29
	15:58	36	10:40 (B22)	17:01		18:03	20:08	21:10	21:09 (B1)	22:01
9	08:47	10:04 (B22)	07:58		06:50	06:28	05:15		05:48 (B1)	04:28
	15:59	36	10:40 (B22)	17:03		18:05	20:10	21:12	21:09 (B1)	22:02
10	08:46	10:04 (B22)	07:56		06:47	06:25	05:13		05:48 (B1)	04:28
	16:01	37	10:41 (B22)	17:05		18:07	20:12	21:14	21:09 (B1)	22:03
11	08:45	10:05 (B22)	07:54		06:45	06:22	05:11		05:47 (B1)	04:27
	16:03	37	10:42 (B22)	17:08		18:09	20:14	21:16	21:08 (B1)	22:04
12	08:44	10:05 (B22)	07:52		06:42	06:20	05:08		05:47 (B1)	04:27
	16:04	38	10:43 (B22)	17:10		18:11	20:16	21:18	21:08 (B1)	22:05
13	08:43	10:04 (B22)	07:49		06:40	06:17	05:06		05:47 (B1)	04:26
	16:06	39	10:43 (B22)	17:12		18:13	20:18	21:20	21:07 (B1)	22:06
14	08:42	10:05 (B22)	07:47		06:37	06:14	05:04		05:49 (B1)	04:26
	16:08	39	10:44 (B22)	17:14		18:15	20:20	21:22	21:08 (B1)	22:07
15	08:41	10:04 (B22)	07:45		06:34	06:12	05:03		05:49 (B1)	04:26
	16:10	40	10:44 (B22)	17:17		18:18	20:22	21:24	21:07 (B1)	22:07
16	08:40	10:05 (B22)	07:43		06:32	06:09	05:01		05:49 (B1)	04:25
	16:12	40	10:45 (B22)	17:19		18:20	20:24	21:25	21:06 (B1)	22:08
17	08:39	10:06 (B22)	07:40		06:29	06:07	04:59		05:51 (B1)	04:25
	16:14	40	10:46 (B22)	17:21		18:22	20:26	21:27	21:06 (B1)	22:08
18	08:37	10:05 (B22)	07:38		06:26	06:04	04:57		05:51 (B1)	04:25
	16:16	41	10:46 (B22)	17:23		18:24	20:28	21:29	21:04 (B1)	22:09
19	08:36	10:05 (B22)	07:35		06:24	06:02	04:55		05:52 (B1)	04:25
	16:18	41	10:46 (B22)	17:26		18:26	20:30	21:31	21:03 (B1)	22:09
20	08:35	10:06 (B22)	07:33		06:21	05:59	04:53		05:55 (B1)	04:25
	16:20	41	10:47 (B22)	17:28		18:28	20:33	21:33	21:01 (B1)	22:10
21	08:33	10:06 (B22)	07:31		06:18	05:57	04:52			04:25
	16:22	41	10:47 (B22)	17:30		18:30	20:35	21:35		22:10
22	08:32	10:06 (B22)	07:28		06:16	05:54	04:50			04:25
	16:24	41	10:47 (B22)	17:32		18:32	20:37	21:37		22:10
23	08:30	10:06 (B22)	07:26		06:13	05:52	04:48			04:26
	16:26	41	10:47 (B22)	17:34		18:34	20:39	21:38		22:10
24	08:29	10:08 (B22)	07:23		06:10	05:49	04:47			04:26
	16:28	40	10:48 (B22)	17:37		18:36	20:41	21:40		22:10
25	08:27	10:08 (B22)	07:21		06:07	05:47	04:45			04:26
	16:30	40	10:48 (B22)	17:39		18:38	20:43	21:42		22:10
26	08:26	10:08 (B22)	07:18		06:05	05:44	04:44			04:27
	16:32	40	10:48 (B22)	17:41		18:41	20:45	21:43		22:10
27	08:24	10:09 (B22)	07:16		06:02	05:42	04:42			04:27
	16:34	39	10:48 (B22)	17:43		18:43	20:47	21:45		22:10
28	08:22	10:09 (B22)	07:13		05:59	05:40	04:41			04:28
	16:36	39	10:48 (B22)	17:45		18:45	20:49	21:47		22:10
29	08:20	10:10 (B22)			06:57	05:37	04:40			04:29
	16:39	38	10:48 (B22)			19:47	20:51	21:48		22:10
30	08:18	10:11 (B22)			06:54	05:35	04:38			04:29
	16:41	36	10:47 (B22)			19:49	20:53	21:50		22:09
31	08:17	10:12 (B22)			06:51		04:37			
	16:43	35	10:47 (B22)			19:51	21:51			
Potential sun hours	235		266		366	426	508		529	
Total, worst case	1166		173				303			
Sun reduction	0.13		0.20				0.57			
Oper. time red.	0.98		0.98				0.98			
Wind dir. red.	0.61		0.61				0.67			
Total reduction	0.08		0.12				0.36			
Total, real	90		20				109			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vipes skola 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (187)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July			August			September		October		November		December		
1	04:30			05:16	05:58 (B1)	06:17	07:17	07:23					08:24	09:47 (B22)	
	22:09			21:28	20	06:18 (B1)	20:14	18:54	16:36				15:45	37	10:24 (B22)
2	04:31			05:18	05:58 (B1)	06:19	07:19	07:25					08:26	09:48 (B22)	
	22:09			21:26	21	06:19 (B1)	20:11	18:51	16:34				15:44	36	10:24 (B22)
3	04:32			05:19	05:58 (B1)	06:21	07:21	07:27					08:28	09:47 (B22)	
	22:08			21:24	21	06:19 (B1)	20:09	18:48	16:32				15:43	37	10:24 (B22)
4	04:33			05:21	05:58 (B1)	06:23	07:23	07:29	09:53 (B22)				08:29	09:48 (B22)	
	22:07			21:22	21	06:19 (B1)	20:06	18:46	16:29	13	10:06 (B22)	15:42	36	10:24 (B22)	
5	04:34			05:23	05:57 (B1)	06:25	07:25	07:31	09:49 (B22)				08:31	09:49 (B22)	
	22:07			21:20	21	06:18 (B1)	20:03	18:43	16:27	19	10:08 (B22)	15:42	35	10:24 (B22)	
6	04:35			05:25	05:58 (B1)	06:27	07:27	07:33	09:48 (B22)				08:32	09:50 (B22)	
	22:06			21:17	20	06:18 (B1)	20:01	18:40	16:25	23	10:11 (B22)	15:41	35	10:25 (B22)	
7	04:36			05:27	06:00 (B1)	06:29	07:30	07:36	09:46 (B22)				08:34	09:50 (B22)	
	22:05			21:15	17	06:17 (B1)	19:58	18:38	16:23	27	10:13 (B22)	15:40	34	10:24 (B22)	
8	04:37			05:29	06:02 (B1)	06:31	07:32	07:38	09:45 (B22)				08:35	09:52 (B22)	
	22:04			21:13	14	06:16 (B1)	19:55	18:35	16:21	30	10:15 (B22)	15:40	32	10:24 (B22)	
9	04:38			05:31	06:04 (B1)	06:33	07:34	07:40	09:44 (B22)				08:37	09:52 (B22)	
	22:03			21:11	11	06:15 (B1)	19:53	18:32	16:19	31	10:15 (B22)	15:39	32	10:24 (B22)	
10	04:39			05:33	06:06 (B1)	06:35	07:36	07:42	09:44 (B22)				08:38	09:53 (B22)	
	22:02			21:08	8	06:14 (B1)	19:50	18:30	16:17	33	10:17 (B22)	15:39	32	10:25 (B22)	
11	04:41			05:35	06:07 (B1)	06:37	07:38	07:44	09:43 (B22)				08:39	09:54 (B22)	
	22:01			21:06	4	06:11 (B1)	19:47	18:27	16:15	35	10:18 (B22)	15:38	30	10:24 (B22)	
12	04:42			05:37		06:39	07:40	07:46	09:42 (B22)				08:40	09:55 (B22)	
	22:00			21:04		19:45	18:25	16:13	10:18 (B22)	36		15:38	30	10:25 (B22)	
13	04:43			05:39		06:41	07:42	07:49	09:42 (B22)				08:42	09:55 (B22)	
	21:59			21:02		19:42	18:22	16:11	10:19 (B22)	37		15:38	30	10:25 (B22)	
14	04:45			05:41		06:43	07:44	07:51	09:41 (B22)				08:43	09:56 (B22)	
	21:58			20:59		19:39	18:19	16:09	10:20 (B22)	39		15:38	29	10:25 (B22)	
15	04:46			05:43		06:45	07:46	07:53	09:41 (B22)				08:44	09:57 (B22)	
	21:57			20:57		19:37	18:17	16:08	10:20 (B22)	39		15:38	28	10:25 (B22)	
16	04:48			05:45		06:47	07:48	07:55	09:41 (B22)				08:45	09:57 (B22)	
	21:55			20:54		19:34	18:14	16:06	10:21 (B22)	40		15:38	29	10:26 (B22)	
17	04:49			05:47		06:49	07:50	07:57	09:41 (B22)				08:46	09:58 (B22)	
	21:54			20:52		19:31	18:12	16:04	10:21 (B22)	40		15:38	28	10:26 (B22)	
18	04:51			05:49		06:51	07:52	07:59	09:42 (B22)				08:46	09:59 (B22)	
	21:52			20:50		19:29	18:09	16:02	10:22 (B22)	40		15:38	27	10:26 (B22)	
19	04:52			05:51		06:53	07:55	08:01	09:41 (B22)				08:47	09:59 (B22)	
	21:51			20:47		19:26	18:07	16:01	10:22 (B22)	41		15:38	27	10:26 (B22)	
20	04:54			05:53		06:55	07:57	08:03	09:41 (B22)				08:48	10:00 (B22)	
	21:49			20:45		19:23	18:04	15:59	10:22 (B22)	41		15:39	27	10:27 (B22)	
21	04:56			05:55		06:57	07:59	08:05	09:41 (B22)				08:48	10:01 (B22)	
	21:48			20:42		19:20	18:02	15:58	10:22 (B22)	41		15:39	27	10:28 (B22)	
22	04:57			05:57		06:59	08:01	08:07	09:42 (B22)				08:49	10:01 (B22)	
	21:46			20:40		19:18	17:59	15:56	10:23 (B22)	41		15:39	27	10:28 (B22)	
23	04:59	06:07 (B1)		05:59		07:01	08:03	08:09	09:42 (B22)				08:50	10:02 (B22)	
	21:45	2	06:09 (B1)	20:37		19:15	17:57	15:55	10:23 (B22)	41		15:40	27	10:29 (B22)	
24	05:01		06:04 (B1)	06:01		07:03	08:05	08:11	09:43 (B22)				08:50	10:02 (B22)	
	21:43	9	06:13 (B1)	20:35		19:12	17:55	15:53	10:23 (B22)	40		15:41	27	10:29 (B22)	
25	05:03		06:03 (B1)	06:03		07:05	07:07	08:13	09:43 (B22)				08:50	10:02 (B22)	
	21:41	12	06:15 (B1)	20:32		19:10	16:52	15:52	10:23 (B22)	40		15:41	27	10:29 (B22)	
26	05:04		06:01 (B1)	06:05		07:07	07:10	08:15	09:43 (B22)				08:51	10:02 (B22)	
	21:39	14	06:15 (B1)	20:30		19:07	16:50	15:51	10:23 (B22)	40		15:42	28	10:30 (B22)	
27	05:06		06:01 (B1)	06:07		07:09	07:12	08:17	09:44 (B22)				08:51	10:02 (B22)	
	21:38	16	06:17 (B1)	20:27		19:04	16:47	15:49	10:24 (B22)	40		15:43	28	10:30 (B22)	
28	05:08		05:59 (B1)	06:09		07:11	07:14	08:19	09:45 (B22)				08:51	10:03 (B22)	
	21:36	18	06:17 (B1)	20:24		19:02	16:45	15:48	10:24 (B22)	39		15:44	28	10:31 (B22)	
29	05:10		05:59 (B1)	06:11		07:13	07:16	08:21	09:45 (B22)				08:51	10:03 (B22)	
	21:34	18	06:17 (B1)	20:22		18:59	16:43	15:47	10:24 (B22)	39		15:45	29	10:32 (B22)	
30	05:12		05:59 (B1)	06:13		07:15	07:18	08:22	09:46 (B22)				08:51	10:03 (B22)	
	21:32	19	06:18 (B1)	20:19		18:56	16:40	15:46	10:24 (B22)	38		15:46	30	10:33 (B22)	
31	05:14		05:59 (B1)	06:15			07:20						08:51	10:04 (B22)	
	21:30	20	06:19 (B1)	20:17			16:38						15:47	30	10:34 (B22)
Potential sun hours	529			469			385	324	247				216		
Total, worst case		128			178				963				939		
Sun reduction		0.49			0.50				0.08				0.07		
Oper. time red.		0.98			0.98				0.98				0.98		
Wind dir. red.		0.67			0.67				0.61				0.61		
Total reduction		0.31			0.32				0.05				0.04		
Total, real		40			56				46				38		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vipmali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (115)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51	09:37 (B15)	08:15	09:00 (B2)	07:11	06:49	05:32	07:24 (B17)	04:36	07:38 (B17)								
	15:48	60 13:10 (B1)	16:45	28 09:28 (B2)	17:47	19:53	20:55	80 08:44 (B17)	21:53	46 08:24 (B17)								
2	08:50	09:38 (B15)	08:13	09:00 (B2)	07:08	06:46	05:30	07:24 (B17)	04:34	07:38 (B17)								
	15:49	57 13:11 (B1)	16:47	29 09:29 (B2)	17:50	19:55	20:57	79 08:43 (B17)	21:54	46 08:24 (B17)								
3	08:50	09:38 (B15)	08:11	09:00 (B2)	07:06	06:43	05:28	07:24 (B17)	04:33	07:39 (B17)								
	15:50	54 13:10 (B1)	16:49	30 09:30 (B2)	17:52	19:57	20:59	79 08:43 (B17)	21:55	44 08:23 (B17)								
4	08:50	09:39 (B15)	08:09	09:00 (B2)	07:03	06:41	05:25	07:24 (B17)	04:32	07:40 (B17)								
	15:52	51 13:10 (B1)	16:52	30 09:30 (B2)	17:54	19:59	21:02	79 08:43 (B17)	21:57	42 08:22 (B17)								
5	08:49	09:40 (B15)	08:07	09:00 (B2)	07:00	06:38	05:23	07:25 (B17)	04:31	07:41 (B17)								
	15:53	44 13:11 (B1)	16:54	30 09:30 (B2)	17:56	20:01	21:04	77 08:42 (B17)	21:58	41 08:22 (B17)								
6	08:49	09:41 (B15)	08:05	09:00 (B2)	06:58	06:35	05:21	07:25 (B17)	04:31	07:42 (B17)								
	15:55	43 13:11 (B1)	16:56	30 09:30 (B2)	17:58	20:03	21:06	77 08:42 (B17)	21:59	39 08:21 (B17)								
7	08:48	09:41 (B15)	08:03	09:00 (B2)	06:55	06:33	05:19	07:25 (B17)	04:30	07:42 (B17)								
	15:56	41 13:11 (B1)	16:58	30 09:30 (B2)	18:00	20:05	21:08	77 08:42 (B17)	22:00	38 08:20 (B17)								
8	08:48	09:42 (B15)	08:00	09:01 (B2)	06:53	06:30	05:17	07:25 (B17)	04:29	07:44 (B17)								
	15:58	39 13:11 (B1)	17:01	29 09:30 (B2)	18:02	20:07	21:10	76 08:41 (B17)	22:01	36 08:20 (B17)								
9	08:47	09:43 (B15)	07:58	09:01 (B2)	06:50	06:27	05:14	07:25 (B17)	04:28	07:44 (B17)								
	15:59	36 13:10 (B1)	17:03	28 09:29 (B2)	18:05	20:10	21:12	75 08:40 (B17)	22:02	35 08:19 (B17)								
10	08:46	09:45 (B15)	07:56	09:02 (B2)	06:47	06:25	05:12	07:25 (B17)	04:28	07:46 (B17)								
	16:01	33 13:10 (B1)	17:05	27 09:29 (B2)	18:07	20:12	21:14	75 08:40 (B17)	22:03	33 08:19 (B17)								
11	08:45	09:46 (B15)	07:54	09:03 (B2)	06:45	06:22	05:10	07:25 (B17)	04:27	07:46 (B17)								
	16:03	29 13:10 (B1)	17:07	25 09:28 (B2)	18:09	20:14	21:16	74 08:39 (B17)	22:04	32 08:18 (B17)								
12	08:44	09:50 (B15)	07:52	09:04 (B2)	06:42	06:20	05:08	07:25 (B17)	04:27	07:47 (B17)								
	16:04	22 13:10 (B1)	17:10	23 09:27 (B2)	18:11	20:16	21:18	73 08:38 (B17)	22:05	31 08:18 (B17)								
13	08:43	12:50 (B1)	07:49	09:05 (B2)	06:39	06:17	05:06	07:26 (B17)	04:26	07:48 (B17)								
	16:06	18 13:08 (B1)	17:12	21 09:26 (B2)	18:13	20:18	21:20	72 08:38 (B17)	22:06	29 08:17 (B17)								
14	08:42	12:53 (B1)	07:47	09:06 (B2)	06:37	06:14	05:04	07:26 (B17)	04:26	07:48 (B17)								
	16:08	14 13:07 (B1)	17:14	18 09:24 (B2)	18:15	20:20	21:22	71 08:37 (B17)	22:07	28 08:16 (B17)								
15	08:41	12:56 (B1)	07:45	09:09 (B2)	06:34	06:12	05:02	07:27 (B17)	04:25	07:49 (B17)								
	16:10	10 13:06 (B1)	17:16	13 09:22 (B2)	18:17	20:22	21:24	70 08:37 (B17)	22:07	27 08:16 (B17)								
16	08:40		07:43		06:31	06:09	05:00	07:27 (B17)	04:25	07:49 (B17)								
	16:12		17:19		18:19	20:24	21:25	69 08:36 (B17)	22:08	27 08:16 (B17)								
17	08:39		07:40		06:29	06:07	04:59	07:27 (B17)	04:25	07:50 (B17)								
	16:13		17:21		18:22	20:26	21:27	68 08:35 (B17)	22:08	26 08:16 (B17)								
18	08:37		07:38		06:26	06:04	04:57	07:28 (B17)	04:25	07:51 (B17)								
	16:15		17:23		18:24	20:28	21:29	67 08:35 (B17)	22:09	25 08:16 (B17)								
19	08:36		07:35		06:23	06:02	04:55	07:28 (B17)	04:25	07:51 (B17)								
	16:17		17:25		18:26	20:30	21:31	66 08:34 (B17)	22:09	25 08:16 (B17)								
20	08:35		07:33		06:21	05:59	04:53	07:29 (B17)	04:25	07:51 (B17)								
	16:19		17:28		18:28	20:32	21:33	64 08:33 (B17)	22:10	25 08:16 (B17)								
21	08:33		07:31		06:18	05:56	04:51	07:29 (B17)	04:25	07:51 (B17)								
	16:21		17:30		18:30	20:35	21:35	63 08:32 (B17)	22:10	25 08:16 (B17)								
22	08:32		07:28		06:15	05:54	04:50	07:27 (B17)	04:25	07:52 (B17)								
	16:23		17:32		18:32	20:37	21:36	61 08:32 (B17)	22:10	25 08:17 (B17)								
23	08:30	09:08 (B2)	07:26		06:13	05:52	04:48	07:31 (B17)	04:25	07:52 (B17)								
	16:26	8 09:16 (B2)	17:34		18:34	20:39	21:38	60 08:31 (B17)	22:10	25 08:17 (B17)								
24	08:29	09:07 (B2)	07:23		06:10	05:49	04:46	07:32 (B17)	04:26	07:52 (B17)								
	16:28	13 09:20 (B2)	17:36		18:36	20:41	21:40	58 08:30 (B17)	22:10	25 08:17 (B17)								
25	08:27	09:05 (B2)	07:21		06:07	05:47	04:45	07:33 (B17)	04:26	07:52 (B17)								
	16:30	17 09:22 (B2)	17:39		18:38	20:43	21:42	57 08:30 (B17)	22:10	26 08:18 (B17)								
26	08:25	09:04 (B2)	07:18		06:05	05:44	04:43	07:33 (B17)	04:27	07:52 (B17)								
	16:32	19 09:23 (B2)	17:41		18:40	20:45	21:43	55 08:28 (B17)	22:10	26 08:18 (B17)								
27	08:24	09:03 (B2)	07:16		06:02	05:42	04:42	07:33 (B17)	04:27	07:52 (B17)								
	16:34	22 09:25 (B2)	17:43		18:42	20:47	21:45	55 08:28 (B17)	22:10	27 08:19 (B17)								
28	08:22	09:02 (B2)	07:13		05:59	05:39	04:41	07:34 (B17)	04:28	07:51 (B17)								
	16:36	24 09:26 (B2)	17:45		18:45	20:49	21:47	53 08:27 (B17)	22:10	28 08:19 (B17)								
29	08:20	09:01 (B2)			06:57	05:37	04:39	07:35 (B17)	04:28	07:51 (B17)								
	16:38	26 09:27 (B2)			19:47	20:51	21:48	52 08:27 (B17)	22:10	29 08:20 (B17)								
30	08:18	09:01 (B2)			06:54	05:35	04:38	07:36 (B17)	04:29	07:50 (B17)								
	16:41	27 09:28 (B2)			19:49	20:53	21:50	50 08:26 (B17)	22:09	31 08:21 (B17)								
31	08:17	09:01 (B2)			06:51		04:37	07:37 (B17)										
	16:43	28 09:29 (B2)			19:51		21:51	48 08:25 (B17)										
Potential sun hours	235		266		366		426		508		529							
Total, worst case		735		391			1787		2080		942							
Sun reduction		0.13		0.20			0.50		0.57		0.56							
Oper. time red.		0.98		0.98			0.98		0.98		0.98							
Wind dir. red.		0.62		0.59			0.65		0.65		0.65							
Total reduction		0.08		0.11			0.31		0.36		0.35							
Total, real		59		45			563		744		331							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Vipmali - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (115)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

July		August		September		October		November		December	
1	04:30	07:50 (B17)	05:15	07:36 (B17)	06:17	07:39 (B17)	07:17	07:22	08:31 (B2)	08:24	09:29 (B15)
2	22:09	32 08:22 (B17)	21:28	73 08:49 (B17)	20:14	59 08:38 (B17)	18:53	16:36	27 08:58 (B2)	15:45	28 12:52 (B1)
3	04:31	07:50 (B17)	05:17	07:35 (B17)	06:19	07:40 (B17)	07:19	07:25	08:30 (B2)	08:26	09:28 (B15)
4	22:09	33 08:23 (B17)	21:26	75 08:50 (B17)	20:11	56 08:36 (B17)	18:51	16:34	29 08:59 (B2)	15:44	33 12:53 (B1)
5	04:31	07:50 (B17)	05:19	07:35 (B17)	06:21	07:42 (B17)	07:21	07:27	08:31 (B2)	08:28	09:26 (B15)
6	22:08	34 08:24 (B17)	21:24	75 08:50 (B17)	20:09	53 08:35 (B17)	18:48	16:31	29 09:00 (B2)	15:43	36 12:53 (B1)
7	04:32	07:49 (B17)	05:21	07:34 (B17)	06:23	07:42 (B17)	07:23	07:29	08:30 (B2)	08:29	09:26 (B15)
8	22:07	36 08:25 (B17)	21:22	76 08:50 (B17)	20:06	49 08:31 (B17)	18:45	16:29	30 09:00 (B2)	15:42	39 12:55 (B1)
9	04:33	07:49 (B17)	05:23	07:34 (B17)	06:25	07:44 (B17)	07:25	07:31	08:29 (B2)	08:31	09:26 (B15)
10	22:07	37 08:26 (B17)	21:19	77 08:51 (B17)	20:03	45 08:29 (B17)	18:43	16:27	30 08:59 (B2)	15:41	42 12:56 (B1)
11	04:34	07:49 (B17)	05:25	07:34 (B17)	06:27	07:46 (B17)	07:27	07:33	08:30 (B2)	08:32	09:27 (B15)
12	22:06	38 08:27 (B17)	21:17	77 08:51 (B17)	20:01	40 08:26 (B17)	18:40	16:25	30 09:00 (B2)	15:41	42 12:57 (B1)
13	04:35	07:48 (B17)	05:27	07:34 (B17)	06:29	07:49 (B17)	07:29	07:36	08:30 (B2)	08:34	09:26 (B15)
14	22:05	40 08:28 (B17)	21:15	78 08:52 (B17)	19:58	34 08:23 (B17)	18:38	16:23	30 09:00 (B2)	15:40	44 12:57 (B1)
15	04:37	07:48 (B17)	05:29	07:34 (B17)	06:31	07:52 (B17)	07:31	07:38	08:31 (B2)	08:35	09:27 (B15)
16	22:04	41 08:29 (B17)	21:13	78 08:52 (B17)	19:55	27 08:19 (B17)	18:35	16:21	29 09:00 (B2)	15:39	51 12:58 (B1)
17	04:38	07:47 (B17)	05:31	07:34 (B17)	06:33	07:57 (B17)	07:34	07:40	08:30 (B2)	08:37	09:27 (B15)
18	22:03	43 08:30 (B17)	21:11	78 08:52 (B17)	19:53	17 08:14 (B17)	18:32	16:19	30 09:00 (B2)	15:39	54 12:59 (B1)
19	04:39	07:46 (B17)	05:33	07:33 (B17)	06:35		07:36	07:42	08:30 (B2)	08:38	09:27 (B15)
20	22:02	45 08:31 (B17)	21:08	79 08:52 (B17)	19:50		18:30	16:17	29 08:59 (B2)	15:39	57 13:00 (B1)
21	04:40	07:46 (B17)	05:35	07:33 (B17)	06:37		07:38	07:44	08:32 (B2)	08:39	09:27 (B15)
22	22:01	45 08:31 (B17)	21:06	79 08:52 (B17)	19:47		18:27	16:15	27 08:59 (B2)	15:38	60 13:00 (B1)
23	04:42	07:45 (B17)	05:37	07:33 (B17)	06:39		07:40	07:46	08:32 (B2)	08:40	09:28 (B15)
24	22:00	47 08:32 (B17)	21:04	79 08:52 (B17)	19:45		18:24	16:13	27 08:59 (B2)	15:38	61 13:01 (B1)
25	04:43	07:45 (B17)	05:39	07:33 (B17)	06:41		07:42	07:49	08:33 (B2)	08:42	09:28 (B15)
26	21:59	49 08:34 (B17)	21:01	79 08:52 (B17)	19:42		18:22	16:11	26 08:59 (B2)	15:38	64 13:02 (B1)
27	04:45	07:44 (B17)	05:41	07:33 (B17)	06:43		07:44	07:51	08:34 (B2)	08:43	09:29 (B15)
28	21:58	51 08:35 (B17)	20:59	79 08:52 (B17)	19:39		18:19	16:09	24 08:58 (B2)	15:38	63 13:02 (B1)
29	04:46	07:43 (B17)	05:43	07:33 (B17)	06:45		07:46	07:53	08:35 (B2)	08:44	09:29 (B15)
30	21:57	52 08:35 (B17)	20:57	79 08:52 (B17)	19:37		18:17	16:07	21 08:56 (B2)	15:38	66 13:03 (B1)
31	04:47	07:43 (B17)	05:45	07:32 (B17)	06:47		07:48	07:55	08:37 (B2)	08:45	09:29 (B15)
32	21:55	54 08:37 (B17)	20:54	79 08:51 (B17)	19:34		18:14	16:06	19 08:56 (B2)	15:38	65 13:03 (B1)
33	04:49	07:43 (B17)	05:47	07:32 (B17)	06:49		07:50	07:57	08:38 (B2)	08:46	09:30 (B15)
34	21:54	54 08:37 (B17)	20:52	79 08:51 (B17)	19:31		18:12	16:04	17 08:55 (B2)	15:38	66 13:04 (B1)
35	04:51	07:42 (B17)	05:49	07:32 (B17)	06:51		07:52	07:59	08:41 (B2)	08:46	09:31 (B15)
36	21:52	56 08:38 (B17)	20:49	79 08:51 (B17)	19:28		18:09	16:02	13 08:54 (B2)	15:38	67 13:05 (B1)
37	04:52	07:42 (B17)	05:51	07:32 (B17)	06:53		07:54	08:01	08:43 (B2)	08:47	09:31 (B15)
38	21:51	57 08:39 (B17)	20:47	78 08:50 (B17)	19:26		18:07	16:01	8 08:51 (B2)	15:38	67 13:05 (B1)
39	04:54	07:41 (B17)	05:53	07:33 (B17)	06:55		07:57	08:03		08:48	09:31 (B15)
40	21:49	59 08:40 (B17)	20:45	77 08:50 (B17)	19:23		18:04	15:59		15:38	67 13:05 (B1)
41	04:56	07:41 (B17)	05:55	07:33 (B17)	06:57		07:59	08:05		08:48	09:32 (B15)
42	21:48	60 08:41 (B17)	20:42	77 08:50 (B17)	19:20		18:02	15:57		15:39	67 13:06 (B1)
43	04:57	07:41 (B17)	05:57	07:33 (B17)	06:59		08:01	08:07		08:49	09:32 (B15)
44	21:46	62 08:43 (B17)	20:40	76 08:49 (B17)	19:18		17:59	15:56		15:39	68 13:06 (B1)
45	04:59	07:39 (B17)	05:59	07:34 (B17)	07:01		08:03	08:09		08:50	09:33 (B15)
46	21:45	64 08:43 (B17)	20:37	75 08:49 (B17)	19:15		17:57	15:54		15:40	67 13:07 (B1)
47	05:01	07:39 (B17)	06:01	07:34 (B17)	07:03		08:05	08:11		08:50	09:33 (B15)
48	21:43	65 08:44 (B17)	20:35	74 08:48 (B17)	19:12		17:54	15:53		15:40	67 13:07 (B1)
49	05:02	07:38 (B17)	06:03	07:34 (B17)	07:05		07:07	08:13		08:50	09:33 (B15)
50	21:41	66 08:44 (B17)	20:32	72 08:46 (B17)	19:10		16:52	15:52		15:41	68 13:08 (B1)
51	05:04	07:38 (B17)	06:05	07:34 (B17)	07:07		07:09	08:15		08:51	09:34 (B15)
52	21:39	67 08:45 (B17)	20:29	71 08:45 (B17)	19:07		16:50	6 08:48 (B2)		15:42	66 13:08 (B1)
53	05:06	07:38 (B17)	06:07	07:35 (B17)	07:09		07:12	08:38 (B2)		08:17	09:34 (B15)
54	21:38	68 08:46 (B17)	20:27	69 08:44 (B17)	19:04		16:47	14 08:52 (B2)		15:49	66 13:08 (B1)
55	05:08	07:37 (B17)	06:09	07:35 (B17)	07:11		07:14	08:35 (B2)		08:19	09:35 (B15)
56	21:36	69 08:46 (B17)	20:24	68 08:43 (B17)	19:01		16:45	19 08:54 (B2)		15:48	65 13:09 (B1)
57	05:10	07:37 (B17)	06:11	07:36 (B17)	07:13		07:16	08:34 (B2)		08:21	09:35 (B15)
58	21:34	70 08:47 (B17)	20:22	66 08:42 (B17)	18:59		16:43	22 08:56 (B2)		15:47	65 13:09 (B1)
59	05:12	07:37 (B17)	06:13	07:37 (B17)	07:15		07:18	08:33 (B2)		08:22	09:36 (B15)
60	21:32	71 08:48 (B17)	20:19	64 08:41 (B17)	18:56		16:40	24 08:57 (B2)		15:46	63 13:10 (B1)
61	05:14	07:36 (B17)	06:15	07:38 (B17)			07:20	08:31 (B2)		08:51	09:37 (B15)
62	21:30	72 08:48 (B17)	20:17	62 08:40 (B17)			16:38	26 08:57 (B2)		15:46	62 13:10 (B1)
Potential sun hours	529		469		385		324		247		216
Total, worst case	1637		2327		380		111		538		1796
Sun reduction	0.49		0.50		0.43		0.26		0.08		0.07
Oper. time red.	0.98		0.98		0.98		0.98		0.98		0.98
Wind dir. red.	0.65		0.65		0.65		0.59		0.59		0.63
Total reduction	0.31		0.31		0.27		0.15		0.05		0.04
Total, real	508		730		102		16		25		76

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Zalumi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (178)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	05:50 (B25) 06:07 (B25)	06:17 20:14	07:17 18:54	07:23 16:36
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	05:51 (B25) 06:07 (B25)	06:19 20:11	07:19 18:51	07:25 16:34
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	05:53 (B25) 06:07 (B25)	06:21 20:09	07:21 18:40	07:27 16:32
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:56	04:33 22:07	05:22 21:22	05:55 (B25) 06:06 (B25)	06:23 20:06	07:23 18:46	07:29 16:30
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:19	05:57 (B25) 06:06 (B25)	06:25 20:03	07:25 18:43	07:31 16:27
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	05:58 (B25) 06:04 (B25)	06:27 20:01	07:27 18:40	07:33 16:25
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:05	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:00 (B25) 06:04 (B25)	06:29 19:58	07:30 18:38	07:36 16:23
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:06	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:23	04:26 22:07	04:47 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:44 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:29	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:38	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:10 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:51	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:18 16:41	07:04 17:49	05:54 18:54	05:35 20:53	04:38 21:49	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:01 17:51	05:51 18:51	05:31 20:51	04:37 21:51	04:31 22:10	05:14 21:30	06:15 20:17	07:20 16:38	07:20 15:47	08:22 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case					172	77	101	77				
Sun reduction					0.57	0.56	0.49	0.50				
Oper. time red.					0.98	0.98	0.98	0.98				
Wind dir. red.					0.67	0.66	0.67	0.67				
Total reduction					0.37	0.36	0.32	0.33				
Total, real					64	28	33	25				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Zemturi - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (39)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:39
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:49	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Zemites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (194)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	20:41 (B12) 20:53 (B12)	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	20:42 (B12) 20:51 (B12)	06:19 20:11	07:19 18:51	07:24 16:33	08:25 15:44
3	08:50 15:50	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:32 22:07	05:19 21:23	20:43 (B12) 20:49 (B12)	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	20:43 (B12) 20:47 (B12)	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:33 21:57	04:33 22:06	05:23 21:19	20:47 (B12)	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17		06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15		06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	20:35 (B12) 20:36 (B12)	04:29 22:01	05:29 21:12		06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	20:34 (B12) 20:38 (B12)	04:28 22:02	05:31 21:10		06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	20:32 (B12) 20:40 (B12)	04:28 22:03	05:33 21:08		06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	20:32 (B12) 20:41 (B12)	04:27 22:01	05:35 21:06		06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	20:31 (B12) 20:43 (B12)	04:27 22:05	05:37 21:03		06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	20:30 (B12) 20:45 (B12)	04:26 22:05	05:39 21:01		06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	20:30 (B12) 20:46 (B12)	04:26 22:06	05:41 20:59		06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	20:31 (B12) 20:48 (B12)	04:26 22:07	05:43 20:56		06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	20:31 (B12) 20:48 (B12)	04:25 22:07	05:45 20:54		06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	20:30 (B12) 20:47 (B12)	04:49 22:08	05:47 20:52		06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:15	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	20:31 (B12) 20:48 (B12)	04:51 22:05	05:49 20:49		06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	20:31 (B12) 20:47 (B12)	04:52 22:09	05:51 21:50	20:48 (B12) 20:51 (B12)	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	20:32 (B12) 20:47 (B12)	04:25 22:09	05:53 21:49	20:45 (B12) 20:53 (B12)	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	20:33 (B12) 20:46 (B12)	04:25 22:09	05:55 21:47	20:44 (B12) 20:55 (B12)	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	20:34 (B12) 20:46 (B12)	04:25 22:10	05:57 21:46	20:44 (B12) 20:57 (B12)	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	20:35 (B12) 20:44 (B12)	04:26 22:10	05:59 21:44	20:43 (B12) 20:58 (B12)	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	20:37 (B12) 20:43 (B12)	04:26 22:10	06:01 21:42	20:42 (B12) 20:58 (B12)	06:01 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:38	06:07 18:38	05:47 20:43	04:45 21:41	20:43 (B12)	04:26 22:10	06:02 21:41	20:41 (B12) 20:57 (B12)	06:03 19:32	08:05 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:41 (B12)	20:58 (B12) 20:58 (B12)	06:05 20:29	08:07 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:42 (B12)	20:59 (B12) 20:41 (B12)	06:07 06:09	08:09 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:41 (B12)	20:41 (B12) 20:58 (B12)	06:09 20:24	07:11 19:01	08:18 16:45	08:50 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:41 (B12)	20:58 (B12) 20:58 (B12)	06:11 20:21	07:13 18:59	08:20 16:43	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:41 (B12)	20:41 (B12) 20:57 (B12)	06:13 20:19	07:15 18:56	08:22 16:40	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51	05:14 21:29	05:14 20:54 (B12)	06:15 20:16			07:20 16:38	08:20 15:46	08:50 15:46
Potential sun hours	235	266	366	426	508	528	529	469		384	324	248	216
Total, worst case					204		177	31					
Sun reduction					0.57		0.49	0.50					
Oper. time red.					0.98		0.98	0.98					
Wind dir. red.					0.62		0.62	0.62					
Total reduction					0.35		0.30	0.30					
Total, real					71		53	9					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ziedini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (111)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March		April		May		June	
1	08:51		09:38 (B22)	08:15		09:45 (B22)	07:11		06:49		05:33		04:36	
	15:48	14	09:52 (B22)	16:45	19	10:04 (B22)	17:48		19:53		20:55		21:53	
2	08:51		09:38 (B22)	08:13		09:47 (B22)	07:08		06:46		05:30		04:35	
	15:49	16	09:54 (B22)	16:47	16	10:03 (B22)	17:50		19:55		20:58		21:54	
3	08:50		09:37 (B22)	08:11		09:50 (B22)	07:06		06:43		05:28		04:34	
	15:51	17	09:54 (B22)	16:50	10	10:00 (B22)	17:52		19:57		21:00		21:55	
4	08:50		09:37 (B22)	08:09			07:03		06:41		05:26		04:33	
	15:52	18	09:55 (B22)	16:52			17:54		19:59		21:02		21:57	
5	08:49		09:37 (B22)	08:07			07:01		06:38		05:23		04:32	
	15:53	20	09:57 (B22)	16:54			17:56		20:01		21:04		21:58	
6	08:49		09:37 (B22)	08:05			06:58		06:35		05:21		04:31	
	15:55	21	09:58 (B22)	16:56			17:58		20:03		21:06		21:59	
7	08:48		09:37 (B22)	08:03			06:55		06:33		05:19		04:30	
	15:56	21	09:58 (B22)	16:59			18:01		20:05		21:08		22:00	
8	08:48		09:36 (B22)	08:01			06:53		06:30		05:17		04:29	
	15:58	23	09:59 (B22)	17:01			18:03		20:08		21:10		22:01	
9	08:47		09:36 (B22)	07:58			06:50		06:28		05:15		04:28	
	15:59	24	10:00 (B22)	17:03			18:05		20:10		21:12		22:02	
10	08:46		09:36 (B22)	07:56			06:47		06:25		05:13		04:28	
	16:01	25	10:01 (B22)	17:05			18:07		20:12		21:14		22:03	
11	08:45		09:37 (B22)	07:54			06:45		06:22		05:11		04:27	
	16:03	25	10:02 (B22)	17:08			18:09		20:14		21:16		22:04	
12	08:44		09:37 (B22)	07:52			06:42		06:20		05:08		04:27	
	16:04	26	10:03 (B22)	17:10			18:11		20:16		21:18		22:05	
13	08:43		09:36 (B22)	07:50			06:40		06:17		05:06		04:26	
	16:06	27	10:03 (B22)	17:12			18:13		20:18		21:20		22:06	
14	08:42		09:36 (B22)	07:47			06:37		06:15		05:04		04:26	
	16:08	28	10:04 (B22)	17:14			18:15		20:20		21:22		22:07	
15	08:41		09:37 (B22)	07:45			06:34		06:12		05:03		04:26	
	16:10	28	10:05 (B22)	17:17			18:18		20:22		21:24		22:07	
16	08:40		09:36 (B22)	07:43			06:32		06:09		05:01		04:25	
	16:12	29	10:05 (B22)	17:19			18:20		20:24		21:26		22:08	
17	08:39		09:37 (B22)	07:40			06:29		06:07	06:33 (B1)	04:59		04:25	
	16:14	30	10:07 (B22)	17:21			18:22		20:26	1	06:34 (B1)	21:27	22:09	
18	08:38		09:37 (B22)	07:38			06:26		06:04	06:30 (B1)	04:57		04:25	
	16:16	30	10:07 (B22)	17:23			18:24		20:28	6	06:36 (B1)	21:29	22:09	
19	08:36		09:36 (B22)	07:36			06:24		06:02	06:28 (B1)	04:55		04:25	
	16:18	31	10:07 (B22)	17:26			18:26		20:30	9	06:37 (B1)	21:31	22:09	
20	08:35		09:37 (B22)	07:33			06:21		05:59	06:25 (B1)	04:53		04:25	
	16:20	31	10:08 (B22)	17:28			18:28		20:33	12	06:37 (B1)	21:33	22:10	
21	08:33		09:37 (B22)	07:31			06:18		05:57	06:23 (B1)	04:52		04:25	
	16:22	31	10:08 (B22)	17:30			18:30		20:35	15	06:38 (B1)	21:35	22:10	
22	08:32		09:37 (B22)	07:28			06:16		05:54	06:21 (B1)	04:50		04:25	
	16:24	31	10:08 (B22)	17:32			18:32		20:37	18	06:39 (B1)	21:37	22:10	
23	08:30		09:38 (B22)	07:26			06:13		05:52	06:20 (B1)	04:48		04:26	
	16:26	30	10:08 (B22)	17:34			18:34		20:39	18	06:38 (B1)	21:38	22:10	
24	08:29		09:39 (B22)	07:23			06:10		05:49	06:20 (B1)	04:47		04:26	
	16:28	30	10:09 (B22)	17:37			18:36		20:41	18	06:38 (B1)	21:40	22:10	
25	08:27		09:39 (B22)	07:21			06:07		05:47	06:20 (B1)	04:45		04:26	
	16:30	30	10:09 (B22)	17:39			18:38		20:43	18	06:38 (B1)	21:42	22:10	
26	08:26		09:40 (B22)	07:18			06:05		05:44	06:20 (B1)	04:44		04:27	
	16:32	29	10:09 (B22)	17:41			18:41		20:45	16	06:36 (B1)	21:43	22:10	
27	08:24		09:40 (B22)	07:16			06:02		05:42	06:21 (B1)	04:42		04:27	
	16:34	28	10:08 (B22)	17:43			18:43		20:47	15	06:36 (B1)	21:45	22:10	
28	08:22		09:41 (B22)	07:13			05:59		05:40	06:22 (B1)	04:41		04:28	
	16:36	27	10:08 (B22)	17:45			18:45		20:49	13	06:35 (B1)	21:47	22:10	
29	08:20		09:42 (B22)				06:57		05:37	06:24 (B1)	04:40		04:29	
	16:39	26	10:08 (B22)				19:47		20:51	9	06:33 (B1)	21:48	22:10	
30	08:19		09:43 (B22)				06:54		05:35		04:38		04:29	
	16:41	24	10:07 (B22)				19:49		20:53		21:50		22:09	
31	08:17		09:44 (B22)				06:51				04:37			
	16:43	22	10:06 (B22)				19:51				21:51			
Potential sun hours	235			266			366		426		508		529	
Total, worst case	792			45					168					
Sun reduction	0.13			0.20					0.50					
Oper. time red.	0.98			0.98					0.98					
Wind dir. red.	0.61			0.61					0.65					
Total reduction	0.08			0.12					0.31					
Total, real	61			5					52					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ziedini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (111)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:49 15:39
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	05:04 21:39	06:05 20:30	07:07 19:07	08:15 16:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:17 16:47	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:19 16:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:21 16:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:22 16:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		174			614	357
Sun reduction		0.50			0.08	0.07
Oper. time red.		0.98			0.98	0.98
Wind dir. red.		0.65			0.61	0.61
Total reduction		0.31			0.05	0.04
Total, real		54			29	15

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ziemeli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (125)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	06:49	05:33	04:36
	15:48	16:45	17:48	19:53	20:55	21:53
2	08:50	08:13	07:08	07:34 (B24)	06:46	05:30
	15:50	16:48	17:50	1 07:35 (B24)	19:55	20:58
3	08:50	08:11	07:06	07:32 (B24)	06:44	05:28
	15:51	16:50	17:52	4 07:36 (B24)	19:57	21:00
4	08:50	08:09	07:03	07:29 (B24)	06:41	05:26
	15:52	16:52	17:54	8 07:37 (B24)	19:59	21:02
5	08:49	08:07	07:01	07:26 (B24)	06:38	05:24
	15:54	16:54	17:56	10 07:36 (B24)	20:01	21:04
6	08:49	08:05	06:58	07:24 (B24)	06:36	05:21
	15:55	16:57	17:58	13 07:37 (B24)	20:03	21:06
7	08:48	08:03	06:55	07:21 (B24)	06:33	05:19
	15:56	16:59	18:01	15 07:36 (B24)	20:06	21:08
8	08:48	08:01	06:53	07:20 (B24)	06:30	05:17
	15:58	17:01	18:03	15 07:35 (B24)	20:08	21:10
9	08:47	07:58	06:50	07:16 (B14)	06:28	05:15
	16:00	17:03	18:05	16 07:35 (B24)	20:10	21:12
10	08:46	07:56	06:48	07:13 (B14)	06:25	05:13
	16:01	17:06	18:07	18 07:32 (B24)	20:12	21:14
11	08:45	07:54	06:45	07:10 (B14)	06:22	05:11
	16:03	17:08	18:09	15 07:28 (B24)	20:14	21:16
12	08:44	07:52	06:42	07:08 (B14)	06:20	05:09
	16:05	17:10	18:11	17 07:25 (B14)	20:16	21:18
13	08:43	07:50	06:40	07:05 (B14)	06:17	05:07
	16:06	17:12	18:13	20 07:25 (B14)	20:18	21:20
14	08:42	07:47	06:37	07:02 (B14)	06:15	05:05
	16:08	17:14	18:16	23 07:25 (B14)	20:20	21:22
15	08:41	07:45	06:34	07:02 (B14)	06:12	05:03
	16:10	17:17	18:18	24 07:26 (B14)	20:22	21:24
16	08:40	07:43	06:32	07:01 (B14)	06:09	05:01
	16:12	17:19	18:20	25 07:26 (B14)	20:24	21:26
17	08:39	07:40	06:29	07:00 (B14)	06:07	04:59
	16:14	17:21	18:22	25 07:25 (B14)	20:26	21:27
18	08:38	07:38	06:26	07:00 (B14)	06:04	06:30 (B22)
	16:16	17:23	18:24	24 07:24 (B14)	20:28	2 06:32 (B22)
19	08:36	07:36	06:24	07:01 (B14)	06:02	06:28 (B22)
	16:18	17:26	18:26	23 07:24 (B14)	20:31	6 06:34 (B22)
20	08:35	07:33	06:21	07:01 (B14)	05:59	06:26 (B22)
	16:20	17:28	18:28	22 07:23 (B14)	20:33	8 06:34 (B22)
21	08:33	07:31	06:18	07:01 (B14)	05:57	06:23 (B22)
	16:22	17:30	18:30	20 07:21 (B14)	20:35	11 06:34 (B22)
22	08:32	07:28	06:16	07:03 (B14)	05:54	06:21 (B22)
	16:24	17:32	18:32	18 07:21 (B14)	20:37	13 06:34 (B22)
23	08:30	07:26	06:13	07:04 (B14)	05:52	06:18 (B22)
	16:26	17:35	18:34	14 07:18 (B14)	20:39	16 06:34 (B22)
24	08:29	07:23	06:10	07:07 (B14)	05:49	06:16 (B22)
	16:28	17:37	18:36	7 07:14 (B14)	20:41	17 06:33 (B22)
25	08:27	07:21	06:08		05:47	06:17 (B22)
	16:30	17:39	18:39		20:43	16 06:33 (B22)
26	08:26	07:18	06:05		05:45	06:17 (B22)
	16:32	17:41	18:41		20:45	14 06:31 (B22)
27	08:24	07:16	06:02		05:42	06:18 (B22)
	16:34	17:43	18:43		20:47	12 06:30 (B22)
28	08:22	07:13	06:00		05:40	06:20 (B22)
	16:37	17:45	18:45		20:49	9 06:29 (B22)
29	08:20		06:57		05:37	
	16:39		19:47		20:51	
30	08:19		06:54		05:35	
	16:41		19:49		20:53	
31	08:17		06:52			
	16:43		19:51			
Potential sun hours	235	266	366	426	508	528
Total, worst case			377	124		
Sun reduction			0.41	0.50		
Oper. time red.			0.98	0.98		
Wind dir. red.			0.63	0.65		
Total reduction			0.25	0.32		
Total, real			95	39		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ziemeli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (125)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:46 (B14) 08:04 (B14)	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:48 (B14) 08:03 (B14)	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:50 (B14) 08:09 (B24)	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:52 (B14) 08:11 (B24)	07:29 16:30
5	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:58 (B24) 08:12 (B24)	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:57 (B24) 08:12 (B24)	07:34 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:58 (B24) 08:12 (B24)	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:00 (B24) 08:12 (B24)	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:03 (B24) 08:12 (B24)	07:40 16:19
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:05 (B24) 08:11 (B24)	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:07 (B24) 08:10 (B24)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25		07:46 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22		07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20		07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17		07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15		07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12		07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09		07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:56 (B14) 08:00 (B14)		08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:52 (B14) 08:04 (B14)		08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:49 (B14) 08:06 (B14)		08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	07:47 (B14) 08:07 (B14)		08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	07:46 (B14) 08:08 (B14)		08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	07:45 (B14) 08:08 (B14)		08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	07:44 (B14) 08:08 (B14)		08:13 15:52
26	05:05 21:39	06:05 20:30	07:07 19:07	07:43 (B14) 08:08 (B14)		08:15 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	07:43 (B14) 08:08 (B14)		08:17 15:50
28	05:08 21:36	06:09 20:24	07:11 19:02	07:43 (B14) 08:07 (B14)		08:19 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	07:43 (B14) 08:06 (B14)		08:21 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	07:44 (B14) 08:06 (B14)		08:22 15:46
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		130	241		142	
Sun reduction		0.50	0.43		0.26	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.65	0.63		0.62	
Total reduction		0.32	0.26		0.16	
Total, real		41	63		22	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ziemeļnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (27)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:36 21:52	05:47 (B12) 20:53 (B25)	04:30 22:09	20:21 (B25) 21:00 (B25)	05:16 21:28	05:52 (B12) 20:48 (B24)	06:17 18:53	07:17 16:36	07:22 15:45	08:24 15:45
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	05:48 (B12) 20:53 (B25)	04:31 22:08	20:21 (B25) 21:00 (B25)	05:18 21:26	05:53 (B12) 20:48 (B14)	06:19 18:51	07:19 16:34	07:25 15:44	08:26 15:44
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	05:28 20:59	2 04:34 21:55	05:49 (B12) 20:54 (B25)	04:32 22:08	20:21 (B25) 21:01 (B25)	05:19 21:23	05:54 (B12) 20:48 (B14)	06:21 18:49	07:21 16:32	07:27 15:43	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	5 04:33 21:56	05:51 (B12) 20:54 (B25)	04:33 22:07	20:22 (B25) 21:01 (B25)	05:21 21:21	05:55 (B12) 20:48 (B14)	06:23 18:45	07:23 16:29	07:29 15:42	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	10 04:32 21:58	05:54 (B12) 20:55 (B25)	04:34 22:06	20:22 (B25) 21:01 (B25)	05:23 21:19	05:56 (B12) 20:45 (B14)	06:25 18:43	07:25 16:27	07:31 15:42	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	20 04:31 21:59	05:51 (B12) 20:55 (B25)	04:31 22:06	20:23 (B25) 21:01 (B25)	05:25 21:17	05:58 (B12) 20:43 (B14)	06:27 18:40	07:27 16:25	07:33 15:41	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	29 04:30 22:00	05:48 (B12) 20:55 (B25)	04:30 22:05	20:23 (B25) 21:01 (B25)	05:27 21:15	20:29 (B24) 20:41 (B14)	06:29 18:38	07:29 16:23	07:35 15:40	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	35 04:29 22:01	05:46 (B12) 20:56 (B25)	04:29 22:04	05:59 (B12) 21:01 (B25)	05:29 21:13	20:31 (B24) 20:40 (B14)	06:31 18:35	07:31 16:21	07:38 15:40	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	40 04:29 22:02	05:45 (B12) 20:56 (B25)	04:29 22:03	05:57 (B12) 21:01 (B25)	05:31 21:10	20:34 (B14) 20:38 (B14)	06:33 18:32	07:33 16:19	07:40 15:39	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	44 04:28 22:03	05:43 (B12) 20:56 (B25)	04:28 22:02	05:56 (B12) 21:01 (B25)	05:33 21:08	20:34 (B14) 20:35 (B14)	06:35 18:30	07:36 16:17	07:42 15:39	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:10 21:15	45 04:27 22:04	05:42 (B12) 20:56 (B25)	04:27 22:01	05:55 (B12) 21:01 (B25)	05:35 21:06	06:37 18:27	07:38 16:15	07:44 15:38	07:49 15:38	08:39 15:38
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:08 21:17	47 04:26 22:05	05:42 (B12) 20:56 (B25)	04:27 22:00	05:55 (B12) 21:01 (B25)	05:37 21:04	06:39 18:25	07:40 16:13	07:46 15:38	07:54 15:38	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	48 04:26 22:06	05:41 (B12) 20:57 (B25)	04:26 22:06	05:54 (B12) 21:01 (B25)	05:39 21:01	06:41 18:22	07:42 16:11	07:48 15:38	07:50 15:38	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	49 04:26 22:06	05:41 (B12) 20:57 (B25)	04:26 22:06	05:53 (B12) 21:01 (B25)	05:41 20:59	06:43 18:19	07:44 16:09	07:50 15:38	08:42 15:38	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	49 04:26 22:07	05:41 (B12) 20:57 (B25)	04:26 22:07	05:53 (B12) 21:00 (B25)	05:43 20:57	06:45 18:17	07:53 16:08	08:43 15:38	08:44 15:38	08:44 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	50 04:25 22:08	05:40 (B12) 20:57 (B25)	04:25 22:08	05:53 (B12) 21:00 (B25)	05:45 20:54	06:47 18:14	07:55 16:06	08:44 15:38	08:45 15:38	08:45 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	50 04:25 22:08	05:41 (B12) 20:57 (B25)	04:25 22:08	05:52 (B12) 21:00 (B25)	05:47 20:52	06:49 18:12	07:50 16:04	08:45 15:38	08:46 15:38	08:46 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	53 04:25 22:09	05:40 (B12) 20:58 (B25)	04:25 22:09	05:52 (B12) 21:00 (B25)	05:49 20:49	06:51 18:09	07:52 16:02	08:46 15:38	08:47 15:38	08:47 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	54 04:25 22:09	05:40 (B12) 20:58 (B25)	04:25 22:09	05:51 (B12) 20:59 (B25)	05:51 20:47	06:53 18:07	07:54 16:01	08:47 15:38	08:47 15:38	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	54 04:25 22:09	05:41 (B12) 20:58 (B25)	04:25 22:09	05:52 (B12) 20:59 (B25)	05:53 20:44	06:55 18:04	07:56 15:59	08:48 15:39	08:48 15:39	08:48 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	56 04:25 22:10	05:40 (B12) 20:59 (B25)	04:25 22:10	05:51 (B12) 20:57 (B25)	05:55 20:42	06:57 18:02	07:59 15:58	08:49 15:39	08:49 15:39	08:49 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	55 04:26 22:10	05:41 (B12) 20:59 (B25)	04:26 22:10	05:51 (B12) 20:57 (B25)	05:57 20:39	06:59 18:03	08:01 15:56	08:49 15:39	08:49 15:39	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	55 04:26 22:10	05:42 (B12) 20:59 (B25)	04:26 22:10	05:51 (B12) 20:56 (B25)	05:59 20:37	07:01 18:03	08:03 15:55	08:49 15:40	08:49 15:40	08:49 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	53 04:26 22:10	05:42 (B12) 20:59 (B25)	04:26 22:10	05:51 (B12) 20:55 (B25)	06:01 20:34	07:03 18:05	08:05 15:53	08:50 15:41	08:50 15:41	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	55 04:26 22:10	05:42 (B12) 20:59 (B25)	04:26 22:10	05:50 (B12) 20:53 (B25)	06:03 20:32	07:05 18:07	08:07 15:52	08:50 15:41	08:50 15:41	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	55 04:27 22:10	05:43 (B12) 20:51 (B25)	04:27 22:10	05:51 (B12) 20:51 (B25)	06:05 20:29	07:07 18:09	08:15 15:51	08:50 15:42	08:50 15:42	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	55 04:27 22:10	05:43 (B12) 20:51 (B25)	04:27 22:10	05:51 (B12) 20:49 (B24)	06:07 20:27	07:09 18:04	08:17 15:49	08:50 15:43	08:50 15:43	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	54 04:28 22:10	05:44 (B12) 20:51 (B25)	04:28 22:10	05:51 (B12) 20:48 (B24)	06:09 20:24	07:11 18:01	08:19 15:45	08:51 15:44	08:51 15:44	08:51 15:44
29	08:20 16:39	07:15 17:47	05:57 18:47	05:37 20:51	04:40 21:48	54 04:29 22:09	05:45 (B12) 20:52 (B25)	04:29 22:09	05:51 (B12) 20:49 (B24)	06:11 20:22	07:13 18:03	08:20 15:47	08:51 15:45	08:51 15:45	08:51 15:45
30	08:18 16:41	07:14 17:49	05:54 18:49	05:35 20:53	04:38 21:49	54 04:29 22:09	05:45 (B12) 20:52 (B25)	04:29 22:09	05:52 (B12) 20:49 (B24)	06:13 20:19	07:15 18:06	08:22 15:46	08:51 15:46	08:51 15:46	08:51 15:46
31	08:16 16:43	07:16 17:51	05:51 18:49	05:32 20:51	04:37 21:51	53 04:30 22:03	05:46 (B12) 20:53 (B25)	04:30 22:03	05:52 (B12) 20:49 (B24)	06:15 20:16	07:20 18:08	08:23 15:47	08:51 15:47	08:51 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216			
Total, worst case					1283		1228		254						
Sun reduction					0.57		0.56		0.49						
Oper. time red.					0.98		0.98		0.98						
Wind dir. red.					0.64		0.62		0.64						
Total reduction					0.36		0.34		0.31						
Total, real					457		419		79						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Zvirgzdini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (24)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:43
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:57	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:20	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:37 22:03	05:31 21:11	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:07	06:24 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:52 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:04	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:24 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:12 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:46	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Zilites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (97)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January			February			March			April			May			June		
1	08:51		13:02 (B22)	08:15		07:11				06:49			05:32			06:24 (B1)	04:36	
	15:48	6	13:08 (B22)	16:45		17:47				19:53			20:55	38		07:02 (B1)	21:53	
2	08:50			08:13		07:08				06:46			05:30			06:24 (B1)	04:35	
	15:49			16:47		17:50				19:55			20:57	38		07:02 (B1)	21:54	
3	08:50			08:11		07:06				06:43			05:28			06:24 (B1)	04:34	
	15:51			16:50		17:52				19:57			21:00	38		07:02 (B1)	21:55	
4	08:50			08:09		07:03				06:41			05:26			06:24 (B1)	04:33	
	15:52			16:52		17:54				19:59			21:02	38		07:02 (B1)	21:57	
5	08:49			08:07		07:00				06:38			05:23			06:24 (B1)	04:32	
	15:53			16:54		17:56				20:01			21:04	38		07:02 (B1)	21:58	
6	08:49			08:05		06:58				06:35			05:21			06:25 (B1)	04:31	
	15:55			16:56		17:58				20:03			21:06	36		07:01 (B1)	21:59	
7	08:48			08:03		06:55				06:33			05:19			06:25 (B1)	04:30	05:05 (B17)
	15:56			16:59		18:00				20:05			21:08	36		07:01 (B1)	22:00	2 05:07 (B17)
8	08:48			08:00		06:53				06:30			05:17			06:25 (B1)	04:29	05:05 (B17)
	15:58			17:01		18:03				20:08			21:10	35		07:00 (B1)	22:01	3 05:08 (B17)
9	08:47			07:58		06:50				06:27			05:15			06:25 (B1)	04:28	05:04 (B17)
	15:59			17:03		18:05				20:10			21:12	35		07:00 (B1)	22:02	5 05:09 (B17)
10	08:46			07:56		06:47				06:25			05:13			06:26 (B1)	04:28	05:04 (B17)
	16:01			17:05		18:07				20:12			21:14	33		06:59 (B1)	22:03	6 05:10 (B17)
11	08:45			07:54		06:45				06:22			05:10			06:26 (B1)	04:27	05:03 (B17)
	16:03			17:08		18:09				20:14			21:16	32		06:58 (B1)	22:04	7 05:10 (B17)
12	08:44			07:52		06:42				06:20			05:08			06:27 (B1)	04:27	05:03 (B17)
	16:04			17:10		18:11				20:16			21:18	30		06:57 (B1)	22:05	8 05:11 (B17)
13	08:43			07:49		06:39				06:17			05:06			06:27 (B1)	04:26	05:03 (B17)
	16:06			17:12		18:13				20:18	5	06:43 (B2)	21:20	29		06:56 (B1)	22:06	8 05:11 (B17)
14	08:42			07:47		06:37				06:14			05:04			06:29 (B1)	04:26	05:02 (B17)
	16:08			17:14		18:15				20:20	9	06:49 (B2)	21:22	27		06:56 (B1)	22:07	9 05:11 (B17)
15	08:41			07:45		06:34				06:12			05:02			06:30 (B1)	04:26	05:02 (B17)
	16:10			17:17		18:17				20:22	12	06:50 (B2)	21:24	25		06:55 (B1)	22:07	10 05:12 (B17)
16	08:40			07:43		06:32		06:57 (B4)	06:09			06:35 (B2)	05:01			06:30 (B1)	04:25	05:02 (B17)
	16:12			17:19		18:20	6	07:03 (B4)	20:24	15		06:50 (B2)	21:25	23		06:53 (B1)	22:08	10 05:12 (B17)
17	08:39			07:40		06:29		06:54 (B4)	06:07			06:33 (B2)	04:59			06:32 (B1)	04:25	05:02 (B17)
	16:14			17:21		18:22	11	07:05 (B4)	20:26	17		06:50 (B2)	21:27	21		06:53 (B1)	22:08	10 05:12 (B17)
18	08:37			07:38		06:26		06:51 (B4)	06:04			06:32 (B2)	04:57			06:34 (B1)	04:25	05:02 (B17)
	16:16			17:23		18:24	14	07:05 (B4)	20:28	18		06:50 (B2)	21:29	16		06:50 (B1)	22:09	11 05:13 (B17)
19	08:36			07:35		06:23		06:49 (B4)	06:02			06:32 (B2)	04:55			06:35 (B1)	04:25	05:02 (B17)
	16:18			17:25		18:26	18	07:07 (B4)	20:30	19		06:51 (B1)	21:31	13		06:48 (B1)	22:09	11 05:13 (B17)
20	08:35			07:33		06:21		06:47 (B4)	05:59			06:32 (B2)	04:53			06:40 (B1)	04:25	05:02 (B17)
	16:20			17:28		18:28	20	07:07 (B4)	20:33	22		06:54 (B1)	21:33	5		06:45 (B1)	22:10	11 05:13 (B17)
21	08:33			07:31		06:18		06:46 (B4)	05:57			06:32 (B2)	04:52				04:25	05:02 (B17)
	16:22			17:30		18:30	20	07:06 (B4)	20:35	24		06:56 (B1)	21:35				22:10	11 05:13 (B17)
22	08:32			07:28		06:15		06:46 (B4)	05:54			06:33 (B1)	04:50				04:25	05:03 (B17)
	16:24			17:32		18:32	21	07:07 (B4)	20:37	25		06:58 (B1)	21:36				22:10	11 05:14 (B17)
23	08:30			07:26		06:13		06:46 (B4)	05:52			06:31 (B1)	04:48				04:26	05:03 (B17)
	16:26			17:34		18:34	20	07:06 (B4)	20:39	28		06:59 (B1)	21:38				22:10	11 05:14 (B17)
24	08:29			07:23		06:10		06:46 (B4)	05:49			06:30 (B1)	04:47				04:26	05:03 (B17)
	16:28			17:37		18:36	19	07:05 (B4)	20:41	30		07:00 (B1)	21:40				22:10	11 05:14 (B17)
25	08:27			07:21		06:07		06:46 (B4)	05:47			06:29 (B1)	04:45				04:26	05:04 (B17)
	16:30			17:39		18:38	17	07:03 (B4)	20:43	32		07:01 (B1)	21:42				22:10	11 05:15 (B17)
26	08:26			07:18		06:05		06:48 (B4)	05:44			06:27 (B1)	04:44				04:27	05:04 (B17)
	16:32			17:41		18:40	14	07:02 (B4)	20:45	34		07:01 (B1)	21:43				22:10	10 05:14 (B17)
27	08:24			07:16		06:02		06:49 (B4)	05:42			06:27 (B1)	04:42				04:27	05:05 (B17)
	16:34			17:43		18:43	11	07:00 (B4)	20:47	34		07:01 (B1)	21:45				22:10	10 05:15 (B17)
28	08:22			07:13		05:59		06:53 (B4)	05:39			06:26 (B1)	04:41				04:28	05:05 (B17)
	16:36			17:45		18:45	2	06:55 (B4)	20:49	36		07:02 (B1)	21:47				22:10	9 05:14 (B17)
29	08:20					06:57			05:37			06:26 (B1)	04:39				04:28	05:06 (B17)
	16:39					19:47			20:51	36		07:02 (B1)	21:48				22:10	9 05:15 (B17)
30	08:18					06:54			05:35			06:25 (B1)	04:38				04:29	05:07 (B17)
	16:41					19:49			20:53	37		07:02 (B1)	21:50				22:09	8 05:15 (B17)
31	08:17					06:51							04:37					
	16:43					19:51							21:51					
Potential sun hours	235			266		366			426			508				529		
Total, worst case		6				193			433			586				212		
Sun reduction		0.13				0.41			0.50			0.57				0.56		
Oper. time red.		0.98				0.98			0.98			0.98				0.98		
Wind dir. red.		0.64				0.64			0.65			0.65				0.66		
Total reduction		0.08				0.26			0.32			0.36				0.36		
Total, real		0				50			138			212				77		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Zilites - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (97)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:07 (B17)	05:16	06:37 (B1)	06:17	07:17
	22:09	7 05:14 (B17)	21:28	31 07:08 (B1)	20:14	18:54
2	04:31	05:08 (B17)	05:17	06:36 (B1)	06:19	07:19
	22:09	6 05:14 (B17)	21:26	33 07:09 (B1)	20:11	18:51
3	04:32	05:09 (B17)	05:19	06:36 (B1)	06:21	07:21
	22:08	5 05:14 (B17)	21:24	34 07:10 (B1)	20:09	18:48
4	04:33	05:10 (B17)	05:21	06:36 (B1)	06:23	07:23
	22:07	4 05:14 (B17)	21:22	34 07:10 (B1)	20:06	18:46
5	04:34	05:11 (B17)	05:23	06:34 (B1)	06:25	07:25
	22:07	3 05:14 (B17)	21:19	36 07:10 (B1)	20:03	18:43
6	04:35	05:12 (B17)	05:25	06:34 (B1)	06:27	07:27
	22:06	1 05:13 (B17)	21:17	36 07:10 (B1)	20:01	18:40
7	04:36		05:27	06:34 (B1)	06:29	07:29
	22:05		21:15	37 07:11 (B1)	19:58	18:38
8	04:37		05:29	06:34 (B1)	06:31	07:32
	22:04		21:13	37 07:11 (B1)	19:55	18:35
9	04:38		05:31	06:34 (B1)	06:33	07:34
	22:03		21:11	37 07:11 (B1)	19:53	18:32
10	04:39		05:33	06:33 (B1)	06:35	07:36
	22:02		21:08	37 07:10 (B1)	19:50	18:30
11	04:41		05:35	06:33 (B1)	06:37	07:38
	22:01		21:06	37 07:10 (B1)	19:47	18:27
12	04:42		05:37	06:33 (B1)	06:39	07:40
	22:00		21:04	37 07:10 (B1)	19:45	18:25
13	04:43		05:39	06:33 (B1)	06:41	07:42
	21:59		21:01	37 07:10 (B1)	19:42	18:22
14	04:45		05:41	06:33 (B1)	06:43	07:44
	21:58		20:59	37 07:10 (B1)	19:39	18:19
15	04:46		05:43	06:34 (B1)	06:45	07:46
	21:57		20:57	35 07:09 (B1)	19:37	18:17
16	04:48		05:45	06:34 (B1)	06:47	07:48
	21:55		20:54	35 07:09 (B1)	19:34	18:14
17	04:49		05:47	06:34 (B1)	06:49	07:50
	21:54		20:52	33 07:07 (B1)	19:31	18:12
18	04:51		05:49	06:34 (B1)	06:51	07:52
	21:52		20:50	32 07:06 (B1)	19:29	18:09
19	04:52		05:51	06:35 (B1)	06:53	07:55
	21:51		20:47	30 07:05 (B1)	19:26	18:07
20	04:54		05:53	06:36 (B1)	06:55	07:57
	21:49		20:45	28 07:04 (B1)	19:23	18:04
21	04:56		05:55	06:38 (B2)	06:57	07:59
	21:48		20:42	24 07:02 (B1)	19:20	18:02
22	04:57		05:57	06:37 (B2)	06:59	08:01
	21:46		20:40	24 07:01 (B1)	19:18	17:59
23	04:59		05:59	06:36 (B2)	07:01	08:03
	21:45		20:37	22 06:58 (B1)	19:15	17:57
24	05:01	06:48 (B1)	06:01	06:36 (B2)	07:03	08:05
	21:43	9 06:57 (B1)	20:35	18 06:54 (B1)	19:12	17:55
25	05:03	06:45 (B1)	06:03	06:35 (B2)	07:05	08:07
	21:41	14 06:59 (B1)	20:32	18 06:53 (B2)	19:10	16:52
26	05:04	06:43 (B1)	06:05	06:35 (B2)	07:07	08:10
	21:39	19 07:02 (B1)	20:29	17 06:52 (B2)	19:07	16:50
27	05:06	06:42 (B1)	06:07	06:37 (B2)	07:09	08:12
	21:38	21 07:03 (B1)	20:27	15 06:52 (B2)	19:04	16:47
28	05:08	06:40 (B1)	06:09	06:39 (B2)	07:11	08:14
	21:36	24 07:04 (B1)	20:24	12 06:51 (B2)	19:02	16:45
29	05:10	06:39 (B1)	06:11	06:41 (B2)	07:13	08:16
	21:34	27 07:06 (B1)	20:22	9 06:50 (B2)	18:59	16:43
30	05:12	06:39 (B1)	06:13	06:43 (B2)	07:15	08:18
	21:32	28 07:07 (B1)	20:19	5 06:48 (B2)	18:56	16:40
31	05:14	06:38 (B1)	06:15			08:20
	21:30	30 07:08 (B1)	20:17			16:38
Potential sun hours	529		469	385	324	247
Total, worst case	198		857	194		274
Sun reduction	0.49		0.50	0.43		0.07
Oper. time red.	0.98		0.98	0.98		0.98
Wind dir. red.	0.65		0.65	0.64		0.64
Total reduction	0.31		0.32	0.27		0.04
Total, real	62		272	52		12

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Zilusala - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (150)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:58	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:34 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:21	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Abeles - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (153)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:42 (B22) 19:53	05:33 20:56	04:36 21:53
2	08:51 15:49	08:13 16:48	07:08 17:50	07:43 (B22) 19:55	05:30 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	07:46 (B22) 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	07:53 (B22) 19:59	05:26 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	07:01 17:56		05:24 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58		05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01		05:19 21:08	04:30 22:00
8	08:48 15:58	08:01 17:01	06:53 18:03		05:17 21:10	04:29 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05		05:15 21:12	04:29 22:02
10	08:46 16:01	09:23 (B14) 09:25 (B14)	07:56 17:05		05:13 21:14	04:28 22:03
11	08:45 16:03	09:22 (B14) 09:26 (B14)	07:54 17:08		05:11 21:16	04:27 22:04
12	08:44 16:05	09:21 (B14) 09:27 (B14)	07:52 17:10		05:09 21:18	04:27 22:05
13	08:43 16:06	09:19 (B14) 09:27 (B14)	07:50 17:12		05:07 21:20	04:26 22:06
14	08:42 16:08	09:18 (B14) 09:28 (B14)	07:47 17:14		05:05 21:22	04:26 22:07
15	08:41 16:10	09:17 (B14) 09:29 (B14)	07:45 17:17		05:03 21:24	04:26 22:07
16	08:40 16:12	09:15 (B14) 09:29 (B14)	07:43 17:19		05:01 21:26	04:26 22:08
17	08:39 16:14	09:14 (B14) 09:30 (B14)	07:40 17:21		04:59 21:27	04:25 22:09
18	08:38 16:16	09:14 (B14) 09:30 (B14)	07:38 17:23		04:57 21:29	04:25 22:09
19	08:36 16:18	09:14 (B14) 09:30 (B14)	07:36 17:26		04:55 21:31	04:25 22:09
20	08:35 16:20	09:15 (B14) 09:30 (B14)	07:33 17:28		04:53 21:33	04:25 22:10
21	08:33 16:22	09:15 (B14) 09:30 (B14)	07:31 17:30		04:52 21:35	04:25 22:10
22	08:32 16:24	09:16 (B14) 09:30 (B14)	07:28 17:32		04:50 21:37	04:26 22:10
23	08:30 16:26	09:18 (B14) 09:30 (B14)	07:26 17:34	07:53 (B22) 07:56 (B22)	05:52 20:39	04:48 21:38
24	08:29 16:28	09:19 (B14) 09:29 (B14)	07:23 17:37	06:10 07:57 (B22)	05:49 20:41	04:47 21:40
25	08:27 16:30	09:21 (B14) 09:27 (B14)	07:21 17:39	06:08 07:48 (B22)	05:47 20:43	04:45 21:42
26	08:26 16:32	09:21 (B14) 17:41	07:18 17:41	06:05 07:45 (B22)	05:44 20:45	04:44 21:43
27	08:24 16:34	07:16 17:43	13 07:42 (B22)	06:02 18:43	05:42 20:47	04:42 21:45
28	08:22 16:37	07:13 17:45	15 07:57 (B22)	06:00 18:45	05:40 20:49	04:41 21:47
29	08:20 16:39			06:57 19:47	05:37 20:51	04:40 21:48
30	08:19 16:41			06:54 19:49	05:35 21:50	04:38 21:50
31	08:17 16:43			06:52 19:51	05:37 21:51	04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	176	63	32			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.59	0.63	0.63			
Total reduction	0.08	0.12	0.25			
Total, real	13	8	8			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Abeles - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (153)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October		November		December
1	04:30	05:16	06:17	07:17		07:23		08:24 09:04 (B14)
	22:09	21:28	20:14	18:54		16:36	4	15:45 09:08 (B14)
2	04:31	05:18	06:19	07:19		07:25		08:26 09:06 (B14)
	22:09	21:26	20:11	18:51		16:34	2	15:44 09:08 (B14)
3	04:32	05:20	06:21	07:21		07:27		08:28
	22:08	21:24	20:09	18:48		16:32		15:43
4	04:33	05:22	06:23	07:23		07:29		08:29
	22:07	21:22	20:06	18:46		16:29		15:42
5	04:34	05:23	06:25	07:26		07:31		08:31
	22:07	21:20	20:04	18:43		16:27		15:42
6	04:35	05:25	06:27	07:28		07:34		08:32
	22:06	21:17	20:01	18:40		16:25		15:41
7	04:36	05:27	06:29	07:30		07:36		08:34
	22:05	21:15	19:58	18:38		16:23		15:40
8	04:37	05:29	06:31	07:32		07:38		08:35
	22:04	21:13	19:56	18:35		16:21		15:40
9	04:38	05:31	06:33	07:34		07:40		08:37
	22:03	21:11	19:53	18:33		16:19		15:39
10	04:39	05:33	06:35	07:36	08:23 (B22)	07:42		08:38
	22:03	21:09	19:50	18:30	1 08:24 (B22)	16:17		15:39
11	04:41	05:35	06:37	07:38	08:18 (B22)	07:44		08:39
	22:01	21:06	19:48	18:27	10 08:28 (B22)	16:15		15:39
12	04:42	05:37	06:39	07:40	08:16 (B22)	07:47		08:41
	22:00	21:04	19:45	18:25	13 08:29 (B22)	16:13		15:38
13	04:43	05:39	06:41	07:42	08:15 (B22)	07:49		08:42
	21:59	21:02	19:42	18:22	14 08:29 (B22)	16:11		15:38
14	04:45	05:41	06:43	07:44	08:15 (B22)	07:51		08:43
	21:58	20:59	19:39	18:20	15 08:30 (B22)	16:09		15:38
15	04:46	05:43	06:45	07:46	08:16 (B22)	07:53		08:44
	21:57	20:57	19:37	18:17	14 08:30 (B22)	16:08		15:38
16	04:48	05:45	06:47	07:48	08:18 (B22)	07:55		08:45
	21:55	20:55	19:34	18:15	12 08:30 (B22)	16:06		15:38
17	04:49	05:47	06:49	07:50	08:20 (B22)	07:57	08:54 (B14)	08:46
	21:54	20:52	19:31	18:12	9 08:29 (B22)	16:04	6 09:00 (B14)	15:38
18	04:51	05:49	06:51	07:53	08:22 (B22)	07:59	08:53 (B14)	08:47
	21:53	20:50	19:29	18:09	6 08:28 (B22)	16:03	10 09:03 (B14)	15:38
19	04:53	05:51	06:53	07:55	08:25 (B22)	08:01	08:52 (B14)	08:47
	21:51	20:47	19:26	18:07	2 08:27 (B22)	16:01	12 09:04 (B14)	15:38
20	04:54	05:53	06:55	07:57		08:03	08:51 (B14)	08:48
	21:50	20:45	19:23	18:04		15:59	14 09:05 (B14)	15:39
21	04:56	05:55	06:57	07:59		08:05	08:51 (B14)	08:49
	21:48	20:42	19:21	18:02		15:58	15 09:06 (B14)	15:39
22	04:58	05:57	06:59	08:01		08:07	08:51 (B14)	08:49
	21:46	20:40	19:18	18:00		15:56	16 09:07 (B14)	15:40
23	04:59	05:59	07:01	08:03		08:09	08:51 (B14)	08:50
	21:45	20:37	19:15	17:57		15:55	16 09:07 (B14)	15:40
24	05:01	06:01	07:03	08:05		08:11	08:51 (B14)	08:50
	21:43	20:35	19:12	17:55		15:53	16 09:07 (B14)	15:41
25	05:03	06:03	07:05	07:07		08:13	08:51 (B14)	08:50
	21:41	20:32	19:10	16:52		15:52	16 09:07 (B14)	15:41
26	05:05	06:05	07:07	07:10		08:15	08:54 (B14)	08:51
	21:39	20:30	19:07	16:50		15:51	14 09:08 (B14)	15:42
27	05:06	06:07	07:09	07:12		08:17	08:56 (B14)	08:51
	21:38	20:27	19:04	16:48		15:49	12 09:08 (B14)	15:43
28	05:08	06:09	07:11	07:14		08:19	08:58 (B14)	08:51
	21:36	20:24	19:02	16:45		15:48	10 09:08 (B14)	15:44
29	05:10	06:11	07:13	07:16		08:21	09:00 (B14)	08:51
	21:34	20:22	18:59	16:43		15:47	8 09:08 (B14)	15:45
30	05:12	06:13	07:15	07:18		08:23	09:02 (B14)	08:51
	21:32	20:19	18:56	16:41		15:46	6 09:08 (B14)	15:46
31	05:14	06:15		07:20				08:51
	21:30	20:17		16:38				15:47
Potential sun hours	529	469	385	324		247		216
Total, worst case				96		171		6
Sun reduction				0.26		0.08		0.07
Oper. time red.				0.98		0.98		0.98
Wind dir. red.				0.63		0.59		0.59
Total reduction				0.16		0.05		0.04
Total, real				15		8		0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Arsmeniek (kad. apz. 76860060006001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (196)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:04	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:58	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:51	06:49 19:31	07:50 18:12	07:56 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:25	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:00 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:38	06:07 18:38	05:47 20:42	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Arsmeniekī (kad. apz. 76860060006008) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (200)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
---	-----	-----	---	-----	-----	---	-----	-----	---	-----	-----	-----

441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577
-----	-----	-----	-----	-----	-----	-----	-----	-------	-------	-----	-----	-------

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:26 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:31 21:58	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:12	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:15 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:39 16:19	08:36 15:39
10	08:45 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:37 15:39
11	08:45 16:03	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:15	05:08 21:17	04:27 22:04	04:42 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:05	04:43 21:58	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:45 21:57	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:44 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:39 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:21	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:51	06:49 19:31	07:50 18:12	07:56 16:04	08:45 15:38
18	08:37 16:16	07:37 17:23	06:26 18:23	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:25	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:00 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:38	06:07 18:38	05:47 20:42	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ergliš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (208)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

		January	February	March		April	May	June	July	August	September		October		November	December	
1	08:50 15:48	08:14 16:45	07:10 17:47			06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:14		07:17 18:53	22	17:58 (B3) 18:20 (B3)	07:22 16:35	08:24 15:44
2	08:50 15:49	08:12 16:47	07:08 17:49			06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11		07:19 18:50	20	17:58 (B3) 18:18 (B3)	07:24 16:33	08:26 15:43
3	08:50 15:50	08:10 16:49	07:05 17:51			06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08		07:21 18:48	18	17:59 (B3) 18:17 (B3)	07:27 16:31	08:27 15:43
4	08:49 15:51	08:08 16:51	07:03 17:54			06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06		07:23 18:45	14	18:01 (B3) 18:15 (B3)	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56			06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03		07:25 18:42	9	18:03 (B3) 18:12 (B3)	07:31 16:27	08:30 15:41
6	08:48 15:54	08:04 16:56	06:57 17:58			06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00		07:27 18:40			07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00			06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58		07:29 18:37			07:35 16:23	08:33 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	4	17:29 (B3) 17:33 (B3)	06:30 20:07	05:16 21:09	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55		07:31 18:35			07:37 16:20	08:35 15:39
9	08:46 15:59	07:58 17:03	06:50 18:04	12	17:24 (B3) 17:36 (B3)	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52		07:33 18:32			07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	16	17:22 (B3) 17:38 (B3)	06:24 20:11	05:12 21:13	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50		07:35 18:29			07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	19	17:21 (B3) 17:40 (B3)	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47		07:37 18:27			07:44 16:14	08:39 15:39
12	08:44 16:04	07:51 17:09	06:42 18:11	21	17:19 (B3) 17:40 (B3)	06:19 20:15	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:03	06:39 19:44		07:39 18:24			07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	22	17:18 (B3) 17:40 (B3)	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42		07:41 18:22			07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	23	17:18 (B3) 17:41 (B3)	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39		07:44 18:19			07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	24	17:17 (B3) 17:41 (B3)	06:11 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36		07:46 18:16			07:52 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	24	17:16 (B3) 17:40 (B3)	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34		07:48 18:14			07:55 16:05	08:44 15:37
17	08:38 16:13	07:40 17:21	06:28 18:21	23	17:17 (B3) 17:40 (B3)	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31		07:50 18:11			07:57 16:04	08:45 15:37
18	08:37 16:15	07:37 17:23	06:26 18:23	22	17:17 (B3) 17:39 (B3)	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28		07:52 18:09			07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	21	17:17 (B3) 17:38 (B3)	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:25		07:54 18:06			08:01 16:00	08:47 15:38
20	08:34 16:19	07:33 17:27	06:20 18:28	19	17:19 (B3) 17:38 (B3)	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23		07:56 18:04			08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	17	17:19 (B3) 17:36 (B3)	05:56 20:34	04:51 21:34	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	18:07 (B3) 18:18 (B3)	07:58 18:01			08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	12	17:21 (B3) 17:33 (B3)	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	18:05 (B3) 18:20 (B3)	08:01 17:59			08:07 15:56	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	1	17:26 (B3) 17:27 (B3)	05:51 20:38	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	18:03 (B3) 18:21 (B3)	08:03 17:56			08:09 15:54	08:49 15:39
24	08:28 16:27	07:23 17:36	06:10 18:36			05:49 20:40	04:46 21:40	04:25 22:10	06:01 21:43	07:03 20:34	08:05 19:12	18:01 (B3) 18:22 (B3)	08:05 17:54	21		08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38			05:46 20:43	04:45 21:41	04:26 22:10	06:03 21:41	07:05 20:32	08:07 19:09	18:00 (B3) 18:22 (B3)	08:07 16:52	22		08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:40	06:04 18:40			05:44 20:45	04:43 21:43	04:26 22:10	06:05 20:29	07:07 19:07	08:09 17:59 (B3)	18:02 (B3) 18:22 (B3)	08:09 16:49	23		08:15 15:50	08:50 15:41
27	08:23 16:34	07:15 17:43	06:02 18:42			05:41 20:47	04:42 21:45	04:27 22:10	06:06 21:37	07:09 20:27	08:11 19:04	17:58 (B3) 18:22 (B3)	08:11 16:47	24		08:17 15:49	08:50 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44			05:39 20:49	04:40 21:46	04:27 22:10	06:08 21:35	07:11 20:24	08:13 19:01	17:58 (B3) 18:22 (B3)	08:13 16:45	24		08:18 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46			05:37 20:51	04:39 21:48	04:28 22:09	06:11 21:33	07:13 20:21	08:15 18:58	17:58 (B3) 18:21 (B3)	08:16 16:42	23		08:20 15:47	08:51 15:44
30	08:18 16:40		06:54 19:48			05:34 20:53	04:38 21:49	04:29 22:09	06:13 21:31	07:15 20:19	08:17 18:56	17:58 (B3) 18:21 (B3)	08:18 16:40	23		08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:50				04:36 21:51		05:13 21:29	06:15 20:16			07:20 16:38			08:51 15:46	
Potential sun hours	235	266	366			426	508	529	529	469	385		324		247	216	
Total, worst case			280								204		83				
Sun reduction			0.41								0.43		0.26				
Oper. time red.			0.98								0.98		0.98				
Wind dir. red.			0.65								0.65		0.65				
Total reduction			0.26								0.27		0.17				
Total, real			74								56		14				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ergli - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (34)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:44
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:51	08:09 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:57	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:18	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:09	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:37
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	07:57 16:04	08:45 15:37
18	08:37 16:15	07:38 17:23	06:26 18:23	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:01	08:05 15:57	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:10	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:51 15:41
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:43		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

## SHADOW - Calendar

Shadow receptor: Ives - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (96)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:40 (B14)	06:49	05:33
	15:48	16:45	17:48	26 08:06 (B14)	19:53	20:55
2	08:51	08:13	07:08	07:40 (B14)	06:46	05:30
	15:50	16:48	17:50	26 08:06 (B14)	19:55	20:58
3	08:50	08:11	07:06	07:40 (B14)	06:44	05:28
	15:51	16:50	17:52	26 08:06 (B14)	19:57	21:00
4	08:50	08:09	07:03	07:40 (B14)	06:41	05:26
	15:52	16:52	17:54	25 08:05 (B14)	19:59	21:02
5	08:49	08:07	07:01	07:40 (B14)	06:38	05:24
	15:54	16:54	17:56	25 08:05 (B14)	20:01	21:04
6	08:49	08:05	06:58	07:41 (B14)	06:36	05:21
	15:55	16:57	17:58	23 08:04 (B14)	20:03	21:06
7	08:48	08:03	06:55	07:41 (B14)	06:33	05:19
	15:56	16:59	18:01	22 08:03 (B14)	20:06	21:08
8	08:48	08:01	06:53	07:41 (B14)	06:30	05:17
	15:58	17:01	18:03	20 08:01 (B14)	20:08	21:10
9	08:47	07:58	06:50	07:44 (B14)	06:28	05:15
	16:00	17:03	18:05	16 08:00 (B14)	20:10	21:12
10	08:46	07:56	06:48	07:45 (B14)	06:25	05:13
	16:01	17:05	18:07	12 07:57 (B14)	20:12	21:14
11	08:45	07:54	06:45	06:22	06:48 (B22)	05:11
	16:03	17:08	18:09	8 06:56 (B22)	21:16	22:04
12	08:44	07:52	06:42	06:20	06:45 (B22)	05:09
	16:05	17:10	18:11	20:16	11 06:56 (B22)	21:18
13	08:43	07:50	06:40	06:17	06:43 (B22)	05:07
	16:06	17:12	18:13	20:18	14 06:57 (B22)	21:20
14	08:42	07:47	06:37	06:15	06:40 (B22)	05:05
	16:08	17:14	18:15	20:20	16 06:56 (B22)	21:22
15	08:41	07:45	06:34	06:12	06:38 (B22)	05:03
	16:10	17:17	18:18	20:22	19 06:57 (B22)	21:24
16	08:40	07:43	06:32	06:09	06:37 (B22)	05:01
	16:12	17:19	18:20	20:24	19 06:56 (B22)	21:26
17	08:39	07:40	06:29	06:07	06:38 (B22)	04:59
	16:14	17:21	18:22	20:26	17 06:55 (B22)	21:27
18	08:38	07:38	06:26	06:04	06:38 (B22)	04:57
	16:16	17:23	18:24	20:28	16 06:54 (B22)	21:29
19	08:36	07:36	06:24	06:02	06:39 (B22)	04:55
	16:18	17:26	18:26	20:31	14 06:53 (B22)	21:31
20	08:35	07:33	06:21	05:59	06:41 (B22)	04:53
	16:20	17:28	18:28	20:33	10 06:51 (B22)	21:33
21	08:33	07:31	07:58 (B24)	06:18	05:57	04:52
	16:22	17:30	4 08:02 (B24)	18:30	20:35	4 06:47 (B22)
22	08:32	07:28	07:55 (B24)	06:16	05:54	04:50
	16:24	17:32	7 08:02 (B24)	18:32	20:37	21:37
23	08:30	07:26	07:53 (B14)	06:13	05:52	04:48
	16:26	17:34	10 08:03 (B24)	18:34	20:39	21:38
24	08:29	07:23	07:50 (B14)	06:10	05:49	04:47
	16:28	17:37	13 08:03 (B24)	18:36	20:41	21:40
25	08:27	07:21	07:48 (B14)	06:08	05:47	04:45
	16:30	17:39	16 08:04 (B14)	18:39	20:43	21:42
26	08:26	07:18	07:45 (B14)	06:05	05:44	04:44
	16:32	17:41	20 08:05 (B14)	18:41	20:45	21:43
27	08:24	07:16	07:42 (B14)	06:02	05:42	04:42
	16:34	17:43	23 08:05 (B14)	18:43	20:47	21:45
28	08:22	07:13	07:41 (B14)	06:00	05:40	04:41
	16:37	17:45	25 08:06 (B14)	18:45	20:49	21:47
29	08:20			06:57	05:37	04:40
	16:39			19:47	20:51	21:48
30	08:19			06:54	05:35	04:38
	16:41			19:49	20:53	21:50
31	08:17			06:52		04:37
	16:43			19:51		21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		118	221		154	
Sun reduction		0.20	0.41		0.50	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.63	0.63		0.66	
Total reduction		0.12	0.25		0.32	
Total, real		14	55	49		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Ives - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (96)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	06:47 (B22) 18:54	07:17 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	06:49 (B22) 18:51	07:19 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	06:51 (B22) 18:48	07:21 16:32	08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	06:52 (B22) 18:46	07:23 16:30	08:29 15:43
5	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	08:19 (B14) 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:18 (B14) 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:16 (B14) 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:15 (B14) 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:15 (B14) 16:19	08:37 15:39
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:15 (B14) 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:14 (B14) 16:15	08:39 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:14 (B14) 16:13	08:40 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:14 (B14) 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:14 (B14) 16:10	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:16 (B14) 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:18 (B14) 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:17 (B14) 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	08:22 (B14) 16:03	08:46 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:25 (B14) 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:27 (B24) 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:29 (B24) 15:58	08:49 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:32 (B24) 15:56	08:49 15:40
23	04:59 21:45	05:59 20:37	06:53 (B22) 19:15	18:03 17:57	15:55 15:40	08:50 15:40
24	05:01 21:43	06:01 20:35	06:43 (B22) 19:12	07:03 17:55	08:05 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	06:41 (B22) 19:10	07:05 16:52	08:13 15:52	08:50 15:41
26	05:05 21:39	06:05 20:30	06:40 (B22) 19:07	07:07 16:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	06:40 (B22) 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	05:08 21:36	06:09 20:24	06:39 (B22) 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	06:41 (B22) 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	06:43 (B22) 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17	06:45 (B22) 18:56	07:20 16:38	08:51 15:47	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		143	14	347		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.66	0.63		
Total reduction		0.32	0.27	0.16		
Total, real		45	4	55		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kirš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (78)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (B14) 07:57 (B24)	06:49 19:53	05:33 20:55
2	08:50 15:50	08:13 16:48	07:08 17:50	07:34 (B14) 07:56 (B14)	06:46 19:55	05:30 20:58
3	08:50 15:51	08:11 16:50	07:06 17:52	07:33 (B14) 07:58 (B14)	06:44 19:57	05:28 21:00
4	08:50 15:52	08:09 16:52	07:03 17:54	07:31 (B14) 07:58 (B14)	06:41 19:59	05:26 21:02
5	08:49 15:54	08:07 16:54	07:01 17:56	07:30 (B14) 07:58 (B14)	06:38 20:01	05:24 21:04
6	08:49 15:55	08:05 16:57	06:58 17:58	07:30 (B14) 07:59 (B14)	06:36 20:03	05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:01	07:30 (B14) 07:58 (B14)	06:33 20:06	05:19 21:08
8	08:48 15:58	08:01 17:01	06:53 18:03	07:29 (B14) 07:58 (B14)	06:30 20:08	05:17 21:10
9	08:47 16:00	07:58 17:03	06:50 18:05	07:30 (B14) 07:58 (B14)	06:28 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	06:48 18:07	07:29 (B14) 07:57 (B14)	06:25 20:12	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	07:29 (B14) 07:56 (B14)	06:22 20:14	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11	07:30 (B14) 07:56 (B14)	06:20 20:16	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	07:31 (B14) 07:54 (B14)	06:17 20:18	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	07:31 (B14) 07:52 (B14)	06:15 20:20	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18	07:34 (B14) 07:51 (B14)	06:12 20:22	05:03 21:24
16	08:40 16:12	07:43 17:19	06:32 18:20	07:36 (B14) 07:48 (B14)	06:09 20:24	05:01 21:25
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	06:35 (B22) 06:40 (B22)	04:59 21:27
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	06:30 (B22) 06:41 (B22)	04:57 21:29
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	06:28 (B22) 06:42 (B22)	04:55 21:31
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	06:26 (B22) 06:43 (B22)	04:53 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:23 (B22) 06:42 (B22)	04:52 21:35
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:22 (B22) 06:42 (B22)	04:50 21:37
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:22 (B22) 06:41 (B22)	04:48 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:22 (B22) 06:41 (B22)	04:47 21:40
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	06:23 (B22) 06:40 (B22)	04:45 21:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	06:23 (B22) 06:38 (B22)	04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:24 (B22) 06:37 (B22)	04:42 21:45
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	06:26 (B22) 06:35 (B22)	04:41 21:47
29	08:20 16:39		05:57 19:47	05:37 20:51		04:40 21:48
30	08:19 16:41		05:54 19:49	05:35 20:53		04:38 21:50
31	08:17 16:43		05:51 19:51			04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		67	390		186	
Sun reduction		0.20	0.41		0.50	
Oper. time red.		0.98	0.98		0.98	
Wind dir. red.		0.63	0.62		0.65	
Total reduction		0.12	0.25		0.32	
Total, real		8	98		59	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kirš i - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (78)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	08:10 (B14) 16:36 (B14)	07:23 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	08:09 (B14) 16:34 (B14)	07:25 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:08 (B14) 16:32 (B14)	07:27 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	08:07 (B14) 16:30 (B14)	07:29 15:43
5	04:34 22:07	05:23 21:20	06:25 20:04	07:25 18:43	08:06 (B14) 16:27 (B14)	07:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:06 (B14) 16:25 (B14)	07:33 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:05 (B14) 16:23 (B14)	07:36 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:05 (B14) 16:21 (B14)	07:38 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:06 (B14) 16:19 (B14)	07:40 15:39
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:07 (B14) 16:17 (B14)	07:42 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:07 (B14) 16:15 (B14)	07:44 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:09 (B14) 16:13 (B14)	07:46 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:11 (B14) 16:11 (B14)	07:49 15:38
14	04:45 21:58	05:41 20:59	06:43 (B22) 06:39 (B22)	07:44 18:20	08:13 (B14) 16:10 (B14)	07:51 15:38
15	04:46 21:57	05:43 20:57	06:45 (B22) 06:43 (B22)	07:46 18:17	08:16 (B14) 16:08 (B14)	07:53 15:38
16	04:48 21:55	05:45 20:54	06:47 (B22) 06:45 (B22)	07:48 18:15	08:18 (B24) 16:06 (B24)	07:55 15:38
17	04:49 21:54	05:47 20:52	06:49 (B22) 06:46 (B22)	07:50 18:12	08:20 (B24) 16:04 (B24)	07:57 15:38
18	04:51 21:52	05:49 20:50	06:51 (B22) 06:47 (B22)	07:52 18:09	08:22 (B24) 16:03 (B24)	07:59 15:38
19	04:53 21:51	05:51 20:47	06:53 (B22) 06:47 (B22)	07:55 18:07	08:25 (B24) 16:01 (B24)	08:01 15:38
20	04:54 21:49	05:53 20:45	06:55 (B22) 06:47 (B22)	07:57 18:04	08:27 (B24) 15:59 (B24)	08:03 15:39
21	04:56 21:48	05:55 20:42	06:57 (B22) 06:47 (B22)	07:59 18:02	08:05 15:58 (B14)	08:05 15:39
22	04:58 21:46	05:57 20:40	06:59 (B22) 06:47 (B22)	08:01 18:00	08:07 15:56 (B14)	08:07 15:40
23	04:59 21:45	05:59 20:37	07:01 (B22) 06:46 (B22)	08:03 17:57	08:09 15:55 (B14)	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 (B22) 06:46 (B22)	08:05 17:55	08:11 15:53 (B14)	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 (B22) 06:45 (B22)	07:07 16:52	08:13 15:52 (B14)	08:50 15:41
26	05:05 21:39	06:05 20:30	07:07 (B22) 06:44 (B22)	07:10 16:50	08:15 15:51 (B14)	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 (B22) 06:42 (B22)	07:12 16:48	08:17 (B14) 15:50 (B14)	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:15 (B14) 16:45 (B14)	08:19 15:48 (B14)	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:13 (B14) 16:43 (B14)	08:21 15:47 (B14)	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:11 (B14) 16:41 (B14)	08:22 15:46 (B14)	08:51 15:46
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		190	68	399		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.65	0.62	0.62		
Total reduction		0.32	0.26	0.16		
Total, real		60	18	63		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kikaukas (kad. apz. 56960030117001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (12)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:40	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:08 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Kikaukas (kad. apz. 56960030117008) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (13)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:12	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	05:22 21:22	06:23 20:06	07:24 18:46	07:29 16:30	08:29 15:42
5	08:49 15:53	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:36 20:04	05:21 21:06	04:31 21:59	04:35 22:06	05:25 21:18	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:59 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:03	04:38 22:04	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:39 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:02	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:47 16:13	08:41 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:55	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:28	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:29	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:10	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:34 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:31 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:11	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:26 22:11	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	04:44 21:44	04:27 22:11	05:05 21:40	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:25	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:54	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Lovani - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (65)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	06:02 (B14) 21:53	04:36 22:09	04:30 21:28	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	06:02 (B14) 21:54	04:35 22:08	04:31 21:26	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	06:03 (B14) 21:55	04:34 22:08	04:32 21:24	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	06:03 (B14) 21:57	04:33 22:07	04:33 21:22	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	06:04 (B14) 21:58	04:32 22:07	04:34 21:20	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:59	06:36 20:03	05:21 21:06	06:06 (B14) 21:59	04:31 22:06	04:35 21:17	05:26 21:17	06:17 (B14) 20:01	06:27 18:40	07:34 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	06:15 (B14) 22:00	04:30 22:05	04:36 21:15	05:28 21:15	06:15 (B14) 19:58	06:29 18:38	07:30 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	06:11 (B14) 22:01	04:30 22:04	04:37 21:13	05:29 21:13	06:13 (B14) 19:56	06:31 18:35	07:32 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	06:13 (B14) 22:02	04:29 22:03	04:38 21:11	05:31 21:11	06:13 (B14) 19:53	06:33 18:33	07:34 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	06:12 (B14) 22:03	04:28 22:02	04:40 21:08	05:33 21:08	06:12 (B14) 19:50	06:35 18:30	07:36 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	06:12 (B14) 22:04	04:28 22:01	04:41 21:06	05:35 21:06	06:12 (B14) 19:48	06:37 18:27	07:38 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	06:10 (B14) 22:05	04:27 22:00	04:42 21:04	05:37 21:04	06:10 (B14) 19:45	06:39 18:25	07:40 16:13	08:40 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	06:11 (B14) 22:06	04:27 21:59	04:44 21:02	05:39 21:02	06:11 (B14) 19:42	06:41 18:22	07:42 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	06:13 (B14) 22:07	04:26 21:58	04:45 20:59	05:41 20:59	06:13 (B14) 19:39	06:43 18:20	07:44 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	06:15 (B14) 22:07	04:26 21:57	04:47 20:57	05:43 20:57	06:15 (B14) 19:37	06:45 18:17	07:46 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	06:17 (B14) 22:07	04:26 21:55	04:48 20:54	05:45 20:54	06:17 (B14) 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	06:19 (B14) 22:08	04:50 21:54	05:47 20:52	05:47 20:52	06:19 (B14) 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	06:21 (B14) 22:09	04:51 21:52	05:49 20:50	05:49 20:50	06:21 (B14) 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	06:23 (B14) 22:10	04:53 21:51	05:51 20:47	05:51 20:47	06:23 (B14) 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	06:25 (B14) 22:11	04:54 21:49	05:53 20:45	05:53 20:45	06:25 (B14) 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	06:26 (B14) 22:12	04:56 21:48	05:55 20:42	05:55 20:42	06:26 (B14) 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	06:27 (B14) 22:13	04:58 21:46	05:57 20:40	05:57 20:40	06:27 (B14) 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	06:28 (B14) 22:14	04:59 21:45	05:59 20:37	05:59 20:37	06:28 (B14) 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	06:29 (B14) 22:15	04:56 21:43	05:59 20:35	05:59 20:35	06:29 (B14) 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	06:30 (B14) 22:16	04:57 21:41	06:03 20:32	06:03 20:32	06:30 (B14) 19:10	08:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	06:31 (B14) 22:17	04:57 21:39	06:05 20:30	06:05 20:30	06:31 (B14) 19:07	08:09 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	06:32 (B14) 22:18	04:58 21:38	06:07 20:27	06:07 20:27	06:32 (B14) 19:04	08:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	06:33 (B14) 22:19	04:58 21:36	06:09 20:24	06:09 20:24	06:33 (B14) 19:01	08:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	06:34 (B14) 22:20	04:59 21:34	06:11 20:22	06:11 20:22	06:34 (B14) 18:59	08:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:54	05:35 20:53	04:39 21:50	06:35 (B14) 22:21	05:12 21:32	06:13 20:19	06:13 20:19	06:35 (B14) 18:56	08:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17	06:15 20:17		08:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508		528	529	469	384	324	248	216
Total, worst case				64	85				149				
Sun reduction				0.50	0.57				0.50				
Oper. time red.				0.98	0.98				0.98				
Wind dir. red.				0.66	0.66				0.66				
Total reduction				0.32	0.37				0.32				
Total, real				21	31				48				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Udensrozes - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (185)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	04:33 22:07	05:22 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:58	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:09	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:10	06:33 19:53	07:34 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:17	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:07 21:19	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:05 21:21	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	05:03 21:23	04:26 22:07	04:46 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:12 17:47	08:17 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Udri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (186)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52 34 05:25 (B24)
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54 34 05:25 (B24)
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:59	04:34 21:55 36 05:24 (B24)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:56 36 05:25 (B24)
5	08:49 15:54	08:07 16:54	07:00 17:56	06:38 20:01	05:24 21:04	04:32 21:58 36 05:25 (B24)
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:31 21:59 37 05:24 (B24)
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:05	05:19 21:08	04:30 22:00 37 05:25 (B24)
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01 38 05:24 (B24)
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02 38 05:24 (B24)
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03 39 05:24 (B24)
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04 39 05:25 (B24)
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	06:45 (B25) 05:09 06:53 (B25) 21:18	04:27 22:05 39 05:24 (B24)
13	08:43 16:06	07:49 17:12	06:40 18:13	06:17 20:18	06:43 (B25) 05:07 06:56 (B25) 21:20	04:27 22:06 39 05:25 (B24)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	06:40 (B25) 05:05 06:57 (B25) 21:22	04:26 22:06 39 05:25 (B24)
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	06:38 (B25) 05:03 06:58 (B25) 21:23	04:26 22:07 40 05:25 (B24)
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	06:36 (B25) 05:01 06:58 (B25) 21:25	04:26 22:08 39 05:25 (B24)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	06:36 (B25) 04:59 06:59 (B25) 21:27	04:25 22:08 40 05:25 (B24)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	06:34 (B25) 04:57 06:59 (B25) 21:29	04:25 22:09 40 05:25 (B24)
19	08:36 16:18	07:35 17:26	06:24 18:26	06:02 20:30	06:34 (B25) 04:55 07:00 (B25) 21:31	04:25 22:09 40 05:25 (B24)
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	06:34 (B25) 04:53 07:00 (B25) 21:33	05:38 (B24) 04:25 05:44 (B24) 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:33 (B25) 04:52 06:59 (B25) 21:35	05:34 (B24) 04:25 05:47 (B24) 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:34 (B25) 04:50 06:59 (B25) 21:36	05:32 (B24) 04:26 05:50 (B24) 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:33 (B25) 04:48 06:58 (B25) 21:38	05:31 (B24) 04:26 05:52 (B24) 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:34 (B25) 04:47 06:57 (B25) 21:40	05:29 (B24) 04:26 05:52 (B24) 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	06:34 (B25) 04:45 06:57 (B25) 21:42	05:29 (B24) 04:27 05:54 (B24) 22:10
26	08:25 16:32	07:18 17:41	06:05 18:41	05:44 20:45	06:34 (B25) 04:44 06:55 (B25) 21:43	05:28 (B24) 04:27 05:55 (B24) 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:36 (B25) 04:42 06:54 (B25) 21:45	05:28 (B24) 04:28 05:56 (B24) 22:10
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	06:37 (B25) 04:41 06:53 (B25) 21:46	05:26 (B24) 04:28 05:56 (B24) 22:10
29	08:20 16:39		06:57 19:47	05:37 20:51	06:39 (B25) 04:40 06:51 (B25) 21:48	05:26 (B24) 04:29 05:57 (B24) 22:10
30	08:18 16:41		06:54 19:49	05:35 20:53	06:44 (B25) 04:38 06:46 (B25) 21:49	05:26 (B24) 04:29 05:58 (B24) 22:09
31	08:17 16:43		06:51 19:51		04:37 21:51	05:25 (B24) 04:29 05:58 (B24)
Potential sun hours	235	266	366	426	508	528
Total, worst case				371	287	1156
Sun reduction				0.50	0.57	0.56
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.66	0.67	0.67
Total reduction				0.32	0.37	0.37
Total, real				119	107	425

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

## SHADOW - Calendar

Shadow receptor: Udri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (186)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30	05:29 (B24)	05:16	06:17	07:17	07:22
	22:09	39 06:08 (B24)	21:28	20:14	18:54	16:36
2	04:31	05:29 (B24)	05:18	06:19	07:19	07:25
	22:08	38 06:07 (B24)	21:26	20:11	18:51	16:34
3	04:32	05:29 (B24)	05:20	06:21	07:21	07:27
	22:08	38 06:07 (B24)	21:24	20:09	18:48	16:32
4	04:33	05:30 (B24)	05:22	06:23	07:23	07:29
	22:07	38 06:08 (B24)	21:22	20:06	18:46	16:29
5	04:34	05:30 (B24)	05:23	06:25	07:25	07:31
	22:07	38 06:08 (B24)	21:19	20:03	18:43	16:27
6	04:35	05:30 (B24)	05:25	06:27	07:27	07:33
	22:06	38 06:08 (B24)	21:17	20:01	18:40	16:25
7	04:36	05:31 (B24)	05:27	06:29	07:29	07:36
	22:05	37 06:08 (B24)	21:15	19:58	18:38	16:23
8	04:37	05:31 (B24)	05:29	06:31	07:32	07:38
	22:04	37 06:08 (B24)	21:13	19:55	18:35	16:21
9	04:38	05:32 (B24)	05:31	06:33	07:34	07:40
	22:03	35 06:07 (B24)	21:11	19:53	18:32	16:19
10	04:40	05:32 (B24)	05:33	06:35	07:36	07:42
	22:02	35 06:07 (B24)	21:08	19:50	18:30	16:17
11	04:41	05:33 (B24)	05:35	06:37	07:38	07:44
	22:01	35 06:08 (B24)	21:06	19:47	18:27	16:15
12	04:42	05:33 (B24)	05:37	06:39	07:40	07:46
	22:00	34 06:07 (B24)	21:04	19:45	18:25	16:13
13	04:44	05:34 (B24)	05:39	06:41	07:42	07:48
	21:59	33 06:07 (B24)	21:01	7 06:56 (B25)	19:42	18:22
14	04:45	05:34 (B24)	05:41	06:46	07:44	07:51
	21:58	32 06:06 (B24)	20:59	13 06:59 (B25)	19:39	18:20
15	04:46	05:36 (B24)	05:43	06:44	07:46	07:53
	21:56	30 06:06 (B24)	20:57	17 07:01 (B25)	19:37	18:17
16	04:48	05:36 (B24)	05:45	06:43	07:48	07:55
	21:55	29 06:05 (B24)	20:54	19 07:02 (B25)	19:34	18:14
17	04:49	05:36 (B24)	05:47	06:42	07:50	07:57
	21:54	28 06:04 (B24)	20:52	21 07:03 (B25)	19:31	18:12
18	04:51	05:38 (B24)	05:49	06:40	07:52	07:59
	21:52	26 06:04 (B24)	20:49	23 07:03 (B25)	19:29	18:09
19	04:53	05:39 (B24)	05:51	06:39	07:55	08:01
	21:51	24 06:03 (B24)	20:47	24 07:03 (B25)	19:26	18:07
20	04:54	05:40 (B24)	05:53	06:39	07:57	08:03
	21:49	22 06:02 (B24)	20:45	25 07:04 (B25)	19:23	18:04
21	04:56	05:41 (B24)	05:55	06:38	07:59	08:05
	21:48	19 06:00 (B24)	20:42	26 07:04 (B25)	19:20	18:02
22	04:58	05:44 (B24)	05:57	06:38	08:01	08:07
	21:46	15 05:59 (B24)	20:40	26 07:04 (B25)	19:18	18:00
23	04:59	05:46 (B24)	05:59	06:38	08:03	08:09
	21:44	10 05:56 (B24)	20:37	26 07:04 (B25)	19:15	17:57
24	05:01		06:01	06:38	08:05	08:11
	21:43		20:35	25 07:03 (B25)	19:12	17:55
25	05:03		06:03	06:38	08:13	08:50
	21:41		20:32	25 07:03 (B25)	19:10	17:52
26	05:05		06:05	06:38	08:15	08:50
	21:39		20:29	24 07:02 (B25)	19:07	17:50
27	05:06		06:07	06:38	08:17	08:51
	21:37		20:27	22 07:00 (B25)	19:04	17:48
28	05:08		06:09	06:39	08:19	08:51
	21:36		20:24	20 06:59 (B25)	19:02	17:45
29	05:10		06:11	06:41	08:21	08:51
	21:34		20:22	17 06:58 (B25)	18:59	17:43
30	05:12		06:13	06:43	08:22	08:51
	21:32		20:19	13 06:56 (B25)	18:56	17:41
31	05:14		06:15	06:45	08:20	08:51
	21:30		20:17	7 06:52 (B25)	18:52	17:38
Potential sun hours	529		469	384	324	248
Total, worst case	710		380			
Sun reduction	0.49		0.50			
Oper. time red.	0.98		0.98			
Wind dir. red.	0.67		0.66			
Total reduction	0.32		0.32			
Total, real	230		121			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)