

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 15:50	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	04:33 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 16:15	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	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 16:21	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	08:01 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 15:54	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	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	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
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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 15:43
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 20:21	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	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)

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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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	09:00 (E14) 17:48	06:49 19:53	05:33 20:56	04:36 21:53
2	08:51 15:49	08:13 16:48	09:01 (E14) 17:50	06:46 19:55	05:30 20:58	04:35 21:54
3	08:50 15:51	08:11 16:50	09:02 (E14) 17:52	06:44 19:57	05:28 21:00	04:34 21:55
4	08:50 15:52	08:09 16:52	09:04 (E14) 17:54	06:41 19:59	05:26 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	09:07 (E14) 17:56	06:38 20:01	05:24 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	07:24 (E13) 07:26 (E13)	06:36 20:03	05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:01	07:21 (E13) 07:28 (E13)	06:33 20:06	05:19 21:08
8	08:48 15:58	08:01 17:01	06:53 18:03	07:18 (E13) 07:28 (E13)	06:30 20:08	05:17 21:10
9	08:47 16:00	07:58 17:03	06:50 18:05	07:16 (E13) 07:30 (E13)	06:28 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	06:48 18:07	07:13 (E13) 07:29 (E13)	06:25 20:12	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	07:10 (E13) 07:29 (E13)	06:22 20:14	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11	07:10 (E13) 07:29 (E13)	06:20 20:16	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	07:10 (E13) 07:29 (E13)	06:17 20:18	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	07:10 (E13) 07:27 (E13)	06:15 20:20	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18	07:11 (E13) 07:27 (E13)	06:12 20:22	05:03 21:24
16	08:40 16:12	07:43 17:19	06:32 18:20	07:12 (E13) 07:25 (E13)	06:09 20:24	05:01 21:26
17	08:39 16:14	07:40 17:21	06:29 18:22	07:14 (E13) 07:21 (E13)	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	09:10 (E14) 09:13 (E14)	07:36 17:26	06:02 20:31	04:55 21:31	04:25 22:09
20	08:35 16:20	09:09 (E14) 09:15 (E14)	07:33 17:28	05:59 20:33	04:53 21:33	04:25 22:10
21	08:33 16:22	09:07 (E14) 09:16 (E14)	07:31 17:30	05:57 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	09:05 (E14) 09:16 (E14)	07:28 17:32	05:54 20:37	04:50 21:37	04:26 22:10
23	08:30 16:26	09:03 (E14) 09:17 (E14)	07:26 17:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	09:02 (E14) 09:19 (E14)	07:23 17:37	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 16:30	09:00 (E14) 09:19 (E14)	07:21 17:39	05:47 20:43	04:45 21:42	04:26 22:10
26	08:26 16:32	08:58 (E14) 09:20 (E14)	07:18 17:41	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	08:59 (E14) 09:20 (E14)	07:16 17:43	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 16:37	08:59 (E14) 09:20 (E14)	07:13 17:45	05:40 20:49	04:41 21:47	04:28 22:10
29	08:20 16:39	08:59 (E14) 09:20 (E14)	06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10
30	08:19 16:41	09:00 (E14) 09:20 (E14)	06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09
31	08:17 16:43	09:00 (E14) 09:20 (E14)	06:52 19:51	05:37 21:51	04:37 21:51	04:29 22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case	204	74	159			
Sun reduction	0.13	0.20	0.41			
Oper. time red.	0.96	0.96	0.96			
Wind dir. red.	0.59	0.59	0.62			
Total reduction	0.08	0.11	0.25			
Total, real	15	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)
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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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:49 (E13)	07:23
	22:09	21:28	20:14	18:54	08:08 (E13)	16:36
2	04:31	05:18	06:19	07:19	07:49 (E13)	07:25
	22:09	21:26	20:11	18:51	08:08 (E13)	16:34
3	04:32	05:20	06:21	07:21	07:50 (E13)	07:27
	22:08	21:24	20:09	18:48	08:08 (E13)	16:32
4	04:33	05:22	06:23	07:23	07:52 (E13)	07:29
	22:07	21:22	20:06	18:46	08:07 (E13)	16:29
5	04:34	05:23	06:25	07:26	07:54 (E13)	07:31
	22:07	21:20	20:04	18:43	08:06 (E13)	16:27
6	04:35	05:25	06:27	07:28	07:56 (E13)	07:34
	22:06	21:17	20:01	18:40	08:04 (E13)	16:25
7	04:36	05:27	06:29	07:30	07:58 (E13)	07:36
	22:05	21:15	19:58	18:38	08:03 (E13)	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	17:55		15:53
25	05:03	06:03	07:05	07:07		08:13
	21:41	20:32	19:10	16:52		15:52
26	05:05	06:05	07:07	07:09	08:02 (E13)	08:15
	21:39	20:30	19:07	16:50		15:51
27	05:06	06:07	07:09	07:12	07:55 (E13)	08:17
	21:38	20:27	19:04	16:48	08:06 (E13)	15:50
28	05:08	06:09	07:11	07:14	07:53 (E13)	08:19
	21:36	20:24	19:02	16:45	08:07 (E13)	15:48
29	05:10	06:11	07:13	07:16	07:51 (E13)	08:21
	21:34	20:22	18:59	16:43	08:08 (E13)	15:47
30	05:12	06:13	07:15	07:18	07:50 (E13)	08:23
	21:32	20:19	18:56	16:41	08:08 (E13)	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			63	96	280	
Sun reduction			0.43	0.26	0.08	
Oper. time red.			0.96	0.96	0.96	
Wind dir. red.			0.62	0.62	0.59	
Total reduction			0.26	0.15	0.05	
Total, real			16	15	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)
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Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	05:22 21:22	06:23 20:06	07:23 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 21:17	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 17:05	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 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	04:44 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 20:55	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 20:28	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	08:46 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	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	08:33 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 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	04:27 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 16:34	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 20:53	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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
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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
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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
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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 18:14	07:55 16:06	08:45 15:38
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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	08:46 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	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	08:33 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 15:39
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	08:09 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
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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	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 20:24	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		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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		08:50 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 08:50	08:14 16:45 08:12	07:10 17:47 07:08		06:48 19:53 06:46	05:32 20:55 05:30	04:35 21:52 04:34	04:29 22:09 04:30	05:15 21:27 05:17	06:17 20:14 06:19		
2	15:49 08:50	16:47 08:10	17:49 07:05		19:55 06:43	20:57 05:27	21:54 04:33	22:08 04:31	21:25 05:19	20:11 06:21		
3	15:50 08:49	16:49 08:08	17:51 07:03		17:16 (E1) 17:22 (E1)	06:43 19:57	05:27 20:59	04:33 21:55	05:19 22:08	06:21 21:23		
4	15:51 08:49	16:51 08:06	17:54 07:00		17:13 (E1) 17:11 (E1)	06:40 19:59	05:25 21:01	04:32 21:56	05:21 22:07	06:23 21:21		
5	15:53 08:48	16:54 08:04	17:56 06:57		17:13 (E1) 17:09 (E1)	19:57 19:59	20:59 21:03	21:55 21:58	22:08 22:06	21:23 21:19		
6	15:54 08:48	16:55 08:02	17:57 06:55		17:11 (E1) 17:09 (E1)	19:57 19:59	20:59 21:03	21:55 21:58	22:08 22:06	21:23 21:19		
7	15:56 08:47	16:58 08:00	18:00 06:52		17:27 (E1) 17:23 (E1)	20:01 19:59	21:03 21:07	22:06 22:04	21:19 21:17	20:03 20:00		
8	15:57 08:46	17:00 07:58	18:02 06:50		17:29 (E1) 17:25 (E1)	20:03 19:59	21:05 21:09	22:06 22:04	21:19 21:17	20:03 20:00		
9	15:59 08:46	17:03 07:56	18:04 06:47		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
10	16:00 08:45	17:05 07:54	18:06 06:44		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
11	16:02 08:44	17:07 07:51	18:09 06:42		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
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13	16:06 08:42	17:12 07:47	18:13 06:36		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
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16	16:11 08:38	17:18 07:40	18:19 06:28		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
17	16:13 08:37	17:21 07:37	18:21 06:26		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
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19	16:17 08:34	17:25 07:33	18:25 06:20		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
20	16:19 08:33	17:27 07:30	18:28 06:18		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
21	16:21 08:32	17:29 07:28	18:30 06:15		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
22	16:23 08:30	17:32 07:25	18:32 06:12		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
23	16:25 08:28	17:34 07:23	18:34 06:10		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
24	16:27 08:27	17:36 07:20	18:36 06:07		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
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26	16:32 08:23	17:40 07:15	18:40 06:02		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
27	16:34 08:22	17:43 07:13	18:42 05:59		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
28	16:36 08:20	17:45 07:11	18:44 05:56		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
29	16:38 08:18		06:56 19:46		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
30	16:40 08:16		06:54 19:48		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
31	16:42 08:16		06:51 19:50		17:31 (E1) 17:27 (E1)	20:05 19:59	21:07 21:11	22:08 22:06	21:15 21:13	19:58 19:55		
Potential sun hours	235	266	366		426	508	529	529	469	385		
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)	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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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 20:24	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 22:09	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			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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 21:43	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 16:34	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			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:

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Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:51 (E14)	06:49	05:33
	15:48	16:45	17:48	23 08:14 (E14)	19:53	20:55
2	08:51	08:13	07:08	07:51 (E14)	06:46	07:11 (E13)
	15:50	16:48	17:50	22 08:13 (E14)	19:55	20:58
3	08:50	08:11	07:06	07:52 (E14)	06:44	07:09 (E13)
	15:51	16:50	17:52	20 08:12 (E14)	19:57	21:00
4	08:50	08:09	07:03	07:53 (E14)	06:41	07:06 (E13)
	15:52	16:52	17:54	17 08:10 (E14)	19:59	21:02
5	08:49	08:07	07:01	07:55 (E14)	06:38	07:03 (E13)
	15:54	16:54	17:56	12 08:07 (E14)	20:01	21:04
6	08:49	08:05	06:58	08:00 (E14)	06:36	07:01 (E13)
	15:55	16:57	17:58	3 08:03 (E14)	20:03	21:06
7	08:48	08:03	06:55		06:33	06:58 (E13)
	15:56	16:59	18:01		20:06	21:08
8	08:48	08:01	06:53		06:30	06:56 (E13)
	15:58	17:01	18:03		20:08	21:10
9	08:47	07:58	06:50		06:28	06:55 (E13)
	16:00	17:03	18:05		20:10	21:12
10	08:46	07:56	06:48		06:25	06:55 (E13)
	16:01	17:05	18:07		20:12	21:14
11	08:45	07:54	06:45		06:22	06:56 (E13)
	16:03	17:08	18:09		20:14	21:16
12	08:44	07:52	06:42		06:20	06:57 (E13)
	16:05	17:10	18:11		20:16	21:18
13	08:43	07:50	06:40		06:17	06:59 (E13)
	16:06	17:12	18:13		20:18	21:20
14	08:42	07:47	06:37		06:15	07:03 (E13)
	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	08:05 (E14)	06:26	06:04	04:57
	16:16	17:23	4 08:09 (E14)	18:24	20:28	21:29
19	08:36	07:36	08:03 (E14)	06:24	06:02	04:55
	16:18	17:26	9 08:12 (E14)	18:26	20:31	21:31
20	08:35	07:33	08:00 (E14)	06:21	05:59	04:53
	16:20	17:28	13 08:13 (E14)	18:28	20:33	21:33
21	08:33	07:31	07:58 (E14)	06:18	05:57	04:52
	16:22	17:30	16 08:14 (E14)	18:30	20:35	21:35
22	08:32	07:28	07:55 (E14)	06:16	05:54	04:50
	16:24	17:32	20 08:15 (E14)	18:32	20:37	21:37
23	08:30	07:26	07:53 (E14)	06:13	05:52	04:48
	16:26	17:34	23 08:16 (E14)	18:34	20:39	21:38
24	08:29	07:23	07:51 (E14)	06:10	05:49	04:47
	16:28	17:37	25 08:16 (E14)	18:36	20:41	21:40
25	08:27	07:21	07:51 (E14)	06:08	05:47	04:45
	16:30	17:39	25 08:16 (E14)	18:39	20:43	21:42
26	08:26	07:18	07:50 (E14)	06:05	05:45	04:44
	16:32	17:41	26 08:16 (E14)	18:41	20:45	21:43
27	08:24	07:16	07:50 (E14)	06:02	05:42	04:42
	16:34	17:43	25 08:15 (E14)	18:43	20:47	21:45
28	08:22	07:13	07:51 (E14)	06:00	05:40	04:41
	16:37	17:45	24 08:15 (E14)	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		210	97	161		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.63	0.63	0.66		
Total reduction		0.12	0.25	0.32		
Total, real		25	24	51		

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)
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Project:

Mezares_AB211223

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Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

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

Assumptions for shadow calculations

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:55 (E13) 17 07:12 (E13)	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	06:54 (E13) 18 07:12 (E13)	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:53 (E13) 20 07:13 (E13)	07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (E13) 20 07:13 (E13)	07:23 18:46	07:29 16:30
5	04:34 22:07	05:24 21:20	06:25 20:04	06:55 (E13) 17 07:12 (E13)	07:26 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	06:57 (E13) 15 07:12 (E13)	07:28 18:40	07:34 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	06:58 (E13) 12 07:10 (E13)	07:30 18:38	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:00 (E13) 9 07:09 (E13)	07:32 18:35	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:02 (E13) 6 07:08 (E13)	07:34 18:33	07:40 16:19
10	04:40 22:02	05:33 21:09	06:35 19:50	07:04 (E13) 2 07:06 (E13)	07:36 18:30	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 21 08:26 (E14)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 23 08:24 (E14)	07:46 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 24 08:23 (E14)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 24 08:23 (E14)	07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 25 08:23 (E14)	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 26 08:22 (E14)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 25 08:22 (E14)	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	07:59 25 08:22 (E14)	07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 22 08:25 (E14)	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 18 08:27 (E14)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15 08:29 (E14)	08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 11 08:31 (E14)	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 7 08:34 (E14)	08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 2 08:36 (E14)	08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:13 15:51
26	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	08:15 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:50	08:17 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:45	08:19 15:48	08:19 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:21 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:22 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:20 17:38	08:24 15:45	08:24 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		26	136	310		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.66	0.66	0.63		
Total reduction		0.32	0.27	0.16		
Total, real		8	37	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)
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Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:15	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23	08:24
	15:48	16:45	17:48	19:53	20:55	21:52	22:09	21:28	20:14	18:54	16:36	15:45
2	08:50	08:13	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26
	15:50	16:48	17:50	19:55	20:57	21:54	22:08	21:26	20:11	18:51	16:34	15:44
3	08:50	08:11	07:06	06:44	05:28	04:34	04:32	05:20	06:21	07:21	07:27	08:27
	15:51	16:50	17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:32	15:43
4	08:50	08:09	07:03	06:41	05:26	04:33	04:33	05:22	06:23	07:23	07:29	08:29
	15:52	16:52	17:54	19:59	21:02	21:56	22:07	21:22	20:06	18:46	16:30	15:43
5	08:49	08:07	07:01	06:38	05:24	04:32	04:34	05:24	06:25	07:26	07:31	08:31
	15:54	16:54	17:56	20:01	21:04	21:58	22:07	21:19	20:04	18:43	16:27	15:42
6	08:49	08:05	06:58	06:36	05:21	04:31	04:35	05:26	06:27	07:28	07:33	08:32
	15:55	16:57	17:59	20:03	21:06	21:59	22:06	21:17	20:01	18:40	16:25	15:41
7	08:48	08:03	06:55	06:33	05:19	04:30	04:36	05:28	06:29	07:30	07:36	08:34
	15:57	16:59	18:01	20:06	21:08	22:00	22:05	21:15	19:58	18:38	16:23	15:41
8	08:47	08:01	06:53	06:30	05:17	04:30	04:37	05:30	06:31	07:32	07:38	08:35
	15:58	17:01	18:03	20:08	21:10	22:01	22:04	21:13	19:56	18:35	16:21	15:40
9	08:47	07:58	06:50	06:28	05:15	04:29	04:38	05:31	06:33	07:34	07:40	08:37
	16:00	17:03	18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:33	16:19	15:40
10	08:46	07:56	06:48	06:25	05:13	04:28	04:40	05:33	06:35	07:36	07:42	08:38
	16:01	17:06	18:07	20:12	21:14	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	04:28	04:41	05:35	06:37	07:38	07:44	08:39
	16:03	17:08	18:09	20:14	21:16	22:04	22:01	21:06	19:48	18:27	16:15	15:39
12	08:44	07:52	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	21:18	22:05	22:00	21:04	19:45	18:25	16:13	15:39
13	08:43	07:50	06:40	06:17	05:07	04:27	04:44	05:39	06:41	07:42	07:49	08:41
	16:07	17:12	18:13	20:18	21:20	22:06	21:59	21:02	19:42	18:22	16:11	15:38
14	08:42	07:47	06:37	06:15	05:05	04:26	04:45	05:41	06:43	07:44	07:51	08:43
	16:08	17:15	18:16	20:20	21:22	22:07	21:58	20:59	19:39	18:20	16:10	15:38
15	08:41	07:45	06:34	06:12	05:03	04:26	04:47	05:43	06:45	07:46	07:53	08:44
	16:10	17:17	18:18	20:22	21:24	22:07	21:56	20:57	19:37	18:17	16:08	15:38
16	08:40	07:43	06:32	06:10	05:01	04:26	04:48	05:45	06:47	07:48	07:55	08:45
	16:12	17:19	18:20	20:24	21:25	22:08	21:55	20:54	19:34	18:15	16:06	15:38
17	08:39	07:40	06:29	06:07	04:59	04:26	04:50	05:47	06:49	07:50	07:57	08:45
	16:14	17:21	18:22	20:26	21:27	22:08	21:54	20:52	19:31	18:12	16:04	15:38
18	08:37	07:38	06:26	06:04	04:57	04:26	04:51	05:49	06:51	07:52	07:59	08:46
	16:16	17:23	18:24	20:28	21:29	22:09	21:52	20:50	19:29	18:10	16:03	15:38
19	08:36	07:36	06:24	06:02	04:55	04:26	04:53	05:51	06:53	07:55	08:01	08:47
	16:18	17:26	18:26	20:31	21:31	22:09	21:51	20:47	19:26	18:07	16:01	15:39
20	08:35	07:33	06:21	05:59	04:54	04:26	04:54	05:53	06:55	07:57	08:03	08:48
	16:20	17:28	18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:05	15:59	15:39
21	08:33	07:31	06:18	05:57	04:52	04:26	04:56	05:55	06:57	07:59	08:05	08:48
	16:22	17:30	18:30	20:35	21:35	22:10	21:48	20:42	19:21	18:02	15:58	15:39
22	08:32	07:28	06:16	05:54	04:50	04:26	04:58	05:57	06:59	08:01	08:07	08:49
	16:24	17:32	18:32	20:37	21:36	22:10	21:46	20:40	19:18	18:00	15:56	15:40
23	08:30	07:26	06:13	05:52	04:49	04:26	04:59	05:59	07:01	08:03	08:09	08:49
	16:26	17:35	18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:55	15:40
24	08:29	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	20:35	19:13	17:55	15:54	15:41
25	08:27	07:21	06:08	05:47	04:46	04:27	05:03	06:03	07:05	07:07	08:13	08:50
	16:30	17:39	18:39	20:43	21:42	22:10	21:41	20:32	19:10	16:52	15:52	15:42
26	08:26	07:18	06:05	05:45	04:44	04:27	05:05	06:05	07:07	07:10	08:15	08:51
	16:32	17:41	18:41	20:45	21:43	22:10	21:39	20:30	19:07	16:50	15:51	15:42
27	08:24	07:16	06:02	05:42	04:43	04:28	05:07	06:07	07:09	07:12	08:17	08:51
	16:35	17:43	18:43	20:47	21:45	22:10	21:37	20:27	19:04	16:48	15:50	15:43
28	08:22	07:13	06:00	05:40	04:41	04:28	05:08	06:09	07:11	07:14	08:19	08:51
	16:37	17:46	18:45	20:49	21:46	22:10	21:36	20:24	19:02	16:45	15:49	15:44
29	08:20		06:57	05:37	04:40	04:29	05:10	06:11	07:13	07:16	08:21	08:51
	16:39		19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	15:45
30	08:18		06:54	05:35	04:39	04:30	05:12	06:13	07:15	07:18	08:22	08:51
	16:41		19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:41	15:46	15:46
31	08:17		06:52		04:37		05:14	06:15		07:20		08:51
	16:43		19:51		21:51		21:30	20:17		16:38		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)	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:48 (E14)	06:49	05:33
	15:48	16:45	17:48	25 08:13 (E14)	19:53	20:55
2	08:51	08:13	07:08	07:48 (E14)	06:46	05:30
	15:50	16:48	17:50	24 08:12 (E14)	19:55	20:58
3	08:50	08:11	07:06	07:50 (E14)	06:44	05:28
	15:51	16:50	17:52	22 08:12 (E14)	19:57	21:00
4	08:50	08:09	07:03	07:50 (E14)	06:41	05:26
	15:52	16:52	17:54	20 08:10 (E14)	19:59	21:02
5	08:49	08:07	07:01	07:51 (E14)	06:38	05:24
	15:54	16:54	17:56	17 08:08 (E14)	20:01	21:04
6	08:49	08:05	06:58	07:54 (E14)	06:36	05:21
	15:55	16:57	17:58	12 08:06 (E14)	20:03	21:06
7	08:48	08:03	06:55	07:58 (E14)	06:33	05:19
	15:56	16:59	18:01	3 08:01 (E14)	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	08:03 (E14)	06:24	06:02	04:55
	16:18	17:26	5 08:08 (E14)	18:26	20:31	21:31
20	08:35	07:33	08:00 (E14)	06:21	05:59	04:53
	16:20	17:28	10 08:10 (E14)	18:28	20:33	21:33
21	08:33	07:31	07:58 (E14)	06:18	05:57	04:52
	16:22	17:30	14 08:12 (E14)	18:30	20:35	21:35
22	08:32	07:28	07:55 (E14)	06:16	05:54	04:50
	16:24	17:32	17 08:12 (E14)	18:32	20:37	21:37
23	08:30	07:26	07:53 (E14)	06:13	05:52	04:48
	16:26	17:34	21 08:14 (E14)	18:34	20:39	21:38
24	08:29	07:23	07:50 (E14)	06:10	05:49	04:47
	16:28	17:37	24 08:14 (E14)	18:36	20:41	21:40
25	08:27	07:21	07:49 (E14)	06:08	05:47	04:45
	16:30	17:39	26 08:15 (E14)	18:39	20:43	21:42
26	08:26	07:18	07:49 (E14)	06:05	05:45	04:44
	16:32	17:41	25 08:14 (E14)	18:41	20:45	21:43
27	08:24	07:16	07:48 (E14)	06:02	05:42	04:42
	16:34	17:43	26 08:14 (E14)	18:43	20:47	21:45
28	08:22	07:13	07:49 (E14)	06:00	05:40	04:41
	16:37	17:45	25 08:14 (E14)	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		193	123	167		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.63	0.63	0.66		
Total reduction		0.12	0.25	0.32		
Total, real		23	30	53		

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)
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Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E13) 18:54	07:17 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	06:51 (E13) 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 (E13) 18:48	07:21 16:32	08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (E13) 18:46	07:23 16:30	08:29 15:43
5	04:34 22:07	05:24 21:20	06:25 20:04	06:55 (E13) 18:43	07:25 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	06:57 (E13) 18:40	07:28 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	06:58 (E13) 18:38	07:30 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:00 (E13) 18:35	07:32 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:02 (E13) 18:33	07:34 16:19	08:37 15:39
10	04:40 22:02	05:33 21:09	06:35 19:50	07:04 (E13) 18:33	07:36 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:23 (E14) 16:15	07:44 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:22 (E14) 16:13	07:46 15:38
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:21 (E14) 16:11	07:49 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:20 (E14) 16:10	07:51 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:21 (E14) 16:08	07:53 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:21 (E14) 16:06	07:55 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:20 (E14) 16:04	07:57 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	08:22 (E14) 16:03	07:59 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:25 (E14) 16:01	08:01 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:27 (E14) 15:59	08:03 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:29 (E14) 15:58	08:05 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:31 (E14) 15:56	08:07 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:34 (E14) 15:55	08:09 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:38 (E14) 15:53	08:11 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52		08:13 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50		08:15 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48		08:17 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:45		08:19 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43		08:21 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41		08:22 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:20 17:38		08:24 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		50	119	326		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.66	0.66	0.63		
Total reduction		0.32	0.27	0.16		
Total, real		16	32	51		

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)
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LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

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

Assumptions for shadow calculations

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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	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 21:44	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:05 (E7) 08:13 (E7)	06:49 19:53	05:32 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	05:17 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	05:19 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	05:26 21:02	04:33 21:57	04:32 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	07:00 17:56		06:38 20:01	05:23 21:04	04:32 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 15:55	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	07:30 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 19:55	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		06:27 20:10	05:15 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	05:13 21:14	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	05:10 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 16:04	07:52 17:10	06:42 18:11		06:20 20:16	05:08 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	05:06 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	04:45 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 17:17	08:13 (E7) 08:15 (E7)		06:34 18:17	06:12 20:22	05:02 21:24	04:26 22:07	05:43 21:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:38
16	08:40 16:12	07:43 17:19	08:10 (E7) 08:17 (E7)		06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	05:48 21:55	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	08:08 (E7) 08:19 (E7)		06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	05:47 21:54	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	08:05 (E7) 08:19 (E7)		06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:53	06:51 19:29	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:36 17:25	08:03 (E7) 08:21 (E7)		06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09	05:51 21:51	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	08:00 (E7) 08:21 (E7)		06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	05:53 21:50	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:22	07:31 17:30	07:59 (E7) 08:21 (E7)		06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	05:55 21:48	06:57 19:20	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	07:59 (E7) 08:21 (E7)		06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	05:57 21:46	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	07:59 (E7) 08:21 (E7)		06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	05:59 21:45	07:01 20:37	08:03 19:15	08:09 17:57	08:50 15:40
24	08:29 16:28	07:23 17:37	07:59 (E7) 08:21 (E7)		06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:11	06:01 21:43	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	08:00 (E7) 08:21 (E7)		06:07 18:38	05:47 20:43	04:45 21:42	04:26 22:11	06:03 21:41	07:05 19:10	07:07 16:52	07:07 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	08:00 (E7) 08:19 (E7)		06:05 18:41	05:44 20:45	04:44 21:43	04:27 22:10	06:05 21:39	07:07 20:30	07:10 16:50	08:15 15:42	08:51 15:42
27	08:24 16:34	07:16 17:43	08:01 (E7) 08:18 (E7)		06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	06:06 21:38	07:07 20:27	07:12 19:04	08:17 16:47	08:51 15:43
28	08:22 16:36	07:13 17:45	08:03 (E7) 08:16 (E7)		05:59 18:45	05:39 20:49	04:41 21:47	04:28 22:10	06:09 21:36	07:11 20:24	07:14 19:02	08:19 16:45	08:51 15:44
29	08:20 16:39	07:15 17:45	08:16 (E7) 19:47		05:57 20:51	05:37 21:48	04:37 22:10	04:28 22:10	06:11 21:34	07:13 20:22	07:16 19:06	08:21 15:47	08:51 15:44
30	08:19 16:41	07:14 17:46	08:17 (E7) 19:51		05:54 20:53	05:38 21:50	04:38 22:10	04:29 22:10	06:13 21:32	07:15 20:19	07:18 16:40	08:23 15:46	08:51 15:45
31	08:17 16:43	07:14 17:46	08:17 (E7) 19:51		05:51 20:53	05:37 21:50	04:37 22:10	04:29 22:10	06:15 21:30	07:20 20:17	07:20 16:38	08:51 15:47	08:51 15:47
Potential sun hours	235	266	366	8	426	508	529	529	469	385	324	247	216
Total, worst case		231	0.41	0.96	0.62	0.12	0.28	0.26	0.96	0.62	0.16	0.37	
Sun reduction		0.96	0.62	0.25	0.28	0.26	0.96	0.62	0.16	0.37			
Oper. time red.		0.62	0.25	0.28	0.26	0.96	0.62	0.16	0.37				
Wind dir. red.		0.12	0.28	0.26	0.96	0.62	0.16	0.37					
Total reduction		0.28	0.26	0.96	0.62	0.16	0.37						
Total, real		28	2										

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:11 17:47	05:57 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	07:09 17:49	05:54 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	07:07 17:51	05:51 19:51	05:31 20:51	04:37 21:51	04:27 21:51	05:14 21:30	06:15 20:17	07:21 16:38	07:21 15:47	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E5)	05:32
	15:48	16:45	17:47	19:53	17	07:31 (E5)
2	08:51	08:13	08:43 (E7)	07:08	06:46	07:11 (E5)
	15:49	16:47	1	08:44 (E7)	17:50	19:55
3	08:50	08:11	08:41 (E7)	07:06	06:43	07:10 (E5)
	15:50	16:50	6	08:47 (E7)	17:52	19:57
4	08:50	08:09	08:39 (E7)	07:03	06:41	07:11 (E5)
	15:52	16:52	10	08:49 (E7)	17:54	19:59
5	08:49	08:07	08:37 (E7)	07:00	06:38	07:11 (E5)
	15:53	16:54	13	08:50 (E7)	17:56	20:01
6	08:49	08:05	08:34 (E7)	06:58	06:35	07:12 (E5)
	15:55	16:56	17	08:51 (E7)	17:58	20:03
7	08:48	08:03	08:32 (E7)	06:55	06:33	07:13 (E5)
	15:56	16:59	20	08:52 (E7)	18:00	20:05
8	08:48	08:01	08:30 (E7)	06:53	06:30	07:14 (E5)
	15:58	17:01	23	08:53 (E7)	18:03	20:08
9	08:47	07:58	08:30 (E7)	06:50	06:27	07:22 (E5)
	15:59	17:03	22	08:52 (E7)	18:05	20:10
10	08:46	07:56	08:30 (E7)	06:47	06:25	07:12 (E5)
	16:01	17:05	23	08:53 (E7)	18:07	20:12
11	08:45	07:54	08:30 (E7)	06:45	06:22	07:13 (E5)
	16:03	17:08	23	08:53 (E7)	18:09	20:14
12	08:44	07:52	08:30 (E7)	06:42	06:20	07:14 (E5)
	16:04	17:10	23	08:53 (E7)	18:11	20:16
13	08:43	07:50	08:31 (E7)	06:40	06:17	07:15 (E5)
	16:06	17:12	22	08:53 (E7)	18:13	20:18
14	08:42	07:47	08:31 (E7)	06:37	06:14	07:16 (E5)
	16:08	17:14	21	08:52 (E7)	18:15	20:20
15	08:41	07:45	08:32 (E7)	06:34	06:12	07:17 (E5)
	16:10	17:17	19	08:51 (E7)	18:17	20:22
16	08:40	07:43	08:32 (E7)	06:32	06:09	07:18 (E5)
	16:12	17:19	18	08:50 (E7)	18:20	20:24
17	08:39	07:40	08:34 (E7)	06:29	06:07	07:19 (E5)
	16:14	17:21	15	08:49 (E7)	18:22	20:26
18	08:38	07:38	08:36 (E7)	06:26	06:04	07:20 (E5)
	16:16	17:23	10	08:46 (E7)	18:24	20:28
19	08:36	07:36	08:37 (E7)	06:24	06:02	07:21 (E5)
	16:18	17:25		18:26	20:30	20:30
20	08:35	07:33	08:38 (E7)	06:21	05:59	07:22 (E5)
	16:20	17:28		18:28	20:33	20:33
21	08:33	07:31	08:39 (E7)	06:18	05:57	07:23 (E5)
	16:22	17:30		18:30	20:35	20:35
22	08:32	07:28	08:40 (E7)	06:15	05:54	07:24 (E5)
	16:24	17:32		18:32	20:37	20:37
23	08:30	07:26	08:41 (E7)	06:13	05:52	07:25 (E5)
	16:26	17:34		18:34	20:39	20:39
24	08:29	07:23	08:42 (E7)	06:10	05:49	07:26 (E5)
	16:28	17:37		18:36	20:41	20:41
25	08:27	07:21	08:43 (E7)	06:07	05:47	07:27 (E5)
	16:30	17:39		18:38	20:43	20:43
26	08:26	07:18	08:44 (E7)	06:05	05:44	07:28 (E5)
	16:32	17:41		18:41	20:45	20:45
27	08:24	07:16	08:45 (E7)	06:02	05:42	07:29 (E5)
	16:34	17:43		18:43	20:47	20:47
28	08:22	07:13	08:46 (E7)	05:59	06:24 (E5)	07:30 (E5)
	16:36	17:45		18:45	3	06:27 (E5)
29	08:20		08:47 (E7)	06:57	07:22 (E5)	07:31 (E5)
	16:39			19:47	7	07:29 (E5)
30	08:19		08:48 (E7)	06:54	07:19 (E5)	07:32 (E5)
	16:41			19:49	11	07:30 (E5)
31	08:17		08:49 (E7)	06:51	07:16 (E5)	07:33 (E5)
	16:43			19:51	14	07:30 (E5)
Potential sun hours	235	266	366	426	508	529
Total, worst case		286	35	125		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.61	0.66	0.66		
Total reduction		0.12	0.26	0.32		
Total, real		34	9	39		

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:59 (E7)
	22:09	21:28	20:14	18:54	16:36	23 08:22 (E7)
2	04:31	05:17	06:19	07:19	07:25	07:59 (E7)
	22:09	21:26	20:11	18:51	16:34	23 08:22 (E7)
3	04:32	05:19	06:21	07:21	07:27	08:00 (E7)
	22:08	21:24	20:09	18:48	16:31	22 08:22 (E7)
4	04:32	05:21	06:23	07:23	07:29	08:02 (E7)
	22:07	21:22	20:06	8 07:20 (E5)	16:29	19 08:21 (E7)
5	04:33	05:23	06:25	07:25	07:31	08:05 (E7)
	22:07	21:20	20:03	12 07:21 (E5)	16:27	16 08:21 (E7)
6	04:34	05:25	06:27	07:27	07:33	08:07 (E7)
	22:06	21:17	20:01	15 07:22 (E5)	16:25	13 08:20 (E7)
7	04:36	05:27	06:29	07:30	07:36	08:09 (E7)
	22:05	21:15	19:58	17 07:23 (E5)	16:23	9 08:18 (E7)
8	04:37	05:29	06:31	07:32	07:38	08:12 (E7)
	22:04	21:13	19:55	18 07:23 (E5)	16:21	6 08:18 (E7)
9	04:38	05:31	06:33	07:34	07:40	08:14 (E7)
	22:03	21:11	19:53	20 07:24 (E5)	16:19	1 08:15 (E7)
10	04:39	05:33	06:35	07:36	07:42	08:38
	22:02	21:08	19:50	19 07:23 (E5)	16:17	15:39
11	04:40	05:35	06:37	07:38	07:44	08:39
	22:01	21:06	19:47	17 07:23 (E5)	16:15	15:38
12	04:42	05:37	06:39	07:40	07:46	08:40
	22:00	21:04	19:45	14 07:22 (E5)	16:13	15:38
13	04:43	05:39	06:41	07:42	07:49	08:42
	21:59	21:02	19:42	11 07:21 (E5)	16:11	15:38
14	04:45	05:41	06:43	07:44	07:51	08:43
	21:58	20:59	19:39	8 07:20 (E5)	16:09	15:38
15	04:46	05:43	06:45	07:46	07:53	08:44
	21:57	20:57	19:37	4 07:18 (E5)	16:07	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	07:52	07:59	08:46
	21:53	20:50	19:29	18:09	16:02	15:38
19	04:52	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	15:38
21	04:56	05:55	06:57	07:59	08:05	08:49
	21:48	20:42	19:20	18:02	15:58	15:39
22	04:57	05:57	06:59	08:01	08:07	08:49
	21:46	20:40	19:18	17:59	15:56	15:39
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	09:06 (E7)	08:11
	21:43	20:35	19:12	17:55	11 09:17 (E7)	15:53
25	05:03	06:03	07:05	07:07	08:03 (E7)	08:13
	21:41	20:32	19:10	16:52	15 08:18 (E7)	15:52
26	05:04	06:05	07:07	07:10	08:02 (E7)	08:15
	21:39	20:30	19:07	16:50	18 08:20 (E7)	15:51
27	05:06	06:07	07:09	07:12	08:01 (E7)	08:17
	21:38	20:27	19:04	16:47	20 08:21 (E7)	15:49
28	05:08	06:09	07:11	07:14	08:00 (E7)	08:19
	21:36	20:24	19:02	16:45	21 08:21 (E7)	15:48
29	05:10	06:11	07:13	07:16	08:00 (E7)	08:21
	21:34	20:22	18:59	16:43	22 08:22 (E7)	15:47
30	05:12	06:13	07:15	07:18	07:59 (E7)	08:23
	21:32	20:19	18:56	16:40	23 08:22 (E7)	15:46
31	05:14	06:15		07:20	08:00 (E7)	08:51
	21:30	20:17		16:38	23 08:23 (E7)	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			163	153	132	
Sun reduction			0.43	0.26	0.08	
Oper. time red.			0.96	0.96	0.96	
Wind dir. red.			0.66	0.61	0.61	
Total reduction			0.27	0.15	0.05	
Total, real			44	23	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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 15:50	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 & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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
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
4	08:50 15:52	08:09 16:52	08:39 (E13)	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
5	08:49 15:53	08:07 16:54	5 08:46 (E13)	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	07:31 16:27
6	08:49 15:55	08:05 16:56	9 08:46 (E13)	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
7	08:48 15:56	08:03 16:59	13 08:47 (E13)	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
8	08:48 15:58	08:01 17:01	16 08:48 (E13)	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
9	08:47 15:59	07:58 17:03	19 08:49 (E13)	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
10	08:46 16:01	07:56 17:05	21 08:49 (E13)	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	07:42 16:17
11	08:45 16:03	07:54 17:08	22 08:50 (E13)	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
12	08:44 16:05	07:52 17:10	22 08:50 (E13)	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
13	08:43 16:06	07:50 17:12	21 08:49 (E13)	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
14	08:42 16:08	07:47 17:14	22 08:50 (E13)	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
15	08:41 16:10	07:45 17:17	21 08:49 (E13)	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
16	08:40 16:12	07:43 17:19	19 08:48 (E13)	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	07:55 16:06
17	08:39 16:14	07:40 17:21	17 08:47 (E13)	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
18	08:38 16:16	07:38 17:23	15 08:46 (E13)	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
19	08:36 16:18	07:36 17:26	10 08:43 (E13)	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
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
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
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
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	08:09 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 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	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 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	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	08:10 16:50	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	08:12 16:48	08:17 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 16:45	08:19 15:48
29	08:20 16:39			05:57 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
30	08:19 16:41			05:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 20:13	06:13 20:19	07:15 18:56	08:18 16:41	08:23 15:46
31	08:17 16:43			05:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17	07:20 16:38	08:19 16:20	08:24 15:47
Potential sun hours	235	266		366	426	508	529	529	469	385	324	247
Total, worst case											156	102
Sun reduction											0.26	0.08
Oper. time red.											0.96	0.96
Wind dir. red.											0.61	0.61
Total reduction											0.15	0.05
Total, real											24	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Birtzalas - 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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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	04:26 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		09:42 (E14)	08:15		08:46 (E15)	07:11		06:49		07:17 (E13)	05:33		04:36				
	15:48	13	09:55 (E14)	16:45	62	10:18 (E14)	17:48		19:53	19	07:36 (E13)	20:55		21:53				
2	08:50		09:41 (E14)	08:13		08:46 (E15)	07:08		06:46		07:15 (E13)	05:30		04:35				
	15:49	16	09:57 (E14)	16:48	62	10:18 (E14)	17:50		19:55	23	07:38 (E13)	20:57		21:54				
3	08:50		09:41 (E14)	08:11		08:46 (E15)	07:06		06:43		07:13 (E13)	05:28		04:34				
	15:51	17	09:58 (E14)	16:50	61	10:18 (E14)	17:52		19:57	27	07:40 (E13)	21:00		21:55				
4	08:50		09:40 (E14)	08:09		08:46 (E15)	07:03		06:41		07:11 (E13)	05:26		04:33				
	15:52	19	09:59 (E14)	16:52	60	10:17 (E14)	17:54		19:59	29	07:40 (E13)	21:02		21:57				
5	08:49		09:40 (E14)	08:07		08:47 (E15)	07:01		06:38		07:10 (E13)	05:23		04:32				
	15:53	21	10:01 (E14)	16:54	58	10:17 (E14)	17:56		20:01	30	07:40 (E13)	21:04		21:58				
6	08:49		09:39 (E14)	08:05		08:46 (E15)	06:58		06:35		07:09 (E13)	05:21		04:31				
	15:55	23	10:02 (E14)	16:56	56	10:15 (E14)	17:58		20:03	32	07:41 (E13)	21:06		21:59				
7	08:48		09:39 (E14)	08:03		08:47 (E15)	06:55		06:33		07:08 (E13)	05:19		04:30				
	15:56	24	10:03 (E14)	16:59	54	10:15 (E14)	18:01		20:06	33	07:41 (E13)	21:08		22:00				
8	08:48		09:39 (E14)	08:01		08:48 (E15)	06:53		06:30		07:08 (E13)	05:17		04:29				
	15:58	25	10:04 (E14)	17:01	50	10:14 (E14)	18:03		20:08	34	07:42 (E13)	21:10		22:01				
9	08:47		09:38 (E14)	07:58		08:48 (E15)	06:50		06:28		07:07 (E13)	05:15		04:29				
	16:00	27	10:05 (E14)	17:03	45	10:12 (E14)	18:05		20:10	34	07:41 (E13)	21:12		22:02				
10	08:46		09:38 (E14)	07:56		08:50 (E15)	06:47		06:25		07:06 (E13)	05:13		04:28				
	16:01	28	10:06 (E14)	17:05	39	10:10 (E14)	18:07		20:12	35	07:41 (E13)	21:14		22:03				
11	08:45		09:38 (E14)	07:54		08:52 (E15)	06:45		06:22		07:07 (E13)	05:11		04:27				
	16:03	30	10:08 (E14)	17:08	31	10:08 (E14)	18:09		20:14	34	07:41 (E13)	21:16		22:04				
12	08:44		09:38 (E14)	07:52		08:53 (E15)	06:42		06:20		07:06 (E13)	05:09		04:27				
	16:05	31	10:09 (E14)	17:10	18	10:03 (E14)	18:11		20:16	34	07:40 (E13)	21:18		22:05				
13	08:43		09:37 (E14)	07:50			06:40		06:17		07:06 (E13)	05:07		04:26				
	16:06	32	10:09 (E14)	17:12			18:13		20:18	34	07:40 (E13)	21:20		22:06				
14	08:42		09:37 (E14)	07:47			06:37		06:15		07:06 (E13)	05:05		04:26				
	16:08	33	10:10 (E14)	17:14			18:15		20:20	33	07:39 (E13)	21:22		22:07				
15	08:41		09:36 (E14)	07:45			06:34		06:12		07:07 (E13)	05:03		04:26				
	16:10	35	10:11 (E14)	17:17			18:18		20:22	31	07:38 (E13)	21:24		22:07				
16	08:40		09:37 (E14)	07:43			06:32		06:09		07:07 (E13)	05:01		04:26				
	16:12	35	10:12 (E14)	17:19			18:20		20:24	30	07:37 (E13)	21:25		22:08				
17	08:39		09:37 (E14)	07:40			06:29		06:07		07:08 (E13)	04:59		04:25				
	16:14	36	10:13 (E14)	17:21			18:22		20:26	28	07:36 (E13)	21:27		22:08				
18	08:37		09:36 (E14)	07:38			06:26		06:04		07:08 (E13)	04:57		04:25				
	16:16	38	10:14 (E14)	17:23			18:24		20:28	26	07:34 (E13)	21:29		22:09				
19	08:36		09:36 (E14)	07:36			06:24		06:02		07:10 (E13)	04:55		04:25				
	16:18	38	10:14 (E14)	17:26			18:26		20:30	23	07:33 (E13)	21:31		22:09				
20	08:35		09:37 (E14)	07:33			06:21		05:59		07:12 (E13)	04:53		04:25				
	16:20	38	10:15 (E14)	17:28			18:28		20:33	19	07:31 (E13)	21:33		22:10				
21	08:33		09:36 (E14)	07:31			06:18		05:57		07:13 (E13)	04:52		04:25				
	16:22	40	10:16 (E14)	17:30			18:30		20:35	15	07:28 (E13)	21:35		22:10				
22	08:32		09:36 (E14)	07:28			06:16		05:54		07:17 (E13)	04:50		04:26				
	16:24	40	10:16 (E14)	17:32			18:32		20:37	7	07:24 (E13)	21:37		22:10				
23	08:30		09:36 (E14)	07:26			06:13		05:52			04:48		04:26				
	16:26	40	10:16 (E14)	17:34			18:34		20:39			21:38		22:10				
24	08:29		09:37 (E14)	07:23			06:10		05:49			04:47		04:26				
	16:28	41	10:18 (E14)	17:37			18:36		20:41			21:40		22:10				
25	08:27		09:37 (E14)	07:21			06:08		05:47			04:45		04:26				
	16:30	41	10:18 (E14)	17:39			18:38		20:43			21:42		22:10				
26	08:26		08:58 (E15)	07:18			06:05		05:44			04:44		04:27				
	16:32	45	10:18 (E14)	17:41			18:41		20:45			21:43		22:10				
27	08:24		08:56 (E15)	07:16			06:02		05:42			04:42		04:27				
	16:34	49	10:18 (E14)	17:43			18:43		20:47			21:45		22:10				
28	08:22		08:54 (E15)	07:13			05:59		05:40			04:41		04:28				
	16:37	53	10:19 (E14)	17:45			18:45		20:49			21:47		22:10				
29	08:20		08:52 (E15)				06:57		05:37			04:40		04:29				
	16:39	55	10:19 (E14)				19:47		20:51			21:48		22:10				
30	08:18		08:50 (E15)				06:54		05:35			04:38		04:29				
	16:41	58	10:19 (E14)				19:49		20:53			21:50		22:09				
31	08:17		08:48 (E15)				06:51				07:21 (E13)							
	16:43	60	10:19 (E14)				19:51	13			07:34 (E13)							
Potential sun hours	235			266			366			426			508			529		
Total, worst case	1081			596			13			610								
Sun reduction	0.13			0.20			0.41			0.50								
Oper. time red.	0.96			0.96			0.96			0.96								
Wind dir. red.	0.61			0.60			0.66			0.66								
Total reduction	0.08			0.12			0.26			0.32								
Total, real	84			70			3			193								

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:06 (E13) 18:54	07:17 16:36	08:19 (E15) 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:05 (E13) 18:51	07:19 16:34	08:18 (E15) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:05 (E13) 18:48	07:21 16:32	08:18 (E15) 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:05 (E13) 18:46	07:23 16:29	08:17 (E15) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:05 (E13) 18:43	07:25 16:27	08:16 (E15) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:06 (E13) 18:40	07:27 16:25	08:16 (E15) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:05 (E13) 18:38	07:30 16:23	08:16 (E15) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:06 (E13) 18:35	07:32 16:21	08:17 (E15) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:06 (E13) 18:32	07:34 16:19	08:17 (E15) 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:08 (E13) 18:30	07:36 16:17	08:18 (E15) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:09 (E13) 18:27	07:38 16:15	08:19 (E15) 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:12 (E13) 18:25	07:40 16:13	08:21 (E15) 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:17 (E13) 18:22	07:42 16:11	08:24 (E15) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:20 (E13) 18:20	07:44 16:09	08:26 (E15) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:26 (E13) 18:17	07:46 16:08	08:28 (E15) 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 (E15) 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 (E14) 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:35 (E14) 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:37 (E14) 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:39 (E14) 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:41 (E14) 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:43 (E14) 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:45 (E14) 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:47 (E14) 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:49 (E14) 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 (E14) 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:17 15:49	08:53 (E14) 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:46	08:19 15:48	08:55 (E14) 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47	08:57 (E14) 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:23 15:46	08:59 (E14) 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:19 17:39	08:25 15:45	09:01 (E14) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		285	346	55	1391	293
Sun reduction		0.50	0.43	0.26	0.08	0.07
Oper. time red.		0.96	0.96	0.96	0.96	0.96
Wind dir. red.		0.66	0.66	0.60	0.61	0.61
Total reduction		0.31	0.27	0.15	0.05	0.04
Total, real		90	93	8	67	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January		February		March		April		May		June	
1	08:51		08:15		08:45 (E15)	07:11	06:49		05:33		04:36	
	15:48		16:45	56	10:08 (E14)	17:48	19:53		20:55		21:53	
2	08:50		08:13		08:43 (E15)	07:08	06:46		05:30		04:35	
	15:49		16:48	59	10:08 (E14)	17:50	19:55		20:57		21:54	
3	08:50		08:11		08:41 (E15)	07:06	06:43		05:28		04:34	
	15:51		16:50	62	10:08 (E14)	17:52	19:57		21:00		21:55	
4	08:50		08:09		08:39 (E15)	07:03	06:41		05:26		04:33	
	15:52		16:52	64	10:08 (E14)	17:54	19:59		21:02		21:57	
5	08:49		08:07		08:39 (E15)	07:01	06:38		05:23		04:32	
	15:53		16:54	66	10:09 (E14)	17:56	20:01	12	07:18 (E13)	21:04	21:58	
6	08:49		08:05		08:38 (E15)	06:58	06:35		07:03 (E13)	05:21	04:31	
	15:55		16:56	65	10:08 (E14)	17:58	20:03	19	07:22 (E13)	21:06	21:59	
7	08:48		08:03		08:38 (E15)	06:55	06:33		07:01 (E13)	05:19	04:30	
	15:56		16:59	65	10:08 (E14)	18:01	20:06	22	07:23 (E13)	21:08	22:00	
8	08:48		08:01		08:39 (E15)	06:53	06:30		06:59 (E13)	05:17	04:29	
	15:58		17:01	63	10:08 (E14)	18:03	20:08	26	07:25 (E13)	21:10	22:01	
9	08:47		07:58		08:38 (E15)	06:50	06:28		06:57 (E13)	05:15	04:29	
	16:00		17:03	62	10:06 (E14)	18:05	20:10	28	07:25 (E13)	21:12	22:02	
10	08:46		09:37 (E14)		07:56	08:39 (E15)	06:47		06:56 (E13)	05:13	04:28	
	16:01	6	09:43 (E14)		17:05	10:06 (E14)	18:07	29	07:25 (E13)	21:14	22:03	
11	08:45		09:35 (E14)		07:54	08:40 (E15)	06:45		06:55 (E13)	05:11	04:27	
	16:03	12	09:47 (E14)		17:08	10:05 (E14)	18:09	31	07:26 (E13)	21:16	22:04	
12	08:44		09:32 (E14)		07:52	08:40 (E15)	06:42		06:54 (E13)	05:09	04:27	
	16:05	16	09:48 (E14)		17:10	10:04 (E14)	18:11	32	07:26 (E13)	21:18	22:05	
13	08:43		09:31 (E14)		07:50	08:42 (E15)	06:40		06:54 (E13)	05:07	04:26	
	16:06	20	09:51 (E14)		17:12	10:03 (E14)	18:13	33	07:27 (E13)	21:20	22:06	
14	08:42		09:31 (E14)		07:47	08:42 (E15)	06:37		06:53 (E13)	05:05	04:26	
	16:08	22	09:53 (E14)		17:14	10:01 (E14)	18:15	33	07:26 (E13)	21:22	22:07	
15	08:41		09:29 (E14)		07:45	08:45 (E15)	06:34		06:53 (E13)	05:03	04:26	
	16:10	25	09:54 (E14)		17:17	09:59 (E14)	18:18	34	07:27 (E13)	21:24	22:07	
16	08:40		09:29 (E14)		07:43	09:37 (E14)	06:32		06:52 (E13)	05:01	04:26	
	16:12	27	09:56 (E14)		17:19	09:56 (E14)	18:20	34	07:26 (E13)	21:25	22:08	
17	08:39		09:28 (E14)		07:40	09:41 (E14)	06:29		06:52 (E13)	04:59	04:25	
	16:14	29	09:57 (E14)		17:21	09:53 (E14)	18:22	34	07:26 (E13)	21:27	22:08	
18	08:37		09:28 (E14)		07:38		06:26		06:52 (E13)	04:57	04:25	
	16:16	30	09:58 (E14)		17:23		18:24	33	07:25 (E13)	21:29	22:09	
19	08:36		09:27 (E14)		07:36		06:24		06:52 (E13)	04:55	04:25	
	16:18	32	09:59 (E14)		17:26		18:26	33	07:25 (E13)	21:31	22:09	
20	08:35		09:27 (E14)		07:33		06:21		06:53 (E13)	04:53	04:25	
	16:20	34	10:01 (E14)		17:28		18:28	32	07:25 (E13)	21:33	22:10	
21	08:33		09:26 (E14)		07:31		06:18		06:53 (E13)	04:52	04:25	
	16:22	36	10:02 (E14)		17:30		18:30	30	07:23 (E13)	21:35	22:10	
22	08:32		09:26 (E14)		07:28		06:16		06:54 (E13)	04:50	04:26	
	16:24	36	10:02 (E14)		17:32		18:32	28	07:22 (E13)	21:37	22:10	
23	08:30		09:25 (E14)		07:26		06:13		06:54 (E13)	04:48	04:26	
	16:26	38	10:03 (E14)		17:34		18:34	27	07:21 (E13)	21:38	22:10	
24	08:29		09:26 (E14)		07:23		06:10		06:55 (E13)	04:47	04:26	
	16:28	39	10:05 (E14)		17:37		18:36	25	07:20 (E13)	21:40	22:10	
25	08:27		09:26 (E14)		07:21		06:08		06:56 (E13)	04:45	04:26	
	16:30	39	10:05 (E14)		17:39		18:38	22	07:18 (E13)	21:42	22:10	
26	08:26		09:25 (E14)		07:18		06:05		06:57 (E13)	04:44	04:27	
	16:32	41	10:06 (E14)		17:41		18:41	18	07:15 (E13)	21:43	22:10	
27	08:24		09:25 (E14)		07:16		06:02		07:00 (E13)	04:42	04:27	
	16:34	41	10:06 (E14)		17:43		18:43	13	07:13 (E13)	21:45	22:10	
28	08:22		09:25 (E14)		07:13		05:59			04:41	04:28	
	16:37	42	10:07 (E14)		17:45		18:45			21:47	22:10	
29	08:20		08:52 (E15)				06:57			04:40	04:29	
	16:39	43	10:07 (E14)				19:47			21:48	22:10	
30	08:18		08:50 (E15)				06:54			04:38	04:29	
	16:41	48	10:08 (E14)				19:49			21:50	22:09	
31	08:17		08:48 (E15)				06:51			04:37		
	16:43	52	10:08 (E14)				19:51			21:51		
Potential sun hours	235			266		366	426		508		529	
Total, worst case		708		892			628					
Sun reduction		0.13		0.20			0.50					
Oper. time red.		0.96		0.96			0.96					
Wind dir. red.		0.60		0.60			0.66					
Total reduction		0.08		0.12			0.32					
Total, real		55		104			199					

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:54 (E13) 07:25 (E13)	07:17 18:54	07:23 16:36
2	04:31 22:08	05:18 21:26	06:19 20:11	06:55 (E13) 07:24 (E13)	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:55 (E13) 07:23 (E13)	07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	06:56 (E13) 07:22 (E13)	07:23 18:46	07:29 16:29
5	04:34 22:07	05:23 21:20	06:25 20:03	06:58 (E13) 07:20 (E13)	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	06:59 (E13) 07:18 (E13)	07:27 18:40	07:33 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:01 (E13) 07:14 (E13)	07:30 18:38	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	07:38 16:19
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	07:40 16:19
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	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	07:46 16:13
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	07:51 16:09
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	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	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	07:59 16:02
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	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	08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	08:13 17:52	08:13 15:52	08:13 15:52
26	05:05 21:39	06:05 20:30	07:07 19:07	08:15 17:50	08:15 15:51	08:15 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	08:17 17:48	08:17 15:49	08:17 15:49
28	05:08 21:36	06:09 20:24	07:11 19:02	08:19 17:46	08:19 15:48	08:19 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	08:21 17:43	08:21 15:47	08:21 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	08:23 17:41	08:23 15:46	08:23 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:25 17:39	08:25 15:45	08:25 15:45
Potential sun hours	529	469	385	324	247	216
Total, worst case		470	168	284	1312	19
Sun reduction		0.50	0.43	0.26	0.08	0.07
Oper. time red.		0.96	0.96	0.96	0.96	0.96
Wind dir. red.		0.66	0.66	0.60	0.60	0.60
Total reduction		0.32	0.27	0.15	0.05	0.04
Total, real		148	45	43	63	1

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 15:42
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 20:03	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 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 17:05	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 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	08:46 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	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	08:33 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 17:34	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 22:10	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 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 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 16:34	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 20:24	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
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
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Oper. time red.												
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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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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

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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
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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
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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
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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
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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
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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
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
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Total reduction												
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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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
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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	08:18 (E14) 08:21 (E14)	06:40 18:13	06:17 20:18	05:07 21:20	04:44 22:06	05:39 21:59	06:41 21:02	07:42 19:42	07:49 18:22	08:42 16:11
14	08:42 16:08	07:47 17:14	08:15 (E14) 08:22 (E14)	06:37 18:16	06:15 20:20	05:05 21:22	04:45 22:07	05:41 21:58	06:43 20:59	07:44 19:39	07:51 18:20	08:43 16:10
15	08:41 16:10	07:45 17:17	08:13 (E14) 08:24 (E14)	06:34 18:18	06:12 20:22	05:03 21:24	04:46 22:07	05:43 21:57	06:45 20:57	07:46 19:37	07:53 18:17	08:44 16:08
16	08:40 16:12	07:43 17:19	08:10 (E14) 08:24 (E14)	06:32 18:20	06:09 20:24	05:01 21:26	04:48 22:08	05:45 21:55	06:47 20:54	07:48 19:34	07:55 18:15	08:45 16:06
17	08:39 16:14	07:40 17:21	08:08 (E14) 08:25 (E14)	06:29 18:22	06:07 20:26	04:59 21:27	04:49 22:09	05:47 21:54	06:49 20:52	07:50 19:31	08:42 (E14) 08:49 (E14)	07:57 16:04
18	08:38 16:16	07:38 17:23	08:06 (E14) 08:25 (E14)	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:53	06:51 20:50	07:53 19:29	08:49 (E14) 08:51 (E14)	07:59 16:03
19	08:36 16:18	07:36 17:26	08:05 (E14) 08:25 (E14)	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:51	06:53 20:47	07:55 19:26	08:38 (E14) 08:54 (E14)	08:01 16:01
20	08:35 16:20	07:33 17:28	08:05 (E14) 08:24 (E14)	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	05:53 21:50	06:55 20:45	07:57 19:23	08:37 (E14) 08:54 (E14)	08:03 15:59
21	08:33 16:22	07:31 17:30	08:06 (E14) 08:24 (E14)	06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	05:55 21:48	06:57 20:42	07:59 19:21	08:36 (E14) 08:54 (E14)	08:05 15:58
22	08:32 16:24	07:28 17:32	08:06 (E14) 08:23 (E14)	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	05:57 21:46	06:59 20:40	08:01 19:18	08:36 (E14) 08:55 (E14)	08:07 15:56
23	08:30 16:26	07:26 17:35	08:08 (E14) 08:22 (E14)	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	05:59 21:45	07:01 20:37	08:03 19:15	08:35 (E14) 08:55 (E14)	08:09 15:55
24	08:29 16:28	07:23 17:37	08:09 (E14) 08:19 (E14)	06:10 18:36	05:49 20:41	04:47 21:40	05:01 22:10	06:01 21:43	07:03 20:35	08:05 19:13	08:36 (E14) 08:55 (E14)	08:11 15:53
25	08:27 16:30	07:21 17:39	08:14 (E14) 08:16 (E14)	06:08 18:39	05:47 20:43	04:45 21:42	05:03 22:10	06:03 21:41	07:05 20:32	07:07 19:10	07:38 (E14) 07:54 (E14)	08:13 15:52
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	07:41 (E14) 07:54 (E14)	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 (E14) 07:53 (E14)	08:17 15:50
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	07:45 (E14) 07:51 (E14)	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 (E14) 07:51 (E14)	08:21 15:47
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		08:51 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	529	529	469	385	324	247	216
Total, worst case												
Sun reduction										176		
Oper. time red.										0.26		
Wind dir. red.										0.96		
Total reduction										0.62		
Total, real										0.16		
										27		

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:
25/06/2024 18:19/4.0.540

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
434 458 529 455 479 767 770 921 1,193 1,059 818 546 8,428
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	06:49 (E14) 07:13 (E14)	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	06:19 20:11	06:49 (E14) 07:12 (E14)	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	06:51 (E14) 07:11 (E14)	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	06:53 (E14) 07:10 (E14)	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	06:55 (E14) 07:09 (E14)	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	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	06:57 (E14) 07:07 (E14)	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	05:27 21:15	06:29 19:58	06:58 (E14) 07:03 (E14)	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	07:58 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	07:46 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	08:38 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	07:53 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	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 18:05	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	06:59 (E14) 07:08 (E14)	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 22:10	05:01 21:43	06:01 20:35	06:56 (E14) 07:11 (E14)	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	04:27 22:10	05:03 21:41	06:03 20:32	06:54 (E14) 07:12 (E14)	07:05 19:10	08:07 17:52	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	06:53 (E14) 07:13 (E14)	07:07 19:07	08:09 17:10	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	06:52 (E14) 07:14 (E14)	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 20:24	06:50 (E14) 07:13 (E14)	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 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	06:50 (E14) 07:13 (E14)	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:09 17:54	05:54 18:54	05:35 20:53	04:38 21:50	04:29 22:09	05:12 20:19	06:13 20:13	06:49 (E14) 07:13 (E14)	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:07 17:51	05:52 18:51	05:33 20:51	04:37 21:51	05:14 21:30	06:15 20:17	06:49 (E14) 07:13 (E14)	07:20 18:56	07:20 16:38	08:20 15:47	08:51 15:47	
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216	
Total, worst case				288				178	113				
Sun reduction				0.50				0.50	0.43				
Oper. time red.				0.96				0.96	0.96				
Wind dir. red.				0.66				0.66	0.66				
Total reduction				0.32				0.32	0.27				
Total, real				91				56	31				

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		10:02 (E14)	08:15		09:20 (E15)	07:11			06:49		05:33			04:36			
	15:48	33	10:35 (E14)	16:45	4	09:24 (E15)	17:48			19:53		20:55			21:53			
2	08:50		10:03 (E14)	08:13			07:08			06:46		05:30			04:35			
	15:49	33	10:36 (E14)	16:48			17:50			19:55		20:58			21:54			
3	08:50		10:02 (E14)	08:11			07:06			06:43		05:28			04:34			
	15:51	34	10:36 (E14)	16:50			17:52			19:57		21:00			21:55			
4	08:50		10:03 (E14)	08:09			07:03			06:41		05:26			04:33			
	15:52	33	10:36 (E14)	16:52			17:54			19:59		21:02			21:57			
5	08:49		10:04 (E14)	08:07			07:01			06:38		05:23			04:32			
	15:53	33	10:37 (E14)	16:54			17:56			20:01		21:04			21:58			
6	08:49		10:04 (E14)	08:05			06:58			06:35		05:21			04:31			
	15:55	33	10:37 (E14)	16:56			17:58			20:03		21:06			21:59			
7	08:48		10:04 (E14)	08:03			06:55			06:33		05:19			04:30			
	15:56	34	10:38 (E14)	16:59			18:01			20:06		21:08			22:00			
8	08:48		10:05 (E14)	08:01			06:53			06:30		05:17			04:29			
	15:58	33	10:38 (E14)	17:01			18:03			20:08		21:10			22:01			
9	08:47		10:05 (E14)	07:58			06:50		07:24 (E13)	06:28		05:15			04:29			
	16:00	33	10:38 (E14)	17:03			18:05	1	07:25 (E13)	20:10		21:12			22:02			
10	08:46		10:06 (E14)	07:56			06:47		07:17 (E13)	06:25		05:13			04:28			
	16:01	33	10:39 (E14)	17:05			18:07	14	07:31 (E13)	20:12		21:14			22:03			
11	08:45		10:06 (E14)	07:54			06:45		07:14 (E13)	06:22		05:11			04:27			
	16:03	33	10:39 (E14)	17:08			18:09	19	07:33 (E13)	20:14		21:16			22:04			
12	08:44		09:21 (E15)	07:52			06:42		07:13 (E13)	06:20		05:09			04:27			
	16:05	35	10:40 (E14)	17:10			18:11	23	07:36 (E13)	20:16		21:18			22:05			
13	08:43		09:19 (E15)	07:50			06:40		07:11 (E13)	06:17		05:07			04:26			
	16:06	37	10:39 (E14)	17:12			18:13	26	07:37 (E13)	20:18		21:20			22:06			
14	08:42		09:18 (E15)	07:47			06:37		07:09 (E13)	06:15		05:05			04:26			
	16:08	39	10:40 (E14)	17:14			18:15	28	07:37 (E13)	20:20		21:22			22:07			
15	08:41		09:16 (E15)	07:45			06:34		07:08 (E13)	06:12		05:03			04:26			
	16:10	41	10:39 (E14)	17:17			18:18	30	07:38 (E13)	20:22		21:24			22:07			
16	08:40		09:15 (E15)	07:43			06:32		07:07 (E13)	06:09		05:01			04:26			
	16:12	43	10:40 (E14)	17:19			18:20	31	07:38 (E13)	20:24		21:25			22:08			
17	08:39		09:14 (E15)	07:40			06:29		07:06 (E13)	06:07		04:59			04:25			
	16:14	44	10:40 (E14)	17:21			18:22	32	07:38 (E13)	20:26		21:27			22:08			
18	08:38		09:12 (E15)	07:38			06:26		07:05 (E13)	06:04		04:57			04:25			
	16:16	45	10:39 (E14)	17:23			18:24	33	07:38 (E13)	20:28		21:29			22:09			
19	08:36		09:10 (E15)	07:36			06:24		07:05 (E13)	06:02		04:55			04:25			
	16:18	47	10:39 (E14)	17:26			18:26	34	07:39 (E13)	20:30		21:31			22:09			
20	08:35		09:10 (E15)	07:33			06:21		07:05 (E13)	05:59		04:53			04:25			
	16:20	46	10:39 (E14)	17:28			18:28	33	07:38 (E13)	20:33		21:33			22:10			
21	08:33		09:10 (E15)	07:31			06:18		07:04 (E13)	05:57		04:52			04:25			
	16:22	44	10:38 (E14)	17:30			18:30	33	07:37 (E13)	20:35		21:35			22:10			
22	08:32		09:09 (E15)	07:28			06:16		07:05 (E13)	05:54		04:50			04:26			
	16:24	44	10:37 (E14)	17:32			18:32	32	07:37 (E13)	20:37		21:37			22:10			
23	08:30		09:10 (E15)	07:26			06:13		07:05 (E13)	05:52		04:48			04:26			
	16:26	41	10:36 (E14)	17:34			18:34	31	07:36 (E13)	20:39		21:38			22:10			
24	08:29		09:11 (E15)	07:23			06:10		07:05 (E13)	05:49		04:47			04:26			
	16:28	39	10:36 (E14)	17:37			18:36	30	07:35 (E13)	20:41		21:40			22:10			
25	08:27		09:11 (E15)	07:21			06:08		07:06 (E13)	05:47		04:45			04:26			
	16:30	35	10:34 (E14)	17:39			18:38	28	07:34 (E13)	20:43		21:42			22:10			
26	08:26		09:12 (E15)	07:18			06:05		07:07 (E13)	05:44		04:44			04:27			
	16:32	27	10:31 (E14)	17:41			18:41	25	07:32 (E13)	20:45		21:43			22:10			
27	08:24		09:12 (E15)	07:16			06:02		07:07 (E13)	05:42		04:42			04:27			
	16:34	19	09:31 (E15)	17:43			18:43	23	07:30 (E13)	20:47		21:45			22:10			
28	08:22		09:13 (E15)	07:13			05:59		07:10 (E13)	05:40		04:41			04:28			
	16:37	18	09:31 (E15)	17:45			18:45	19	07:29 (E13)	20:49		21:47			22:10			
29	08:20		09:14 (E15)				06:57		08:12 (E13)	05:37		04:40			04:29			
	16:39	16	09:30 (E15)				19:47	13	08:25 (E13)	20:51		21:48			22:10			
30	08:19		09:15 (E15)				06:54			05:35		04:38			04:29			
	16:41	14	09:29 (E15)				19:49			20:53		21:50			22:09			
31	08:17		09:17 (E15)				06:51					04:37						
	16:43	11	09:28 (E15)				19:51					21:51						
Potential sun hours	235			266			366			426			508			529		
Total, worst case	1050			4			538											
Sun reduction	0.13			0.20			0.41											
Oper. time red.	0.96			0.96			0.96											
Wind dir. red.	0.61			0.59			0.62											
Total reduction	0.08			0.11			0.25											
Total, real	82			0			133											

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:51 (E13) 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:52 (E13) 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:54 (E13) 16:32	08:28 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:57 (E13) 16:29	08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:58 (E13) 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:59 (E13) 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:59 (E13) 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:59 (E13) 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:59 (E13) 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:01 (E15) 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:02 (E15) 16:15	08:39 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:03 (E15) 16:13	08:40 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:04 (E15) 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:05 (E15) 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:06 (E15) 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	08:07 (E15) 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:08 (E15) 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	08:09 (E15) 16:02	08:47 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:10 (E15) 16:01	08:48 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:56 18:04	08:11 (E15) 15:59	08:49 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:58 18:02	08:12 (E15) 15:58	08:50 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	07:59 (E13) 18:00	08:13 (E15) 15:56	08:51 15:39
23	04:59 21:45	05:59 20:37	07:01 19:15	08:00 (E13) 17:57	08:14 (E15) 15:55	08:52 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:01 (E13) 17:55	08:15 (E15) 15:53	08:53 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:02 (E13) 17:52	08:16 (E15) 15:52	08:54 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:03 (E13) 17:50	08:17 (E15) 15:51	08:55 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:04 (E13) 17:48	08:18 (E15) 15:49	08:56 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:05 (E13) 17:46	08:19 (E15) 15:48	08:57 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:06 (E13) 17:43	08:20 (E15) 15:47	08:58 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:07 (E13) 17:41	08:21 (E15) 15:46	08:59 15:46
31	05:14 21:30	06:15 20:17		08:08 (E13) 17:38	08:22 (E15) 15:45	09:00 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			481	72	689	1019
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.96	0.96	0.96	0.96
Wind dir. red.			0.62	0.62	0.60	0.61
Total reduction			0.26	0.16	0.05	0.04
Total, real			123	11	33	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 15:42
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	05:24 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 17:05	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 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	04:44 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 20:55	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 20:28	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	08:46 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	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	08:33 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 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	04:27 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	05:45 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 16:34	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 20:53	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 9	14:07 (E5) 14:16 (E5) 14:09 (E5)	08:15 16:45 08:13	07:11 17:47 07:08	06:48 19:53 06:46	05:32 20:55 05:30	04:35 21:53 04:34	04:30 22:09 04:30	05:15 21:28 05:17	06:17 20:14 06:19	07:17 18:53 07:19	07:22 16:36 07:25	08:24 15:45 08:26
2	15:49 7	14:16 (E5) 16:47	16:47 17:49	17:49 19:55	20:57 19:55	20:57 21:54	21:54 22:09	22:09 21:26	21:26 20:11	20:11 18:51	18:51 16:33	16:33 15:44	15:44
3	08:50 15:50 3	14:11 (E5) 14:14 (E5)	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	14:01 (E5) 14:03 (E5)
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	2 6 13:59 (E5) 14:05 (E5)
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	8 14:06 (E5)
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	10 14:08 (E5)
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	11 14:09 (E5)
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	13 14:10 (E5)
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	12 14:10 (E5)
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	13 14:11 (E5)
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	14 14:12 (E5)
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	15 14:13 (E5)
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	14 14:13 (E5)
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	14 14:13 (E5)
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	14 14:14 (E5)
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	14 14:14 (E5)
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	14 14:15 (E5)
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 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40	14 14:15 (E5)
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	08:07 16:52	08:13 15:52	08:50 15:41	15 14:16 (E5)
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	08:09 16:50	08:15 15:50	08:51 15:41	14 14:16 (E5)
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	08:12 16:47	08:17 15:49	08:51 15:42	14 14:16 (E5)
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	08:14 16:45	08:19 15:48	08:51 15:43	13 14:16 (E5)
29	08:20 16:38	07:11 19:47	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 18:59	07:16 16:42	08:21 15:47	08:51 15:44	12 14:16 (E5)
30	08:18 16:40	07:09 19:49	05:54 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	12 14:17 (E5)
31	08:17 16:43	07:07 19:51	05:51 19:51	05:31 21:51	04:37 21:51	05:13 21:30	06:15 20:16	07:15 16:38	07:20 15:46	08:22 15:46	08:51 15:46	08:51 14:17 (E5)	10 14:17 (E5)
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216	
Total, worst case	19												278
Sun reduction	0.13												0.07
Oper. time red.	0.96												0.96
Wind dir. red.	0.66												0.66
Total reduction	0.08												0.04
Total, real	2												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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	04:36
	15:48	16:45	17:47	19:53	20:55	21:53
2	08:50	08:13	07:08	06:46	05:30	04:35
	15:49	16:47	17:50	19:55	20:57	21:54
3	08:50	08:11	07:06	06:43	07:20 (E7)	05:28
	15:51	16:50	17:52	19:57	12 07:32 (E7)	21:00
4	08:50	08:09	07:03	06:41	07:17 (E7)	05:26
	15:52	16:52	17:54	19:59	19 07:36 (E7)	21:02
5	08:49	08:07	07:00	06:38	07:14 (E7)	05:23
	15:53	16:54	17:56	3 07:29 (E8)	20:01	23 07:37 (E7)
6	08:49	08:05	06:58	06:35	07:12 (E7)	05:21
	15:55	16:56	17:58	8 07:32 (E8)	20:03	28 07:40 (E7)
7	08:48	08:03	06:55	06:33	07:10 (E7)	05:19
	15:56	16:59	18:00	12 07:33 (E8)	20:05	30 07:40 (E7)
8	08:48	08:00	06:53	06:30	07:08 (E7)	05:17
	15:58	17:01	18:03	16 07:34 (E8)	20:08	33 07:41 (E7)
9	08:47	07:58	06:50	06:27	07:07 (E7)	05:15
	15:59	17:03	18:05	19 07:35 (E8)	20:10	35 07:42 (E7)
10	08:46	07:56	06:47	06:25	07:06 (E7)	05:12
	16:01	17:05	18:07	21 07:35 (E8)	20:12	36 07:42 (E7)
11	08:45	07:54	06:45	06:22	07:06 (E7)	05:10
	16:03	17:08	18:09	22 07:35 (E8)	20:14	37 07:43 (E7)
12	08:44	07:52	06:42	06:20	07:04 (E7)	05:08
	16:04	17:10	18:11	21 07:35 (E8)	20:16	39 07:43 (E7)
13	08:43	07:49	06:39	06:17	07:04 (E7)	05:06
	16:06	17:12	18:13	21 07:34 (E8)	20:18	39 07:43 (E7)
14	08:42	07:47	06:37	06:14	07:03 (E7)	05:04
	16:08	17:14	18:15	20 07:33 (E8)	20:20	40 07:43 (E7)
15	08:41	07:45	06:34	06:12	07:03 (E7)	05:02
	16:10	17:17	18:17	18 07:32 (E8)	20:22	40 07:43 (E7)
16	08:40	07:43	06:32	06:09	07:03 (E7)	05:01
	16:12	17:19	18:20	16 07:31 (E8)	20:24	39 07:42 (E7)
17	08:39	07:40	06:29	06:07	07:03 (E7)	04:59
	16:14	17:21	18:22	13 07:29 (E8)	20:26	39 07:42 (E7)
18	08:37	07:38	06:26	06:04	07:02 (E7)	04:57
	16:16	17:23	18:24	6 07:25 (E8)	20:28	39 07:41 (E7)
19	08:36	07:35	06:23	06:02	07:03 (E7)	04:55
	16:18	17:25	18:26	20:30	38 07:41 (E7)	21:31
20	08:35	07:33	06:21	05:59	07:02 (E7)	04:53
	16:20	17:28	18:28	20:33	38 07:40 (E7)	21:33
21	08:33	07:31	06:18	05:57	07:03 (E7)	04:52
	16:22	17:30	18:30	20:35	36 07:39 (E7)	21:35
22	08:32	07:28	06:15	05:54	07:04 (E7)	04:50
	16:24	17:32	18:32	20:37	35 07:39 (E7)	21:37
23	08:30	07:26	06:13	05:52	07:04 (E7)	04:48
	16:26	17:34	18:34	20:39	33 07:37 (E7)	21:38
24	08:29	07:23	06:10	05:49	07:05 (E7)	04:47
	16:28	17:37	18:36	20:41	31 07:36 (E7)	21:40
25	08:27	07:21	06:07	05:47	07:06 (E7)	04:45
	16:30	17:39	18:38	20:43	29 07:35 (E7)	21:42
26	08:26	07:18	06:05	05:44	07:06 (E7)	04:44
	16:32	17:41	18:40	20:45	27 07:33 (E7)	21:43
27	08:24	07:16	06:02	05:42	07:08 (E7)	04:42
	16:34	17:43	18:43	20:47	23 07:31 (E7)	21:45
28	08:22	07:13	05:59	05:39	07:10 (E7)	04:41
	16:36	17:45	18:45	20:49	19 07:29 (E7)	21:47
29	08:20		06:57	05:37	07:13 (E7)	04:39
	16:39		19:47	20:51	14 07:27 (E7)	21:48
30	08:18		06:54	05:35	07:17 (E7)	04:38
	16:41		19:49	20:53	3 07:20 (E7)	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			216	854	67	632
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.96	0.96	0.96	0.96
Wind dir. red.			0.62	0.66	0.67	0.67
Total reduction			0.24	0.32	0.37	0.36
Total, real			53	270	24	227

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July				August				September				October				November		December	
1	04:30		05:12 (E5)	05:16			06:17		07:05 (E7)	07:17		07:53 (E8)	07:23			08:24				
	22:09	21	05:33 (E5)	21:28			20:14	37	07:42 (E7)	18:54	21	08:14 (E8)	16:36			15:45				
2	04:31		05:12 (E5)	05:17			06:19		07:05 (E7)	07:19		07:52 (E8)	07:25			08:26				
	22:09	22	05:34 (E5)	21:26			20:11	36	07:41 (E7)	18:51	22	08:14 (E8)	16:34			15:44				
3	04:32		05:13 (E5)	05:19			06:21		07:05 (E7)	07:21		07:52 (E8)	07:27			08:28				
	22:08	21	05:34 (E5)	21:24			20:09	35	07:40 (E7)	18:48	21	08:13 (E8)	16:31			15:43				
4	04:33		05:13 (E5)	05:21			06:23		07:06 (E7)	07:23		07:52 (E8)	07:29			08:29				
	22:07	21	05:34 (E5)	21:22			20:06	33	07:39 (E7)	18:46	21	08:13 (E8)	16:29			15:42				
5	04:33		05:13 (E5)	05:23			06:25		07:06 (E7)	07:25		07:54 (E8)	07:31			08:31				
	22:07	22	05:35 (E5)	21:19			20:03	30	07:36 (E7)	18:43	18	08:12 (E8)	16:27			15:41				
6	04:35		05:14 (E5)	05:25			06:27		07:07 (E7)	07:27		07:56 (E8)	07:33			08:32				
	22:06	21	05:35 (E5)	21:17			20:01	28	07:35 (E7)	18:40	14	08:10 (E8)	16:25			15:41				
7	04:36		05:14 (E5)	05:27			06:29		07:09 (E7)	07:29		07:58 (E8)	07:36			08:34				
	22:05	21	05:35 (E5)	21:15			19:58	24	07:33 (E7)	18:38	10	08:08 (E8)	16:23			15:40				
8	04:37		05:14 (E5)	05:29			06:31		07:11 (E7)	07:32		08:00 (E8)	07:38			08:35				
	22:04	21	05:35 (E5)	21:13			19:55	19	07:30 (E7)	18:35	6	08:06 (E8)	16:21			15:40				
9	04:38		05:15 (E5)	05:31			06:33		07:14 (E7)	07:34			07:40			08:37				
	22:03	20	05:35 (E5)	21:11			19:53	13	07:27 (E7)	18:32			16:19			15:39				
10	04:39		05:16 (E5)	05:33			06:35			07:36			07:42			08:38				
	22:02	18	05:34 (E5)	21:08			19:50			18:30			16:17			15:39				
11	04:41		05:17 (E5)	05:35			06:37			07:38			07:44			08:39				
	22:01	17	05:34 (E5)	21:06			19:47			18:27			16:15			15:38				
12	04:42		05:19 (E5)	05:37			06:39			07:40			07:46			08:40				
	22:00	16	05:35 (E5)	21:04			19:45			18:25			16:13			15:38				
13	04:43		05:20 (E5)	05:39		07:23 (E7)	06:41			07:42			07:49			08:42				
	21:59	14	05:34 (E5)	21:01	8	07:31 (E7)	19:42			18:22			16:11			15:38				
14	04:45		05:21 (E5)	05:41			07:19 (E7)	06:43		07:44			07:51			08:43				
	21:58	13	05:34 (E5)	20:59	16	07:35 (E7)	19:39			18:19			16:09			15:38				
15	04:46		05:22 (E5)	05:43			07:17 (E7)	06:45		07:46			07:53			08:44				
	21:57	11	05:33 (E5)	20:57	21	07:38 (E7)	19:37			18:17			16:07			15:38				
16	04:48		05:24 (E5)	05:45			07:15 (E7)	06:47		07:48			07:55			08:45				
	21:55	9	05:33 (E5)	20:54	24	07:39 (E7)	19:34			18:14			16:06			15:38				
17	04:49		05:25 (E5)	05:47			07:13 (E7)	06:49		07:50			07:57			08:46				
	21:54	7	05:32 (E5)	20:52	27	07:40 (E7)	19:31			18:12			16:04			15:38				
18	04:51		05:27 (E5)	05:49			07:11 (E7)	06:51		07:52			07:59			08:46				
	21:52	4	05:31 (E5)	20:50	30	07:41 (E7)	19:29			18:09			16:02			15:38				
19	04:52		05:28 (E5)	05:51			07:10 (E7)	06:53		07:55			08:01			08:47				
	21:51	1	05:29 (E5)	20:47	32	07:42 (E7)	19:26			18:07			16:01			15:38				
20	04:54		05:53				07:09 (E7)	06:55		07:57			08:03			08:48				
	21:49		20:45	34	07:43 (E7)	19:23			18:04			15:59			15:38					
21	04:56		05:55				07:08 (E7)	06:57		07:59			08:05			08:48				
	21:48		20:42	36	07:44 (E7)	19:20			18:02			15:58			15:39					
22	04:57		05:57				07:08 (E7)	06:59		08:01			08:07			08:49				
	21:46		20:40	36	07:44 (E7)	19:18			17:59			15:56			15:39					
23	04:59		05:59				07:07 (E7)	07:01		08:03			08:09			08:50				
	21:45		20:37	38	07:45 (E7)	19:15			17:57			15:55			15:40					
24	05:01		06:01				07:06 (E7)	07:03		08:05			08:11			08:50				
	21:43		20:35	39	07:45 (E7)	19:12			17:55			15:53			15:40					
25	05:03		06:03				07:06 (E7)	07:05		08:04 (E8)	07:07		08:13			08:50				
	21:41		20:32	39	07:45 (E7)	19:10		2	08:06 (E8)	16:52			15:52			15:41				
26	05:04		06:05				07:05 (E7)	07:07		08:00 (E8)	07:10		08:15			08:51				
	21:39		20:29	39	07:44 (E7)	19:07		11	08:11 (E8)	16:50			15:51			15:42				
27	05:06		06:07				07:04 (E7)	07:09		07:57 (E8)	07:12		08:17			08:51				
	21:38		20:27	40	07:44 (E7)	19:04		16	08:13 (E8)	16:47			15:49			15:43				
28	05:08		06:09				07:04 (E7)	07:11		07:56 (E8)	07:14		08:19			08:51				
	21:36		20:24	40	07:44 (E7)	19:02		18	08:14 (E8)	16:45			15:48			15:44				
29	05:10		06:11				07:04 (E7)	07:13		07:55 (E8)	07:16		08:21			08:51				
	21:34		20:22	40	07:44 (E7)	18:59		19	08:14 (E8)	16:43			15:47			15:44				
30	05:12		06:13				07:04 (E7)	07:15		07:54 (E8)	07:18		08:22			08:51				
	21:32		20:19	39	07:43 (E7)	18:56		20	08:14 (E8)	16:40			15:46			15:45				
31	05:14		06:15				07:04 (E7)			07:20						08:51				
	21:30		20:17	39	07:43 (E7)				16:38							15:47				
Potential sun hours	529			469			385			324			247			216				
Total, worst case		300		617			341			133										
Sun reduction		0.49		0.50			0.43			0.26										
Oper. time red.		0.96		0.96			0.96			0.96										
Wind dir. red.		0.67		0.66			0.65			0.62										
Total reduction		0.32		0.32			0.27			0.15										
Total, real		95		194			91			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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:46 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	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	08:33 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 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	04:27 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	05:45 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 16:34	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 20:53	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		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:41 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 17:14	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 20:55	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 20:28	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	08:46 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	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	08:33 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 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	04:27 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 16:34	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 20:53	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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		09:57 (E13)	08:15		10:05 (E13)	07:11		06:49				05:33		06:00 (E7)	04:36		
	15:48	30	10:27 (E13)	16:45	34	10:39 (E13)	17:48		19:53				20:55	6	06:06 (E7)	21:53		
2	08:50		09:58 (E13)	08:13		10:06 (E13)	07:08		06:46				05:30		05:58 (E7)	04:35		
	15:49	31	10:29 (E13)	16:47	32	10:38 (E13)	17:50		19:55				20:57	9	06:07 (E7)	21:54		
3	08:50		09:57 (E13)	08:11		10:08 (E13)	07:06		06:43				05:28		05:56 (E7)	04:34		
	15:51	32	10:29 (E13)	16:50	30	10:38 (E13)	17:52		19:57				21:00	12	06:08 (E7)	21:55		
4	08:50		09:57 (E13)	08:09		10:09 (E13)	07:03		06:41				05:26		05:54 (E7)	04:33		
	15:52	33	10:30 (E13)	16:52	28	10:37 (E13)	17:54		19:59				21:02	15	06:09 (E7)	21:57		
5	08:49		09:58 (E13)	08:07		10:11 (E13)	07:00		06:38				05:23		05:52 (E7)	04:32		
	15:53	33	10:31 (E13)	16:54	24	10:35 (E13)	17:56		20:01				21:04	17	06:09 (E7)	21:58		
6	08:49		09:58 (E13)	08:05		10:13 (E13)	06:58		06:35				05:21		05:50 (E7)	04:31		
	15:55	34	10:32 (E13)	16:56	19	10:32 (E13)	17:58		20:03				21:06	20	06:10 (E7)	21:59		
7	08:48		09:58 (E13)	08:03		10:16 (E13)	06:55		06:33				05:19		05:50 (E7)	04:30		
	15:56	34	10:32 (E13)	16:59	14	10:30 (E13)	18:00		20:05				21:08	20	06:10 (E7)	22:00		
8	08:48		09:58 (E13)	08:01			06:53		06:30				05:17		05:50 (E7)	04:29		
	15:58	35	10:33 (E13)	17:01			18:03		20:08				21:10	20	06:10 (E7)	22:01		
9	08:47		09:58 (E13)	07:58			06:50		06:28				05:15		05:50 (E7)	04:29		
	15:59	36	10:34 (E13)	17:03			18:05		20:10				21:12	19	06:09 (E7)	22:02		
10	08:46		09:58 (E13)	07:56			06:47		06:25				05:13		05:50 (E7)	04:28		
	16:01	37	10:35 (E13)	17:05			18:07		20:12				21:14	19	06:09 (E7)	22:03		
11	08:45		09:58 (E13)	07:54			06:45		06:22				05:11		05:50 (E7)	04:27		
	16:03	37	10:35 (E13)	17:08			18:09		20:14				21:16	18	06:08 (E7)	22:04		
12	08:44		09:59 (E13)	07:52			06:42		06:20				05:08		05:50 (E7)	04:27		
	16:04	37	10:36 (E13)	17:10			18:11		20:16				21:18	18	06:08 (E7)	22:05		
13	08:43		09:58 (E13)	07:50			06:40		06:17				05:06		05:51 (E7)	04:26		
	16:06	38	10:36 (E13)	17:12			18:13		20:18				21:20	16	06:07 (E7)	22:06		
14	08:42		09:58 (E13)	07:47			06:37		06:14				05:04		05:52 (E7)	04:26		
	16:08	39	10:37 (E13)	17:14			18:15		20:20				21:22	15	06:07 (E7)	22:07		
15	08:41		09:58 (E13)	07:45			06:34		06:12				05:03		05:53 (E7)	04:26		
	16:10	39	10:37 (E13)	17:17			18:18		20:22				21:24	12	06:05 (E7)	22:07		
16	08:40		09:58 (E13)	07:43			06:32		06:09				05:01		05:54 (E7)	04:25		
	16:12	40	10:38 (E13)	17:19			18:20		20:24				21:25	9	06:03 (E7)	22:08		
17	08:39		09:59 (E13)	07:40			06:29		06:07				04:59		05:59 (E7)	04:25		
	16:14	40	10:39 (E13)	17:21			18:22		20:26				21:27	1	06:00 (E7)	22:08		
18	08:37		09:59 (E13)	07:38			06:26		06:04				04:57			04:25		
	16:16	40	10:39 (E13)	17:23			18:24		20:28				21:29			22:09		
19	08:36		09:59 (E13)	07:36			06:24		06:02				04:55			04:25		
	16:18	40	10:39 (E13)	17:26			18:26		20:30				21:31			22:09		
20	08:35		10:00 (E13)	07:33			06:21		05:59				04:53			04:25		
	16:20	41	10:41 (E13)	17:28			18:28		20:33				21:33			22:10		
21	08:33		10:00 (E13)	07:31			06:18		05:57				04:52			04:25		
	16:22	41	10:41 (E13)	17:30			18:30		20:35				21:35			22:10		
22	08:32		10:00 (E13)	07:28			06:16		05:54				04:50			04:25		
	16:24	41	10:41 (E13)	17:32			18:32		20:37				21:37			22:10		
23	08:30		10:00 (E13)	07:26			06:13		05:52				04:48			04:26		
	16:26	41	10:41 (E13)	17:34			18:34		20:39				21:38			22:10		
24	08:29		10:01 (E13)	07:23			06:10		05:49				04:47			04:26		
	16:28	41	10:42 (E13)	17:37			18:36		20:41				21:40			22:10		
25	08:27		10:01 (E13)	07:21			06:07		05:47				04:45			04:26		
	16:30	41	10:42 (E13)	17:39			18:38		20:43				21:42			22:10		
26	08:26		10:02 (E13)	07:18			06:05		05:44				04:44			04:27		
	16:32	40	10:42 (E13)	17:41			18:41		20:45				21:43			22:10		
27	08:24		10:02 (E13)	07:16			06:02		05:42				04:42			04:27		
	16:34	39	10:41 (E13)	17:43			18:43		20:47				21:45			22:10		
28	08:22		10:03 (E13)	07:13			05:59		05:40				04:41			04:28		
	16:36	38	10:41 (E13)	17:45			18:45		20:49				21:47			22:10		
29	08:20		10:03 (E13)				06:57		05:37				04:40			04:29		
	16:39	38	10:41 (E13)				19:47		20:51				21:48			22:10		
30	08:18		10:04 (E13)				06:54		05:35				04:38			04:29		
	16:41	37	10:41 (E13)				19:49		20:53		2	06:02 (E7)	21:50			22:09		
31	08:17		10:05 (E13)				06:51						04:37					
	16:43	35	10:40 (E13)				19:51						21:51					
Potential sun hours	235			266			366			426			508			529		
Total, worst case	1158			181						2			246					
Sun reduction	0.13			0.20						0.50			0.57					
Oper. time red.	0.96			0.96						0.96			0.96					
Wind dir. red.	0.61			0.61						0.67			0.67					
Total reduction	0.08			0.12						0.32			0.36					
Total, real	91			21						1			90					

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July		August		September		October		November		December		
1	04:30		05:16	06:00 (E7)	06:17	07:17	07:23				08:24	09:40 (E13)	
	22:09		21:28	18	06:18 (E7)	20:14	18:54	16:36			15:45	38	10:18 (E13)
2	04:31		05:18		06:00 (E7)	06:19	07:19	07:25			08:26		09:41 (E13)
	22:09		21:26	19	06:19 (E7)	20:11	18:51	16:34			15:44	37	10:18 (E13)
3	04:32		05:19		06:00 (E7)	06:21	07:21	07:27	09:51 (E13)		08:28		09:41 (E13)
	22:08		21:24	19	06:19 (E7)	20:09	18:48	16:32	4	09:55 (E13)	15:43	36	10:17 (E13)
4	04:33		05:21		06:00 (E7)	06:23	07:23	07:29	09:45 (E13)		08:29		09:42 (E13)
	22:07		21:22	20	06:20 (E7)	20:06	18:46	16:29	15	10:00 (E13)	15:42	35	10:17 (E13)
5	04:34		05:23		05:59 (E7)	06:25	07:25	07:31	09:42 (E13)		08:31		09:43 (E13)
	22:07		21:20	20	06:19 (E7)	20:03	18:43	16:27	20	10:02 (E13)	15:42	34	10:17 (E13)
6	04:35		05:25		05:59 (E7)	06:27	07:27	07:33	09:41 (E13)		08:32		09:44 (E13)
	22:06		21:17	20	06:19 (E7)	20:01	18:40	16:25	24	10:05 (E13)	15:41	34	10:18 (E13)
7	04:36		05:27		06:00 (E7)	06:29	07:30	07:36	09:39 (E13)		08:34		09:44 (E13)
	22:05		21:15	19	06:19 (E7)	19:58	18:38	16:23	27	10:06 (E13)	15:40	33	10:17 (E13)
8	04:37		05:29		06:02 (E7)	06:31	07:32	07:38	09:38 (E13)		08:35		09:45 (E13)
	22:04		21:13	17	06:19 (E7)	19:55	18:35	16:21	30	10:08 (E13)	15:40	33	10:18 (E13)
9	04:38		05:31		06:04 (E7)	06:33	07:34	07:40	09:37 (E13)		08:37		09:45 (E13)
	22:03		21:11	14	06:18 (E7)	19:53	18:32	16:19	32	10:09 (E13)	15:39	32	10:17 (E13)
10	04:39		05:33		06:06 (E7)	06:35	07:36	07:42	09:37 (E13)		08:38		09:47 (E13)
	22:02		21:08	11	06:17 (E7)	19:50	18:30	16:17	34	10:11 (E13)	15:39	31	10:18 (E13)
11	04:41		05:35		06:07 (E7)	06:37	07:38	07:44	09:36 (E13)		08:39		09:47 (E13)
	22:01		21:06	8	06:15 (E7)	19:47	18:27	16:15	35	10:11 (E13)	15:38	31	10:18 (E13)
12	04:42		05:37		06:09 (E7)	06:39	07:40	07:46	09:35 (E13)		08:40		09:49 (E13)
	22:00		21:04	5	06:14 (E7)	19:45	18:25	16:13	37	10:12 (E13)	15:38	29	10:18 (E13)
13	04:43		05:39		06:11 (E7)	06:41	07:42	07:49	09:35 (E13)		08:42		09:49 (E13)
	21:59		21:02	1	06:12 (E7)	19:42	18:22	16:11	38	10:13 (E13)	15:38	29	10:18 (E13)
14	04:45		05:41			06:43	07:44	07:51	09:35 (E13)		08:43		09:50 (E13)
	21:58		20:59			19:39	18:19	16:09	38	10:13 (E13)	15:38	28	10:18 (E13)
15	04:46		05:43			06:45	07:46	07:53	09:34 (E13)		08:44		09:50 (E13)
	21:57		20:57			19:37	18:17	16:08	39	10:13 (E13)	15:38	28	10:18 (E13)
16	04:48		05:45			06:47	07:48	07:55	09:35 (E13)		08:45		09:51 (E13)
	21:55		20:54			19:34	18:14	16:06	40	10:15 (E13)	15:38	28	10:19 (E13)
17	04:49		05:47			06:49	07:50	07:57	09:34 (E13)		08:46		09:52 (E13)
	21:54		20:52			19:31	18:12	16:04	41	10:15 (E13)	15:38	27	10:19 (E13)
18	04:51		05:49			06:51	07:52	07:59	09:35 (E13)		08:46		09:53 (E13)
	21:52		20:50			19:29	18:09	16:02	41	10:16 (E13)	15:38	27	10:20 (E13)
19	04:52		05:51			06:53	07:55	08:01	09:35 (E13)		08:47		09:52 (E13)
	21:51		20:47			19:26	18:07	16:01	41	10:16 (E13)	15:38	27	10:19 (E13)
20	04:54		05:53			06:55	07:57	08:03	09:35 (E13)		08:48		09:53 (E13)
	21:49		20:45			19:23	18:04	15:59	41	10:16 (E13)	15:39	27	10:20 (E13)
21	04:56		05:55			06:57	07:59	08:05	09:35 (E13)		08:48		09:54 (E13)
	21:48		20:42			19:20	18:02	15:58	41	10:16 (E13)	15:39	27	10:21 (E13)
22	04:57		05:57			06:59	08:01	08:07	09:36 (E13)		08:49		09:54 (E13)
	21:46		20:40			19:18	17:59	15:56	41	10:17 (E13)	15:39	27	10:21 (E13)
23	04:59		05:59			07:01	08:03	08:09	09:36 (E13)		08:50		09:55 (E13)
	21:45		20:37			19:15	17:57	15:55	41	10:17 (E13)	15:40	27	10:22 (E13)
24	05:01		06:01			07:03	08:05	08:11	09:36 (E13)		08:50		09:55 (E13)
	21:43		20:35			19:12	17:55	15:53	40	10:16 (E13)	15:41	27	10:22 (E13)
25	05:03		06:03			07:05	07:07	08:13	09:36 (E13)		08:50		09:55 (E13)
	21:41		20:32			19:10	16:52	15:52	40	10:16 (E13)	15:41	27	10:22 (E13)
26	05:04		06:05			07:07	07:10	08:15	09:37 (E13)		08:51		09:56 (E13)
	21:39		20:30			19:07	16:50	15:51	39	10:16 (E13)	15:42	27	10:23 (E13)
27	05:06	06:07 (E7)	06:07			07:09	07:12	08:17	09:38 (E13)		08:51		09:56 (E13)
	21:38	6	06:13 (E7)	20:27		19:04	16:47	15:49	39	10:17 (E13)	15:43	27	10:23 (E13)
28	05:08	06:04 (E7)	06:09			07:11	07:14	08:19	09:38 (E13)		08:51		09:56 (E13)
	21:36	10	06:14 (E7)	20:24		19:02	16:45	15:48	39	10:17 (E13)	15:44	28	10:24 (E13)
29	05:10	06:03 (E7)	06:11			07:13	07:16	08:21	09:39 (E13)		08:51		09:57 (E13)
	21:34	13	06:16 (E7)	20:22		18:59	16:43	15:47	38	10:17 (E13)	15:45	28	10:25 (E13)
30	05:12	06:02 (E7)	06:13			07:15	07:18	08:22	09:40 (E13)		08:51		09:57 (E13)
	21:32	15	06:17 (E7)	20:19		18:56	16:40	15:46	37	10:17 (E13)	15:46	29	10:26 (E13)
31	05:14	06:02 (E7)	06:15				07:20				08:51		09:57 (E13)
	21:30	16	06:18 (E7)	20:17			16:38				15:47	30	10:27 (E13)
Potential sun hours	529		469			385	324	247			216		
Total, worst case	60		191					972			928		
Sun reduction	0.49		0.50					0.08			0.07		
Oper. time red.	0.96		0.96					0.96			0.96		
Wind dir. red.	0.67		0.67					0.61			0.61		
Total reduction	0.32		0.32					0.05			0.04		
Total, real	19		61					47			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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Elks 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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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	04:26 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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	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
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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
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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
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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 17:46	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 20:54	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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	08:07 16:52	08:13 15:52	08:50 15:41
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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	07:06 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	05:21 21:21	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
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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	08:34 15:40
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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	08:35 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 18:42	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 15:43
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	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 16:40	08:22 15:46	08:51 15:46
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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:

25/06/2024 18:19/4.0.540

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
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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
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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	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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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Total, worst case												
Sun reduction												
Oper. time red.												
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Total, real												

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

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	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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		10:15 (E7)	08:15		07:11				06:49		05:32			04:36			
	15:48	21	10:36 (E7)	16:45		17:47				19:53		20:55			21:53			
2	08:51		10:16 (E7)	08:13		07:08			07:34 (E5)	06:46		05:30			04:34			
	15:49	20	10:36 (E7)	16:47		17:50		9	07:43 (E5)	19:55		20:57			21:54			
3	08:50		10:17 (E7)	08:11		07:06			07:32 (E5)	06:43		05:28			04:33			
	15:50	19	10:36 (E7)	16:50		17:52		15	07:47 (E5)	19:57		21:00			21:55			
4	08:50		10:17 (E7)	08:09		07:03			07:29 (E5)	06:41		05:25			04:32			
	15:52	19	10:36 (E7)	16:52		17:54		19	07:48 (E5)	19:59		21:02			21:57			
5	08:49		10:19 (E7)	08:07		07:00			07:27 (E5)	06:38		05:23			04:31			
	15:53	17	10:36 (E7)	16:54		17:56		22	07:49 (E5)	20:01		21:04			21:58			
6	08:49		10:20 (E7)	08:05		06:58			07:26 (E5)	06:35		05:21			04:31			
	15:55	16	10:36 (E7)	16:56		17:58		25	07:51 (E5)	20:03		21:06			21:59			
7	08:48		10:21 (E7)	08:03		06:55			07:25 (E5)	06:33		05:19			04:30			
	15:56	14	10:35 (E7)	16:58		18:00		26	07:51 (E5)	20:05		21:08			22:00			
8	08:48		10:22 (E7)	08:01		06:53			07:24 (E5)	06:30		05:17			04:29			
	15:58	13	10:35 (E7)	17:01		18:03		27	07:51 (E5)	20:08		21:10			22:01			
9	08:47		10:24 (E7)	07:58		06:50			07:24 (E5)	06:27		05:15			04:28			
	15:59	10	10:34 (E7)	17:03		18:05		28	07:52 (E5)	20:10		21:12			22:02			
10	08:46		10:26 (E7)	07:56		06:47			07:23 (E5)	06:25		05:12			04:28			
	16:01	7	10:33 (E7)	17:05		18:07		28	07:51 (E5)	20:12		21:14			22:03			
11	08:45			07:54		06:45			07:23 (E5)	06:22		05:10			04:27			
	16:03			17:07		18:09		28	07:51 (E5)	20:14		21:16			22:04			
12	08:44			07:52		06:42			07:23 (E5)	06:20		05:08			04:27			
	16:04			17:10		18:11		28	07:51 (E5)	20:16		21:18			22:05			
13	08:43			07:49		06:39			07:23 (E5)	06:17		05:06			04:26			
	16:06			17:12		18:13		27	07:50 (E5)	20:18		21:20			22:06			
14	08:42			07:47		06:37			07:23 (E5)	06:14		05:04			04:26			
	16:08			17:14		18:15		26	07:49 (E5)	20:20		21:22			22:07			
15	08:41			07:45		06:34			07:23 (E5)	06:12		05:02			04:25			
	16:10			17:16		18:17		25	07:48 (E5)	20:22		21:24			22:07			
16	08:40			07:43		06:31			07:25 (E5)	06:09		05:00			04:25			
	16:12			17:19		18:20		22	07:47 (E5)	20:24		21:26			22:08			
17	08:39			07:40		06:29			07:25 (E5)	06:07		04:59			04:25			
	16:14			17:21		18:22		20	07:45 (E5)	20:26		21:27			22:09			
18	08:38			07:38		06:26			07:27 (E5)	06:04		04:57			04:25			
	16:15			17:23		18:24		16	07:43 (E5)	20:28		21:29			22:09			
19	08:36			07:35		06:23			07:30 (E5)	06:02		04:55			04:25			
	16:17			17:25		18:26		10	07:40 (E5)	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	156						401											
Sun reduction	0.13						0.41											
Oper. time red.	0.96						0.96											
Wind dir. red.	0.61						0.62											
Total reduction	0.08						0.25											
Total, real	12						99											

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July	August	September	October	November	December
1	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:54	08:02 (E5) 16:36	08:24 15:45
2	04:31 22:09	05:17 21:26	06:19 20:11	07:19 18:51	08:02 (E5) 16:34	08:26 15:44
3	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	08:01 (E5) 16:31	08:28 15:43
4	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:46	08:01 (E5) 16:29	08:29 15:42
5	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	08:01 (E5) 16:27	08:31 15:41
6	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	08:01 (E5) 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	08:01 (E5) 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	08:02 (E5) 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	08:04 (E5) 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:05 (E5) 16:17	08:38 15:39
11	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:07 (E5) 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:08 (E5) 16:13	08:40 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:09 (E5) 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	08:10 (E5) 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:11 (E5) 16:07	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	08:12 (E5) 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:13 (E5) 16:04	08:46 15:38
18	04:51 21:53	05:49 20:50	06:51 19:29	07:52 18:09	08:14 (E5) 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:15 (E5) 16:01	08:47 15:38
20	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:16 (E5) 15:59	08:48 15:38
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:17 (E5) 15:57	08:49 15:39
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:18 (E5) 15:56	08:49 15:39
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:19 (E5) 15:54	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:54	08:20 (E5) 15:53	08:50 15:40
25	05:02 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:21 (E5) 15:52	08:51 15:41
26	05:04 21:39	06:05 20:30	07:07 19:07	08:08 (E5) 17:50	08:22 (E5) 15:50	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:09 (E5) 17:47	08:23 (E5) 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:10 (E5) 17:45	08:24 (E5) 15:48	08:51 15:43
29	05:10 21:34	06:11 20:22	07:13 18:59	08:11 (E5) 17:43	08:25 (E5) 15:47	08:51 15:44
30	05:12 21:32	06:13 20:19	07:15 18:56	08:12 (E5) 17:41	08:26 (E5) 15:46	08:51 15:45
31	05:14 21:30	06:15 20:17		08:13 (E5) 17:38	08:27 (E5) 15:46	08:51 15:46
Potential sun hours	529	469	385	324	247	216
Total, worst case			138	263		599
Sun reduction			0.43	0.26		0.07
Oper. time red.			0.96	0.96		0.96
Wind dir. red.			0.62	0.62		0.61
Total reduction			0.26	0.15		0.04
Total, real			35	41		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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 08:51	08:15 16:45 08:13	07:11 17:47 07:08	07:37 (E7) 19:53 07:34 (E7)	06:49 20:55 05:30	04:36 21:53 04:35	04:30 22:09 04:31	05:16 21:28 05:17	06:17 20:14 06:19	07:17 18:54 07:19	08:16 (E7) 16:36 08:13 (E7)	07:23 15:45 07:25
2	15:49 08:50	16:47 08:11	17:50 07:06	19:55 07:33 (E7)	20:58 05:28	21:54 04:34	22:09 04:32	21:26 05:19	20:11 06:21	18:51 07:21	16:34 08:11 (E7)	15:44 07:27
3	15:51 08:50	16:50 08:09	17:52 07:03	19:57 07:32 (E7)	21:00 05:26	21:55 04:33	22:08 04:32	21:24 05:21	20:09 06:23	18:48 07:23	16:31 08:10 (E7)	15:43 07:29
4	15:52 08:49	16:52 08:07	17:54 07:00	19:59 07:31 (E7)	21:02 05:23	21:57 04:32	22:07 04:33	21:22 05:23	20:06 06:25	18:46 07:25	16:29 08:31 (E7)	15:42 07:31
5	15:53 08:49	16:54 08:05	17:56 07:00	20:01 07:32 (E7)	21:04 05:21	21:58 04:31	22:07 04:35	21:20 05:25	20:03 06:27	18:43 07:27	16:27 08:31 (E7)	15:41 07:33
6	15:55 08:48	16:56 08:03	17:58 06:58	20:03 07:31 (E7)	21:06 05:19	21:59 04:30	22:06 04:36	21:17 05:27	20:01 06:29	18:40 07:30	16:25 08:31 (E7)	15:41 07:36
7	15:56 08:48	16:59 08:01	18:00 06:53	20:05 07:31 (E7)	21:08 05:17	22:00 04:29	22:05 04:37	21:15 05:29	19:58 06:31	18:38 07:32	16:23 08:31 (E7)	15:40 07:38
8	15:58 08:47	17:01 07:58	18:03 06:50	20:08 07:32 (E7)	21:10 05:15	22:01 04:28	22:04 04:38	21:13 05:31	19:55 06:33	18:35 07:34	16:21 08:31 (E7)	15:40 07:40
9	15:59 08:46	17:03 07:56	18:05 06:47	20:10 07:33 (E7)	21:12 05:13	22:02 04:28	22:03 04:39	21:11 05:33	19:53 06:35	18:32 07:36	16:19 08:31 (E7)	15:39 07:42
10	16:01 08:45	17:05 07:54	18:07 06:45	20:12 07:33 (E7)	21:14 05:10	22:03 04:27	22:02 04:41	21:08 05:35	19:50 06:37	18:30 07:38	16:17 08:31 (E7)	15:39 07:44
11	16:03 08:44	17:08 07:52	18:09 06:42	20:14 07:31 (E7)	21:16 05:08	22:04 04:27	22:01 04:42	21:06 05:37	19:47 06:39	18:27 07:40	16:15 08:30 (E7)	15:38 07:46
12	16:04 08:43	17:10 07:50	18:11 06:40	20:16 07:39 (E7)	21:18 05:06	22:05 04:26	22:00 04:43	21:04 05:39	19:45 06:41	18:25 07:42	16:13 08:31 (E7)	15:38 07:49
13	16:06 08:42	17:12 07:47	18:13 06:37	20:18 07:45 (E7)	21:20 05:04	22:06 04:26	21:59 04:45	21:02 05:41	19:42 06:43	18:22 07:44	16:11 08:31 (E7)	15:38 07:51
14	16:08 08:41	17:14 07:45	18:15 06:34	20:20 06:12	21:22 05:02	22:07 04:26	21:58 04:46	20:59 05:43	19:39 06:45	18:19 07:46	16:09 08:31 (E7)	15:38 07:53
15	16:10 08:40	17:17 07:43	18:17 06:32	20:22 06:09	21:24 05:01	22:07 04:25	21:57 04:48	20:57 05:45	19:37 06:47	18:17 07:48	16:07 08:31 (E7)	15:38 07:55
16	16:12 08:39	17:19 07:40	18:20 06:29	20:24 06:07	21:26 04:59	22:08 04:25	21:55 04:49	20:54 05:47	19:34 06:49	18:14 07:50	16:06 08:31 (E7)	15:38 07:57
17	16:14 08:38	17:21 07:38	18:22 06:26	20:26 06:04	21:29 04:57	22:09 04:25	21:54 04:51	20:52 05:49	19:31 06:51	18:12 07:52	16:04 08:31 (E7)	15:38 07:59
18	16:16 08:36	17:23 07:36	18:24 06:24	20:28 06:02	21:29 04:55	22:09 04:25	21:53 04:52	20:50 05:51	19:29 06:53	18:09 07:55	16:02 08:31 (E7)	15:38 08:01
19	16:18 08:35	17:25 07:33	18:26 06:21	20:30 05:59	21:31 04:53	22:09 04:25	21:51 04:54	20:47 05:53	19:26 06:55	18:07 07:57	16:01 08:31 (E7)	15:38 08:03
20	16:20 08:33	17:28 07:31	18:28 06:18	20:33 05:57	21:33 04:52	22:10 04:25	21:50 04:56	20:45 05:55	19:23 06:57	18:04 07:59	15:59 08:31 (E7)	15:38 08:05
21	16:22 08:32	17:30 07:28	18:30 06:15	20:35 05:54	21:35 04:50	22:10 04:25	21:48 04:57	20:42 05:57	19:20 06:59	18:02 08:01	15:58 08:31 (E7)	15:39 08:07
22	16:24 08:30	17:32 07:26	18:32 06:13	20:37 05:52	21:37 04:48	22:10 04:26	21:46 04:59	20:40 05:59	19:18 07:01	17:59 08:03	15:56 08:31 (E7)	15:39 08:09
23	16:26 08:29	17:34 07:23	18:34 06:10	20:39 05:49	21:38 04:47	22:10 04:26	21:45 05:01	20:37 06:01	19:15 07:03	17:57 08:05	15:55 08:31 (E7)	15:40 08:11
24	16:28 08:27	17:37 07:21	18:36 06:07	20:41 05:47	21:40 04:45	22:10 04:26	21:43 05:03	20:35 06:03	19:12 07:05	17:55 07:07	15:53 08:31 (E7)	15:40 08:13
25	16:30 08:26	17:39 07:18	18:38 06:05	20:43 05:44	21:42 04:44	22:10 04:27	21:41 05:04	20:32 06:05	19:10 07:07	17:52 07:10	15:52 08:31 (E7)	15:41 08:15
26	16:32 08:24	17:41 07:16	18:41 06:02	20:45 05:42	21:43 04:42	22:10 04:27	21:39 05:06	20:30 06:07	19:07 07:09	17:50 07:12	15:51 08:31 (E7)	15:42 08:17
27	16:34 08:22	17:43 07:13	18:43 05:59	20:47 05:39	21:45 04:41	22:10 04:28	21:38 05:08	20:27 06:09	19:04 07:11	17:47 07:14	15:49 08:31 (E7)	15:43 08:19
28	16:36 08:20	17:45 07:10	18:45 06:07	20:49 05:37	21:47 04:39	22:10 04:28	21:36 05:10	20:24 06:11	19:02 07:13	17:45 07:16	15:48 08:31 (E7)	15:44 08:21
29	16:39 08:19	17:49 07:04	18:49 06:04	20:51 05:35	21:48 04:38	22:10 04:29	21:34 05:12	20:22 06:13	18:59 07:15	17:43 07:18	15:47 08:31 (E7)	15:44 08:22
30	16:41 08:17	17:51 07:00	18:51 06:01	20:53 05:31	21:50 04:37	22:09 04:29	21:32 05:14	20:19 06:15	18:56 07:20	17:40 07:20	15:46 08:31 (E7)	15:45 08:51
31	16:43 Potential sun hours	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction		27		258						287		
Oper. time red.		0.20		0.41						0.26		
Wind dir. red.		0.96		0.96						0.96		
Total reduction		0.62		0.62						0.62		
Total, real		0.12		0.25						0.16		
		3		64						45		

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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	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
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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	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 20:54	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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		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	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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 20:03	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 15:39
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 18:15	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	04:53 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	08:33 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 15:39
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	08:09 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 22:10	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 16:34	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 20:24	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		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:57 (E14)	06:49	05:33
	15:48	16:45	17:48	28 08:25 (E14)	19:53	20:55
2	08:50	08:13	07:08	07:57 (E14)	06:46	05:30
	15:50	16:48	17:50	26 08:23 (E14)	19:55	20:58
3	08:50	08:11	07:06	07:59 (E14)	06:43	05:28
	15:51	16:50	17:52	24 08:23 (E14)	19:57	21:00
4	08:50	08:09	07:03	07:59 (E14)	06:41	05:26
	15:52	16:52	17:54	22 08:21 (E14)	19:59	21:02
5	08:49	08:07	07:01	08:01 (E14)	06:38	05:24
	15:54	16:54	17:56	18 08:19 (E14)	20:01	21:04
6	08:49	08:05	06:58	08:03 (E14)	06:36	05:21
	15:55	16:56	17:58	13 08:16 (E14)	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	18:15		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	08:10 (E14)	06:32	06:09	05:01
	16:12	17:19	8 08:18 (E14)	18:20	20:24	21:26
17	08:39	07:40	08:08 (E14)	06:29	06:07	04:59
	16:14	17:21	13 08:21 (E14)	18:22	20:26	21:27
18	08:38	07:38	08:05 (E14)	06:26	06:04	04:57
	16:16	17:23	17 08:22 (E14)	18:24	20:28	21:29
19	08:36	07:36	08:03 (E14)	06:24	06:02	04:55
	16:18	17:26	21 08:24 (E14)	18:26	20:31	21:31
20	08:35	07:33	08:00 (E14)	06:21	05:59	04:53
	16:20	17:28	24 08:24 (E14)	18:28	20:33	21:33
21	08:33	07:31	07:59 (E14)	06:18	05:57	04:52
	16:22	17:30	27 08:26 (E14)	18:30	20:35	21:35
22	08:32	07:28	07:58 (E14)	06:16	05:54	04:50
	16:24	17:32	28 08:26 (E14)	18:32	20:37	21:37
23	08:30	07:26	07:58 (E14)	06:13	05:52	04:48
	16:26	17:34	29 08:27 (E14)	18:34	20:39	21:38
24	08:29	07:23	07:57 (E14)	06:10	05:49	04:47
	16:28	17:37	29 08:26 (E14)	18:36	20:41	21:40
25	08:27	07:21	07:57 (E14)	06:08	05:47	04:45
	16:30	17:39	30 08:27 (E14)	18:39	20:43	21:42
26	08:26	07:18	07:57 (E14)	06:05	05:44	04:44
	16:32	17:41	29 08:26 (E14)	18:41	20:45	21:43
27	08:24	07:16	07:56 (E14)	06:02	05:42	04:42
	16:34	17:43	30 08:26 (E14)	18:43	20:47	21:45
28	08:22	07:13	07:57 (E14)	06:00	05:40	04:41
	16:37	17:45	29 08:26 (E14)	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			06:51		04:37
	16:43			19:51		21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		314	131	229		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.62	0.62	0.66		
Total reduction		0.12	0.25	0.32		
Total, real		38	32	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E13) 07:07 (E13)	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	06:49 (E13) 07:06 (E13)	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:51 (E13) 07:06 (E13)	07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (E13) 07:04 (E13)	07:23 18:46	07:29 16:30
5	04:34 22:07	05:23 21:20	06:25 20:04	06:55 (E13) 07:03 (E13)	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	06:57 (E13) 07:01 (E13)	07:28 18:40	07:33 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:41 (E14) 08:50 (E14)	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:37 (E14) 08:53 (E14)	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:35 (E14) 08:55 (E14)	07:40 16:19
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:34 (E14) 08:56 (E14)	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:32 (E14) 08:57 (E14)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:31 (E14) 08:58 (E14)	07:46 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:30 (E14) 08:58 (E14)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:29 (E14) 08:58 (E14)	07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:29 (E14) 08:59 (E14)	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:29 (E14) 08:58 (E14)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:28 (E14) 08:58 (E14)	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	08:28 (E14) 08:57 (E14)	07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:29 (E14) 08:58 (E14)	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:29 (E14) 08:57 (E14)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:29 (E14) 08:56 (E14)	08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:31 (E14) 08:54 (E14)	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 (E13) 06:53 (E13)	08:03 17:57	08:34 (E14) 08:54 (E14)	08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 (E13) 07:04 (E13)	08:05 17:55	08:36 (E14) 08:52 (E14)	08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 (E13) 07:06 (E13)	08:07 16:52	08:38 (E14) 07:50 (E14)	08:13 15:52
26	05:05 21:39	06:05 20:30	07:07 (E13) 07:07 (E13)	08:10 16:50	08:41 (E14) 07:47 (E14)	08:15 15:51
27	05:06 21:38	06:07 20:27	07:09 (E13) 07:08 (E13)	08:12 16:48	08:17 15:50	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 (E13) 07:07 (E13)	08:14 16:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 (E13) 07:08 (E13)	08:16 16:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 (E13) 07:08 (E13)	08:18 16:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17	07:17 (E13) 07:07 (E13)	08:20 16:38	08:51 15:47	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		157	75	455		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.66	0.66	0.62		
Total reduction		0.31	0.27	0.16		
Total, real		49	20	71		

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January	February	March	April	May	June	July	August	September	October	November	December
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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 22:07	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 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	07:58 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 17:05	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 21:27	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	04:53 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	08:33 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 17:34	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 19:12	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 22:10	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 16:34	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		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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Total, worst case												
Sun reduction												
Oper. time red.												
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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:

25/06/2024 18:19/4.0.540

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
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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January	February	March	April	May	June	July	August	September	October	November	December
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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
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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 17:05	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 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	08:46 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	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	08:33 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 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 22:10	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	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	08:26 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 16:34	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 20:24	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 22:09	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			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:16 (E15) 20:55	06:16 (E14) 21:53
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:15 (E15) 20:57	06:16 (E14) 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	07:16 (E15) 21:00	06:16 (E14) 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:16 (E15) 21:02	06:16 (E14) 21:57
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:16 (E15) 21:04	06:17 (E14) 21:58
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:18 (E15) 21:06	06:17 (E14) 21:59
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	07:20 (E15) 21:08	06:17 (E14) 22:00
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:26 (E15) 21:10	06:18 (E14) 22:01
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	06:19 (E14) 22:02
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	06:19 (E14) 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	06:20 (E14) 22:04
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	06:21 (E14) 22:05
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	06:24 (E14) 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	06:26 (E14) 22:07
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	06:36 (E14) 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	06:32 (E14) 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	06:28 (E14) 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:42 (E14) 21:35	04:26 22:10
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:43 (E14) 21:36	04:26 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:45 (E14) 21:38	04:26 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:21 (E14) 21:40	04:27 22:10
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	06:47 (E14) 21:42	04:27 22:10
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	06:48 (E14) 21:44	04:27 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:47 (E14) 21:43	04:28 22:10
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	06:33 (E15) 21:45	04:28 22:10
29	08:20 16:39	07:11 17:47	05:57 18:47	05:37 20:51	06:25 (E15) 21:47	04:29 22:10
30	08:18 16:41	07:09 17:49	05:54 18:49	05:35 20:53	07:22 (E15) 21:48	04:29 22:10
31	08:17 16:43	07:08 17:51	05:52 18:51	05:33 20:55	07:19 (E15) 21:50	04:37 22:09
Potential sun hours	235	266	366	426	508	528
Total, worst case			68	405	356	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.96	0.96	0.96	
Wind dir. red.			0.66	0.65	0.65	
Total reduction			0.26	0.31	0.36	
Total, real			18	127	127	

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:32 (E14) 20:14		07:17 18:54	07:23 16:36
2	04:31 22:08	05:18 21:26	06:30 (E14) 20:11		07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:29 (E14) 20:09		07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:29 (E14) 20:06		07:23 18:46	07:29 16:30
5	04:34 22:07	05:24 21:20	06:28 (E14) 20:03	07:18 (E15) 07:23 (E15)	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 (E14) 20:01	07:14 (E15) 07:26 (E15)	07:28 18:40	07:33 16:25
7	04:36 22:05	05:27 21:15	06:26 (E14) 19:58	07:11 (E15) 07:26 (E15)	07:30 18:38	07:36 16:23
8	04:37 22:04	05:29 21:13	06:26 (E14) 19:56	07:10 (E15) 07:27 (E15)	07:32 18:35	07:38 16:21
9	04:38 22:03	05:31 21:11	06:26 (E14) 19:53	07:09 (E15) 07:28 (E15)	07:34 18:33	07:40 16:19
10	04:40 22:02	05:33 21:08	06:25 (E14) 19:50	07:08 (E15) 07:28 (E15)	07:36 18:30	07:42 16:17
11	04:41 22:01	05:35 21:06	06:25 (E14) 19:47	07:08 (E15) 07:28 (E15)	07:38 18:27	07:44 16:15
12	04:42 22:00	05:37 21:04	06:24 (E14) 19:45	07:08 (E15) 07:28 (E15)	07:40 18:25	07:46 16:13
13	04:44 21:59	05:39 21:02	06:24 (E14) 19:42	07:10 (E15) 07:27 (E15)	07:42 18:22	07:49 16:11
14	04:45 21:58	05:41 20:59	06:24 (E14) 19:39	07:12 (E15) 07:26 (E15)	07:44 18:20	07:51 16:10
15	04:46 21:57	05:43 20:57	06:25 (E14) 19:37	07:14 (E15) 07:25 (E15)	07:46 18:17	07:53 16:08
16	04:48 21:55	05:45 20:54	06:25 (E14) 19:34	07:16 (E15) 07:23 (E15)	07:48 18:15	07:55 16:06
17	04:49 21:54	05:47 20:52	06:25 (E14) 19:31	07:18 (E15) 07:21 (E15)	07:50 18:12	07:57 16:04
18	04:51 21:52	05:49 20:50	06:26 (E14) 19:29		18:12 18:09	16:04 16:03
19	04:53 21:51	05:51 20:47	06:26 (E14) 19:26		07:55 18:07	08:01 16:01
20	04:54 21:49	05:53 20:45	06:27 (E14) 19:23		07:57 18:04	08:03 15:59
21	04:56 21:48	05:55 20:42	06:28 (E14) 19:21		07:59 18:02	08:05 15:58
22	04:58 21:46	05:57 20:40	06:29 (E14) 19:18		08:01 18:00	08:07 15:56
23	04:59 21:45	05:59 20:37	06:32 (E14) 19:15		08:03 17:57	08:09 15:55
24	05:01 21:43	06:01 20:35	06:37 (E14) 19:12		08:05 17:55	08:11 15:53
25	05:03 21:41	06:03 20:32			07:07 16:52	08:13 15:52
26	05:05 21:39	06:05 20:30			07:10 16:50	08:15 15:51
27	05:06 21:38	06:07 20:27			07:12 16:48	08:17 15:50
28	05:08 21:36	06:09 20:24			07:14 16:45	08:19 15:48
29	05:10 21:34	06:38 (E14) 06:44 (E14)	06:11 20:22		07:16 16:43	08:21 15:47
30	05:12 21:32	06:35 (E14) 06:48 (E14)	06:13 20:19		07:18 16:41	08:22 15:46
31	05:14 21:30	06:33 (E14) 06:50 (E14)	06:15 20:17		07:20 16:38	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case	36	625	180			
Sun reduction	0.49	0.50	0.43			
Oper. time red.	0.96	0.96	0.96			
Wind dir. red.	0.65	0.65	0.66			
Total reduction	0.31	0.31	0.27			
Total, real	11	195	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	04:36
	15:48	16:45	17:47	19:53	20:55	21:53
2	08:50	08:13	07:08	06:46	05:30	04:35
	15:49	16:47	17:50	19:55	20:57	21:54
3	08:50	08:11	07:06	06:43	07:22 (E7)	05:28
	15:51	16:50	17:52	19:57	20:24 (E7)	21:00
4	08:50	08:09	07:03	06:41	07:16 (E7)	05:26
	15:52	16:52	17:54	19:59	20:31 (E7)	21:02
5	08:49	08:07	07:00	06:38	07:12 (E7)	05:23
	15:53	16:54	17:56	20:01	07:33 (E7)	21:04
6	08:49	08:05	06:58	07:24 (E8)	06:35	07:10 (E7)
	15:55	16:56	17:58	20:03	25 07:35 (E7)	21:06
7	08:48	08:03	06:55	07:21 (E8)	06:33	07:08 (E7)
	15:56	16:59	18:00	20:05	28 07:36 (E7)	21:08
8	08:48	08:00	06:53	07:18 (E8)	06:30	07:06 (E7)
	15:58	17:01	18:03	20:08	31 07:37 (E7)	21:10
9	08:47	07:58	06:50	07:16 (E8)	06:27	07:05 (E7)
	15:59	17:03	18:05	20:10	33 07:38 (E7)	21:12
10	08:46	07:56	06:47	07:13 (E8)	06:25	07:04 (E7)
	16:01	17:05	18:07	20:12	34 07:38 (E7)	21:14
11	08:45	07:54	06:45	07:11 (E8)	06:22	07:03 (E7)
	16:03	17:08	18:09	20:14	36 07:39 (E7)	21:16
12	08:44	07:52	06:42	07:11 (E8)	06:20	07:02 (E7)
	16:04	17:10	18:11	20:16	37 07:39 (E7)	21:18
13	08:43	07:49	06:39	07:11 (E8)	06:17	07:02 (E7)
	16:06	17:12	18:13	20:18	37 07:39 (E7)	21:20
14	08:42	07:47	06:37	07:10 (E8)	06:14	07:01 (E7)
	16:08	17:14	18:15	20:20	38 07:39 (E7)	21:22
15	08:41	07:45	06:34	07:10 (E8)	06:12	07:01 (E7)
	16:10	17:17	18:17	20:22	38 07:39 (E7)	21:24
16	08:40	07:43	06:32	07:11 (E8)	06:09	07:00 (E7)
	16:12	17:19	18:20	20:24	38 07:38 (E7)	21:25
17	08:39	07:40	06:29	07:12 (E8)	06:07	07:01 (E7)
	16:14	17:21	18:22	20:26	37 07:38 (E7)	21:27
18	08:37	07:38	06:26	07:13 (E8)	06:04	07:00 (E7)
	16:16	17:23	18:24	20:28	37 07:37 (E7)	21:29
19	08:36	07:35	06:23	07:18 (E8)	06:02	07:01 (E7)
	16:18	17:25	18:26	20:30	36 07:37 (E7)	21:31
20	08:35	07:33	06:21	07:21 (E8)	05:59	07:00 (E7)
	16:20	17:28	18:28	20:33	36 07:36 (E7)	21:33
21	08:33	07:31	06:18	05:57	07:01 (E7)	04:52
	16:22	17:30	18:30	20:35	34 07:35 (E7)	21:35
22	08:32	07:28	06:15	05:54	07:02 (E7)	04:50
	16:24	17:32	18:32	20:37	33 07:35 (E7)	21:37
23	08:30	07:26	06:13	05:52	07:02 (E7)	04:48
	16:26	17:34	18:34	20:39	31 07:33 (E7)	21:38
24	08:29	07:23	06:10	05:49	07:03 (E7)	04:47
	16:28	17:37	18:36	20:41	29 07:32 (E7)	21:40
25	08:27	07:21	06:07	05:47	07:04 (E7)	04:45
	16:30	17:39	18:38	20:43	27 07:31 (E7)	21:42
26	08:26	07:18	06:05	05:44	07:05 (E7)	04:44
	16:32	17:41	18:40	20:45	24 07:29 (E7)	21:43
27	08:24	07:16	06:02	05:42	07:06 (E7)	04:42
	16:34	17:43	18:43	20:47	21 07:27 (E7)	21:45
28	08:22	07:13	05:59	05:39	07:09 (E7)	04:41
	16:36	17:45	18:45	20:49	15 07:24 (E7)	21:47
29	08:20		06:57	05:37	07:13 (E7)	04:39
	16:39		19:47	20:51	7 07:20 (E7)	21:48
30	08:18		06:54	05:35		04:38
	16:41		19:49	20:53		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			203	780	87	617
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.96	0.96	0.96	0.96
Wind dir. red.			0.62	0.66	0.67	0.67
Total reduction			0.25	0.32	0.37	0.36
Total, real			50	247	32	222

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July		August		September		October		November		December	
1	04:30	05:14 (E5)	05:16		06:17		07:02 (E7)	07:17	07:50 (E8)	07:23	08:24	
	22:09	21 05:35 (E5)	21:28		20:14	36	07:38 (E7)	18:54	21 08:11 (E8)	16:36	15:45	
2	04:31	05:14 (E5)	05:17		06:19		07:03 (E7)	07:19	07:50 (E8)	07:25	08:26	
	22:09	21 05:35 (E5)	21:26		20:11	34	07:37 (E7)	18:51	21 08:11 (E8)	16:34	15:44	
3	04:32	05:14 (E5)	05:19		06:21		07:03 (E7)	07:21	07:50 (E8)	07:27	08:28	
	22:08	21 05:35 (E5)	21:24		20:09	33	07:36 (E7)	18:48	20 08:10 (E8)	16:31	15:43	
4	04:33	05:15 (E5)	05:21		06:23		07:04 (E7)	07:23	07:52 (E8)	07:29	08:29	
	22:07	21 05:36 (E5)	21:22		20:06	31	07:35 (E7)	18:46	17 08:09 (E8)	16:29	15:42	
5	04:33	05:15 (E5)	05:23		06:25		07:04 (E7)	07:25	07:54 (E8)	07:31	08:31	
	22:07	21 05:36 (E5)	21:19		20:03	28	07:32 (E7)	18:43	13 08:07 (E8)	16:27	15:41	
6	04:35	05:15 (E5)	05:25		06:27		07:05 (E7)	07:27	07:56 (E8)	07:33	08:32	
	22:06	21 05:36 (E5)	21:17		20:01	25	07:30 (E7)	18:40	10 08:06 (E8)	16:25	15:41	
7	04:36	05:15 (E5)	05:27		06:29		07:07 (E7)	07:29	07:58 (E8)	07:36	08:34	
	22:05	21 05:36 (E5)	21:15		19:58	21	07:28 (E7)	18:38	5 08:03 (E8)	16:23	15:40	
8	04:37	05:16 (E5)	05:29		06:31		07:10 (E7)	07:32		07:38	08:35	
	22:04	20 05:36 (E5)	21:13		19:55	15	07:25 (E7)	18:35		16:21	15:40	
9	04:38	05:16 (E5)	05:31		06:33		07:15 (E7)	07:34		07:40	08:37	
	22:03	20 05:36 (E5)	21:11		19:53	4	07:19 (E7)	18:32		16:19	15:39	
10	04:39	05:16 (E5)	05:33		06:35			07:36		07:42	08:38	
	22:02	20 05:36 (E5)	21:08		19:50			18:30		16:17	15:39	
11	04:41	05:17 (E5)	05:35		06:37			07:38		07:44	08:39	
	22:01	19 05:36 (E5)	21:06		19:47			18:27		16:15	15:38	
12	04:42	05:19 (E5)	05:37		06:39			07:40		07:46	08:40	
	22:00	18 05:37 (E5)	21:04		19:45			18:25		16:13	15:38	
13	04:43	05:20 (E5)	05:39		06:41			07:42		07:49	08:42	
	21:59	16 05:36 (E5)	21:01		19:42			18:22		16:11	15:38	
14	04:45	05:21 (E5)	05:41		06:43			07:44		07:51	08:43	
	21:58	15 05:36 (E5)	20:59	10	07:29 (E7)	19:39		18:19		16:09	15:38	
15	04:46	05:22 (E5)	05:43		07:16 (E7)	06:45		07:46		07:53	08:44	
	21:57	13 05:35 (E5)	20:57	17	07:33 (E7)	19:37		18:17		16:07	15:38	
16	04:48	05:24 (E5)	05:45		07:14 (E7)	06:47		07:48		07:55	08:45	
	21:55	11 05:35 (E5)	20:54	21	07:35 (E7)	19:34		18:14		16:06	15:38	
17	04:49	05:25 (E5)	05:47		07:11 (E7)	06:49		07:50		07:57	08:46	
	21:54	9 05:34 (E5)	20:52	24	07:35 (E7)	19:31		18:12		16:04	15:38	
18	04:51	05:27 (E5)	05:49		07:09 (E7)	06:51		07:52		07:59	08:46	
	21:52	7 05:34 (E5)	20:50	28	07:37 (E7)	19:29		18:09		16:02	15:38	
19	04:52	05:28 (E5)	05:51		07:08 (E7)	06:53		07:55		08:01	08:47	
	21:51	5 05:33 (E5)	20:47	30	07:38 (E7)	19:26		18:07		16:01	15:38	
20	04:54	05:30 (E5)	05:53		07:07 (E7)	06:55		07:57		08:03	08:48	
	21:49	2 05:32 (E5)	20:45	32	07:39 (E7)	19:23		18:04		15:59	15:38	
21	04:56		05:55		07:06 (E7)	06:57		07:59		08:05	08:48	
	21:48		20:42	34	07:40 (E7)	19:20		18:02		15:58	15:39	
22	04:57		05:57		07:06 (E7)	06:59		08:01		08:07	08:49	
	21:46		20:40	34	07:40 (E7)	19:18		17:59		15:56	15:39	
23	04:59		05:59		07:05 (E7)	07:01		08:03		08:09	08:50	
	21:45		20:37	36	07:41 (E7)	19:15		17:57		15:55	15:40	
24	05:01		06:01		07:04 (E7)	07:03		08:05		08:11	08:50	
	21:43		20:35	37	07:41 (E7)	19:12		17:55		15:53	15:40	
25	05:03		06:03		07:04 (E7)	07:05		07:57 (E8)		07:07	08:50	
	21:41		20:32	37	07:41 (E7)	19:10	10	08:07 (E8)		15:52	15:41	
26	05:04		06:05		07:02 (E7)	07:07		07:55 (E8)		07:10	08:51	
	21:39		20:29	38	07:40 (E7)	19:07	14	08:09 (E8)		15:51	15:42	
27	05:06		06:07		07:02 (E7)	07:09		07:54 (E8)		07:12	08:51	
	21:38		20:27	38	07:40 (E7)	19:04	17	08:11 (E8)		16:47	15:49	
28	05:08		06:09		07:02 (E7)	07:11		07:52 (E8)		07:14	08:51	
	21:36		20:24	38	07:40 (E7)	19:02	19	08:11 (E8)		16:45	15:48	
29	05:10		06:11		07:02 (E7)	07:13		07:51 (E8)		07:16	08:51	
	21:34		20:22	37	07:39 (E7)	18:59	20	08:11 (E8)		16:43	15:47	
30	05:12		06:13		07:02 (E7)	07:15		07:51 (E8)		07:18	08:51	
	21:32		20:19	37	07:39 (E7)	18:56	20	08:11 (E8)		16:40	15:45	
31	05:14		06:15		07:02 (E7)			07:20			08:51	
	21:30		20:17	36	07:38 (E7)			16:38			15:47	
Potential sun hours	529		469		385			324		247	216	
Total, worst case		322		564		327		107				
Sun reduction		0.49		0.50		0.43		0.26				
Oper. time red.		0.96		0.96		0.96		0.96				
Wind dir. red.		0.67		0.66		0.65		0.62				
Total reduction		0.32		0.32		0.27		0.15				
Total, real		102		178		87		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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:39 (E7)	04:36					
	15:48	16:45	17:47		19:53		20:55	39	07:18 (E7)	21:53				
2	08:50	08:13	07:08		06:46		05:30	06:39 (E7)	04:35					
	15:49	16:47	17:50		19:55		20:57	38	07:17 (E7)	21:54				
3	08:50	08:11	07:06		06:43		05:28	06:40 (E7)	04:34					
	15:51	16:50	17:52		19:57		21:00	37	07:17 (E7)	21:55	2	05:08 (E5)		
4	08:50	08:09	07:03		06:41		05:26	06:41 (E7)	04:33		05:07 (E5)			
	15:52	16:52	17:54		19:59		21:02	35	07:16 (E7)	21:57	4	05:11 (E5)		
5	08:49	08:07	07:00		06:38		05:23	06:41 (E7)	04:32		05:07 (E5)			
	15:53	16:54	17:56		20:01		21:04	34	07:15 (E7)	21:58	6	05:13 (E5)		
6	08:49	08:05	06:58		06:35		05:21	06:42 (E7)	04:31		05:06 (E5)			
	15:55	16:56	17:58		20:03		21:06	32	07:14 (E7)	21:59	7	05:13 (E5)		
7	08:48	08:03	06:55		06:33		05:19	06:43 (E7)	04:30		05:05 (E5)			
	15:56	16:59	18:00		20:05		21:08	30	07:13 (E7)	22:00	8	05:13 (E5)		
8	08:48	08:00	06:53		06:30		05:17	06:44 (E7)	04:29		05:05 (E5)			
	15:58	17:01	18:03		20:08		21:10	28	07:12 (E7)	22:01	10	05:15 (E5)		
9	08:47	07:58	06:50		06:27		05:15	06:45 (E7)	04:28		05:04 (E5)			
	15:59	17:03	18:05	1	07:17 (E8)	20:10	21:12	26	07:11 (E7)	22:02	11	05:15 (E5)		
10	08:46	07:56	06:47		06:25		05:13	06:46 (E7)	04:28		05:04 (E5)			
	16:01	17:05	18:07	8	07:21 (E8)	20:12	21:14	23	07:09 (E7)	22:03	12	05:16 (E5)		
11	08:45	07:54	06:45		06:22		05:10	06:48 (E7)	04:27		05:03 (E5)			
	16:03	17:08	18:09	12	07:22 (E8)	20:14	21:16	19	07:07 (E7)	22:04	12	05:15 (E5)		
12	08:44	07:52	06:42		06:20		06:58 (E7)	05:08	06:50 (E7)	04:27		05:03 (E5)		
	16:04	17:10	18:11	16	07:24 (E8)	20:16	9	07:07 (E7)	21:18	14	07:04 (E7)	22:05	13	05:16 (E5)
13	08:43	07:49	06:39		06:17		06:54 (E7)	05:06	06:54 (E7)	04:26		05:03 (E5)		
	16:06	17:12	18:13	19	07:24 (E8)	20:18	18	07:12 (E7)	21:20	6	07:00 (E7)	22:06	14	05:17 (E5)
14	08:42	07:47	06:37		06:14		06:51 (E7)	05:04	06:50 (E7)	04:26		05:02 (E5)		
	16:08	17:14	18:15	21	07:24 (E8)	20:20	23	07:14 (E7)	21:22	22:07	14	05:16 (E5)		
15	08:41	07:45	06:34		06:12		06:49 (E7)	05:02	06:49 (E7)	04:26		05:02 (E5)		
	16:10	17:17	18:17	22	07:24 (E8)	20:22	27	07:16 (E7)	21:24	22:07	15	05:17 (E5)		
16	08:40	07:43	06:31		06:09		06:47 (E7)	05:01	06:47 (E7)	04:25		05:02 (E5)		
	16:12	17:19	18:20	22	07:24 (E8)	20:24	29	07:16 (E7)	21:25	22:08	15	05:17 (E5)		
17	08:39	07:40	06:29		06:07		06:46 (E7)	04:59	06:46 (E7)	04:25		05:02 (E5)		
	16:14	17:21	18:22	22	07:24 (E8)	20:26	32	07:18 (E7)	21:27	22:08	16	05:18 (E5)		
18	08:37	07:38	06:26		06:04		06:44 (E7)	04:57	06:44 (E7)	04:25		05:02 (E5)		
	16:16	17:23	18:24	21	07:23 (E8)	20:28	34	07:18 (E7)	21:29	22:09	16	05:18 (E5)		
19	08:36	07:35	06:23		06:02		06:43 (E7)	04:55	06:43 (E7)	04:25		05:02 (E5)		
	16:18	17:25	18:26	19	07:22 (E8)	20:30	36	07:19 (E7)	21:31	22:09	16	05:18 (E5)		
20	08:35	07:33	06:21		06:03		06:42 (E7)	04:53	06:42 (E7)	04:25		05:02 (E5)		
	16:20	17:28	18:28	18	07:21 (E8)	20:33	37	07:19 (E7)	21:33	22:10	16	05:18 (E5)		
21	08:33	07:31	06:18		06:04		06:41 (E7)	04:52	06:41 (E7)	04:25		05:02 (E5)		
	16:22	17:30	18:30	15	07:19 (E8)	20:35	39	07:20 (E7)	21:35	22:10	16	05:18 (E5)		
22	08:32	07:28	06:15		06:05		06:41 (E7)	04:50	06:41 (E7)	04:25		05:03 (E5)		
	16:24	17:32	18:32	11	07:17 (E8)	20:37	39	07:20 (E7)	21:36	22:10	16	05:19 (E5)		
23	08:30	07:26	06:13		05:52		06:40 (E7)	04:48	06:40 (E7)	04:26		05:03 (E5)		
	16:26	17:34	18:34		20:39		07:20 (E7)	21:38	07:20 (E7)	22:10	16	05:19 (E5)		
24	08:29	07:23	06:10		05:49		06:40 (E7)	04:47	06:40 (E7)	04:26		05:03 (E5)		
	16:28	17:37	18:36		20:41		07:20 (E7)	21:40	07:20 (E7)	22:10	16	05:19 (E5)		
25	08:27	07:21	06:07		05:47		06:40 (E7)	04:45	06:40 (E7)	04:26		05:04 (E5)		
	16:30	17:39	18:38		20:43		07:21 (E7)	21:42	07:21 (E7)	22:10	16	05:20 (E5)		
26	08:26	07:18	06:05		05:44		06:39 (E7)	04:44	06:39 (E7)	04:27		05:04 (E5)		
	16:32	17:41	18:40		20:45		07:20 (E7)	21:43	07:20 (E7)	22:10	16	05:20 (E5)		
27	08:24	07:16	06:02		05:42		06:39 (E7)	04:42	06:39 (E7)	04:27		05:05 (E5)		
	16:34	17:43	18:43		20:47		07:20 (E7)	21:45	07:20 (E7)	22:10	15	05:20 (E5)		
28	08:22	07:13	05:59		05:39		06:39 (E7)	04:41	06:39 (E7)	04:28		05:05 (E5)		
	16:36	17:45	18:45		20:49		07:20 (E7)	21:47	07:20 (E7)	22:10	15	05:20 (E5)		
29	08:20		06:57		05:37		06:39 (E7)	04:39	06:39 (E7)	04:28		05:06 (E5)		
	16:39		19:47		20:51		07:20 (E7)	21:48	07:20 (E7)	22:10	14	05:20 (E5)		
30	08:18		06:54		05:35		06:39 (E7)	04:38	06:39 (E7)	04:29		05:07 (E5)		
	16:41		19:49		20:53		07:18 (E7)	21:50	07:18 (E7)	22:09	14	05:21 (E5)		
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				227	647		361		361					
Sun reduction				0.41	0.50		0.57		0.56					
Oper. time red.				0.96	0.96		0.96		0.96					
Wind dir. red.				0.63	0.66		0.66		0.67					
Total reduction				0.25	0.32		0.36		0.36					
Total, real				56	204		129		129					

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)
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25/06/2024 18:19/4.0.540

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Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July		August		September		October		November		December	
1	04:30	05:07 (E5)	05:16	06:59 (E7)	06:17		07:17	07:46 (E8)	07:23	08:24		
	22:09	13 05:20 (E5)	21:28	17 07:16 (E7)	20:14		18:54	17 08:03 (E8)	16:36	15:45		
2	04:31	05:08 (E5)	05:17	06:57 (E7)	06:19		07:19	07:48 (E8)	07:25	08:26		
	22:09	12 05:20 (E5)	21:26	21 07:18 (E7)	20:11		18:51	14 08:02 (E8)	16:34	15:44		
3	04:32	05:09 (E5)	05:19	06:56 (E7)	06:21		07:21	07:50 (E8)	07:27	08:28		
	22:08	11 05:20 (E5)	21:24	24 07:20 (E7)	20:09		18:48	10 08:00 (E8)	16:31	15:43		
4	04:33	05:10 (E5)	05:21	06:55 (E7)	06:23		07:23	07:52 (E8)	07:29	08:29		
	22:07	10 05:20 (E5)	21:22	26 07:21 (E7)	20:06		18:46	5 07:57 (E8)	16:29	15:42		
5	04:33	05:11 (E5)	05:23	06:53 (E7)	06:25		07:25		07:31	08:31		
	22:07	9 05:20 (E5)	21:19	29 07:22 (E7)	20:03		18:43		16:27	15:41		
6	04:35	05:12 (E5)	05:25	06:52 (E7)	06:27		07:27		07:33	08:32		
	22:06	8 05:20 (E5)	21:17	31 07:23 (E7)	20:01		18:40		16:25	15:41		
7	04:36	05:13 (E5)	05:27	06:51 (E7)	06:29		07:29		07:36	08:34		
	22:05	6 05:19 (E5)	21:15	33 07:24 (E7)	19:58		18:38		16:23	15:40		
8	04:37	05:14 (E5)	05:29	06:50 (E7)	06:31		07:32		07:38	08:35		
	22:04	5 05:19 (E5)	21:13	35 07:25 (E7)	19:55		18:35		16:21	15:40		
9	04:38	05:15 (E5)	05:31	06:50 (E7)	06:33		07:34		07:40	08:37		
	22:03	3 05:18 (E5)	21:11	36 07:26 (E7)	19:53		18:32		16:19	15:39		
10	04:39	05:16 (E5)	05:33	06:48 (E7)	06:35		07:36		07:42	08:38		
	22:02	1 05:17 (E5)	21:08	37 07:25 (E7)	19:50		18:30		16:17	15:39		
11	04:41		05:35	06:48 (E7)	06:37		07:38		07:44	08:39		
	22:01		21:06	38 07:26 (E7)	19:47		18:27		16:15	15:38		
12	04:42		05:37	06:47 (E7)	06:39		07:40		07:46	08:40		
	22:00		21:04	39 07:26 (E7)	19:45		18:25		16:13	15:38		
13	04:43		05:39	06:47 (E7)	06:41		07:42		07:49	08:42		
	21:59		21:01	40 07:27 (E7)	19:42		18:22		16:11	15:38		
14	04:45		05:41	06:47 (E7)	06:43		07:44		07:51	08:43		
	21:58		20:59	40 07:27 (E7)	19:39		18:19		16:09	15:38		
15	04:46		05:43	06:47 (E7)	06:45		07:46		07:53	08:44		
	21:57		20:57	40 07:27 (E7)	19:37		18:17		16:07	15:38		
16	04:48		05:45	06:46 (E7)	06:47		07:48		07:55	08:45		
	21:55		20:54	41 07:27 (E7)	19:34		18:14		16:06	15:38		
17	04:49		05:47	06:45 (E7)	06:49		07:50		07:57	08:46		
	21:54		20:52	41 07:26 (E7)	19:31		18:12		16:04	15:38		
18	04:51		05:49	06:45 (E7)	06:51		07:52		07:59	08:46		13:17 (E13)
	21:52		20:50	41 07:26 (E7)	19:29		18:09		16:02	15:38	2	13:19 (E13)
19	04:52		05:51	06:45 (E7)	06:53		07:55		08:01	08:47		13:16 (E13)
	21:51		20:47	41 07:26 (E7)	19:26		18:07		16:01	15:38	3	13:19 (E13)
20	04:54		05:53	06:46 (E7)	06:55		07:57		08:03	08:48		13:16 (E13)
	21:49		20:45	40 07:26 (E7)	19:23		18:04		15:59	15:38	5	13:21 (E13)
21	04:56		05:55	06:46 (E7)	06:57	07:53 (E8)	07:59		08:05	08:48		13:16 (E13)
	21:48		20:42	39 07:25 (E7)	19:20	9 08:02 (E8)	18:02		15:58	15:39	6	13:22 (E13)
22	04:57		05:57	06:46 (E7)	06:59	07:49 (E8)	08:01		08:07	08:49		13:16 (E13)
	21:46		20:40	38 07:24 (E7)	19:18	14 08:03 (E8)	17:59		15:56	15:39	6	13:22 (E13)
23	04:59		05:59	06:47 (E7)	07:01	07:47 (E8)	08:03		08:09	08:50		13:18 (E13)
	21:45		20:37	37 07:24 (E7)	19:15	17 08:04 (E8)	17:57		15:55	15:40	5	13:23 (E13)
24	05:01		06:01	06:47 (E7)	07:03	07:46 (E8)	08:05		08:11	08:50		13:18 (E13)
	21:43		20:35	36 07:23 (E7)	19:12	19 08:05 (E8)	17:55		15:53	15:40	5	13:23 (E13)
25	05:03		06:03	06:48 (E7)	07:05	07:45 (E8)	07:07		08:13	08:50		13:19 (E13)
	21:41		20:32	34 07:22 (E7)	19:10	20 08:05 (E8)	16:52		15:52	15:41	3	13:22 (E13)
26	05:04		06:05	06:48 (E7)	07:07	07:44 (E8)	07:09		08:15	08:51		
	21:39		20:29	32 07:20 (E7)	19:07	21 08:05 (E8)	16:50		15:51	15:42		
27	05:06		06:07	06:49 (E7)	07:09	07:44 (E8)	07:12		08:17	08:51		
	21:38		20:27	29 07:18 (E7)	19:04	22 08:06 (E8)	16:47		15:49	15:43		
28	05:08		06:09	06:50 (E7)	07:11	07:44 (E8)	07:14		08:19	08:51		
	21:36		20:24	26 07:16 (E7)	19:02	22 08:06 (E8)	16:45		15:48	15:44		
29	05:10		06:11	06:52 (E7)	07:13	07:44 (E8)	07:16		08:21	08:51		
	21:34		20:22	22 07:14 (E7)	18:59	21 08:05 (E8)	16:43		15:47	15:44		
30	05:12		06:13	06:54 (E7)	07:15	07:44 (E8)	07:18		08:22	08:51		
	21:32		20:19	17 07:11 (E7)	18:56	20 08:04 (E8)	16:40		15:46	15:45		
31	05:14	07:03 (E7)	06:15	06:59 (E7)			07:20			08:51		
	21:30	10 07:13 (E7)	20:17	8 07:07 (E7)			16:38			15:47		
Potential sun hours	529		469		385		324		247	216		
Total, worst case	88		1008		185		46			35		
Sun reduction	0.49		0.50		0.43		0.26			0.07		
Oper. time red.	0.96		0.96		0.96		0.96			0.96		
Wind dir. red.	0.66		0.66		0.63		0.63			0.63		
Total reduction	0.31		0.31		0.26		0.16			0.04		
Total, real	28		317		48		7			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	04:31 22:08	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	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	08:09 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 18:45	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 22:06	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	06:52 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 19:53	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	08:38 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 21:04	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 21:19	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 22:08	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 21:53	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 16:02	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 21:48	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	04:25 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	07:26 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 17:36	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 17:54	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	08:51 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 16:40	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	05:59 20:33	04:54 21:33	04:26 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:04 (E13) 04:36
	15:48	16:45	17:48	19:53	20:55	20 06:24 (E13) 21:53
2	08:50	08:13	07:08	06:46	05:30	06:04 (E13) 04:35
	15:50	16:48	17:50	19:55	20:58	20 06:24 (E13) 21:54
3	08:50	08:11	07:06	06:44	05:28	06:04 (E13) 04:34
	15:51	16:50	17:52	19:57	21:00	19 06:23 (E13) 21:55
4	08:50	08:09	07:03	06:41	05:26	06:05 (E13) 04:33
	15:52	16:52	17:54	19:59	21:02	17 06:22 (E13) 21:57
5	08:49	08:07	07:01	06:38	05:24	06:06 (E13) 04:32
	15:54	16:54	17:56	20:01	21:04	15 06:21 (E13) 21:58
6	08:49	08:05	06:58	06:36	05:21	06:07 (E13) 04:31
	15:55	16:57	17:58	20:03	21:06	13 06:20 (E13) 21:59
7	08:48	08:03	06:55	06:33	05:19	06:09 (E13) 04:30
	15:56	16:59	18:01	20:06	21:08	9 06:18 (E13) 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	07:08 (E14) 06:20	05:09	04:27
	16:05	17:10	18:11	11 07:19 (E14) 20:16	21:18	22:05
13	08:43	07:50	06:40	07:05 (E14) 06:17	05:07	04:27
	16:06	17:12	18:13	16 07:21 (E14) 20:18	21:20	22:06
14	08:42	07:47	06:37	07:02 (E14) 06:15	05:05	04:26
	16:08	17:14	18:15	20 07:22 (E14) 20:20	21:22	22:07
15	08:41	07:45	06:34	07:00 (E14) 06:12	05:03	04:26
	16:10	17:17	18:18	24 07:24 (E14) 20:22	21:24	22:07
16	08:40	07:43	06:32	06:57 (E14) 06:09	05:01	04:26
	16:12	17:19	18:20	27 07:24 (E14) 20:24	21:25	22:08
17	08:39	07:40	06:29	06:56 (E14) 06:07	04:59	04:25
	16:14	17:21	18:22	28 07:24 (E14) 20:26	21:27	22:08
18	08:37	07:38	06:26	06:55 (E14) 06:04	04:57	04:25
	16:16	17:23	18:24	29 07:24 (E14) 20:28	21:29	22:09
19	08:36	07:36	06:24	06:55 (E14) 06:02	04:55	04:25
	16:18	17:26	18:26	30 07:25 (E14) 20:31	21:31	22:09
20	08:35	07:33	06:21	06:54 (E14) 05:59	04:54	04:25
	16:20	17:28	18:28	31 07:25 (E14) 20:33	21:33	22:10
21	08:33	07:31	06:18	06:53 (E14) 05:57	04:52	04:25
	16:22	17:30	18:30	31 07:24 (E14) 20:35	21:35	22:10
22	08:32	07:28	06:16	06:54 (E14) 05:54	04:50	04:26
	16:24	17:32	18:32	30 07:24 (E14) 20:37	21:37	22:10
23	08:30	07:26	06:13	06:54 (E14) 05:52	06:18 (E13) 04:48	04:26
	16:26	17:34	18:34	30 07:24 (E14) 20:39	4 06:22 (E13) 21:38	22:10
24	08:29	07:23	06:10	06:53 (E14) 05:49	06:16 (E13) 04:47	04:26
	16:28	17:37	18:36	29 07:22 (E14) 20:41	7 06:23 (E13) 21:40	22:10
25	08:27	07:21	06:08	06:54 (E14) 05:47	06:14 (E13) 04:45	04:27
	16:30	17:39	18:39	28 07:22 (E14) 20:43	10 06:24 (E13) 21:42	22:10
26	08:26	07:18	06:05	06:55 (E14) 05:45	06:11 (E13) 04:44	04:27
	16:32	17:41	18:41	26 07:21 (E14) 20:45	13 06:24 (E13) 21:43	22:10
27	08:24	07:16	06:02	06:55 (E14) 05:42	06:09 (E13) 04:42	04:28
	16:34	17:43	18:43	24 07:19 (E14) 20:47	16 06:25 (E13) 21:45	22:10
28	08:22	07:13	06:00	06:57 (E14) 05:40	06:07 (E13) 04:41	04:28
	16:37	17:45	18:45	21 07:18 (E14) 20:49	18 06:25 (E13) 21:47	22:10
29	08:20		06:57	07:58 (E14) 05:37	06:05 (E13) 04:40	04:29
	16:39		19:47	17 08:15 (E14) 20:51	20 06:25 (E13) 21:48	22:10
30	08:19		06:54	08:01 (E14) 05:35	06:04 (E13) 04:38	04:29
	16:41		19:49	10 08:11 (E14) 20:53	21 06:25 (E13) 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	528
Total, worst case			462	109	113	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.96	0.96	0.96	
Wind dir. red.			0.63	0.66	0.66	
Total reduction			0.25	0.32	0.36	
Total, real			116	35	41	

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14) 07:59 (E14)	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:48 (E14) 07:55 (E14)	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48		07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46		07:29 16:30
5	04:34 22:07	05:24 21:20	06:22 (E13) 06:25 (E13)	07:25 18:43		07:31 16:27
6	04:35 22:06	05:25 21:17	06:18 (E13) 06:28 (E13)	07:28 18:40		07:33 16:25
7	04:36 22:05	05:27 21:15	06:16 (E13) 06:30 (E13)	07:30 18:38		07:36 16:23
8	04:37 22:04	05:29 21:13	06:15 (E13) 06:31 (E13)	07:32 18:35		07:38 16:21
9	04:38 22:03	05:31 21:11	06:14 (E13) 06:32 (E13)	07:34 18:33		07:40 16:19
10	04:40 22:02	05:33 21:08	06:14 (E13) 06:33 (E13)	07:36 18:30		07:42 16:17
11	04:41 22:01	05:35 21:06	06:13 (E13) 06:33 (E13)	07:38 18:27		07:44 16:15
12	04:42 22:00	05:37 21:04	06:12 (E13) 06:33 (E13)	07:40 18:25		07:46 16:13
13	04:44 21:59	05:39 21:02	06:12 (E13) 06:33 (E13)	07:42 08:02 (E14)		07:49 16:11
14	04:45 21:58	05:41 20:59	06:13 (E13) 06:33 (E13)	07:49 (E14) 08:05 (E14)		07:51 16:10
15	04:46 21:57	05:43 20:57	06:15 (E13) 06:33 (E13)	07:47 (E14) 08:07 (E14)		07:53 16:08
16	04:48 21:55	05:45 20:54	06:17 (E13) 06:32 (E13)	07:45 (E14) 08:08 (E14)		07:55 16:06
17	04:49 21:54	05:47 20:52	06:19 (E13) 06:32 (E13)	07:43 (E14) 08:09 (E14)		07:57 16:04
18	04:51 21:52	05:49 20:50	06:21 (E13) 06:31 (E13)	07:42 (E14) 08:09 (E14)		07:59 16:03
19	04:53 21:51	05:51 20:47	06:22 (E13) 06:29 (E13)	07:41 (E14) 08:10 (E14)		08:01 16:01
20	04:54 21:49	05:53 20:45	06:24 (E13) 06:27 (E13)	07:40 (E14) 08:10 (E14)		08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:40 (E14) 08:10 (E14)		08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	07:39 (E14) 08:10 (E14)		08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	07:39 (E14) 08:10 (E14)		08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	07:38 (E14) 08:09 (E14)		08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	07:38 (E14) 08:08 (E14)		08:13 15:52
26	05:05 21:39	06:05 20:30	07:07 19:07	07:39 (E14) 08:07 (E14)		08:15 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	07:39 (E14) 08:06 (E14)		08:17 15:50
28	05:08 21:36	06:09 20:24	07:11 19:02	07:40 (E14) 08:05 (E14)		08:19 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	07:42 (E14) 08:04 (E14)		08:21 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	07:44 (E14) 08:02 (E14)		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		228	453	20		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.66	0.63	0.63		
Total reduction		0.32	0.26	0.16		
Total, real		72	118	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:50 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	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 17:59	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	08:48 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	05:29 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 15:40
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 15:38
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 21:25	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 17:23	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	07:53 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	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 18:05	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	08:50 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 15:54	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	07:07 16:52	08:13 15:52	08:50 15:41
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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 15:48	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	06:13 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14) 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	07:04 (E14) 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 (E14) 20:58	05:30 21:54	04:35 22:09	05:18 21:26	06:19 20:11	07:03 (E14) 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 (E14) 21:00	05:28 21:55	04:34 22:08	05:20 21:24	06:21 20:09	07:01 (E14) 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 (E14) 21:02	05:26 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:01 (E14) 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	07:03 (E14) 21:04	05:24 21:58	04:32 22:07	05:24 21:20	06:25 20:04	07:00 (E14) 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	07:03 (E14) 21:06	05:21 21:59	04:31 22:06	05:26 21:17	06:27 20:01	06:59 (E14) 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	07:03 (E14) 21:08	05:19 22:00	04:30 22:05	05:27 21:15	06:29 19:58	06:59 (E14) 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	07:04 (E14) 21:10	05:17 22:01	04:29 22:04	05:29 21:13	06:31 19:56	07:00 (E14) 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	07:03 (E14) 21:12	05:15 22:02	04:28 22:03	05:31 21:11	06:33 19:53	07:02 (E14) 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	07:04 (E14) 21:14	05:13 22:03	04:28 22:02	05:33 21:08	06:35 19:50	07:04 (E14) 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	07:05 (E14) 21:16	05:11 22:04	04:28 22:01	05:35 21:06	06:37 19:48	07:06 (E14) 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	07:07 (E14) 21:18	05:09 22:05	04:27 22:00	05:37 21:04	06:39 19:45	07:08 (E14) 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	07:17 (E14) 21:20	05:07 22:06	04:27 21:59	05:39 21:02	06:41 19:42	07:10 (E14) 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	07:11 (E14) 21:22	05:05 22:07	04:26 21:58	05:41 20:59	06:43 19:39	07:11 (E14) 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	07:12 (E14) 21:24	05:03 22:07	04:26 21:57	05:43 20:57	06:45 19:37	07:12 (E14) 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	07:13 (E14) 21:26	05:01 22:08	04:26 21:55	05:45 20:54	06:47 19:34	07:13 (E14) 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	07:14 (E14) 21:27	05:00 22:08	04:26 21:54	05:47 20:52	06:49 19:31	07:14 (E14) 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	07:15 (E14) 21:29	04:59 22:09	04:50 21:52	05:49 20:50	06:49 19:29	07:15 (E14) 18:10	07:51 16:03	07:58 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	07:16 (E14) 21:31	04:55 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:16 (E14) 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	07:17 (E14) 21:33	04:54 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:17 (E14) 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	07:18 (E14) 21:35	04:52 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:18 (E14) 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	07:19 (E14) 21:37	04:50 22:10	04:58 21:46	05:57 20:40	06:59 19:18	07:19 (E14) 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	07:20 (E14) 21:38	04:49 22:10	04:59 21:45	05:59 20:37	07:01 19:15	07:20 (E14) 17:57	08:03 15:55	08:09 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	07:21 (E14) 21:40	04:47 22:10	05:01 21:43	06:01 20:35	07:03 19:13	07:21 (E14) 17:55	08:05 15:53	08:11 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	07:22 (E14) 21:42	04:45 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:22 (E14) 17:52	08:07 15:52	08:13 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	07:23 (E14) 21:43	04:44 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:23 (E14) 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	07:24 (E14) 21:45	04:42 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:24 (E14) 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	07:25 (E14) 21:47	04:41 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:25 (E14) 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:06 17:57	05:57 18:51	05:37 20:51	07:26 (E14) 21:48	04:40 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:26 (E14) 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:04 17:59	05:54 18:54	05:35 20:53	07:27 (E14) 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:27 (E14) 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:02 18:01	05:52 18:57	07:17 (E14) 20:53	07:28 (E14) 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:07 (E14) 18:56	07:28 (E14) 17:40	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			5	204				10	201			
Sun reduction			0.41	0.50				0.50	0.43			
Oper. time red.			0.96	0.96				0.96	0.96			
Wind dir. red.			0.66	0.66				0.66	0.66			
Total reduction			0.26	0.32				0.32	0.27			
Total, real			1	65				3	54			

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March	April	May			June	
1	08:51		09:30 (E8)	08:15			07:11	06:49		05:32		06:30 (E5)	04:36
	15:48	58	11:17 (E7)	16:45			17:47	19:53		20:55	42	07:12 (E5)	21:53
2	08:50		09:30 (E8)	08:13			07:08	06:46		05:30		06:30 (E5)	04:34
	15:49	59	11:18 (E7)	16:47			17:50	19:55		20:57	42	07:12 (E5)	21:54
3	08:50		09:29 (E8)	08:11			07:06	06:43		05:28		06:30 (E5)	04:33
	15:50	60	11:18 (E7)	16:49			17:52	19:57		21:00	42	07:12 (E5)	21:55
4	08:50		09:28 (E8)	08:09			07:03	06:41		05:25		06:31 (E5)	04:32
	15:52	62	11:19 (E7)	16:52			17:54	19:59		21:02	40	07:11 (E5)	21:57
5	08:49		09:28 (E8)	08:07			07:00	06:38		05:23		06:31 (E5)	04:31
	15:53	64	11:20 (E7)	16:54			17:56	20:01		21:04	40	07:11 (E5)	21:58
6	08:49		09:27 (E8)	08:05			06:58	06:35		05:21		06:31 (E5)	04:31
	15:55	64	11:20 (E7)	16:56			17:58	20:03		21:06	39	07:10 (E5)	21:59
7	08:48		09:26 (E8)	08:03			06:55	06:33		05:19		06:32 (E5)	04:30
	15:56	66	11:20 (E7)	16:58			18:00	20:05		21:08	38	07:10 (E5)	22:00
8	08:48		09:26 (E8)	08:00			06:53	06:30		05:17		06:32 (E5)	04:29
	15:58	67	11:21 (E7)	17:01			18:03	20:07		21:10	37	07:09 (E5)	22:01
9	08:47		09:26 (E8)	07:58			06:50	06:27		05:15		06:33 (E5)	04:28
	15:59	67	11:21 (E7)	17:03			18:05	20:10		21:12	35	07:08 (E5)	22:02
10	08:46		09:27 (E8)	07:56			06:47	06:25		05:12		06:33 (E5)	04:28
	16:01	67	11:21 (E7)	17:05			18:07	20:12		21:14	34	07:07 (E5)	22:03
11	08:45		09:27 (E8)	07:54		08:23 (E6)	06:45	06:22		05:10		06:34 (E5)	04:27
	16:03	67	11:22 (E7)	17:07	2	08:25 (E6)	18:09	20:14		21:16	32	07:06 (E5)	22:04
12	08:44		09:28 (E8)	07:52		08:20 (E6)	06:42	06:20		05:08		06:35 (E5)	04:27
	16:04	66	11:22 (E7)	17:10	7	08:27 (E6)	18:11	20:16		21:18	30	07:05 (E5)	22:05
13	08:43		09:27 (E8)	07:49		08:18 (E6)	06:39	06:17		05:06		06:36 (E5)	04:26
	16:06	67	11:22 (E7)	17:12	12	08:30 (E6)	18:13	20:18		21:20	27	07:03 (E5)	22:06
14	08:42		09:28 (E8)	07:47		08:15 (E6)	06:37	06:14		05:04		06:38 (E5)	04:26
	16:08	66	11:22 (E7)	17:14	15	08:30 (E6)	18:15	20:20	5	06:57 (E5)	25	07:03 (E5)	22:07
15	08:41		09:29 (E8)	07:45		08:13 (E6)	06:34	06:12		05:02		06:39 (E5)	04:25
	16:10	66	11:23 (E7)	17:16	19	08:32 (E6)	18:17	20:22	16	07:03 (E5)	22	07:01 (E5)	22:07
16	08:40		09:29 (E8)	07:43		08:10 (E6)	06:31	06:09		06:43 (E5)	05:00	06:41 (E5)	04:25
	16:12	64	11:22 (E7)	17:19	22	08:32 (E6)	18:20	20:24	22	07:05 (E5)	21:25	06:59 (E5)	22:08
17	08:39		09:30 (E8)	07:40		08:09 (E6)	06:29	06:07		06:41 (E5)	04:59	06:43 (E5)	04:25
	16:14	63	11:23 (E7)	17:21	24	08:33 (E6)	18:22	20:26	26	07:07 (E5)	21:27	06:56 (E5)	22:09
18	08:37		09:30 (E8)	07:38		08:08 (E6)	06:26	06:04		06:39 (E5)	04:57	06:47 (E5)	04:25
	16:15	62	11:22 (E7)	17:23	25	08:33 (E6)	18:24	20:28	29	07:08 (E5)	21:29	06:52 (E5)	22:09
19	08:36		09:30 (E8)	07:35		08:09 (E6)	06:23	06:02		06:38 (E5)	04:55		04:25
	16:17	62	11:22 (E7)	17:25	24	08:33 (E6)	18:26	20:30	32	07:10 (E5)	21:31		22:09
20	08:35		09:31 (E8)	07:33		08:08 (E6)	06:21	05:59		06:36 (E5)	04:53		04:25
	16:19	59	11:22 (E7)	17:28	25	08:33 (E6)	18:28	20:32	34	07:10 (E5)	21:33		22:10
21	08:33		09:32 (E8)	07:31		08:09 (E6)	06:18	05:57		06:35 (E5)	04:51		04:25
	16:21	58	11:22 (E7)	17:30	24	08:33 (E6)	18:30	20:35	36	07:11 (E5)	21:35		22:10
22	08:32		09:33 (E8)	07:28		08:09 (E6)	06:15	05:54		06:34 (E5)	04:50		04:25
	16:24	54	11:21 (E7)	17:32	23	08:32 (E6)	18:32	20:37	38	07:12 (E5)	21:37		22:10
23	08:30		09:34 (E8)	07:26		08:10 (E6)	06:13	05:52		06:33 (E5)	04:48		04:25
	16:26	51	11:21 (E7)	17:34	22	08:32 (E6)	18:34	20:39	39	07:12 (E5)	21:38		22:10
24	08:29		09:36 (E8)	07:23		08:10 (E6)	06:10	05:49		06:32 (E5)	04:47		04:26
	16:28	47	11:21 (E7)	17:36	20	08:30 (E6)	18:36	20:41	41	07:13 (E5)	21:40		22:10
25	08:27		09:38 (E8)	07:21		08:11 (E6)	06:07	05:47		06:32 (E5)	04:45		04:26
	16:30	42	11:20 (E7)	17:39	17	08:28 (E6)	18:38	20:43	41	07:13 (E5)	21:42		22:10
26	08:26		09:41 (E8)	07:18		08:13 (E6)	06:05	05:44		06:31 (E5)	04:44		04:27
	16:32	34	11:19 (E7)	17:41	14	08:27 (E6)	18:40	20:45	42	07:13 (E5)	21:43		22:10
27	08:24		10:52 (E7)	07:16		08:16 (E6)	06:02	05:42		06:31 (E5)	04:42		04:27
	16:34	25	11:17 (E7)	17:43	8	08:24 (E6)	18:43	20:47	42	07:13 (E5)	21:45		22:10
28	08:22		10:54 (E7)	07:13			05:59	05:39		06:31 (E5)	04:41		04:28
	16:36	22	11:16 (E7)	17:45			18:45	20:49	42	07:13 (E5)	21:47		22:10
29	08:20		10:57 (E7)				06:57	05:37		06:30 (E5)	04:39		04:28
	16:38	17	11:14 (E7)				19:47	20:51	42	07:12 (E5)	21:48		22:10
30	08:18		11:01 (E7)				06:54	05:35		06:30 (E5)	04:38		04:29
	16:41	9	11:10 (E7)				19:49	20:53	42	07:12 (E5)	21:50		22:09
31	08:17						06:51			04:37			
	16:43						19:51			21:51			
Potential sun hours	235			266			366			508			529
Total, worst case	1635			303			569			561			
Sun reduction	0.13			0.20			0.50			0.57			
Oper. time red.	0.96			0.96			0.96			0.96			
Wind dir. red.	0.61			0.62			0.65			0.65			
Total reduction	0.08			0.12			0.31			0.36			
Total, real	127			36			179			200			

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)
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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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July			August			September			October			November			December		
1	04:30			05:15		06:45 (E5)	06:17		07:17			07:23			08:24		09:09 (E8)	
	22:09			21:28	30	07:15 (E5)	20:14		18:53			16:36			15:45	67	11:04 (E7)	
2	04:31			05:17		06:44 (E5)	06:19		07:19			07:25			08:26		09:10 (E8)	
	22:09			21:26	33	07:17 (E5)	20:11		18:51			16:34			15:44	67	11:04 (E7)	
3	04:31			05:19		06:44 (E5)	06:21		07:21			07:27			08:28		09:10 (E8)	
	22:08			21:24	34	07:18 (E5)	20:09		18:48			16:31			15:43	67	11:05 (E7)	
4	04:32			05:21		06:43 (E5)	06:23		07:23			07:29			08:29		09:10 (E8)	
	22:07			21:22	36	07:19 (E5)	20:06		18:46			16:29			15:42	68	11:05 (E7)	
5	04:33			05:23		06:41 (E5)	06:25		07:25			07:31			08:31		09:11 (E8)	
	22:07			21:19	37	07:18 (E5)	20:03		18:43			16:27			15:41	66	11:05 (E7)	
6	04:34			05:25		06:41 (E5)	06:27		07:27			07:33			08:32		09:13 (E8)	
	22:06			21:17	38	07:19 (E5)	20:01		18:40			16:25			15:41	64	11:06 (E7)	
7	04:36			05:27		06:41 (E5)	06:29		07:29			07:36			08:34		09:14 (E8)	
	22:05			21:15	39	07:20 (E5)	19:58		18:38			16:23			15:40	64	11:06 (E7)	
8	04:37			05:29		06:40 (E5)	06:31		07:31			07:38			08:35		09:16 (E8)	
	22:04			21:13	40	07:20 (E5)	19:55		18:35			16:21			15:40	63	11:07 (E7)	
9	04:38			05:31		06:40 (E5)	06:33		07:34			07:40			08:37		09:18 (E8)	
	22:03			21:11	41	07:21 (E5)	19:53		18:32			16:19			15:39	61	11:08 (E7)	
10	04:39			05:33		06:39 (E5)	06:35		07:36			07:42			08:38		09:19 (E8)	
	22:02			21:08	41	07:20 (E5)	19:50		18:30			16:17			15:39	60	11:08 (E7)	
11	04:40			05:35		06:38 (E5)	06:37		07:38			07:44			08:39		09:20 (E8)	
	22:01			21:06	42	07:20 (E5)	19:47		18:27			16:15			15:38	59	11:08 (E7)	
12	04:42			05:37		06:38 (E5)	06:39		07:40			07:46			08:40		09:22 (E8)	
	22:00			21:04	43	07:21 (E5)	19:45		18:25		10	16:13	10:31 (E7)		15:38	58	11:09 (E7)	
13	04:43			05:39		06:38 (E5)	06:41		07:42			07:49			08:42		09:23 (E8)	
	21:59			21:01	43	07:21 (E5)	19:42		18:22		18	16:11	10:46 (E7)		15:38	56	11:09 (E7)	
14	04:45			05:41		06:38 (E5)	06:43		07:44			07:51			08:43		09:24 (E8)	
	21:58			20:59	43	07:21 (E5)	19:39		18:19		22	16:09	10:48 (E7)		15:38	55	11:09 (E7)	
15	04:46			05:43		06:38 (E5)	06:45		07:46	08:47 (E6)		07:53			10:24 (E7)	08:44	09:25 (E8)	
	21:57			20:57	43	07:21 (E5)	19:37		18:17	11 08:58 (E6)		16:07	25	10:49 (E7)	15:38	54	11:09 (E7)	
16	04:48			05:45		06:38 (E5)	06:47		07:48	08:44 (E6)		07:55			09:14 (E8)	08:45	09:26 (E8)	
	21:55			20:54	42	07:20 (E5)	19:34		18:14	16 09:00 (E6)		16:06	34	10:52 (E7)	15:38	53	11:10 (E7)	
17	04:49			05:47		06:38 (E5)	06:49		07:50	08:43 (E6)		07:57			09:11 (E8)	08:46	09:27 (E8)	
	21:54			20:52	41	07:19 (E5)	19:31		18:12	18 09:01 (E6)		16:04	42	10:53 (E7)	15:38	52	11:10 (E7)	
18	04:51			05:49		06:38 (E5)	06:51		07:52	08:41 (E6)		07:59			09:10 (E8)	08:46	09:28 (E8)	
	21:52			20:49	41	07:19 (E5)	19:28		18:09	21 09:02 (E6)		16:02	47	10:55 (E7)	15:38	52	11:11 (E7)	
19	04:52			05:51		06:38 (E5)	06:53		07:54	08:41 (E6)		08:01			09:09 (E8)	08:47	09:29 (E8)	
	21:51			20:47	40	07:18 (E5)	19:26		18:07	22 09:03 (E6)		16:01	51	10:56 (E7)	15:38	52	11:12 (E7)	
20	04:54			05:53		06:39 (E5)	06:55		07:57	08:40 (E6)		08:03			09:08 (E8)	08:48	09:29 (E8)	
	21:49			20:45	38	07:17 (E5)	19:23		18:04	23 09:03 (E6)		15:59	54	10:56 (E7)	15:38	51	11:12 (E7)	
21	04:56			05:55		06:39 (E5)	06:57		07:59	08:39 (E6)		08:05			09:07 (E8)	08:49	09:30 (E8)	
	21:48			20:42	38	07:17 (E5)	19:20		18:02	24 09:03 (E6)		15:57	58	10:57 (E7)	15:39	50	11:12 (E7)	
22	04:57			05:57		06:40 (E5)	06:59		08:01	08:38 (E6)		08:07			09:08 (E8)	08:49	09:30 (E8)	
	21:46			20:40	36	07:16 (E5)	19:18		17:59	25 09:03 (E6)		15:56	58	10:58 (E7)	15:39	50	11:12 (E7)	
23	04:59			05:59		06:41 (E5)	07:01		08:03	08:39 (E6)		08:09			09:07 (E8)	08:50	09:31 (E8)	
	21:45			20:37	34	07:15 (E5)	19:15		17:57	24 09:03 (E6)		15:54	62	10:59 (E7)	15:40	50	11:13 (E7)	
24	05:01			06:01		06:42 (E5)	07:03		08:05	08:39 (E6)		08:11			09:07 (E8)	08:50	09:31 (E8)	
	21:43			20:35	31	07:13 (E5)	19:12		17:54	24 09:03 (E6)		15:53	62	10:59 (E7)	15:40	51	11:14 (E7)	
25	05:02			06:03		06:42 (E5)	07:05		07:07	07:39 (E6)		08:13			09:07 (E8)	08:50	09:31 (E8)	
	21:41			20:32	29	07:11 (E5)	19:10		16:52	23 08:02 (E6)		15:52	64	11:00 (E7)	15:41	52	11:14 (E7)	
26	05:04		06:55 (E5)	06:05		06:43 (E5)	07:07		07:09	07:41 (E6)		08:15			09:08 (E8)	08:51	09:31 (E8)	
	21:39	10	07:05 (E5)	20:29	26	07:09 (E5)	19:07		16:50	21 08:02 (E6)		15:50	64	11:01 (E7)	15:42	52	11:14 (E7)	
27	05:06		06:53 (E5)	06:07		06:45 (E5)	07:09		07:12	07:43 (E6)		08:17			09:08 (E8)	08:51	09:31 (E8)	
	21:38	15	07:08 (E5)	20:27	22	07:07 (E5)	19:04		16:47	18 08:01 (E6)		15:49	65	11:02 (E7)	15:43	53	11:15 (E7)	
28	05:08		06:50 (E5)	06:09		06:48 (E5)	07:11		07:14	07:45 (E6)		08:19			09:08 (E8)	08:51	09:31 (E8)	
	21:36	20	07:10 (E5)	20:24	16	07:04 (E5)	19:02		16:45	14 07:59 (E6)		15:48	66	11:02 (E7)	15:43	54	11:15 (E7)	
29	05:10		06:49 (E5)	06:11		06:54 (E5)	07:13		07:16	07:48 (E6)		08:21			09:08 (E8)	08:51	09:31 (E8)	
	21:34	23	07:12 (E5)	20:22	3	06:57 (E5)	18:59		16:43	11 07:59 (E6)		15:47	67	11:03 (E7)	15:44	54	11:16 (E7)	
30	05:12		06:48 (E5)	06:13			07:15		07:18	07:50 (E6)		08:22			09:09 (E8)	08:51	09:31 (E8)	
	21:32	25	07:13 (E5)	20:19			18:56		16:40	6 07:56 (E6)		15:46	66	11:03 (E7)	15:45	56	11:17 (E7)	
31	05:14		06:46 (E5)	06:15					07:20						08:51	09:31 (E8)		
	21:30	28	07:14 (E5)	20:17					16:38						15:46	56	11:17 (E7)	
Potential sun hours	529			469				385	324		247				216			
Total, worst case		121			1020				301		935				1767			
Sun reduction		0.49			0.50				0.26		0.08				0.07			
Oper. time red.		0.96			0.96				0.96		0.96				0.96			
Wind dir. red.		0.65			0.65				0.62		0.61				0.61			
Total reduction		0.31			0.31				0.15		0.05				0.04			
Total, real		38			320				47		45				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)
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Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:11 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	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:09 17:49	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	08:23 15:46	08:51 15:46
31	08:17 16:43	07:07 17:51	05:51 18:51	05:31 20:51	04:37 21:51	04:27 21:51	05:14 21:30	06:15 20:17	07:21 16:38	07:21 15:47	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:13 (E7) 19:53	05:32 20:55	04:36 21:53
2	08:51 15:49	08:13 16:47	07:08 17:50	08:15 (E7) 19:55	05:30 20:58	04:35 21:54
3	08:50 15:50	08:11 16:50	07:06 17:52	08:27 (E7) 19:55	05:28 21:00	04:33 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:32 21:57
5	08:49 15:53	08:07 16:54	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	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	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	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:15 21:12	04:28 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04
12	08:44 16:04	07:52 17:10	08:20 (E7) 18:11	06:20 20:16	06:45 (E5) 21:18	05:08 22:05
13	08:43 16:06	07:50 17:12	08:18 (E7) 18:13	06:17 20:18	06:43 (E5) 21:20	05:06 22:06
14	08:42 16:08	07:47 17:14	08:31 (E7) 18:15	06:14 20:20	06:51 (E5) 21:22	05:04 22:07
15	08:41 16:10	07:45 17:17	08:13 (E7) 18:17	06:12 20:22	06:38 (E5) 21:24	05:02 22:07
16	08:40 16:12	07:43 17:19	08:35 (E7) 18:20	06:09 20:24	06:35 (E5) 21:26	05:00 22:08
17	08:39 16:14	07:40 17:21	08:11 (E7) 18:22	06:07 20:26	06:33 (E5) 21:27	04:59 22:09
18	08:38 16:16	07:38 17:23	08:36 (E7) 18:24	06:04 20:28	06:31 (E5) 21:29	04:57 22:09
19	08:36 16:18	07:35 17:25	08:10 (E7) 18:26	06:02 20:30	06:53 (E5) 21:31	04:55 22:09
20	08:35 16:20	07:33 17:28	08:37 (E7) 18:28	05:59 20:33	06:31 (E5) 21:33	04:53 22:10
21	08:33 16:22	07:31 17:30	08:09 (E7) 18:30	05:57 20:35	06:52 (E5) 21:35	04:52 22:10
22	08:32 16:24	07:28 17:32	08:09 (E7) 18:32	05:54 20:37	06:32 (E5) 21:37	04:50 22:10
23	08:30 16:26	07:26 17:34	08:09 (E7) 18:34	05:52 20:39	06:32 (E5) 21:38	04:48 22:10
24	08:29 16:28	07:23 17:37	08:09 (E7) 18:36	05:49 20:41	06:49 (E5) 21:40	04:47 22:10
25	08:27 16:30	07:21 17:39	08:37 (E7) 18:38	05:47 20:43	06:33 (E5) 21:42	04:45 22:10
26	08:26 16:32	07:18 17:41	08:10 (E7) 18:40	05:44 20:45	06:48 (E5) 21:43	04:44 22:10
27	08:24 16:34	07:16 17:43	08:35 (E7) 18:42	05:42 20:47	06:35 (E5) 21:45	04:42 22:10
28	08:22 16:36	07:13 17:45	08:34 (E7) 18:43	05:39 20:49	06:47 (E5) 21:47	04:41 22:10
29	08:20 16:39		08:12 (E7) 18:45	05:37 20:51	06:37 (E5) 21:48	04:39 22:10
30	08:19 16:41		06:57 19:47	05:35 20:53	04:39 21:50	04:28 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		400	30	232		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.62	0.62	0.65		
Total reduction		0.12	0.25	0.31		
Total, real		48	7	73		

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	05:17 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 16:31	08:28 15:43
4	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	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	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	07:29 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	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:52 (E7) 08:59 (E7)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:48 (E7) 09:03 (E7)	07:46 16:13
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:46 (E7) 09:04 (E7)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	08:44 (E7) 09:05 (E7)	07:51 16:09
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:43 (E7) 09:07 (E7)	07:53 16:07
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	08:42 (E7) 09:08 (E7)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:41 (E7) 09:08 (E7)	07:57 16:04
18	04:51 21:53	05:49 20:50	06:51 19:29	07:52 18:09	08:40 (E7) 09:08 (E7)	07:59 16:02
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:40 (E7) 09:09 (E7)	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:40 (E7) 09:08 (E7)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:39 (E7) 09:08 (E7)	08:05 15:58
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:39 (E7) 09:07 (E7)	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:40 (E7) 09:08 (E7)	08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:40 (E7) 09:07 (E7)	08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	07:40 (E7) 08:05 (E7)	08:13 15:52
26	05:04 21:39	06:05 20:30	07:07 19:07	08:09 16:50	07:42 (E7) 08:05 (E7)	08:15 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 16:47	07:43 (E7) 08:04 (E7)	08:17 15:49
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 16:45	07:45 (E7) 08:02 (E7)	08:19 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 16:43	07:48 (E7) 08:00 (E7)	08:21 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:40	07:50 (E7) 07:57 (E7)	08:22 15:46
31	05:14 21:30	06:15 20:17	07:17 16:38	08:19 16:38	07:57 (E7)	08:24 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		231		440		
Sun reduction		0.50		0.26		
Oper. time red.		0.96		0.96		
Wind dir. red.		0.65		0.62		
Total reduction		0.31		0.15		
Total, real		72		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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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	04:49 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	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 16:34	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	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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	16:02 (E16) 17:47	07:11 17:16 (E15)	06:49 19:53	07:30 (E11) 20:55
2	08:50 15:49	08:13 16:47	15:58 (E16) 17:50	07:08 17:20 (E15)	06:46 19:55	07:29 (E11) 20:57
3	08:50 15:51	08:11 16:50	15:56 (E16) 17:52	07:05 17:13 (E15)	06:43 19:57	07:28 (E11) 20:59
4	08:50 15:52	08:09 16:52	15:55 (E16) 17:54	07:03 17:11 (E15)	06:41 19:59	07:28 (E11) 21:01
5	08:49 15:53	08:07 16:54	15:53 (E16) 17:56	07:00 17:27 (E15)	06:38 20:01	07:27 (E11) 21:03
6	08:49 15:55	08:05 16:56	15:53 (E16) 17:58	06:58 17:30 (E15)	06:35 20:03	07:28 (E11) 21:05
7	08:48 15:56	08:02 16:59	15:52 (E16) 18:00	06:55 17:30 (E15)	06:33 20:05	07:28 (E11) 21:08
8	08:47 15:58	08:00 17:01	15:51 (E16) 18:03	06:53 17:30 (E15)	06:30 20:07	07:27 (E11) 21:10
9	08:47 15:59	07:58 17:03	15:51 (E16) 18:05	06:50 17:30 (E15)	06:27 20:09	07:28 (E11) 21:12
10	08:46 16:01	07:56 17:05	15:51 (E16) 18:07	06:47 17:30 (E15)	06:25 20:12	07:28 (E11) 21:14
11	08:45 16:03	07:54 17:08	15:50 (E16) 18:09	06:45 17:29 (E15)	06:22 20:14	07:29 (E11) 21:16
12	08:44 16:04	07:52 17:10	15:50 (E16) 18:11	06:42 17:28 (E15)	06:20 20:16	07:30 (E11) 21:18
13	08:43 16:06	07:49 17:12	15:51 (E16) 18:13	06:39 17:28 (E15)	06:17 20:18	07:31 (E11) 21:19
14	08:42 16:08	07:47 17:14	15:50 (E16) 18:15	06:37 17:15 (E12)	06:14 20:20	07:32 (E11) 21:21
15	08:41 16:10	07:45 17:16	15:51 (E16) 18:17	06:34 17:15 (E12)	06:12 20:22	07:35 (E11) 21:23
16	08:40 16:12	07:42 17:19	15:51 (E16) 18:19	06:31 17:16 (E12)	06:09 20:24	07:37 (E11) 21:25
17	08:39 16:14	07:40 17:21	15:52 (E16) 18:22	06:29 17:39 (E12)	06:07 20:26	04:59 21:27
18	08:37 16:16	07:38 17:23	15:52 (E16) 18:24	06:26 17:16 (E12)	06:04 20:28	04:57 21:29
19	08:36 16:18	07:35 17:25	15:54 (E16) 18:26	06:23 17:18 (E12)	06:02 20:30	04:55 21:31
20	08:35 16:20	07:33 17:28	15:55 (E16) 18:28	06:21 17:19 (E12)	05:59 20:32	04:53 21:33
21	08:33 16:22	07:30 17:30	15:57 (E16) 18:30	06:18 17:22 (E12)	05:57 20:34	04:52 21:35
22	08:32 16:24	07:28 17:32	15:59 (E16) 18:32	06:15 17:23 (E12)	05:54 20:37	04:50 21:36
23	08:30 16:26	07:26 17:34	16:11 (E16) 18:34	06:13 18:34	05:52 20:39	04:48 21:38
24	08:29 16:28	07:23 17:36	06:10 18:36	06:44 (E11) 06:55 (E11)	05:49 20:41	04:47 21:40
25	08:27 16:30	07:21 17:39	06:07 18:38	06:40 (E11) 06:58 (E11)	05:47 20:43	04:45 21:41
26	08:25 16:32	07:18 17:41	06:05 18:40	06:38 (E11) 07:01 (E11)	05:44 20:45	04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:42	06:36 (E11) 07:02 (E11)	05:42 20:47	04:42 21:45
28	08:22 16:36	07:13 17:45	05:59 18:45	06:34 (E11) 07:03 (E11)	05:39 20:49	04:41 21:46
29	08:20 16:39	07:11 17:47	05:57 19:47	07:33 (E11) 08:04 (E11)	05:37 20:51	04:39 21:48
30	08:18 16:41	07:09 17:49	06:54 19:49	07:31 (E11) 08:04 (E11)	05:35 20:53	04:38 21:49
31	08:16 16:43	07:07 17:51	06:51 19:51	07:30 (E11) 08:04 (E11)	05:33 20:55	04:37 21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case		514	819	539	1032	705
Sun reduction		0.20	0.41	0.50	0.57	0.56
Oper. time red.		0.96	0.96	0.96	0.96	0.96
Wind dir. red.		0.67	0.64	0.65	0.66	0.67
Total reduction		0.13	0.25	0.31	0.36	0.36
Total, real		66	207	168	372	253

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

July		August		September		October		November		December	
1	04:30	05:57 (E10)	05:16	05:58 (E10)	06:17	07:28 (E11)	07:17	07:55 (E12)	07:22	15:20 (E16)	08:24
2	22:09	24 06:21 (E10)	21:28	39 20:28 (E13)	20:14	30 07:58 (E11)	18:53	48 18:08 (E15)	16:36	30 15:50 (E16)	15:45
3	04:31	05:58 (E10)	05:17	05:59 (E10)	06:19	07:27 (E11)	07:19	07:55 (E12)	07:25	15:20 (E16)	08:26
4	22:08	24 06:22 (E10)	21:26	41 20:30 (E13)	20:11	32 07:59 (E11)	18:51	49 18:08 (E15)	16:34	29 15:49 (E16)	15:44
5	04:32	05:58 (E10)	05:19	06:00 (E10)	06:21	07:26 (E11)	07:21	07:55 (E12)	07:27	15:21 (E16)	08:27
6	22:08	24 06:22 (E10)	21:24	41 20:31 (E13)	20:09	34 08:00 (E11)	18:48	49 18:08 (E15)	16:31	27 15:48 (E16)	15:43
7	04:33	05:58 (E10)	05:21	06:01 (E10)	06:23	07:24 (E11)	07:23	07:55 (E12)	07:29	15:22 (E16)	08:29
8	22:07	25 06:23 (E10)	21:21	42 20:32 (E13)	20:06	35 07:59 (E11)	18:45	47 18:07 (E15)	16:29	26 15:48 (E16)	15:42
9	04:34	05:57 (E10)	05:23	06:01 (E10)	06:25	07:24 (E11)	07:25	07:56 (E12)	07:31	15:22 (E16)	08:31
10	22:06	27 06:24 (E10)	21:19	40 20:32 (E13)	20:03	35 07:59 (E11)	18:43	45 18:07 (E15)	16:27	25 15:47 (E16)	15:42
11	04:35	05:57 (E10)	05:25	06:03 (E10)	06:27	07:23 (E11)	07:27	07:57 (E12)	07:33	15:24 (E16)	08:32
12	22:06	27 06:24 (E10)	21:17	39 20:33 (E13)	20:01	36 07:59 (E11)	18:40	42 18:06 (E15)	16:25	22 15:46 (E16)	15:41
13	04:36	05:57 (E10)	05:27	06:05 (E10)	06:29	07:23 (E11)	07:29	07:58 (E12)	07:35	15:25 (E16)	08:34
14	22:05	28 06:25 (E10)	21:15	35 20:33 (E13)	19:58	36 07:59 (E11)	18:38	37 18:05 (E15)	16:23	20 15:45 (E16)	15:40
15	04:37	05:57 (E10)	05:29	06:09 (E10)	06:31	07:22 (E11)	07:31	08:00 (E12)	07:38	15:26 (E16)	08:35
16	22:04	28 06:25 (E10)	21:13	29 20:34 (E13)	19:55	37 07:59 (E11)	18:35	31 18:04 (E15)	16:21	17 15:43 (E16)	15:40
17	04:38	05:57 (E10)	05:31	20:13 (E13)	06:33	07:22 (E11)	07:33	17:45 (E15)	07:40	15:29 (E16)	08:36
18	22:03	29 06:26 (E10)	21:11	21 20:34 (E13)	19:53	37 07:59 (E11)	18:32	16 18:01 (E15)	16:19	12 15:41 (E16)	15:39
19	04:39	05:56 (E10)	05:33	20:12 (E13)	06:35	07:22 (E11)	07:36	17:47 (E15)	07:42	15:33 (E16)	08:38
20	22:02	30 06:26 (E10)	21:08	21 20:33 (E13)	19:50	36 07:58 (E11)	18:30	12 17:59 (E15)	16:17	3 15:36 (E16)	15:39
21	04:41	05:56 (E10)	05:35	20:12 (E13)	06:37	07:22 (E11)	07:38	17:49 (E15)	07:44		08:39
22	22:01	30 06:26 (E10)	21:06	21 20:33 (E13)	19:47	36 07:58 (E11)	18:27	7 17:56 (E15)	16:15		15:38
23	04:42	05:57 (E10)	05:37	20:12 (E13)	06:39	07:22 (E11)	07:40		07:46		08:40
24	22:00	31 06:27 (E10)	21:04	19 20:31 (E13)	19:45	35 07:57 (E11)	18:25		16:13		15:38
25	04:43	05:56 (E10)	05:39	20:13 (E13)	06:41	07:23 (E11)	07:42		07:48		08:41
26	21:59	32 06:28 (E10)	21:01	16 20:29 (E13)	19:42	33 07:56 (E11)	18:22		16:11		15:38
27	04:45	05:56 (E10)	05:41	20:13 (E13)	06:43	07:23 (E11)	07:44		07:50		08:42
28	21:58	32 06:28 (E10)	20:59	14 20:27 (E13)	19:39	32 07:55 (E11)	18:19		16:09		15:38
29	04:46	05:55 (E10)	05:43	20:14 (E13)	06:45	07:24 (E11)	07:46		07:53		08:43
30	21:56	33 06:28 (E10)	20:57	11 20:25 (E13)	19:37	29 07:53 (E11)	18:17		16:07		15:38
31	04:48	05:56 (E10)	05:45	20:16 (E13)	06:47	07:25 (E11)	07:48		07:55		08:44
32	21:55	33 06:29 (E10)	20:54	7 20:23 (E13)	19:34	27 07:52 (E11)	18:14		16:06		15:38
33	04:49	05:55 (E10)	05:47	20:17 (E13)	06:49	07:26 (E11)	07:50		07:57		08:45
34	21:54	34 06:29 (E10)	20:52	2 20:19 (E13)	19:31	24 07:50 (E11)	18:12		16:04		15:38
35	04:51	05:56 (E10)	05:49		06:51	07:28 (E11)	07:52		07:59		08:46
36	21:52	34 06:30 (E10)	20:49		19:28	19 07:47 (E11)	18:09		16:02		15:38
37	04:52	05:55 (E10)	05:51		06:53	07:30 (E11)	07:54	16:33 (E16)	08:01		08:47
38	21:51	35 06:30 (E10)	20:47		19:26	13 07:43 (E11)	18:07	6 16:39 (E16)	16:01		15:38
39	04:54	05:56 (E10)	05:53		06:55		07:56	16:29 (E16)	08:03		08:48
40	21:49	34 06:30 (E10)	20:44		19:23		18:04	14 16:43 (E16)	15:59		15:39
41	04:56	05:55 (E10)	05:55		06:57		07:59	16:27 (E16)	08:05		08:48
42	21:48	35 06:30 (E10)	20:42		19:20		18:02	18 16:45 (E16)	15:58		15:39
43	04:57	05:56 (E10)	05:57		06:59	08:09 (E12)	08:01	16:24 (E16)	08:07		08:49
44	21:46	35 06:31 (E10)	20:39		19:18	3 08:12 (E12)	17:59	22 16:46 (E16)	15:56		15:39
45	04:59	05:55 (E10)	05:59		07:01	08:04 (E12)	08:03	16:24 (E16)	08:09		08:49
46	21:44	35 06:30 (E10)	20:37		19:15	12 08:16 (E12)	17:57	24 16:48 (E16)	15:55		15:40
47	05:01	05:56 (E10)	06:01		07:03	08:01 (E12)	08:05	16:22 (E16)	08:11		08:50
48	21:43	34 06:30 (E10)	20:34		19:12	17 08:18 (E12)	17:54	26 16:48 (E16)	15:53		15:40
49	05:03	05:55 (E10)	06:03		07:05	07:59 (E12)	07:07	15:21 (E16)	08:13		08:50
50	21:41	35 06:30 (E10)	20:32		19:10	21 08:20 (E12)	16:52	28 15:49 (E16)	15:52		15:41
51	05:04	05:56 (E10)	06:05		07:07	07:58 (E12)	07:09	15:20 (E16)	08:15		08:50
52	21:39	34 06:30 (E10)	20:29		19:07	22 08:20 (E12)	16:50	29 15:49 (E16)	15:51		15:42
53	05:06	05:56 (E10)	06:07	07:39 (E11)	07:09	07:57 (E12)	07:12	15:20 (E16)	08:17		08:51
54	21:37	34 06:30 (E10)	20:27	11 07:50 (E11)	19:04	31 18:01 (E15)	16:47	30 15:50 (E16)	15:49		15:43
55	05:08	05:56 (E10)	06:09		07:11	07:56 (E12)	07:14	15:20 (E16)	08:19		08:51
56	21:35	33 06:29 (E10)	20:24	18 07:53 (E11)	19:01	39 18:04 (E15)	16:45	30 15:50 (E16)	15:48		15:44
57	05:10	05:57 (E10)	06:11	07:33 (E11)	07:13	07:55 (E12)	07:16	15:20 (E16)	08:20		08:51
58	21:34	32 06:29 (E10)	20:22	22 07:55 (E11)	18:59	43 18:05 (E15)	16:43	30 15:50 (E16)	15:47		15:45
59	05:12	05:57 (E10)	06:13	07:31 (E11)	07:15	07:56 (E12)	07:18	15:20 (E16)	08:22		08:51
60	21:32	32 06:29 (E10)	20:19	25 07:56 (E11)	18:56	46 18:07 (E15)	16:40	30 15:50 (E16)	15:46		15:46
61	05:14	05:58 (E10)	06:15	07:29 (E11)			07:20	15:20 (E16)			08:51
62	21:30	33 20:25 (E13)	20:16	29 07:58 (E11)			16:38	29 15:49 (E16)			15:47
Potential sun hours	529		469		385		324		247		216
Total, worst case		966		543		830		699		211	
Sun reduction		0.49		0.50		0.43		0.26		0.08	
Oper. time red.		0.96		0.96		0.96		0.96		0.96	
Wind dir. red.		0.67		0.64		0.64		0.65		0.67	
Total reduction		0.32		0.31		0.26		0.16		0.05	
Total, real		306		167		220		113		11	

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:49 19:53	07:31 (E11) 08:07 (E11)	05:32 20:55	20:02 (E13) 21:52	04:36 21:52	05:48 (E10) 06:20 (E10)
2	08:50 15:49	08:13 16:47	16:00 (E16) 17:50	17:16 (E15) 19:55	07:30 (E11) 08:07 (E11)	05:30 20:57	20:02 (E13) 21:54	04:35 21:54	05:48 (E10) 06:19 (E10)
3	08:50 15:51	08:11 16:50	15:58 (E16) 17:52	17:13 (E15) 19:57	07:29 (E11) 08:06 (E11)	05:28 20:59	20:02 (E13) 21:55	04:34 21:55	05:48 (E10) 06:19 (E10)
4	08:50 15:52	08:09 16:52	15:56 (E16) 17:54	17:11 (E15) 19:59	07:29 (E11) 08:06 (E11)	05:26 21:01	20:02 (E13) 21:56	04:33 21:56	05:49 (E10) 06:19 (E10)
5	08:49 15:53	08:07 16:54	15:54 (E16) 17:56	17:26 (E12) 20:01	07:29 (E11) 08:06 (E11)	05:23 21:03	20:23 (E13) 21:58	04:32 21:58	05:50 (E10) 06:19 (E10)
6	08:49 15:55	08:05 16:56	15:54 (E16) 17:58	17:24 (E12) 20:03	07:29 (E11) 08:06 (E11)	05:21 21:05	20:23 (E13) 21:59	04:31 21:59	05:50 (E10) 06:19 (E10)
7	08:48 15:56	08:02 16:59	15:53 (E16) 18:00	17:22 (E12) 20:05	07:29 (E11) 08:05 (E11)	05:19 21:08	20:22 (E13) 22:00	04:30 22:00	05:50 (E10) 06:18 (E10)
8	08:47 15:58	08:00 17:01	15:52 (E16) 18:03	17:20 (E12) 20:07	07:28 (E11) 08:04 (E11)	05:17 21:10	20:22 (E13) 22:01	04:29 22:01	05:51 (E10) 06:19 (E10)
9	08:47 15:59	07:58 17:03	15:52 (E16) 18:05	17:19 (E12) 20:09	07:29 (E11) 08:03 (E11)	05:15 21:12	20:22 (E13) 22:02	04:28 22:02	05:51 (E10) 06:18 (E10)
10	08:46 16:01	07:56 17:05	15:52 (E16) 18:07	17:18 (E12) 20:12	07:29 (E11) 08:02 (E11)	05:13 21:14	20:22 (E13) 22:03	04:28 22:03	05:52 (E10) 06:18 (E10)
11	08:45 16:03	07:54 17:08	15:51 (E16) 18:09	17:17 (E12) 20:14	07:30 (E11) 08:01 (E11)	05:10 21:16	20:22 (E13) 22:04	04:27 22:04	05:52 (E10) 06:18 (E10)
12	08:44 16:04	07:52 17:10	15:51 (E16) 18:11	17:16 (E12) 20:16	07:31 (E11) 07:59 (E11)	05:08 21:18	20:22 (E13) 22:05	04:27 22:05	05:53 (E10) 06:18 (E10)
13	08:43 16:06	07:49 17:12	15:52 (E16) 18:13	17:17 (E12) 20:18	07:32 (E11) 07:58 (E11)	05:06 21:19	20:22 (E13) 22:06	04:26 22:06	05:54 (E10) 06:18 (E10)
14	08:42 16:08	07:47 17:14	15:51 (E16) 18:15	17:16 (E12) 20:20	07:33 (E11) 07:55 (E11)	05:04 21:21	20:22 (E13) 22:06	04:26 22:06	05:53 (E10) 06:17 (E10)
15	08:41 16:10	07:45 17:16	15:52 (E16) 18:17	17:16 (E12) 20:22	07:36 (E11) 07:53 (E11)	05:02 21:23	20:22 (E13) 22:07	04:26 22:07	05:54 (E10) 06:18 (E10)
16	08:40 16:12	07:42 17:19	15:52 (E16) 18:19	17:17 (E12) 20:24	07:39 (E11) 07:48 (E11)	05:01 21:25	20:22 (E13) 22:08	04:25 22:08	05:54 (E10) 06:18 (E10)
17	08:39 16:14	07:40 17:21	15:53 (E16) 18:22	17:17 (E12) 20:26	07:48 (E11) 07:59 (E11)	04:59 21:27	20:22 (E13) 22:08	04:25 22:08	05:55 (E10) 06:18 (E10)
18	08:37 16:16	07:38 17:23	15:53 (E16) 18:24	17:18 (E12) 20:28	07:58 (E11) 07:58 (E11)	04:57 21:29	20:22 (E13) 22:09	04:25 22:09	05:55 (E10) 06:18 (E10)
19	08:36 16:18	07:35 17:25	15:55 (E16) 18:26	17:20 (E12) 20:30	07:58 (E11) 07:58 (E11)	04:55 21:31	20:22 (E13) 22:09	04:25 22:09	05:55 (E10) 06:18 (E10)
20	08:35 16:20	07:33 17:28	15:56 (E16) 18:28	17:21 (E12) 20:32	07:59 (E11) 07:59 (E11)	04:53 21:33	20:22 (E13) 22:09	04:25 22:09	05:56 (E10) 06:18 (E10)
21	08:33 16:22	07:30 17:30	15:58 (E16) 18:30	17:26 (E12) 20:34	07:59 (E11) 07:59 (E11)	04:52 21:35	20:22 (E13) 22:10	04:25 22:10	05:57 (E10) 06:19 (E10)
22	08:32 16:24	07:28 17:32	16:00 (E16) 18:32	17:28 (E12) 20:37	07:59 (E11) 07:59 (E11)	04:50 21:36	20:22 (E13) 22:10	04:25 22:10	05:57 (E10) 06:19 (E10)
23	08:30 16:26	07:26 17:34	16:12 (E16) 18:34	17:30 (E12) 20:39	07:59 (E11) 07:59 (E11)	04:48 21:38	20:22 (E13) 22:10	04:26 22:10	05:56 (E10) 06:19 (E10)
24	08:29 16:28	07:23 17:36	16:10 (E16) 18:36	17:30 (E12) 20:41	07:59 (E11) 07:59 (E11)	04:47 21:40	20:22 (E13) 22:10	04:26 22:10	05:56 (E10) 06:19 (E10)
25	08:27 16:30	07:21 17:39	16:07 (E16) 18:38	17:30 (E12) 20:43	07:59 (E11) 07:59 (E11)	04:45 21:41	20:22 (E13) 22:10	04:26 22:10	05:57 (E10) 06:20 (E10)
26	08:25 16:32	07:18 17:41	16:05 (E16) 18:40	17:30 (E12) 20:45	07:59 (E11) 07:59 (E11)	04:44 21:43	20:22 (E13) 22:10	04:27 22:10	05:57 (E10) 06:20 (E10)
27	08:24 16:34	07:16 17:43	16:02 (E16) 18:42	17:30 (E12) 20:47	07:59 (E11) 07:59 (E11)	04:42 21:45	20:22 (E13) 22:10	04:27 22:10	05:57 (E10) 06:21 (E10)
28	08:22 16:36	07:13 17:45	15:59 (E16) 18:45	17:30 (E12) 20:49	07:59 (E11) 07:59 (E11)	04:41 21:46	20:22 (E13) 22:10	04:28 22:10	05:56 (E10) 06:21 (E10)
29	08:20 16:39	07:11 17:47	15:57 (E16) 18:47	17:30 (E12) 20:51	07:59 (E11) 07:59 (E11)	04:39 21:48	20:22 (E13) 22:09	04:28 22:09	05:57 (E10) 06:21 (E10)
30	08:18 16:41	07:09 17:49	15:54 (E16) 18:49	17:30 (E12) 20:53	07:59 (E11) 07:59 (E11)	04:38 21:49	20:22 (E13) 22:09	04:29 22:09	05:57 (E10) 06:22 (E10)
31	08:16 16:43	07:07 17:51	15:51 (E16) 18:51	17:30 (E12) 20:55	07:59 (E11) 07:59 (E11)	04:37 21:51	20:22 (E13) 22:09	04:30 22:09	05:57 (E10) 06:22 (E10)
Potential sun hours	235	266	366	426	508	528			
Total, worst case			831	557	1018	763			
Sun reduction		0.20	0.41	0.50	0.57	0.56			
Oper. time red.		0.96	0.96	0.96	0.96	0.96			
Wind dir. red.		0.67	0.64	0.65	0.66	0.67			
Total reduction		0.13	0.25	0.31	0.36	0.36			
Total, real		65	210	173	367	274			

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July			August			September			October			November			December	
1	04:30		05:56 (E10)	05:16		05:58 (E10)	06:17		07:29 (E11)	07:17		07:56 (E12)	07:22		15:22 (E16)	08:24	
2	22:09	26	06:22 (E10)	21:28	33	20:24 (E13)	20:14	31	08:00 (E11)	18:53	47	18:07 (E15)	16:36	28	15:50 (E16)	15:45	
	04:31		05:56 (E10)	05:17		05:59 (E10)	06:19		07:28 (E11)	07:19		07:56 (E12)	07:25		15:22 (E16)	08:26	
3	22:08	27	06:23 (E10)	21:26	37	20:27 (E13)	20:11	33	08:01 (E11)	18:51	49	18:08 (E15)	16:34	28	15:50 (E16)	15:44	
	04:32		05:57 (E10)	05:19		06:00 (E10)	06:21		07:27 (E11)	07:21		07:56 (E12)	07:27		15:22 (E16)	08:27	
4	22:08	26	06:23 (E10)	21:24	39	20:29 (E13)	20:09	34	08:01 (E11)	18:48	49	18:08 (E15)	16:31	27	15:49 (E16)	15:43	
	04:33		05:57 (E10)	05:21		06:01 (E10)	06:23		07:25 (E11)	07:23		07:56 (E12)	07:29		15:23 (E16)	08:29	
5	22:07	27	06:24 (E10)	21:21	39	20:30 (E13)	20:06	36	08:01 (E11)	18:45	48	18:07 (E15)	16:29	26	15:49 (E16)	15:42	
	04:34		05:57 (E10)	05:23		06:02 (E10)	06:25		07:25 (E11)	07:25		07:57 (E12)	07:31		15:24 (E16)	08:31	
6	22:06	27	06:24 (E10)	21:19	38	20:30 (E13)	20:03	36	08:01 (E11)	18:43	46	18:07 (E15)	16:27	23	15:47 (E16)	15:42	
	04:35		05:56 (E10)	05:25		06:03 (E10)	06:27		07:24 (E11)	07:27		07:57 (E12)	07:33		15:25 (E16)	08:32	
7	22:06	29	06:25 (E10)	21:17	36	20:31 (E13)	20:01	37	08:01 (E11)	18:40	43	18:06 (E15)	16:25	22	15:47 (E16)	15:41	
	04:36		05:56 (E10)	05:27		06:06 (E10)	06:29		07:24 (E11)	07:29		07:58 (E12)	07:35		15:26 (E16)	08:34	
8	22:05	30	06:26 (E10)	21:15	33	20:32 (E13)	19:58	37	08:01 (E11)	18:38	39	18:05 (E15)	16:23	19	15:45 (E16)	15:40	
	04:37		05:56 (E10)	05:29		06:10 (E10)	06:31		07:23 (E11)	07:31		08:00 (E12)	07:38		15:28 (E16)	08:35	
9	22:04	30	06:26 (E10)	21:13	25	20:32 (E13)	19:55	38	08:01 (E11)	18:35	34	18:04 (E15)	16:21	15	15:43 (E16)	15:40	
	04:38		05:56 (E10)	05:31		20:12 (E13)	06:33		07:23 (E11)	07:33		08:03 (E12)	07:40		15:31 (E16)	08:36	
10	22:03	30	06:26 (E10)	21:11	21	20:33 (E13)	19:53	37	08:00 (E11)	18:32	23	18:01 (E15)	16:19	10	15:41 (E16)	15:39	
	04:39		05:56 (E10)	05:33		20:11 (E13)	06:35		07:23 (E11)	07:36		17:47 (E15)	07:42			08:38	
11	22:02	31	06:27 (E10)	21:08	21	20:32 (E13)	19:50	37	08:00 (E11)	18:30	12	17:59 (E15)	16:17			15:39	
	04:41		05:55 (E10)	05:35		20:11 (E13)	06:37		07:23 (E11)	07:38		17:48 (E15)	07:44			08:39	
12	22:01	32	06:27 (E10)	21:06	21	20:32 (E13)	19:47	36	07:59 (E11)	18:27	8	17:56 (E15)	16:15			15:38	
	04:42		05:56 (E10)	05:37		20:11 (E13)	06:39		07:23 (E11)	07:40			07:46			08:40	
13	22:00	32	06:28 (E10)	21:04	20	20:31 (E13)	19:45	36	07:59 (E11)	18:25			16:13			15:38	
	04:43		05:56 (E10)	05:39		20:11 (E13)	06:41		07:24 (E11)	07:42			07:48			08:41	
14	21:59	32	06:28 (E10)	21:01	18	20:29 (E13)	19:42	34	07:58 (E11)	18:22			16:11			15:38	
	04:45		05:55 (E10)	05:41		20:12 (E13)	06:43		07:24 (E11)	07:44			07:50			08:42	
15	21:58	33	06:28 (E10)	20:59	15	20:27 (E13)	19:39	33	07:57 (E11)	18:19			16:09			15:38	
	04:46		05:55 (E10)	05:43		20:13 (E13)	06:45		07:25 (E11)	07:46			07:53			08:43	
16	21:56	33	06:28 (E10)	20:57	12	20:25 (E13)	19:37	30	07:55 (E11)	18:17			16:07			15:38	
	04:48		05:55 (E10)	05:45		20:14 (E13)	06:47		07:26 (E11)	07:48			07:55			08:44	
17	21:55	34	06:29 (E10)	20:54	9	20:23 (E13)	19:34	28	07:54 (E11)	18:14			16:06			15:38	
	04:49		05:55 (E10)	05:47		20:14 (E13)	06:49		07:27 (E11)	07:50			07:57			08:45	
18	21:54	34	06:29 (E10)	20:52	5	20:19 (E13)	19:31	25	07:52 (E11)	18:12			16:04			15:38	
	04:51		05:55 (E10)	05:49			06:51		07:28 (E11)	07:52			07:59			08:46	
19	21:52	35	06:30 (E10)	20:49			19:28	22	07:50 (E11)	18:09			16:02			15:38	
	04:52		05:55 (E10)	05:51			06:53		07:30 (E11)	07:54		16:34 (E16)	08:01			08:47	
20	21:51	35	06:30 (E10)	20:47			19:26	16	07:46 (E11)	18:07	5	16:39 (E16)	16:01			15:38	
	04:54		05:55 (E10)	05:53			06:55		07:34 (E11)	07:56		16:30 (E16)	08:03			08:48	
21	21:49	36	06:31 (E10)	20:44			19:23	6	07:40 (E11)	18:04	14	16:44 (E16)	15:59			15:39	
	04:56		05:55 (E10)	05:55			06:57			07:59		16:28 (E16)	08:05			08:48	
22	21:48	35	06:30 (E10)	20:42			19:20			18:02	18	16:46 (E16)	15:58			15:39	
	04:57		05:55 (E10)	05:57			06:59			08:01		16:26 (E16)	08:07			08:49	
23	21:46	36	06:31 (E10)	20:39			19:18			17:59	21	16:47 (E16)	15:56			15:39	
	04:59		05:55 (E10)	05:59			07:01		08:06 (E12)	08:03		16:25 (E16)	08:09			08:49	
24	21:44	35	06:30 (E10)	20:37			19:15	11	08:17 (E12)	17:57	24	16:49 (E16)	15:55			15:40	
	05:01		05:55 (E10)	06:01			07:03		08:03 (E12)	08:05		16:23 (E16)	08:11			08:50	
25	21:43	36	06:31 (E10)	20:34			19:12	16	08:19 (E12)	17:54	26	16:49 (E16)	15:53			15:40	
	05:03		05:55 (E10)	06:03			07:05		08:01 (E12)	07:07		15:22 (E16)	08:13			08:50	
26	21:41	35	06:30 (E10)	20:32			19:10	20	08:21 (E12)	16:52	28	15:50 (E16)	15:52			15:41	
	05:04		05:56 (E10)	06:05			07:07		08:00 (E12)	07:09		15:21 (E16)	08:15			08:50	
27	21:39	34	06:30 (E10)	20:29			19:07	22	08:22 (E12)	16:50	29	15:50 (E16)	15:51			15:42	
	05:06		05:56 (E10)	06:07		07:40 (E11)	07:09		07:58 (E12)	07:12		15:22 (E16)	08:17			08:51	
28	21:37	34	06:30 (E10)	20:27	11	07:51 (E11)	19:04	29	18:00 (E15)	16:47	29	15:51 (E16)	15:49			15:43	
	05:08		05:56 (E10)	06:09			07:37 (E11)	07:11		07:57 (E12)	07:14		15:21 (E16)	08:19		08:51	
29	21:35	33	06:29 (E10)	20:24	17	07:54 (E11)	19:01	38	18:04 (E15)	16:45	29	15:50 (E16)	15:48			15:44	
	05:10		05:56 (E10)	06:11			07:34 (E11)	07:13		07:56 (E12)	07:16		15:21 (E16)	08:20		08:51	
30	21:34	33	06:29 (E10)	20:22	22	07:56 (E11)	18:59	42	18:05 (E15)	16:43	30	15:51 (E16)	15:47			15:45	
	05:12		05:57 (E10)	06:13			07:32 (E11)	07:15		07:57 (E12)	07:18		15:21 (E16)	08:22		08:51	
31	21:32	32	06:29 (E10)	20:19	26	07:58 (E11)	18:56	45	18:07 (E15)	16:40	30	15:51 (E16)	15:46			15:46	
	05:14		05:58 (E10)	06:15			07:31 (E11)			07:20		15:21 (E16)				08:51	
	21:30	31	06:29 (E10)	20:16	28	07:59 (E11)				16:38	29	15:50 (E16)				15:47	
Potential sun hours	529			469				385			324		247			216	
Total, worst case		993			526			845			710		198				
Sun reduction		0.49			0.50			0.43			0.26		0.08				
Oper. time red.		0.96			0.96			0.96			0.96		0.96				
Wind dir. red.		0.67			0.64			0.64			0.65		0.67				
Total reduction		0.32			0.31			0.26			0.16		0.05				
Total, real		315			162			224			115		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E7)
	15:48	16:45	17:47	19:53	20:55	32 07:01 (E7)
2	08:50	08:13	07:08	06:46	05:30	06:30 (E7)
	15:49	16:47	17:50	19:55	20:57	30 07:00 (E7)
3	08:50	08:11	07:06	06:43	05:28	06:30 (E7)
	15:51	16:50	17:52	19:57	21:00	30 07:00 (E7)
4	08:50	08:09	07:03	06:41	05:26	06:31 (E7)
	15:52	16:52	17:54	19:59	21:02	28 06:59 (E7)
5	08:49	08:07	07:00	06:38	05:23	06:32 (E7)
	15:53	16:54	17:56	20:01	21:04	26 06:58 (E7)
6	08:49	08:05	06:58	06:35	05:21	06:33 (E7)
	15:55	16:56	17:58	20:03	21:06	24 06:57 (E7)
7	08:48	08:03	06:55	06:33	05:19	06:34 (E7)
	15:56	16:59	18:00	20:05	21:08	21 06:55 (E7)
8	08:48	08:00	06:53	06:30	05:17	06:35 (E7)
	15:58	17:01	18:03	20:08	21:10	19 06:54 (E7)
9	08:47	07:58	06:50	06:27	05:15	06:37 (E7)
	15:59	17:03	18:05	20:10	21:12	15 06:52 (E7)
10	08:46	07:56	06:47	06:25	05:13	06:40 (E7)
	16:01	17:05	18:07	20:12	21:14	8 06:48 (E7)
11	08:45	07:54	06:45	06:22	05:10	04:27
	16:03	17:08	18:09	20:14	21:16	22:04
12	08:44	07:52	06:42	06:20	05:08	04:27
	16:04	17:10	18:11	20:16	21:18	22:05
13	08:43	07:49	06:39	06:17	05:06	04:26
	16:06	17:12	18:13	20:18	21:20	22:06
14	08:42	07:47	06:37	06:14	05:04	04:26
	16:08	17:14	18:15	20:20	21:22	22:07
15	08:41	07:45	06:34	06:12	05:02	04:26
	16:10	17:17	18:17	5 07:04 (E8)	9 06:53 (E7)	21:24
16	08:40	07:43	06:32	06:09	05:01	04:25
	16:12	17:19	18:20	10 07:07 (E8)	16 06:56 (E7)	21:25
17	08:39	07:40	06:29	06:07	04:59	04:25
	16:14	17:21	18:22	13 07:07 (E8)	21 06:59 (E7)	21:27
18	08:37	07:38	06:26	06:04	04:57	04:25
	16:16	17:23	18:24	16 07:07 (E8)	23 06:59 (E7)	21:29
19	08:36	07:35	06:24	06:02	04:55	04:25
	16:18	17:25	18:26	19 07:08 (E8)	27 07:01 (E7)	21:31
20	08:35	07:33	06:21	05:59	04:53	04:25
	16:20	17:28	18:28	20 07:08 (E8)	28 07:01 (E7)	21:33
21	08:33	07:31	06:18	05:57	04:52	04:25
	16:22	17:30	18:30	20 07:07 (E8)	30 07:02 (E7)	21:35
22	08:32	07:28	06:15	05:54	04:50	04:25
	16:24	17:32	18:32	19 07:07 (E8)	31 07:03 (E7)	21:37
23	08:30	07:26	06:13	05:52	04:48	04:26
	16:26	17:34	18:34	18 07:06 (E8)	32 07:02 (E7)	21:38
24	08:29	07:23	06:10	05:49	04:47	04:26
	16:28	17:37	18:36	16 07:04 (E8)	33 07:03 (E7)	21:40
25	08:27	07:21	06:07	05:47	04:45	04:26
	16:30	17:39	18:38	13 07:02 (E8)	33 07:03 (E7)	21:42
26	08:26	07:18	06:05	05:44	04:44	04:27
	16:32	17:41	18:40	8 07:00 (E8)	33 07:02 (E7)	21:43
27	08:24	07:16	06:02	05:42	04:42	04:27
	16:34	17:43	18:43	20:47	34 07:03 (E7)	21:45
28	08:22	07:13	05:59	05:40	04:41	04:28
	16:36	17:45	18:45	20:49	34 07:03 (E7)	21:47
29	08:20		06:57	05:37	04:39	04:28
	16:39		19:47	20:51	33 07:02 (E7)	21:48
30	08:18		06:54	05:35	04:38	04:29
	16:41		19:49	20:53	32 07:01 (E7)	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			177	449	233	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.96	0.96	0.96	
Wind dir. red.			0.64	0.65	0.65	
Total reduction			0.25	0.31	0.36	
Total, real			45	141	83	

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	05:17 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 16:31	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 21:19	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	07:29 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 21:01	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 18:19	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 16:07	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	07:53 18:07	07:55 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:55 18:04	07:57 15:59	08:48 15:38
21	04:56 21:48	05:55 20:42	06:57 19:20	07:57 18:02	08:05 15:58	08:48 15:39
22	04:57 21:46	05:57 20:40	06:59 19:18	07:59 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 17:53	08:13 15:52	08:51 15:41
26	05:04 21:39	06:05 20:29	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 17:49	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:47	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:44	08:21 15:47	08:51 15:44
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:42	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		08:19 17:40	08:24 15:45	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		690	184			26
Sun reduction		0.50	0.43			0.07
Oper. time red.		0.96	0.96			0.96
Wind dir. red.		0.65	0.64			0.64
Total reduction		0.31	0.26			0.04
Total, real		216	48			1

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		14:17 (E13)	08:15		14:22 (E13)	07:11		06:49				05:32		04:36			
	15:48	33	14:50 (E14)	16:45	37	14:59 (E13)	17:47		19:53				20:55		21:52			
2	08:50		14:18 (E13)	08:13		14:23 (E13)	07:08		06:46				05:30		04:35			
	15:49	33	14:51 (E14)	16:47	35	14:58 (E13)	17:50		19:55				20:57		21:54			
3	08:50		14:17 (E13)	08:11		14:24 (E13)	07:06		06:43				05:28		04:34			
	15:51	34	14:51 (E14)	16:50	34	14:58 (E13)	17:52		19:57				20:59		21:55			
4	08:50		14:17 (E13)	08:09		14:26 (E13)	07:03		06:41				05:26		04:33			
	15:52	34	14:51 (E14)	16:52	31	14:57 (E13)	17:54		19:59				21:02		21:57			
5	08:49		14:18 (E13)	08:07		14:27 (E13)	07:00		06:38				05:23		04:32			
	15:53	34	14:52 (E14)	16:54	30	14:57 (E13)	17:56		20:01				21:04		21:58			
6	08:49		14:17 (E13)	08:05		14:28 (E13)	06:58		06:35				05:21		04:31			
	15:55	35	14:52 (E14)	16:56	27	14:55 (E13)	17:58		20:03				21:06		21:59			
7	08:48		14:17 (E13)	08:03		14:30 (E13)	06:55		06:33				05:19		04:30			
	15:56	35	14:52 (E14)	16:59	23	14:53 (E13)	18:00		20:05				21:08		22:00			
8	08:47		14:17 (E13)	08:00		14:33 (E13)	06:53		06:30				05:17		04:29			
	15:58	35	14:52 (E14)	17:01	18	14:51 (E13)	18:03		20:07				21:10		22:01			
9	08:47		14:17 (E13)	07:58		14:36 (E13)	06:50		06:27				05:15		04:28			
	15:59	35	14:52 (E14)	17:03	11	14:47 (E13)	18:05		20:10				21:12		22:02			
10	08:46		14:17 (E13)	07:56			06:47		06:25				05:13		04:28			
	16:01	35	14:52 (E14)	17:05			18:07		20:12				21:14		22:03			
11	08:45		14:17 (E13)	07:54			06:45		06:22			06:48 (E8)	05:10		04:27			
	16:03	35	14:52 (E14)	17:08			18:09		20:14		5	06:53 (E8)	21:16		22:04			
12	08:44		14:17 (E13)	07:52			06:42		06:20			06:45 (E8)	05:08		04:27			
	16:04	35	14:52 (E13)	17:10			18:11		20:16		10	06:55 (E8)	21:18		22:05			
13	08:43		14:17 (E13)	07:49			06:39		06:17			06:43 (E8)	05:06		04:26			
	16:06	37	14:54 (E13)	17:12			18:13		20:18		14	06:57 (E8)	21:20		22:06			
14	08:42		14:17 (E13)	07:47			06:37		06:14			06:40 (E8)	05:04		04:26			
	16:08	38	14:55 (E13)	17:14			18:15		20:20		18	06:58 (E8)	21:22		22:07			
15	08:41		14:17 (E13)	07:45			06:34		06:12			06:38 (E8)	05:02		04:26			
	16:10	38	14:55 (E13)	17:17			18:17		20:22		21	06:59 (E8)	21:24		22:07			
16	08:40		14:17 (E13)	07:43			06:31		06:09			06:36 (E8)	05:01		04:25			
	16:12	39	14:56 (E13)	17:19			18:20		20:24		23	06:59 (E8)	21:25		22:08			
17	08:39		14:17 (E13)	07:40			06:29		06:07			06:36 (E8)	04:59		04:25			
	16:14	39	14:56 (E13)	17:21			18:22		20:26		24	07:00 (E8)	21:27		22:08			
18	08:37		14:17 (E13)	07:38			06:26		06:04			06:35 (E8)	04:57		04:25			
	16:16	40	14:57 (E13)	17:23			18:24		20:28		24	06:59 (E8)	21:29		22:09			
19	08:36		14:17 (E13)	07:35			06:23		06:02			06:35 (E8)	04:55		04:25			
	16:18	40	14:57 (E13)	17:25			18:26		20:30		24	06:59 (E8)	21:31		22:09			
20	08:35		14:18 (E13)	07:33			06:21		05:59			06:35 (E8)	04:53		04:25			
	16:20	40	14:58 (E13)	17:28			18:28		20:32		23	06:58 (E8)	21:33		22:10			
21	08:33		14:18 (E13)	07:31			06:18		05:57			06:35 (E8)	04:52		04:25			
	16:22	41	14:59 (E13)	17:30			18:30		20:35		23	06:58 (E8)	21:35		22:10			
22	08:32		14:18 (E13)	07:28			06:15		05:54			06:36 (E8)	04:50		04:25			
	16:24	41	14:59 (E13)	17:32			18:32		20:37		22	06:58 (E8)	21:36		22:10			
23	08:30		14:18 (E13)	07:26			06:13		05:52			06:35 (E8)	04:48		04:26			
	16:26	41	14:59 (E13)	17:34			18:34		20:39		22	06:57 (E8)	21:38		22:10			
24	08:29		14:18 (E13)	07:23			06:10		05:49			06:36 (E8)	04:47		04:26			
	16:28	41	14:59 (E13)	17:37			18:36		20:41		20	06:56 (E8)	21:40		22:10			
25	08:27		14:19 (E13)	07:21			06:07		05:47			06:37 (E8)	04:45		04:26			
	16:30	41	15:00 (E13)	17:39			18:38		20:43		18	06:55 (E8)	21:42		22:10			
26	08:25		14:19 (E13)	07:18			06:05		05:44			06:38 (E8)	04:44		04:27			
	16:32	41	15:00 (E13)	17:41			18:40		20:45		14	06:52 (E8)	21:43		22:10			
27	08:24		14:20 (E13)	07:16			06:02		05:42			06:40 (E8)	04:42		04:27			
	16:34	40	15:00 (E13)	17:43			18:43		20:47		10	06:50 (E8)	21:45		22:10			
28	08:22		14:20 (E13)	07:13			05:59		05:40				04:41		04:28			
	16:36	40	15:00 (E13)	17:45			18:45		20:49				21:47		22:10			
29	08:20		14:21 (E13)				06:57		05:37				04:39		04:28			
	16:39	39	15:00 (E13)				19:47		20:51				21:48		22:10			
30	08:18		14:21 (E13)				06:54		05:35				04:38		04:29			
	16:41	39	15:00 (E13)				19:49		20:53				21:50		22:09			
31	08:17		14:21 (E13)				06:51						04:37					
	16:43	38	14:59 (E13)				19:51						21:51					
Potential sun hours	235			266			366		426				508		529			
Total, worst case		1166			246					315								
Sun reduction		0.13			0.20					0.50								
Oper. time red.		0.96			0.96					0.96								
Wind dir. red.		0.66			0.66					0.66								
Total reduction		0.09			0.13					0.31								
Total, real		99			32					99								

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E8) 18:54	07:17 16:36	08:24 15:45
2	04:31 22:08	05:17 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 16:31	08:27 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 21:19	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	07:29 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 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:41 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	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	08:45 15:38
18	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	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	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	08:48 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	08:49 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 17:52	08:13 15:52	08:51 15:41
26	05:04 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	08:51 15:42
27	05:06 21:37	06:07 20:27	07:09 19:04	08:12 17:47	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	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	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	05:14 21:30	06:15 20:17	07:17 18:54	08:20 17:38	08:24 15:45	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		314	5		1037	999
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.96	0.96		0.96	0.96
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.31	0.27		0.05	0.04
Total, real		99	1		55	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Kvieš i - 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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

January		February		March		April		May		June	
1	08:51	08:15	09:06 (E12)	07:11	07:49 (E10)	06:49		05:32		06:23 (E9)	04:36
	15:48	16:45	36 09:42 (E11)	17:47	27 08:16 (E10)	19:53		20:55	41	07:04 (E9)	21:52
2	08:50	08:13	09:07 (E12)	07:08	07:47 (E10)	06:46		05:30		06:23 (E9)	04:35
	15:49	16:47	35 09:42 (E11)	17:50	30 08:17 (E10)	19:55		20:57	42	07:05 (E9)	21:54
3	08:50	08:11	09:08 (E12)	07:05	07:46 (E10)	06:43		05:28		06:23 (E9)	04:34
	15:51	16:50	35 09:43 (E11)	17:52	33 08:19 (E10)	19:57		20:59	42	07:05 (E9)	21:55
4	08:50	08:09	09:10 (E12)	07:03	07:45 (E10)	06:41		05:26		06:23 (E9)	04:33
	15:52	16:52	33 09:43 (E11)	17:54	34 08:19 (E10)	19:59		21:01	42	07:05 (E9)	21:56
5	08:49	08:07	09:10 (E11)	07:00	07:43 (E10)	06:38		05:23		06:22 (E9)	04:32
	15:53	16:54	32 09:42 (E11)	17:56	36 08:19 (E10)	20:01		21:03	43	07:05 (E9)	21:58
6	08:49	08:05	09:11 (E11)	06:58	07:43 (E10)	06:35		05:21		06:22 (E9)	04:31
	15:55	16:56	31 09:42 (E11)	17:58	38 08:21 (E10)	20:03		21:05	43	07:05 (E9)	21:59
7	08:48	08:02	09:12 (E11)	06:55	07:42 (E10)	06:33		05:19		06:22 (E9)	04:30
	15:56	16:58	30 09:42 (E11)	18:00	39 08:21 (E10)	20:05		21:08	43	07:05 (E9)	22:00
8	08:47	08:00	09:13 (E11)	06:53	07:41 (E10)	06:30		05:17		06:23 (E9)	04:29
	15:58	17:01	28 09:41 (E11)	18:02	40 08:21 (E10)	20:07		21:10	41	07:04 (E9)	22:01
9	08:47	07:58	09:13 (E11)	06:50	07:41 (E10)	06:27		05:15		06:23 (E9)	04:28
	15:59	17:03	27 09:40 (E11)	18:05	40 08:21 (E10)	20:09		21:12	41	07:04 (E9)	22:02
10	08:46	07:56	09:15 (E11)	06:47	07:40 (E10)	06:25		05:12		06:23 (E9)	04:28
	16:01	17:05	24 09:39 (E11)	18:07	41 08:21 (E10)	20:12		21:14	40	07:03 (E9)	22:03
11	08:45	07:54	09:16 (E11)	06:45	07:39 (E10)	06:22		05:10		06:23 (E9)	04:27
	16:03	17:07	21 09:37 (E11)	18:09	41 08:20 (E10)	20:14		21:16	40	07:03 (E9)	22:04
12	08:44	07:52	09:18 (E11)	06:42	07:39 (E10)	06:20		05:08		06:23 (E9)	04:27
	16:04	17:10	18 09:36 (E11)	18:11	41 08:20 (E10)	20:16		21:18	39	07:02 (E9)	22:05
13	08:43	07:49	09:21 (E11)	06:39	07:39 (E10)	06:17		05:06		06:23 (E9)	04:26
	16:06	17:12	13 09:34 (E11)	18:13	41 08:20 (E10)	20:18		21:19	38	07:01 (E9)	22:06
14	08:42	07:47		06:37	07:39 (E10)	06:14		05:04		06:25 (E9)	04:26
	16:08	17:14		18:15	40 08:19 (E10)	20:20		21:21	37	07:02 (E9)	22:06
15	08:41	07:45		06:34	07:39 (E10)	06:12		05:02		06:25 (E9)	04:26
	16:10	17:16		18:17	39 08:18 (E10)	20:22		21:23	36	07:01 (E9)	22:07
16	08:40	09:15 (E12)	07:42	06:31	07:40 (E10)	06:09		05:00		06:25 (E9)	04:25
	16:12	1 09:16 (E12)	17:19	18:19	38 08:18 (E10)	20:24		21:25	35	07:00 (E9)	22:08
17	08:39	09:13 (E12)	07:40	06:29	07:40 (E10)	06:07		04:59		06:26 (E9)	04:25
	16:14	9 09:24 (E11)	17:21	18:22	36 08:16 (E10)	20:26		21:27	33	06:59 (E9)	22:08
18	08:37	09:12 (E12)	07:38	06:26	07:40 (E10)	06:04		04:57		06:27 (E9)	04:25
	16:16	16 09:28 (E11)	17:23	18:24	35 08:15 (E10)	20:28		21:29	31	06:58 (E9)	22:09
19	08:36	09:10 (E12)	07:35	06:23	07:42 (E10)	06:02		04:55		06:28 (E9)	04:25
	16:18	20 09:30 (E11)	17:25	18:26	36 17:58 (E13)	20:30	9 06:51 (E9)	21:31	29	06:57 (E9)	22:09
20	08:35	09:08 (E12)	07:33	06:21	07:43 (E10)	05:59		06:37 (E9)	04:53	06:29 (E9)	04:25
	16:20	24 09:32 (E11)	17:28	18:28	38 18:00 (E13)	20:32	17 06:54 (E9)	21:33	28	06:57 (E9)	22:10
21	08:33	09:07 (E12)	07:31	06:18	07:44 (E10)	05:57		06:34 (E9)	04:52	06:30 (E9)	04:25
	16:22	27 09:34 (E11)	17:30	18:30	38 18:02 (E13)	20:34	23 06:57 (E9)	21:35	25	06:55 (E9)	22:10
22	08:32	09:05 (E12)	07:28	06:15	07:45 (E10)	05:54		06:33 (E9)	04:50	06:31 (E9)	04:25
	16:24	30 09:35 (E11)	17:32	18:32	36 18:03 (E13)	20:37	26 06:59 (E9)	21:36	23	06:54 (E9)	22:10
23	08:30	09:04 (E12)	07:26	06:13	07:49 (E10)	05:52		06:30 (E9)	04:48	06:32 (E9)	04:26
	16:26	32 09:36 (E11)	17:34	18:34	33 18:06 (E13)	20:39	30 07:00 (E9)	21:38	20	06:52 (E9)	22:10
24	08:29	09:04 (E12)	07:23	06:10	17:47 (E13)	05:49		06:29 (E9)	04:47	06:34 (E9)	04:26
	16:28	33 09:37 (E11)	17:36	18:36	20 18:07 (E13)	20:41	32 07:01 (E9)	21:40	17	06:51 (E9)	22:10
25	08:27	09:04 (E12)	07:21	06:07	17:47 (E13)	05:47		06:28 (E9)	04:45	06:37 (E9)	04:26
	16:30	34 09:38 (E11)	17:39	18:38	19 18:06 (E13)	20:43	35 07:03 (E9)	21:41	12	06:49 (E9)	22:10
26	08:25	09:05 (E12)	07:18	08:00 (E10)	06:05	17:47 (E13)	05:44	06:26 (E9)	04:44	06:40 (E9)	04:27
	16:32	35 09:40 (E11)	17:41	6 18:06 (E10)	18:40	19 18:06 (E13)	20:45	37 07:03 (E9)	21:43	5 06:45 (E9)	22:10
27	08:24	09:05 (E12)	07:16	07:54 (E10)	06:02	17:47 (E13)	05:42	06:26 (E9)	04:42		04:27
	16:34	35 09:40 (E11)	17:43	17 08:11 (E10)	18:42	18 18:05 (E13)	20:47	37 07:03 (E9)	21:45		22:10
28	08:22	09:05 (E12)	07:13	07:51 (E10)	05:59	17:48 (E13)	05:39	06:25 (E9)	04:41		04:28
	16:36	36 09:41 (E11)	17:45	22 08:13 (E10)	18:45	15 18:03 (E13)	20:49	39 07:04 (E9)	21:46		22:10
29	08:20	09:05 (E12)		06:57	18:50 (E13)	05:37		06:24 (E9)	04:39		04:28
	16:38	37 09:42 (E11)		19:47	12 19:02 (E13)	20:51	40 07:04 (E9)	21:48			22:10
30	08:18	09:05 (E12)		06:54		18:52 (E13)	05:35	06:23 (E9)	04:38		04:29
	16:41	36 09:41 (E11)		19:49	7 18:59 (E13)	20:53	41 07:04 (E9)	21:49			22:09
31	08:16	09:05 (E12)		06:51				04:37			
	16:43	37 09:42 (E11)		19:51				21:51			
Potential sun hours	235		266		366		426		508		529
Total, worst case	442		408		960		366		866		
Sun reduction	0.13		0.20		0.41		0.50		0.57		
Oper. time red.	0.96		0.96		0.96		0.96		0.96		
Wind dir. red.	0.59		0.59		0.63		0.65		0.65		
Total reduction	0.08		0.11		0.25		0.31		0.36		
Total, real	33		47		240		114		308		

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

July		August		September		October		November		December	
1	04:30	05:16	06:33 (E9)	06:17		07:17	08:19 (E10)	07:22		08:44 (E11)	08:24
	22:09	21:28	40 07:13 (E9)	20:14		18:53	41 09:00 (E10)	16:36	25	09:09 (E11)	15:45
2	04:31	05:17	06:33 (E9)	06:19		07:19	08:18 (E10)	07:25		08:43 (E11)	08:26
	22:08	21:26	40 07:13 (E9)	20:11		18:51	41 08:59 (E10)	16:34	27	09:10 (E11)	15:44
3	04:32	05:19	06:33 (E9)	06:21		07:21	08:18 (E10)	07:27		08:42 (E11)	08:27
	22:08	21:24	41 07:14 (E9)	20:09		18:48	41 08:59 (E10)	16:31	28	09:10 (E11)	15:43
4	04:32	05:21	06:33 (E9)	06:23		07:23	08:18 (E10)	07:29		08:42 (E11)	08:29
	22:07	21:21	41 07:14 (E9)	20:06		18:45	40 08:58 (E10)	16:29	29	09:11 (E11)	15:42
5	04:33	05:23	06:32 (E9)	06:25		07:25	08:18 (E10)	07:31		08:41 (E11)	08:31
	22:06	21:19	42 07:14 (E9)	20:03		18:43	40 08:58 (E10)	16:27	31	09:12 (E11)	15:41
6	04:35	05:25	06:32 (E9)	06:27		07:27	08:18 (E10)	07:33		08:41 (E11)	08:32
	22:06	21:17	42 07:14 (E9)	20:01		18:40	39 08:57 (E10)	16:25	32	09:13 (E11)	15:41
7	04:36	05:27	06:32 (E9)	06:29		07:29	08:18 (E10)	07:35		08:39 (E12)	08:34
	22:05	21:15	42 07:14 (E9)	19:58		18:38	38 08:56 (E10)	16:23	34	09:13 (E11)	15:40
8	04:37	05:29	06:32 (E9)	06:31		07:31	08:18 (E10)	07:38		08:38 (E12)	08:35
	22:04	21:13	42 07:14 (E9)	19:55		18:35	37 08:55 (E10)	16:21	34	09:12 (E11)	15:40
9	04:38	05:31	06:32 (E9)	06:33		07:33	08:18 (E10)	07:40		08:38 (E12)	08:36
	22:03	21:11	42 07:14 (E9)	19:53		18:32	36 08:54 (E10)	16:19	35	09:13 (E11)	15:39
10	04:39	05:33	06:31 (E9)	06:35		07:36	08:20 (E10)	07:42		08:37 (E12)	08:38
	22:02	21:08	42 07:13 (E9)	19:50		18:30	33 08:53 (E10)	16:17	36	09:13 (E11)	15:39
11	04:41	05:35	06:31 (E9)	06:37		07:38	08:21 (E10)	07:44		08:37 (E12)	08:39
	22:01	21:06	42 07:13 (E9)	19:47		18:27	31 08:52 (E10)	16:15	36	09:13 (E11)	15:38
12	04:42	05:37	06:32 (E9)	06:39		07:40	08:22 (E10)	07:46		08:37 (E12)	08:40
	22:00	21:04	41 07:13 (E9)	19:45		18:24	28 08:50 (E10)	16:13	36	09:13 (E11)	15:38
13	04:43	05:39	06:32 (E9)	06:41	18:44 (E13)	07:42	08:23 (E10)	07:48		08:37 (E12)	08:41
	21:59	21:01	40 07:12 (E9)	19:42	5 18:49 (E13)	18:22	25 08:48 (E10)	16:11	37	09:14 (E11)	15:38
14	04:45	05:41	06:32 (E9)	06:43		07:44	08:25 (E10)	07:51		08:37 (E12)	08:42
	21:58	20:59	40 07:12 (E9)	19:39	12 18:52 (E13)	18:19	20 08:45 (E10)	16:09	36	09:13 (E11)	15:38
15	04:46	05:43	06:33 (E9)	06:45		07:46	08:28 (E10)	07:53		08:37 (E12)	08:43
	21:56	20:57	38 07:11 (E9)	19:37	15 18:53 (E13)	18:17	13 08:41 (E10)	16:07	35	09:12 (E11)	15:38
16	04:48	05:45	06:33 (E9)	06:47		07:48		07:55		08:38 (E12)	08:44
	21:55	20:54	38 07:11 (E9)	19:34	17 18:54 (E13)	18:14		16:06	35	09:13 (E11)	15:38
17	04:49	05:47	06:33 (E9)	06:49		07:50		07:57		08:38 (E12)	08:45
	21:54	20:52	36 07:09 (E9)	19:31	18 18:54 (E13)	18:12		16:04	34	09:12 (E11)	15:38
18	04:51	05:49	06:34 (E9)	06:51		07:52		07:59		08:38 (E12)	08:46
	21:52	9 06:57 (E9)	20:49	34 07:08 (E9)	19:28	20 18:54 (E13)	18:09	16:02	33	09:11 (E11)	15:38
19	04:52	05:51	06:35 (E9)	06:53		07:54		08:01		08:39 (E12)	08:47
	21:51	15 07:00 (E9)	20:47	32 07:07 (E9)	19:26	19 18:53 (E13)	18:07	16:01	32	09:11 (E11)	15:38
20	04:54	05:53	06:36 (E9)	06:55		07:56		08:03		08:40 (E12)	08:48
	21:49	18 07:02 (E9)	20:44	29 07:05 (E9)	19:23	31 18:52 (E13)	18:04	15:59	30	09:10 (E11)	15:38
21	04:56	05:55	06:38 (E9)	06:57		07:59		08:05		08:42 (E12)	08:48
	21:48	21 07:03 (E9)	20:42	26 07:04 (E9)	19:20	35 18:50 (E13)	18:02	15:57	27	09:09 (E11)	15:39
22	04:57	05:57	06:39 (E9)	06:59		08:01		08:07		08:44 (E12)	08:49
	21:46	24 07:05 (E9)	20:39	23 07:02 (E9)	19:18	38 18:47 (E13)	17:59	15:56	24	09:08 (E11)	15:39
23	04:59	05:59	06:42 (E9)	07:01		08:03		08:09		08:47 (E12)	08:49
	21:44	27 07:06 (E9)	20:37	17 06:59 (E9)	19:15	38 18:44 (E13)	17:57	15:55	20	09:07 (E11)	15:40
24	05:01	06:01	06:46 (E9)	07:03		08:05		08:11		08:49 (E12)	08:50
	21:43	28 07:07 (E9)	20:34	8 06:54 (E9)	19:12	37 18:42 (E13)	17:54	15:53	17	09:06 (E11)	15:40
25	05:03	06:03		07:05		08:07		08:13		08:51 (E12)	08:50
	21:41	31 07:08 (E9)	20:32		19:10	34 18:39 (E13)	16:52	15:52	10	09:02 (E11)	15:41
26	05:04	06:05		07:07		07:09		08:15		08:53 (E12)	08:50
	21:39	32 07:09 (E9)	20:29		19:07	36 08:58 (E10)	16:50	15:51	1	08:54 (E12)	15:42
27	05:06	06:07		07:09		07:12		08:17			08:51
	21:37	33 07:10 (E9)	20:27		19:04	37 08:58 (E10)	16:47	15:49			15:43
28	05:08	06:09		07:11		07:14		08:19			08:51
	21:35	35 07:10 (E9)	20:24		19:01	39 08:59 (E10)	16:45	6 08:59 (E11)	15:48		15:44
29	05:10	06:11		07:13		07:16		08:50 (E11)	15:48		08:51
	21:34	36 07:11 (E9)	20:22		18:59	40 08:59 (E10)	16:43	14 09:04 (E11)	15:47		15:44
30	05:12	06:13		07:15		07:18		08:47 (E11)	15:46		08:51
	21:32	37 07:12 (E9)	20:19		18:56	41 09:00 (E10)	16:40	19 09:06 (E11)	15:46		15:45
31	05:14	06:15				07:20		08:45 (E11)			08:51
	21:30	38 07:12 (E9)	20:16			16:38	22 09:07 (E11)				15:47
Potential sun hours	529		469		385		324		247		216
Total, worst case		384		858		512		564		754	
Sun reduction		0.49		0.50		0.43		0.26		0.08	
Oper. time red.		0.96		0.96		0.96		0.96		0.96	
Wind dir. red.		0.65		0.65		0.64		0.62		0.59	
Total reduction		0.31		0.31		0.26		0.15		0.05	
Total, real		118		267		134		87		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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:01	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 18:32	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	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 16:48	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	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 20:17		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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:51 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 20:21	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		09:50 (E14)	08:15		08:52 (E15)	07:11		06:49		07:20 (E13)	05:33		04:36				
	15:48	29	10:19 (E14)	16:45	62	10:33 (E14)	17:48		19:53	21	07:41 (E13)	20:55		21:53				
2	08:50		09:50 (E14)	08:13		08:53 (E15)	07:08		06:46		07:17 (E13)	05:30		04:35				
	15:49	30	10:20 (E14)	16:48	61	10:33 (E14)	17:50		19:55	25	07:42 (E13)	20:57		21:54				
3	08:50		09:50 (E14)	08:11		08:53 (E15)	07:06		06:43		07:16 (E13)	05:28		04:34				
	15:51	31	10:21 (E14)	16:50	59	10:32 (E14)	17:52		19:57	28	07:44 (E13)	21:00		21:55				
4	08:50		09:50 (E14)	08:09		08:54 (E15)	07:03		06:41		07:14 (E13)	05:26		04:33				
	15:52	31	10:21 (E14)	16:52	55	10:31 (E14)	17:54		19:59	30	07:44 (E13)	21:02		21:57				
5	08:49		09:50 (E14)	08:07		08:55 (E15)	07:01		06:38		07:12 (E13)	05:23		04:32				
	15:53	33	10:23 (E14)	16:54	53	10:31 (E14)	17:56		20:01	32	07:44 (E13)	21:04		21:58				
6	08:49		09:50 (E14)	08:05		08:55 (E15)	06:58		06:35		07:12 (E13)	05:21		04:31				
	15:55	33	10:23 (E14)	16:56	49	10:29 (E14)	17:58		20:03	33	07:45 (E13)	21:06		21:59				
7	08:48		09:50 (E14)	08:03		08:56 (E15)	06:55		06:33		07:10 (E13)	05:19		04:30				
	15:56	34	10:24 (E14)	16:59	43	10:27 (E14)	18:01		20:05	35	07:45 (E13)	21:08		22:00				
8	08:48		09:50 (E14)	08:01		08:57 (E15)	06:53		06:30		07:10 (E13)	05:17		04:29				
	15:58	35	10:25 (E14)	17:01	38	10:25 (E14)	18:03		20:08	36	07:46 (E13)	21:10		22:01				
9	08:47		09:50 (E14)	07:58		08:58 (E15)	06:50		06:28		07:09 (E13)	05:15		04:29				
	16:00	36	10:26 (E14)	17:03	28	10:21 (E14)	18:05		20:10	37	07:46 (E13)	21:12		22:02				
10	08:46		09:50 (E14)	07:56		09:00 (E15)	06:47		06:25		07:08 (E13)	05:13		04:28				
	16:01	37	10:27 (E14)	17:05	11	09:11 (E15)	18:07		20:12	37	07:45 (E13)	21:14		22:03				
11	08:45		09:50 (E14)	07:54			06:45		06:22		07:09 (E13)	05:11		04:27				
	16:03	38	10:28 (E14)	17:08			18:09		20:14	36	07:45 (E13)	21:16		22:04				
12	08:44		09:49 (E14)	07:52			06:42		06:20		07:08 (E13)	05:09		04:27				
	16:05	39	10:28 (E14)	17:10			18:11		20:16	36	07:44 (E13)	21:18		22:05				
13	08:43		09:50 (E14)	07:50			06:40		06:17		07:08 (E13)	05:07		04:26				
	16:06	39	10:29 (E14)	17:12			18:13		20:18	36	07:44 (E13)	21:20		22:06				
14	08:42		09:50 (E14)	07:47			06:37		06:15		07:08 (E13)	05:05		04:26				
	16:08	40	10:30 (E14)	17:14			18:15		20:20	35	07:43 (E13)	21:22		22:07				
15	08:41		09:50 (E14)	07:45			06:34		06:12		07:09 (E13)	05:03		04:26				
	16:10	40	10:30 (E14)	17:17			18:18		20:22	34	07:43 (E13)	21:24		22:07				
16	08:40		09:50 (E14)	07:43			06:32		06:09		07:08 (E13)	05:01		04:26				
	16:12	41	10:31 (E14)	17:19			18:20		20:24	34	07:42 (E13)	21:25		22:08				
17	08:39		09:50 (E14)	07:40			06:29		06:07		07:09 (E13)	04:59		04:25				
	16:14	41	10:31 (E14)	17:21			18:22		20:26	32	07:41 (E13)	21:27		22:08				
18	08:37		09:50 (E14)	07:38			06:26		06:04		07:09 (E13)	04:57		04:25				
	16:16	42	10:32 (E14)	17:23			18:24		20:28	30	07:39 (E13)	21:29		22:09				
19	08:36		09:50 (E14)	07:36			06:24		06:02		07:11 (E13)	04:55		04:25				
	16:18	42	10:32 (E14)	17:26			18:26		20:30	27	07:38 (E13)	21:31		22:09				
20	08:35		09:51 (E14)	07:33			06:21		05:59		07:11 (E13)	04:53		04:25				
	16:20	42	10:33 (E14)	17:28			18:28		20:33	25	07:36 (E13)	21:33		22:10				
21	08:33		09:51 (E14)	07:31			06:18		05:57		07:13 (E13)	04:52		04:25				
	16:22	42	10:33 (E14)	17:30			18:30		20:35	22	07:35 (E13)	21:35		22:10				
22	08:32		09:51 (E14)	07:28			06:16		05:54		07:15 (E13)	04:50		04:26				
	16:24	42	10:33 (E14)	17:32			18:32		20:37	18	07:33 (E13)	21:37		22:10				
23	08:30		09:03 (E15)	07:26			06:13		05:52		07:18 (E13)	04:48		04:26				
	16:26	48	10:34 (E14)	17:34			18:34		20:39	10	07:28 (E13)	21:38		22:10				
24	08:29		09:02 (E15)	07:23			06:10		05:49			04:47		04:26				
	16:28	52	10:35 (E14)	17:37			18:36		20:41			21:40		22:10				
25	08:27		09:00 (E15)	07:21			06:08		05:47			04:45		04:26				
	16:30	55	10:35 (E14)	17:39			18:38		20:43			21:42		22:10				
26	08:26		08:58 (E15)	07:18			06:05		05:44			04:44		04:27				
	16:32	57	10:35 (E14)	17:41			18:41		20:45			21:43		22:10				
27	08:24		08:56 (E15)	07:16			06:02		05:42			04:42		04:27				
	16:34	60	10:35 (E14)	17:43			18:43		20:47			21:45		22:10				
28	08:22		08:54 (E15)	07:13			05:59		05:40			04:41		04:28				
	16:37	63	10:35 (E15)	17:45			18:45		20:49			21:47		22:10				
29	08:20		08:53 (E15)				06:57		05:37			04:40		04:29				
	16:39	64	10:35 (E14)				19:47		20:51			21:48		22:10				
30	08:18		08:53 (E15)				06:54		05:35			04:38		04:29				
	16:41	63	10:35 (E14)				19:49	6	07:33 (E13)			21:50		22:09				
31	08:17		08:53 (E15)				06:51		07:23 (E13)			04:37						
	16:43	63	10:34 (E14)				19:51	16	07:39 (E13)			21:51						
Potential sun hours	235			266			366			426			508			529		
Total, worst case	1342			459			22			689								
Sun reduction	0.13			0.20			0.41			0.50								
Oper. time red.	0.96			0.96			0.96			0.96								
Wind dir. red.	0.61			0.60			0.66			0.66								
Total reduction	0.08			0.12			0.26			0.32								
Total, real	105			54			6			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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:08 (E13) 18:54	07:17 16:36	08:29 (E15) 15:45	09:32 (E14) 10:10 (E14)
2	04:31 22:08	05:18 21:26	06:19 20:11	07:07 (E13) 18:51	07:19 16:34	08:27 (E15) 15:44	09:33 (E14) 10:10 (E14)
3	04:32 22:08	05:20 21:24	06:21 20:09	07:07 (E13) 18:48	07:21 16:32	08:26 (E15) 15:43	09:33 (E14) 10:09 (E14)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:07 (E13) 18:46	07:23 16:29	08:25 (E15) 15:42	09:34 (E14) 10:09 (E14)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:08 (E13) 18:43	07:25 16:27	08:24 (E15) 15:42	09:35 (E14) 10:09 (E14)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:07 (E13) 18:40	07:27 16:25	08:24 (E15) 15:41	09:36 (E14) 10:10 (E14)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:07 (E13) 18:38	07:30 16:23	08:23 (E15) 15:40	09:36 (E14) 10:09 (E14)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:08 (E13) 18:35	07:32 16:21	08:24 (E15) 15:40	09:38 (E14) 10:09 (E14)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:09 (E13) 18:32	07:34 16:19	08:24 (E15) 15:39	09:38 (E14) 10:09 (E14)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:10 (E13) 18:30	07:42 16:17	08:23 (E15) 15:39	09:39 (E14) 10:09 (E14)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:12 (E13) 18:27	07:44 16:15	08:24 (E15) 15:39	09:40 (E14) 10:09 (E14)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:14 (E13) 18:25	07:46 16:13	08:24 (E15) 15:38	09:41 (E14) 10:10 (E14)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:18 (E13) 18:22	07:49 16:11	08:25 (E15) 15:38	09:42 (E14) 10:10 (E14)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:26 (E13) 18:20	07:51 16:09	08:26 (E15) 15:38	09:42 (E14) 10:10 (E14)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:28 (E13) 18:17	07:53 16:08	08:28 (E15) 15:38	09:43 (E14) 10:10 (E14)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:30 (E13) 18:14	07:55 16:06	08:31 (E15) 15:38	09:44 (E14) 10:10 (E14)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:32 (E13) 18:12	07:57 16:04	08:33 (E15) 15:38	09:45 (E14) 10:10 (E14)
18	04:51 21:52	05:49 20:50	06:51 19:29	07:34 (E13) 18:09	07:59 16:02	08:36 (E15) 15:38	09:45 (E14) 10:11 (E14)
19	04:53 21:51	05:51 20:47	06:53 19:26	07:36 (E13) 18:07	08:01 16:01	08:38 (E15) 15:38	09:45 (E14) 10:10 (E14)
20	04:54 21:49	05:53 20:45	06:55 19:23	07:38 (E13) 18:04	08:03 15:59	09:26 (E14) 15:39	09:46 (E14) 10:11 (E14)
21	04:56 21:48	05:55 20:42	06:57 19:21	07:40 (E13) 18:02	08:05 15:58	09:26 (E14) 15:39	09:47 (E14) 10:12 (E14)
22	04:58 21:46	05:57 20:40	06:59 19:18	07:42 (E13) 18:00	08:07 15:56	09:27 (E14) 15:40	09:47 (E14) 10:12 (E14)
23	04:59 21:45	05:59 20:37	07:01 19:15	07:44 (E13) 17:57	08:09 15:55	09:27 (E14) 15:40	09:48 (E14) 10:13 (E14)
24	05:01 21:43	06:01 20:35	07:03 19:12	07:46 (E13) 17:55	08:11 15:53	09:28 (E14) 15:41	09:48 (E14) 10:13 (E14)
25	05:03 21:41	06:03 20:32	07:05 19:10	07:48 (E13) 17:52	08:13 15:52	09:28 (E14) 15:41	09:48 (E14) 10:14 (E14)
26	05:05 21:39	06:05 20:30	07:07 19:07	07:50 (E13) 17:50	08:15 15:51	09:28 (E14) 15:42	09:49 (E14) 10:14 (E14)
27	05:06 21:38	06:07 20:27	07:09 19:04	07:52 (E13) 17:48	08:17 15:49	09:30 (E14) 15:43	09:49 (E14) 10:15 (E14)
28	05:08 21:36	06:09 20:24	07:11 19:02	07:54 (E13) 17:46	08:19 15:48	09:30 (E14) 15:44	09:49 (E14) 10:16 (E14)
29	05:10 21:34	06:11 20:22	07:13 18:59	07:56 (E13) 17:43	08:21 15:47	09:31 (E14) 15:45	09:49 (E14) 10:16 (E14)
30	05:12 21:32	06:13 20:19	07:15 18:56	07:58 (E13) 17:41	08:22 15:46	09:32 (E14) 15:46	09:50 (E14) 10:17 (E14)
31	05:14 21:30	06:15 20:17	07:17 18:54	07:59 (E13) 17:39	08:33 (E15) 08:37 (E15)	08:51 15:47	09:50 (E14) 10:18 (E14)
Potential sun hours	529	469	385	324	247	216	
Total, worst case		345	375	4	1442	893	
Sun reduction		0.50	0.43	0.26	0.08	0.07	
Oper. time red.		0.96	0.96	0.96	0.96	0.96	
Wind dir. red.		0.66	0.66	0.59	0.61	0.61	
Total reduction		0.31	0.27	0.15	0.05	0.04	
Total, real		109	101	1	69	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)
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Mezares_AB211223

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Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

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

Assumptions for shadow calculations

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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14)	06:49	05:33
	15:48	16:45	17:48	17:54 (E14)	19:53	20:55
2	08:50	08:13	07:08	07:34 (E14)	06:46	05:30
	15:50	16:48	17:50	17:55 (E14)	19:55	20:58
3	08:50	08:11	07:06	07:32 (E14)	06:43	05:28
	15:51	16:50	17:52	17:57 (E14)	19:57	21:00
4	08:50	08:09	07:03	07:30 (E14)	06:41	05:26
	15:52	16:52	17:54	17:57 (E14)	19:59	21:02
5	08:49	08:07	07:01	07:28 (E14)	06:38	05:24
	15:54	16:54	17:56	17:58 (E14)	20:01	21:04
6	08:49	08:05	06:58	07:28 (E14)	06:36	05:21
	15:55	16:56	17:58	17:59 (E14)	20:03	21:06
7	08:48	08:03	06:55	07:27 (E14)	06:33	05:19
	15:56	16:59	18:01	17:59 (E14)	20:06	21:08
8	08:48	08:01	06:53	07:26 (E14)	06:30	05:17
	15:58	17:01	18:03	17:58 (E14)	20:08	21:10
9	08:47	07:58	06:50	07:27 (E14)	06:28	05:15
	16:00	17:03	18:05	17:59 (E14)	20:10	21:12
10	08:46	07:56	06:48	07:26 (E14)	06:25	05:13
	16:01	17:05	18:07	17:58 (E14)	20:12	21:14
11	08:45	07:54	06:45	07:26 (E14)	06:22	05:11
	16:03	17:08	18:09	17:58 (E14)	20:14	21:16
12	08:44	07:52	06:42	07:26 (E14)	06:20	05:09
	16:05	17:10	18:11	17:58 (E14)	20:16	21:18
13	08:43	07:50	06:40	07:26 (E14)	06:17	05:07
	16:06	17:12	18:13	17:57 (E14)	20:18	21:20
14	08:42	07:47	06:37	07:26 (E14)	06:15	05:05
	16:08	17:14	18:15	17:56 (E14)	20:20	21:22
15	08:41	07:45	06:34	07:28 (E14)	06:12	05:03
	16:10	17:17	18:18	17:55 (E14)	20:22	21:24
16	08:40	07:43	06:32	07:28 (E14)	06:09	05:01
	16:12	17:19	18:20	17:53 (E14)	20:24	21:25
17	08:39	07:40	06:29	07:29 (E14)	06:07	05:00
	16:14	17:21	18:22	17:51 (E14)	20:26	21:27
18	08:38	07:38	06:26	07:30 (E14)	06:04	05:00
	16:16	17:23	18:24	17:49 (E14)	20:28	21:29
19	08:36	07:36	06:24	07:33 (E14)	06:02	05:00
	16:18	17:26	18:26	17:46 (E14)	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	17:34	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	07:48 (E15)	06:08	05:47	05:00
	16:30	17:39	07:53 (E15)	18:39	20:43	21:42
26	08:26	07:18	07:45 (E15)	06:05	05:44	05:00
	16:32	17:41	07:53 (E15)	18:41	20:45	21:43
27	08:24	07:16	07:42 (E15)	06:02	05:42	05:00
	16:34	17:43	07:53 (E15)	18:43	20:47	21:45
28	08:22	07:13	07:40 (E14)	06:00	05:40	05:00
	16:37	17:45	07:54 (E15)	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			06:51		05:00
	16:43			19:51		21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		38	510	240	12	
Sun reduction		0.20	0.41	0.50	0.57	
Oper. time red.		0.96	0.96	0.96	0.96	
Wind dir. red.		0.62	0.62	0.65	0.65	
Total reduction		0.12	0.25	0.31	0.35	
Total, real		5	126	75	4	

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14)	07:23
	22:09	21:28	20:14	18:54	32 08:37 (E14)	16:36
2	04:31	05:18	06:19	07:19	08:05 (E14)	07:25
	22:09	21:26	20:11	18:51	32 08:37 (E14)	16:34
3	04:32	05:20	06:21	07:21	08:04 (E14)	07:27
	22:08	21:24	20:09	18:48	33 08:37 (E14)	16:32
4	04:33	05:22	06:23	07:23	08:04 (E14)	07:29
	22:07	21:22	20:06	18:46	32 08:36 (E14)	16:30
5	04:34	05:23	06:25	07:25	08:03 (E14)	07:31
	22:07	21:20	20:03	18:43	33 08:36 (E14)	16:27
6	04:35	05:25	06:27	07:28	08:03 (E14)	07:33
	22:06	21:17	20:01	18:40	32 08:35 (E14)	16:25
7	04:36	05:27	06:29	07:30	08:03 (E14)	07:36
	22:05	21:15	19:58	18:38	31 08:34 (E14)	16:23
8	04:37	05:29	06:31	07:32	08:03 (E14)	07:38
	22:04	21:13	19:56	18:35	30 08:33 (E14)	16:21
9	04:38	05:31	06:33	07:34	08:05 (E14)	07:40
	22:03	21:11	19:53	18:33	28 08:33 (E14)	16:19
10	04:40	05:33	06:35	07:36	08:05 (E14)	07:42
	22:02	21:08	19:50	18:30	27 08:32 (E14)	16:17
11	04:41	05:35	06:37	07:38	08:07 (E14)	07:44
	22:01	21:06	7 06:41 (E13)	18:27	23 08:30 (E14)	16:15
12	04:42	05:37	06:39	07:40	08:09 (E14)	07:46
	22:00	21:04	11 06:42 (E13)	18:25	19 08:28 (E14)	16:13
13	04:44	05:39	06:41	07:42	08:11 (E14)	07:49
	21:59	21:02	15 06:44 (E13)	18:22	16 08:27 (E15)	16:11
14	04:45	05:41	06:43	07:44	08:13 (E14)	07:51
	21:58	20:59	17 06:45 (E13)	18:20	13 08:26 (E15)	16:10
15	04:46	05:43	06:45	07:46	08:16 (E15)	07:53
	21:57	20:57	19 06:46 (E13)	18:17	10 08:26 (E15)	16:08
16	04:48	05:45	06:47	07:48	08:18 (E15)	07:55
	21:55	20:54	21 06:47 (E13)	18:15	7 08:25 (E15)	16:06
17	04:49	05:47	06:49	07:50	08:20 (E15)	07:57
	21:54	20:52	21 06:47 (E13)	18:12	3 08:23 (E15)	16:04
18	04:51	05:49	06:51	07:52		07:59
	21:52	20:50	22 06:47 (E13)	18:09		16:03
19	04:53	05:51	06:53	07:55		08:01
	21:51	20:47	23 06:47 (E13)	18:07		16:01
20	04:54	05:53	06:55	07:57		08:03
	21:49	20:45	22 06:46 (E13)	18:04		15:59
21	04:56	05:55	06:57	07:59		08:05
	21:48	20:42	20 06:46 (E13)	18:02		15:58
22	04:58	05:57	06:59	08:01		08:07
	21:46	20:40	18 06:46 (E13)	18:00		15:56
23	04:59	05:59	07:01	08:03		08:09
	21:45	20:37	15 06:45 (E13)	17:57		15:55
24	05:01	06:01	07:03	08:05		08:11
	21:43	20:35	12 06:44 (E13)	08:18 (E14)		08:05
25	05:03	06:03	07:05	08:15 (E14)		08:13
	21:41	20:32	9 06:43 (E13)	08:28 (E14)		15:53
26	05:05	06:05	07:07	08:32 (E14)		08:15
	21:39	20:30	5 06:41 (E13)	08:12 (E14)		15:51
27	05:06	06:07	07:09	08:33 (E14)		08:17
	21:38	20:27	21 07:09	08:10 (E14)		15:51
28	05:08	06:09	07:11	08:35 (E14)		08:19
	21:36	20:24	19:02	08:09 (E14)		15:50
29	05:10	06:11	07:13	08:36 (E14)		08:21
	21:34	20:22	27 07:13	08:07 (E14)		15:48
30	05:12	06:13	07:15	08:36 (E14)		08:22
	21:32	20:19	29 07:15	08:06 (E14)		15:47
31	05:14	06:15	07:17	08:37 (E14)		08:24
	21:30	20:17	31 07:17	08:07 (E14)		15:46
Potential sun hours	529	469	385	324	247	216
Total, worst case		257	160	401		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.65	0.62	0.62		
Total reduction		0.31	0.26	0.16		
Total, real		80	41	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14)	06:49	05:33
	15:48	16:45	17:48	25 08:02 (E14)	19:53	20:55
2	08:50	08:13	07:08	07:35 (E14)	06:46	05:30
	15:50	16:48	17:50	27 08:02 (E14)	19:55	20:58
3	08:50	08:11	07:06	07:35 (E14)	06:44	05:28
	15:51	16:50	17:52	27 08:02 (E14)	19:57	21:00
4	08:50	08:09	07:03	07:34 (E14)	06:41	05:26
	15:52	16:52	17:54	28 08:02 (E14)	19:59	21:02
5	08:49	08:07	07:01	07:33 (E14)	06:38	05:24
	15:54	16:54	17:56	29 08:02 (E14)	20:01	21:04
6	08:49	08:05	06:58	07:34 (E14)	06:36	05:21
	15:55	16:57	17:58	28 08:02 (E14)	20:03	21:06
7	08:48	08:03	06:55	07:34 (E14)	06:33	05:19
	15:56	16:59	18:01	27 08:01 (E14)	20:06	21:08
8	08:48	08:01	06:53	07:34 (E14)	06:30	05:17
	15:58	17:01	18:03	26 08:00 (E14)	20:08	21:10
9	08:47	07:58	06:50	07:35 (E14)	06:28	05:15
	16:00	17:03	18:05	25 08:00 (E14)	20:10	21:12
10	08:46	07:56	06:48	07:35 (E14)	06:25	05:13
	16:01	17:05	18:07	23 07:58 (E14)	20:12	21:14
11	08:45	07:54	06:45	07:36 (E14)	06:22	05:11
	16:03	17:08	18:09	20 07:56 (E14)	20:14	21:16
12	08:44	07:52	06:42	07:38 (E14)	06:20	05:09
	16:05	17:10	18:11	17 07:55 (E14)	20:16	21:18
13	08:43	07:50	06:40	07:40 (E14)	06:17	05:07
	16:06	17:12	18:13	11 07:51 (E14)	20:18	21:20
14	08:42	07:47	06:37	06:15	05:05	04:26
	16:08	17:14	18:15	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	20:24	21:26	22:08
17	08:39	07:40	06:29	06:07	04:59	04:25
	16:14	17:21	18:22	20:26	21:27	22:08
18	08:38	07:38	06:26	06:04	04:57	04:25
	16:16	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	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	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	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	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	4 07:54 (E14)	18:36	20:41	22:10
25	08:27	07:21	06:08	05:47	04:45	04:27
	16:30	17:39	9 07:57 (E14)	18:39	20:43	22:10
26	08:26	07:18	06:05	05:44	04:44	04:27
	16:32	17:41	14 07:59 (E14)	18:41	20:45	22:10
27	08:24	07:16	06:02	05:42	04:42	04:27
	16:34	17:43	18 08:00 (E14)	18:43	20:47	22:10
28	08:22	07:13	06:00	05:40	04:41	04:28
	16:37	17:45	21 08:01 (E14)	18:45	20:49	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		66	313	188		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.62	0.62	0.66		
Total reduction		0.12	0.25	0.32		
Total, real		8	77	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E13) 18:54	07:17 15	08:18 (E14) 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	06:49 (E13) 18:51	07:19 19	08:16 (E14) 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:53 (E13) 18:51	07:21 22	08:14 (E14) 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:23 24	08:12 (E14) 16:30
5	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	07:25 26	08:11 (E14) 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:28 27	08:10 (E14) 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:30 28	08:09 (E14) 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:32 28	08:09 (E14) 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:34 28	08:09 (E14) 16:19
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:36 28	08:09 (E14) 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:38 27	08:09 (E14) 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:40 26	08:09 (E14) 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:42 23	08:11 (E14) 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:44 20	08:13 (E14) 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:46 16	08:16 (E14) 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:48 12	08:18 (E14) 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:50 8	08:20 (E14) 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:52 1	08:22 (E14) 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	07:55 1	08:23 (E14) 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	07:57 1	08:25 (E14) 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	07:59 1	08:27 (E14) 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:01 1	08:29 (E14) 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:03 1	08:31 (E14) 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:05 1	08:33 (E14) 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:07 1	08:35 (E14) 15:52
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:09 1	08:37 (E14) 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:11 1	08:39 (E14) 15:50
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:13 1	08:41 (E14) 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:15 1	08:43 (E14) 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:17 1	08:45 (E14) 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:19 17:39	08:19 1	08:47 (E14) 15:45
Potential sun hours	529	469	385	324	247	216
Total, worst case		177	19	378		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.66	0.64	0.62		
Total reduction		0.31	0.26	0.16		
Total, real		56	5	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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		07:58 (E14) 08:21 (E14)	07:23 16:36	08:24 15:45
2	08:51 15:50	08:13 16:48	07:08 17:50	3	07:34 (E14) 19:55	06:46 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	23	07:19 18:51	24	07:57 (E14) 08:21 (E14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	8	07:32 (E14) 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	25	07:56 (E14) 08:21 (E14)	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	12	07:29 (E14) 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	25	07:56 (E14) 08:21 (E14)	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	16	07:26 (E14) 20:01	06:38 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04		07:26 18:43	25	07:56 (E14) 08:21 (E14)	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	19	07:24 (E14) 20:03	06:36 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01		07:28 18:40	24	07:56 (E14) 08:20 (E14)	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	22	07:21 (E14) 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	24	07:58 (E14) 08:19 (E14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	24	07:19 (E14) 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	21	08:00 (E14) 08:18 (E14)	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	25	07:19 (E14) 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	18	08:03 (E14) 08:17 (E14)	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	25	07:18 (E14) 20:12	06:25 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50		07:36 18:30	14	08:05 (E14) 08:15 (E14)	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	25	07:18 (E14) 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	10	08:07 (E14) 08:13 (E14)	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	25	07:19 (E14) 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	6		07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	24	07:19 (E14) 20:18	06:17 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	22	07:19 (E14) 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	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	21	07:21 (E14) 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	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	18	07:22 (E14) 20:24	06:09 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	15	07:24 (E14) 20:26	06:07 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	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	9	07:33 (E14) 20:28	06:07 21:29	04:25 22:09	04:49 21:52	05:47 20:50	06:49 19:29		07:50 18:09			07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26			06:02 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	04:25 21:33	04:54 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	04:25 21:35	04:56 22:10	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	04:26 21:37	04:58 22:10	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	04:26 21:38	04:59 22:10	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	04:26 21:40	05:01 22:10	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	04:25 21:42	05:03 22:10	06:03 20:32	07:05 19:10		08:07 16:52			08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41			05:45 20:45	04:24 21:43	05:05 22:10	06:05 20:30	07:07 19:07		08:09 (E14) 08:14 (E14)			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	04:28 21:45	05:06 22:10	06:07 20:27	07:09 19:04	5	08:05 (E14) 08:18 (E14)			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	04:28 21:47	05:08 22:10	06:09 20:24	07:11 19:02	13	08:02 (E14) 08:19 (E14)			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	05:10 22:10	06:11 20:22	07:13 18:59	17	08:00 (E14) 08:20 (E14)			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	05:12 22:09	06:13 20:19	07:15 18:56	20	07:59 (E14) 08:21 (E14)			08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51			04:37 21:51	04:37 21:51	05:14 21:30	06:15 20:17	07:20 20:17	22				08:23 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	529	529	469	385		324		247	216	
Total, worst case				288						77		215				
Sun reduction				0.41						0.43		0.26				
Oper. time red.				0.96						0.96		0.96				
Wind dir. red.				0.62						0.62		0.62				
Total reduction				0.25						0.25		0.15				
Total, real				71						20		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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January		February		March		April		May		June	
1	08:51	08:15			07:11	07:43 (E14)	06:49		05:33	04:36		
	15:48	16:45			17:48	27 08:10 (E14)	19:53		20:55	21:53		
2	08:51	08:13			07:08	07:42 (E14)	06:46		05:30	04:35		
	15:50	16:48			17:50	27 08:09 (E14)	19:55		20:58	21:54		
3	08:50	08:11			07:06	07:43 (E14)	06:44		05:28	04:34		
	15:51	16:50			17:52	27 08:10 (E14)	19:57		21:00	21:55		
4	08:50	08:09			07:03	07:43 (E14)	06:41		05:26	04:33		
	15:52	16:52			17:54	26 08:09 (E14)	19:59		21:02	21:57		
5	08:49	08:07			07:01	07:43 (E14)	06:38		05:24	04:32		
	15:54	16:54			17:56	24 08:07 (E14)	20:01		21:04	21:58		
6	08:49	08:05			06:58	07:44 (E14)	06:36	07:01 (E13)	05:21	04:31		
	15:55	16:57			17:58	23 08:07 (E14)	20:03	2 07:03 (E13)	21:06	21:59		
7	08:48	08:03			06:55	07:45 (E14)	06:33	06:58 (E13)	05:19	04:30		
	15:56	16:59			18:01	20 08:05 (E14)	20:06	6 07:04 (E13)	21:08	22:00		
8	08:48	08:01			06:53	07:46 (E14)	06:30	06:56 (E13)	05:17	04:29		
	15:58	17:01			18:03	17 08:03 (E14)	20:08	9 07:05 (E13)	21:10	22:01		
9	08:47	07:58			06:50	07:49 (E14)	06:28	06:53 (E13)	05:15	04:29		
	16:00	17:03			18:05	12 08:01 (E14)	20:10	12 07:05 (E13)	21:12	22:02		
10	08:46	07:56			06:48		06:25	06:50 (E13)	05:13	04:28		
	16:01	17:05			18:07		20:12	15 07:05 (E13)	21:14	22:03		
11	08:45	07:54			06:45		06:22	06:48 (E13)	05:11	04:27		
	16:03	17:08			18:09		20:14	18 07:06 (E13)	21:16	22:04		
12	08:44	07:52			06:42		06:20	06:45 (E13)	05:09	04:27		
	16:05	17:10			18:11		20:16	20 07:05 (E13)	21:18	22:05		
13	08:43	07:50			06:40		06:17	06:45 (E13)	05:07	04:27		
	16:06	17:12			18:13		20:18	20 07:05 (E13)	21:20	22:06		
14	08:42	07:47			06:37		06:15	06:44 (E13)	05:05	04:26		
	16:08	17:14			18:15		20:20	20 07:04 (E13)	21:22	22:07		
15	08:41	07:45			06:34		06:12	06:45 (E13)	05:03	04:26		
	16:10	17:17			18:18		20:22	18 07:03 (E13)	21:24	22:07		
16	08:40	07:43			06:32		06:09	06:45 (E13)	05:01	04:26		
	16:12	17:19			18:20		20:24	17 07:02 (E13)	21:26	22:08		
17	08:39	07:40			06:29		06:07	06:47 (E13)	04:59	04:25		
	16:14	17:21			18:22		20:26	14 07:01 (E13)	21:27	22:08		
18	08:38	07:38			06:26		06:04	06:48 (E13)	04:57	04:25		
	16:16	17:23			18:24		20:28	10 06:58 (E13)	21:29	22:09		
19	08:36	07:36			06:24		06:02		04:55	04:25		
	16:18	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	17:28			18:28		20:33		21:33	22:10		
21	08:33	07:31	07:58 (E14)		06:18		05:57		04:52	04:25		
	16:22	17:30	6 08:04 (E14)		18:30		20:35		21:35	22:10		
22	08:32	07:28	07:55 (E14)		06:16		05:54		04:50	04:26		
	16:24	17:32	10 08:05 (E14)		18:32		20:37		21:37	22:10		
23	08:30	07:26	07:53 (E14)		06:13		05:52		04:48	04:26		
	16:26	17:34	15 08:08 (E14)		18:34		20:39		21:38	22:10		
24	08:29	07:23	07:50 (E14)		06:10		05:49		04:47	04:26		
	16:28	17:37	18 08:08 (E14)		18:36		20:41		21:40	22:10		
25	08:27	07:21	07:48 (E14)		06:08		05:47		04:45	04:27		
	16:30	17:39	22 08:10 (E14)		18:39		20:43		21:42	22:10		
26	08:26	07:18	07:45 (E14)		06:05		05:44		04:44	04:27		
	16:32	17:41	25 08:10 (E14)		18:41		20:45		21:43	22:10		
27	08:24	07:16	07:43 (E14)		06:02		05:42		04:42	04:27		
	16:34	17:43	27 08:10 (E14)		18:43		20:47		21:45	22:10		
28	08:22	07:13	07:44 (E14)		06:00		05:40		04:41	04:28		
	16:37	17:45	26 08:10 (E14)		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			149		203		181					
Sun reduction			0.20		0.41		0.50					
Oper. time red.			0.96		0.96		0.96					
Wind dir. red.			0.63		0.63		0.66					
Total reduction			0.12		0.25		0.32					
Total, real			18		50		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)
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Project:

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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E13) 18:54	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	06:49 (E13) 18:51	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:51 (E13) 18:48	07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (E13) 18:46	07:23 18:46	07:29 16:30
5	04:34 22:07	05:24 21:20	06:25 20:04	06:55 (E13) 18:43	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	06:57 (E13) 18:40	07:28 18:40	07:34 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	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	07:32 18:35	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:34 18:33	07:40 16:19
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:36 18:30	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:38 18:27	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	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	07:42 18:22	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:44 18:20	07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:46 18:17	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:48 18:15	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:50 18:12	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	07:53 18:09	07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	07:55 18:07	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	07:57 18:04	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	07:59 18:02	08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:01 18:00	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:03 17:57	08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:05 17:55	08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:07 17:52	08:13 15:52
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:09 17:50	08:15 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:11 17:48	08:17 15:50
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:13 17:45	08:19 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:15 17:43	08:21 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:17 17:41	08:22 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:19 17:39	08:19 17:39	08:24 15:45
Potential sun hours	529	469	385	324	247	216
Total, worst case		118	62	358		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.66	0.66	0.63		
Total reduction		0.31	0.27	0.16		
Total, real		37	17	56		

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	05:22 21:22	06:23 20:06	07:23 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 21:17	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 17:05	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 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
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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	08:46 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	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	08:33 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 17:34	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 19:12	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 22:10	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 16:34	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 20:24	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		06:52 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	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 & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	05:22 21:22	06:23 20:06	07:23 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 21:17	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 17:05	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 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	04:26 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	08:46 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	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	08:33 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 17:34	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
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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 20:24	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 22:09	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			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	05:57 (E14) 20:16 (E14)	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 20:58	04:35 21:54	04:31 22:08	05:18 21:26	05:56 (E14) 20:11	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	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	05:56 (E14) 20:09	06:21 20:09	07:21 18:48	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 21:57	04:33 22:07	05:22 21:22	05:56 (E14) 20:06	06:23 20:06	07:23 18:46	07:29 16:30
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	05:57 (E14) 20:04	06:25 20:04	07:26 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 (E14) 20:01	06:27 20:01	07:28 18:40	07:33 16:25
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	06:00 (E14) 19:58	06:29 19:58	07:30 18:38	07:36 16:23
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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 17:23	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	07:53 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	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 18:05	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	08:50 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	06:04 (E14) 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	06:02 (E14) 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
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31	08:17 16:43	07:07 17:51	06:52 18:51	05:33 20:51	04:37 21:51	05:14 21:30	05:57 (E14) 20:17	06:15 20:17	07:20 16:38	07:20 16:38	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					274		112	168				
Sun reduction					0.57		0.49	0.50				
Oper. time red.					0.96		0.96	0.96				
Wind dir. red.					0.67		0.67	0.67				
Total reduction					0.37		0.32	0.32				
Total, real					100		36	54				

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	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 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
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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
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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	04:53 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	08:33 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 17:34	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
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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 20:24	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		06:52 19:51		04:37 21:51		05:14 21:30			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:15	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23	08:24
	15:48	16:45	17:48	19:53	20:56	21:53	22:09	21:28	20:14	18:54	16:36	15:45
2	08:51	08:13	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26
	15:49	16:48	17:50	19:55	20:58	21:54	22:09	21:26	20:11	18:51	16:34	15:44
3	08:50	08:11	07:06	06:44	05:28	04:34	04:32	05:20	06:21	07:21	07:27	08:28
	15:51	16:50	17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:32	15:43
4	08:50	08:09	07:03	06:41	05:26	04:33	04:33	05:22	06:23	07:23	07:29	08:29
	15:52	16:52	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:46	16:29	15:42
5	08:49	08:07	07:01	06:38	05:24	04:32	04:34	05:23	06:25	07:26	07:31	08:31
	15:53	16:54	17:56	20:01	21:04	21:58	22:07	21:20	20:04	18:43	16:27	15:42
6	08:49	08:05	06:58	06:36	05:21	04:31	04:35	05:25	06:27	07:28	07:34	08:32
	15:55	16:56	17:58	20:04	21:06	21:59	22:06	21:17	20:01	18:40	16:25	15:41
7	08:48	08:03	06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:30	07:36	08:34
	15:56	16:59	18:01	20:06	21:08	22:00	22:05	21:15	19:58	18:38	16:23	15:40
8	08:48	08:01	06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:32	07:38	08:35
	15:58	17:01	18:03	20:08	21:10	22:01	22:04	21:13	19:56	18:35	16:21	15:40
9	08:47	07:58	06:50	06:28	05:15	04:29	04:38	05:31	06:33	07:34	07:40	08:37
	16:00	17:03	18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:33	16:19	15:39
10	08:46	07:56	06:48	06:25	05:13	04:28	04:39	05:33	06:35	07:36	07:42	08:38
	16:01	17:05	18:07	20:12	21:14	22:03	22:03	21:09	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	21:16	22:04	22:01	21:06	19:48	18:27	16:15	15:39
12	08:44	07:52	06:42	06:20	05:09	04:27	04:42	05:37	06:39	07:40	07:47	08:41
	16:05	17:10	18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:25	16:13	15:38
13	08:43	07:50	06:40	06:17	05:07	04:26	04:43	05:39	06:41	07:42	07:49	08:42
	16:06	17:12	18:13	20:18	21:20	22:06	21:59	21:02	19:42	18:22	16:11	15:38
14	08:42	07:47	06:37	06:15	05:05	04:26	04:45	05:41	06:43	07:44	07:51	08:43
	16:08	17:14	18:16	20:20	21:22	22:07	21:58	20:59	19:39	18:20	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	07:53	08:44
	16:10	17:17	18:18	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:08	15:38
16	08:40	07:43	06:32	06:09	05:01	04:26	04:48	05:45	06:47	07:48	07:55	08:45
	16:12	17:19	18:20	20:24	21:26	22:08	21:55	20:55	19:34	18:15	16:06	15:38
17	08:39	07:40	06:29	06:07	04:59	04:25	04:49	05:47	06:49	07:50	07:57	08:46
	16:14	17:21	18:22	20:26	21:27	22:09	21:54	20:52	19:31	18:12	16:04	15:38
18	08:38	07:38	06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:53	07:59	08:47
	16:16	17:23	18:24	20:28	21:29	22:09	21:53	20:50	19:29	18:09	16:03	15:38
19	08:36	07:36	06:24	06:02	04:55	04:25	04:53	05:51	06:53	07:55	08:01	08:47
	16:18	17:26	18:26	20:31	21:31	22:09	21:51	20:47	19:26	18:07	16:01	15:38
20	08:35	07:33	06:21	05:59	04:53	04:25	04:54	05:53	06:55	07:57	08:03	08:48
	16:20	17:28	18:28	20:33	21:33	22:10	21:50	20:45	19:23	18:04	15:59	15:39
21	08:33	07:31	06:18	05:57	04:52	04:25	04:56	05:55	06:57	07:59	08:05	08:49
	16:22	17:30	18:30	20:35	21:35	22:10	21:48	20:42	19:21	18:02	15:58	15:39
22	08:32	07:28	06:16	05:54	04:50	04:26	04:58	05:57	06:59	08:01	08:07	08:49
	16:24	17:32	18:32	20:37	21:37	22:10	21:46	20:40	19:18	18:00	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	08:50
	16:26	17:34	18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:55	15:40
24	08:29	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	22:11	21:43	20:35	19:12	17:55	15:53	15:41
25	08:27	07:21	06:08	05:47	04:45	04:26	05:03	06:03	07:05	07:07	08:13	08:50
	16:30	17:39	18:39	20:43	21:42	22:11	21:41	20:32	19:10	16:52	15:52	15:41
26	08:26	07:18	06:05	05:44	04:44	04:27	05:05	06:05	07:07	07:10	08:15	08:51
	16:32	17:41	18:41	20:45	21:43	22:10	21:39	20:30	19:07	16:50	15:51	15:42
27	08:24	07:16	06:02	05:42	04:42	04:27	05:06	06:07	07:09	07:12	08:17	08:51
	16:34	17:43	18:43	20:47	21:45	22:10	21:38	20:27	19:04	16:48	15:49	15:43
28	08:22	07:13	06:00	05:40	04:41	04:28	05:08	06:09	07:11	07:14	08:19	08:51
	16:37	17:45	18:45	20:49	21:47	22:10	21:36	20:24	19:02	16:45	15:48	15:44
29	08:20		06:57	05:37	04:40	04:29	05:10	06:11	07:13	07:16	08:21	08:51
	16:39		19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	15:45
30	08:19		06:54	05:35	04:38	04:29	05:12	06:13	07:15	07:18	08:23	08:51
	16:41		19:49	20:53	21:50	22:10	21:32	20:19	18:56	16:41	15:46	15:46
31	08:17		06:52		04:37		05:14	06:15		07:20		08:51
	16:43		19:51		21:51		21:30	20:17		16:38		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)	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:50 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	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 17:59	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 15:57	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	05:29 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 15:40
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 15:38
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 17:23	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	07:53 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	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 18:05	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 18:36	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	04:45 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 15:42
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 15:48	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	06:13 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

January		February		March		April		May		June	
1	08:51	08:15	09:17 (E12)	07:11	07:56 (E10)	06:49		05:32		06:30 (E9)	04:36
	15:48	16:45	36 09:53 (E11)	17:47	38 08:34 (E10)	19:53		20:55	44	07:14 (E9)	21:52
2	08:50	08:13	09:18 (E12)	07:08	07:55 (E10)	06:46		05:30		06:30 (E9)	04:35
	15:49	16:47	35 09:53 (E11)	17:50	39 08:34 (E10)	19:55		20:57	44	07:14 (E9)	21:54
3	08:50	08:11	09:21 (E12)	07:05	07:55 (E10)	06:43		05:28		06:30 (E9)	04:34
	15:51	16:50	32 09:53 (E11)	17:52	40 08:35 (E10)	19:57		20:59	44	07:14 (E9)	21:55
4	08:50	08:09	09:24 (E11)	07:03	07:54 (E10)	06:41		05:26		06:30 (E9)	04:33
	15:52	16:52	28 09:52 (E11)	17:54	41 08:35 (E10)	19:59		21:01	44	07:14 (E9)	21:56
5	08:49	08:07	09:24 (E11)	07:00	07:53 (E10)	06:38		05:23		06:30 (E9)	04:32
	15:53	16:54	27 09:51 (E11)	17:56	42 08:35 (E10)	20:01		21:03	44	07:14 (E9)	21:58
6	08:49	08:05	09:25 (E11)	06:58	07:54 (E10)	06:35		05:21		06:30 (E9)	04:31
	15:55	16:56	25 09:50 (E11)	17:58	42 08:36 (E10)	20:03		21:05	44	07:14 (E9)	21:59
7	08:48	08:02	09:27 (E11)	06:55	07:53 (E10)	06:33		05:19		06:30 (E9)	04:30
	15:56	16:58	22 09:49 (E11)	18:00	42 08:35 (E10)	20:05		21:08	43	07:13 (E9)	22:00
8	08:47	08:00	09:28 (E11)	06:53	07:52 (E10)	06:30		05:17		06:30 (E9)	04:29
	15:58	17:01	20 09:48 (E11)	18:02	42 08:34 (E10)	20:07		21:10	43	07:13 (E9)	22:01
9	08:47	07:58	09:30 (E11)	06:50	07:53 (E10)	06:27		05:15		06:30 (E9)	04:28
	15:59	17:03	15 09:45 (E11)	18:05	42 08:35 (E10)	20:09		21:12	42	07:12 (E9)	22:02
10	08:46	07:56	09:34 (E11)	06:47	07:53 (E10)	06:25		05:12		06:31 (E9)	04:28
	16:01	17:05	8 09:42 (E11)	18:07	41 08:34 (E10)	20:12		21:14	41	07:12 (E9)	22:03
11	08:45	09:27 (E11)	07:54	06:45	07:53 (E10)	06:22		05:10		06:31 (E9)	04:27
	16:03	9 09:36 (E11)	17:07	18:09	40 08:33 (E10)	20:14		21:16	40	07:11 (E9)	22:04
12	08:44	09:20 (E12)	07:52	06:42	07:53 (E10)	06:20		05:08		06:31 (E9)	04:27
	16:04	16 09:37 (E11)	17:10	18:11	38 08:31 (E10)	20:16		21:18	39	07:10 (E9)	22:05
13	08:43	09:19 (E12)	07:49	06:39	07:54 (E10)	06:17		05:06		06:32 (E9)	04:26
	16:06	21 09:40 (E11)	17:12	18:13	37 08:31 (E10)	20:18		21:19	37	07:09 (E9)	22:06
14	08:42	09:18 (E12)	07:47	06:37	07:54 (E10)	06:14		05:04		06:33 (E9)	04:26
	16:08	24 09:42 (E11)	17:14	18:15	35 08:29 (E10)	20:20		21:21	36	07:09 (E9)	22:06
15	08:41	09:16 (E12)	07:45	06:34	07:55 (E10)	06:12		05:02		06:34 (E9)	04:26
	16:10	26 09:42 (E11)	17:16	18:17	33 08:28 (E10)	20:22		21:23	34	07:08 (E9)	22:07
16	08:40	09:15 (E12)	07:42	06:31	07:56 (E10)	06:09		05:00		06:34 (E9)	04:25
	16:12	29 09:44 (E11)	17:19	18:19	31 08:27 (E10)	20:24	6 06:52 (E9)	05:00	33	07:07 (E9)	22:08
17	08:39	09:13 (E12)	07:40	06:29	07:57 (E10)	06:07		06:47 (E9)	04:59	06:35 (E9)	04:25
	16:14	32 09:45 (E11)	17:21	18:22	27 08:24 (E10)	20:26	17 07:04 (E9)	21:27	31	07:06 (E9)	22:08
18	08:37	09:12 (E12)	07:38	06:26	07:59 (E10)	06:04		06:43 (E9)	04:57	06:36 (E9)	04:25
	16:16	35 09:47 (E11)	17:23	18:24	22 08:21 (E10)	20:28	23 07:06 (E9)	21:29	29	07:05 (E9)	22:09
19	08:36	09:11 (E12)	07:35	06:23	08:02 (E10)	06:02		06:41 (E9)	04:55	06:37 (E9)	04:25
	16:18	36 09:47 (E11)	17:25	18:26	17 08:19 (E10)	20:30	27 07:08 (E9)	21:31	27	07:04 (E9)	22:09
20	08:35	09:11 (E12)	07:33	06:21	08:08 (E10)	05:59		06:39 (E9)	04:53	06:39 (E9)	04:25
	16:20	37 09:48 (E11)	17:28	18:28	4 08:12 (E10)	20:32	30 07:09 (E9)	21:33	24	07:03 (E9)	22:10
21	08:33	09:11 (E12)	07:31	06:18		05:57		06:38 (E9)	04:51	06:40 (E9)	04:25
	16:22	38 09:49 (E11)	17:30	18:30		20:34	33 07:11 (E9)	21:35	21	07:01 (E9)	22:10
22	08:32	09:11 (E12)	07:28	06:15		05:54		06:37 (E9)	04:50	06:42 (E9)	04:25
	16:24	39 09:50 (E11)	17:32	15 08:24 (E10)	18:32	20:37	35 07:12 (E9)	21:36	17	06:59 (E9)	22:10
23	08:30	09:11 (E12)	07:26	06:13	08:05 (E10)	06:13		06:35 (E9)	04:48	06:44 (E9)	04:26
	16:26	39 09:50 (E11)	17:34	21 08:26 (E10)	18:34	20:39	37 07:12 (E9)	21:38	13	06:57 (E9)	22:10
24	08:29	09:11 (E12)	07:23	06:10	08:03 (E10)	06:10		06:34 (E9)	04:47	06:48 (E9)	04:26
	16:28	40 09:51 (E11)	17:36	26 08:29 (E10)	18:36	20:41	39 07:13 (E9)	21:40	5	06:53 (E9)	22:10
25	08:27	09:11 (E12)	07:21	06:07	08:01 (E10)	06:07		06:33 (E9)	04:45		04:26
	16:30	40 09:51 (E11)	17:39	29 08:30 (E10)	18:38	20:43	41 07:14 (E9)	21:41			22:10
26	08:25	09:13 (E12)	07:18	06:05	08:00 (E10)	06:05		06:32 (E9)	04:44		04:27
	16:32	40 09:53 (E11)	17:41	32 08:32 (E10)	18:40	20:45	41 07:13 (E9)	21:43			22:10
27	08:24	09:13 (E12)	07:16	06:02	07:58 (E10)	06:02		06:31 (E9)	04:42		04:27
	16:34	40 09:53 (E11)	17:43	35 08:33 (E10)	18:42	20:47	43 07:14 (E9)	21:45			22:10
28	08:22	09:14 (E12)	07:13	05:59	07:57 (E10)	05:59		06:31 (E9)	04:41		04:28
	16:36	39 09:53 (E11)	17:45	36 08:33 (E10)	18:45	20:49	44 07:15 (E9)	21:46			22:10
29	08:20	09:14 (E12)		06:57		05:37		06:30 (E9)	04:39		04:28
	16:38	39 09:53 (E11)		19:47		20:51	44 07:14 (E9)	21:48			22:10
30	08:18	09:14 (E12)		06:54		05:35		06:30 (E9)	04:38		04:29
	16:41	39 09:53 (E11)		19:49		20:53	44 07:14 (E9)	21:49			22:09
31	08:16	09:15 (E12)		06:51				04:37			
	16:43	38 09:53 (E11)		19:51				21:51			
Potential sun hours	235		266	366		426		508			529
Total, worst case	696		442	693		504		819			
Sun reduction	0.13		0.20	0.41		0.50		0.57			
Oper. time red.	0.96		0.96	0.96		0.96		0.96			
Wind dir. red.	0.60		0.61	0.63		0.65		0.65			
Total reduction	0.08		0.12	0.25		0.31		0.36			
Total, real	53		52	171		158		293			

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:41 (E9) 07:21 (E9)	06:17 20:14	07:17 18:53	08:33 (E10) 09:11 (E10)	07:22 16:36	09:02 (E11) 09:13 (E11)	08:24 15:45	09:03 (E12) 09:17 (E11)	
2	04:31 22:08	05:17 21:26	06:41 (E9) 07:21 (E9)	06:19 20:11	07:19 18:51	08:32 (E10) 09:11 (E10)	07:25 16:34	09:13 (E11) 09:15 (E11)	08:26 15:44		
3	04:32 22:08	05:19 21:24	06:41 (E9) 07:22 (E9)	06:21 20:09	07:21 18:48	08:31 (E10) 09:12 (E10)	07:27 16:31	09:15 (E11) 09:17 (E11)	08:27 15:43		
4	04:32 22:07	05:21 21:21	06:41 (E9) 07:23 (E9)	06:23 20:06	07:23 18:45	08:30 (E10) 09:12 (E10)	07:29 16:29	09:17 (E11) 09:19 (E11)	08:29 15:42		
5	04:33 22:06	05:23 21:19	06:39 (E9) 07:22 (E9)	06:25 20:03	07:25 18:43	08:30 (E10) 09:11 (E10)	07:31 16:27	09:19 (E11) 09:20 (E11)	08:31 15:41		
6	04:35 22:06	05:25 21:17	06:39 (E9) 07:23 (E9)	06:27 20:01	07:27 18:40	08:29 (E10) 09:11 (E10)	07:33 16:25	09:20 (E11) 09:22 (E11)	08:32 15:41		
7	04:36 22:05	05:27 21:15	06:39 (E9) 07:23 (E9)	06:29 19:58	07:29 18:38	08:29 (E10) 09:11 (E10)	07:35 16:23	09:22 (E11) 09:22 (E11)	08:34 15:40		
8	04:37 22:04	05:29 21:13	06:39 (E9) 07:23 (E9)	06:31 19:55	07:31 18:35	08:28 (E10) 09:10 (E10)	07:38 16:21	09:23 (E11) 09:22 (E11)	08:35 15:40		
9	04:38 22:03	05:31 21:11	06:39 (E9) 07:24 (E9)	06:33 19:53	07:33 18:32	08:28 (E10) 09:10 (E10)	07:40 16:19	09:23 (E11) 09:23 (E11)	08:36 15:39		
10	04:39 22:02	05:33 21:08	06:38 (E9) 07:23 (E9)	06:35 19:50	07:36 18:30	08:29 (E10) 09:10 (E10)	07:42 16:17	09:24 (E11) 09:24 (E11)	08:38 15:39		
11	04:41 22:01	05:35 21:06	06:38 (E9) 07:23 (E9)	06:37 19:47	07:38 18:27	08:29 (E10) 09:09 (E10)	07:44 16:15	09:25 (E11) 09:25 (E11)	08:39 15:38		
12	04:42 22:00	05:37 21:04	06:38 (E9) 07:23 (E9)	06:39 19:45	07:40 18:24	08:29 (E10) 09:08 (E10)	07:46 16:13	09:26 (E11) 09:24 (E11)	08:40 15:38		
13	04:43 21:59	05:39 21:01	06:38 (E9) 07:23 (E9)	06:41 19:42	07:42 18:22	08:30 (E10) 09:07 (E10)	07:48 16:11	09:26 (E11) 09:25 (E11)	08:41 15:38		
14	04:45 21:58	05:41 20:59	06:38 (E9) 07:22 (E9)	06:43 19:39	07:44 18:19	08:30 (E10) 09:06 (E10)	07:51 16:09	09:26 (E11) 09:25 (E11)	08:42 15:38		
15	04:46 21:56	05:43 20:57	06:39 (E9) 07:22 (E9)	06:45 19:36	07:46 18:17	08:31 (E10) 09:04 (E10)	07:53 16:07	09:26 (E11) 09:25 (E11)	08:43 15:38		
16	04:48 21:55	05:45 20:54	06:39 (E9) 07:21 (E9)	06:47 19:34	07:48 18:14	08:32 (E10) 09:04 (E10)	07:55 16:06	09:26 (E11) 09:25 (E11)	08:44 15:38		
17	04:49 21:54	05:47 20:52	06:39 (E9) 07:20 (E9)	06:49 19:31	07:50 18:12	08:34 (E10) 09:02 (E10)	07:57 16:04	09:26 (E11) 09:25 (E11)	08:45 15:38		
18	04:51 21:52	05:49 20:49	06:39 (E9) 07:19 (E9)	06:51 19:28	07:52 18:09	08:35 (E10) 08:59 (E10)	07:59 16:02	09:26 (E11) 09:25 (E11)	08:46 15:38		
19	04:52 21:51	05:51 20:47	06:40 (E9) 07:18 (E9)	06:53 19:26	07:54 18:07	08:37 (E10) 08:56 (E10)	08:01 16:01	09:26 (E11) 09:25 (E11)	08:47 15:38		
20	04:54 21:49	05:53 20:44	06:40 (E9) 07:17 (E9)	06:55 19:23	07:56 18:04	08:41 (E10) 08:53 (E10)	08:03 15:59	09:26 (E11) 09:25 (E11)	08:48 15:38		
21	04:56 21:48	05:55 20:42	06:41 (E9) 07:16 (E9)	06:57 19:20	07:59 18:02	08:53 (E10)	08:05 15:57	09:25 (E11) 09:24 (E11)	08:48 15:39		
22	04:57 21:46	05:57 20:39	06:42 (E9) 07:15 (E9)	06:59 19:18	08:01 17:59	08:07 15:56	08:07 15:56	09:24 (E11) 09:24 (E11)	08:49 15:39		
23	04:59 21:44	06:00 20:37	06:44 (E9) 07:13 (E9)	07:01 19:15	08:03 17:57	08:09 15:55	08:09 15:55	09:24 (E11) 09:24 (E11)	08:49 15:40		
24	05:01 21:43	06:01 20:34	06:45 (E9) 07:12 (E9)	07:03 19:12	08:05 17:54	08:11 15:53	08:11 15:53	09:24 (E11) 09:24 (E11)	08:50 15:40		
25	05:03 21:41	06:03 20:32	06:46 (E9) 07:11 (E9)	07:05 19:10	08:43 (E10) 09:03 (E10)	07:07 16:52	08:13 15:52	09:24 (E11) 09:23 (E11)	08:50 15:41		
26	05:04 21:39	06:05 20:29	06:49 (E9) 07:10 (E9)	07:07 19:07	08:40 (E10) 09:05 (E10)	07:09 16:50	08:15 15:51	09:24 (E11) 09:22 (E11)	08:50 15:42		
27	05:06 21:37	06:07 20:27	06:56 (E9) 07:17 (E9)	07:09 19:04	08:38 (E10) 09:07 (E10)	07:12 16:47	08:17 15:49	09:22 (E11) 09:22 (E11)	08:51 15:43		
28	05:08 21:35	06:09 20:24	06:58 (E9)	07:11 19:01	08:36 (E10) 09:08 (E10)	07:14 16:45	08:19 15:48	09:21 (E11) 09:21 (E11)	08:51 15:44		
29	05:10 21:34	06:11 20:22	07:13 (E9)	07:13 18:59	08:34 (E10) 09:09 (E10)	07:16 16:43	08:20 15:47	09:20 (E11) 09:21 (E11)	08:51 15:44		
30	05:12 21:32	06:13 20:19	07:15 (E9)	07:15 18:56	08:34 (E10) 09:11 (E10)	07:18 16:40	08:22 15:46	09:20 (E11) 09:20 (E11)	08:51 15:45		
31	05:14 21:30	06:15 20:16	07:17 (E9)	07:17 18:56	09:11 (E10)	07:20 16:38	08:24 15:47	09:20 (E11)	08:51 15:47		
Potential sun hours	529	469	385	324	247	216					
Total, worst case	323	1012	192	710	943	10					
Sun reduction	0.49	0.50	0.43	0.26	0.08	0.07					
Oper. time red.	0.96	0.96	0.96	0.96	0.96	0.96					
Wind dir. red.	0.65	0.65	0.63	0.63	0.60	0.60					
Total reduction	0.31	0.31	0.26	0.16	0.05	0.04					
Total, real	100	317	49	110	45	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	09:13 (E13) 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	07:17 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	09:14 (E13) 17:50	07:08 19:55	06:46 20:58	05:30 21:54	04:31 22:09	04:35 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 16:50	09:15 (E13) 17:52	07:06 19:57	06:43 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 16:52	09:16 (E13) 17:54	07:03 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:21 20:06	06:23 18:46	07:23 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	09:17 (E13) 17:56	07:01 20:01	06:38 21:04	05:23 21:58	04:34 22:07	04:34 21:20	05:23 20:03	06:25 18:43	07:25 16:27	08:31 15:42
6	08:49 15:55	08:05 16:56	09:18 (E13) 17:58	06:58 20:03	06:35 21:06	05:21 21:59	04:35 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:27 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	09:19 (E13) 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	08:34 15:40
8	08:48 15:58	08:01 17:01	09:20 (E13) 18:03	06:55 20:08	06:33 21:10	05:17 22:01	04:37 22:04	04:37 21:13	05:29 19:55	06:31 18:35	07:32 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	09:21 (E13) 18:05	06:50 20:10	06:28 21:12	05:15 22:02	04:38 22:03	04:38 21:11	05:31 19:53	06:33 18:32	07:34 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	09:22 (E13) 18:07	06:47 20:12	06:25 21:14	05:13 22:03	04:39 22:02	04:39 21:08	05:33 19:50	06:35 18:30	07:36 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	09:23 (E13) 18:09	06:45 20:14	06:22 21:16	05:11 22:04	04:41 22:01	04:41 21:06	05:35 19:47	06:37 18:27	07:38 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	09:24 (E13) 18:11	06:42 20:16	06:20 21:18	05:08 22:05	04:42 22:00	04:42 21:04	05:37 19:45	06:39 18:25	07:40 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	09:25 (E13) 18:13	06:40 20:18	06:17 21:20	05:06 22:06	04:43 21:59	04:43 21:02	05:39 19:42	06:41 18:22	07:42 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	09:26 (E13) 18:15	06:37 20:20	06:15 21:22	05:04 22:07	04:45 21:58	04:45 20:59	05:41 19:39	06:43 18:20	07:44 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	09:27 (E13) 18:18	06:34 20:22	06:12 21:24	05:03 22:07	04:46 21:57	04:46 20:57	05:43 19:37	06:45 18:17	07:46 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	09:28 (E13) 18:20	06:32 20:24	06:09 21:26	05:01 22:08	04:48 21:55	04:48 20:54	05:45 19:34	06:47 18:14	07:48 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	09:29 (E13) 18:22	06:29 20:26	06:07 21:27	04:59 22:09	04:49 21:54	04:49 20:52	05:47 19:31	06:49 18:12	07:50 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	09:30 (E13) 18:24	06:26 20:28	06:04 21:29	04:57 22:09	04:51 21:53	04:51 20:50	05:49 19:29	06:51 18:09	07:52 16:02	08:46 15:38
19	08:36 16:18	07:36 17:26	09:31 (E13) 18:26	06:24 20:31	06:02 21:31	04:55 22:09	04:52 21:51	04:52 20:47	05:51 19:26	06:53 18:07	07:55 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	09:32 (E13) 18:28	06:21 20:33	05:59 21:33	04:53 22:10	04:54 21:49	04:54 20:45	05:53 19:23	06:55 18:04	07:57 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	09:33 (E13) 18:30	06:18 20:35	05:57 21:35	04:52 22:10	04:56 21:48	04:56 20:42	05:55 19:21	06:57 18:02	07:59 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	09:34 (E13) 18:32	06:16 20:37	05:54 21:37	04:50 22:10	04:57 21:46	04:57 20:40	05:57 19:18	06:59 17:59	08:01 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	09:35 (E13) 18:34	06:13 20:39	05:52 21:38	04:48 22:10	04:59 21:45	04:59 20:37	05:59 19:15	07:01 17:57	08:03 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	09:36 (E13) 18:36	06:10 20:41	05:49 21:40	04:47 22:10	04:59 21:43	04:59 20:35	05:59 19:12	07:03 17:55	08:05 15:53	08:51 15:41
25	08:27 16:30	07:21 17:39	09:37 (E13) 18:38	06:08 20:43	05:47 21:42	04:45 22:10	04:59 21:41	04:59 20:32	05:59 19:10	07:05 17:52	08:07 15:52	08:52 15:41
26	08:26 16:32	07:18 17:41	09:38 (E13) 18:41	06:05 20:45	05:44 21:43	04:44 22:10	04:59 21:39	04:59 20:30	05:59 19:07	07:07 17:50	08:09 15:51	08:53 15:42
27	08:24 16:34	07:16 17:43	09:39 (E13) 18:43	06:02 20:47	05:42 21:45	04:42 22:10	04:59 21:38	04:59 20:27	05:59 19:04	07:09 17:47	08:11 15:49	08:54 15:43
28	08:22 16:36	07:13 17:45	09:40 (E13) 18:45	05:59 20:49	05:40 21:47	04:41 22:10	04:59 21:36	04:59 20:24	05:59 19:02	07:11 17:45	08:13 15:48	08:55 15:44
29	08:20 16:39	07:11 17:48	09:41 (E13) 18:47	05:57 20:51	05:37 21:48	04:40 22:10	04:59 21:34	04:59 20:22	05:59 18:59	07:13 17:43	08:15 15:47	08:56 15:45
30	08:19 16:41	07:11 17:48	09:42 (E13) 18:48	05:54 20:53	05:35 21:49	04:38 22:09	04:59 21:32	04:59 20:19	05:59 18:56	07:15 17:41	08:17 15:46	08:57 15:41
31	08:17 16:43	07:11 17:48	09:43 (E13) 18:49	05:51 20:51	05:37 21:49	04:37 22:09	04:59 21:30	04:59 20:17	05:59 18:56	07:15 17:41	08:17 15:46	08:57 15:41
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	403	154									567	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.96	0.96									0.96	
Wind dir. red.	0.59	0.59									0.59	
Total reduction	0.08	0.11									0.05	
Total, real	31	18									27	

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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	08:50 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
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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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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
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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
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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	08:50 15:43
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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
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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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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	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 19:10	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14) 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	07:01 (E14) 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 (E14) 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	07:00 (E14) 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 (E14) 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:59 (E14) 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 (E14) 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	06:58 (E14) 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	07:03 (E14) 21:04	05:24 21:58	04:32 22:07	04:34 21:20	05:24 20:04	06:58 (E14) 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	07:01 (E14) 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:26 20:01	06:57 (E14) 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	07:01 (E14) 21:08	05:19 22:00	04:30 22:05	04:36 21:15	05:27 19:58	06:59 (E14) 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	07:01 (E14) 21:10	05:17 22:01	04:29 22:04	05:29 21:13	05:29 19:56	07:00 (E14) 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	07:01 (E14) 21:12	05:15 22:02	04:28 22:03	05:31 21:11	05:31 19:53	07:02 (E14) 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	07:01 (E14) 21:14	05:13 22:03	04:28 22:02	05:33 21:08	05:33 19:50	07:04 (E14) 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	07:02 (E14) 21:16	05:11 22:04	04:28 22:01	05:35 21:06	05:35 19:48	07:06 (E14) 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	07:03 (E14) 21:18	05:09 22:05	04:27 22:00	05:37 21:04	05:37 19:45	07:08 (E14) 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	07:06 (E14) 21:20	05:07 22:06	04:27 21:59	05:39 21:02	05:39 19:42	07:10 (E14) 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	07:14 (E14) 21:22	05:05 22:07	04:26 21:58	05:41 20:59	05:41 19:39	07:11 (E14) 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	07:14 (E14) 21:24	05:03 22:07	04:26 21:57	05:43 20:57	05:43 19:37	07:12 (E14) 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 (E14) 21:26	05:01 22:08	04:26 21:55	05:45 20:54	05:45 19:34	07:13 (E14) 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	07:14 (E14) 21:27	05:00 22:08	04:26 21:54	05:47 20:52	05:47 19:31	07:14 (E14) 18:12	07:49 16:04	07:57 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	07:14 (E14) 21:29	04:59 22:09	04:26 21:52	05:49 20:50	05:49 19:29	07:15 (E14) 18:10	07:50 16:03	07:59 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	07:14 (E14) 21:31	04:55 22:09	04:25 21:51	05:51 20:47	05:51 19:26	07:16 (E14) 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	07:14 (E14) 21:33	04:54 22:10	04:25 21:49	05:53 20:45	05:53 19:23	07:17 (E14) 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	07:14 (E14) 21:35	04:52 22:10	04:26 21:48	05:55 20:42	05:55 19:21	07:18 (E14) 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	07:14 (E14) 21:37	04:50 22:10	04:26 21:46	05:57 20:40	05:57 19:18	07:19 (E14) 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	07:14 (E14) 21:39	04:49 22:10	04:26 21:45	05:59 20:37	05:59 19:15	07:20 (E14) 17:57	08:03 15:55	08:09 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	07:14 (E14) 21:40	04:47 22:10	04:26 21:43	06:01 20:35	06:01 19:13	07:21 (E14) 17:55	08:05 15:53	08:11 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	07:14 (E14) 21:42	04:45 22:10	04:27 21:41	06:03 20:32	06:03 19:10	07:22 (E14) 17:52	08:07 15:52	08:13 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	07:14 (E14) 21:44	04:44 22:10	04:27 21:39	06:05 20:30	06:05 19:07	07:23 (E14) 17:50	08:10 15:51	08:15 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	07:14 (E14) 21:45	04:42 22:10	04:28 21:38	06:07 20:27	06:07 19:04	07:24 (E14) 17:48	08:12 15:50	08:17 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	07:14 (E14) 21:47	04:41 22:10	04:28 21:36	06:09 20:24	06:09 19:02	07:25 (E14) 17:45	08:14 15:48	08:19 15:44
29	08:20 16:39	07:11 17:57	06:57 18:57	05:37 20:51	07:14 (E14) 21:49	04:40 22:10	04:29 21:34	06:11 20:22	06:11 18:59	07:26 (E14) 17:43	08:16 15:47	08:21 15:45
30	08:19 16:41	07:09 18:04	06:54 19:04	05:35 20:53	07:14 (E14) 21:50	04:38 22:09	04:29 21:32	06:13 20:19	06:13 18:59	07:27 (E14) 17:41	08:18 15:46	08:22 15:46
31	08:17 16:43	07:07 18:11	06:52 19:11	05:33 20:51	07:14 (E14) 21:51	04:37 22:10	04:30 21:30	06:15 20:17	06:15 19:13	07:28 (E14) 17:40	08:19 15:47	08:23 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case			1	202				22	184			
Sun reduction			0.41	0.50				0.50	0.43			
Oper. time red.			0.96	0.96				0.96	0.96			
Wind dir. red.			0.66	0.66				0.66	0.66			
Total reduction			0.26	0.32				0.32	0.27			
Total, real			0	64				7	50			

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		13:44 (E13)	08:15		13:59 (E13)	07:11		06:49				05:32		04:36			
	15:48	51	14:35 (E14)	16:45	29	14:28 (E13)	17:47		19:53				20:55		21:53			
2	08:50		13:45 (E13)	08:13		14:01 (E13)	07:08		06:46				05:30		04:35			
	15:49	51	14:36 (E14)	16:47	26	14:27 (E13)	17:50		19:55				20:57		21:54			
3	08:50		13:45 (E13)	08:11		14:04 (E13)	07:06		06:43				05:28		04:34			
	15:51	51	14:36 (E14)	16:50	21	14:25 (E13)	17:52		19:57				20:59		21:55			
4	08:50		13:44 (E13)	08:09		14:07 (E13)	07:03		06:41				05:26		04:33			
	15:52	51	14:35 (E14)	16:52	16	14:23 (E13)	17:54		19:59				21:02		21:57			
5	08:49		13:45 (E13)	08:07		14:12 (E13)	07:00		06:38				05:23		04:32			
	15:53	51	14:36 (E14)	16:54	7	14:19 (E13)	17:56		20:01				21:04		21:58			
6	08:49		13:46 (E13)	08:05			06:58		06:35				05:21		04:31			
	15:55	50	14:36 (E14)	16:56			17:58		20:03				21:06		21:59			
7	08:48		13:46 (E13)	08:03			06:55		06:33				05:19		04:30			
	15:56	49	14:35 (E14)	16:59			18:00		20:05				21:08		22:00			
8	08:47		13:46 (E13)	08:00			06:53		06:30				05:17		04:29			
	15:58	49	14:35 (E14)	17:01			18:03		20:07				21:10		22:01			
9	08:47		13:46 (E13)	07:58			06:50		06:27			06:53 (E8)	05:15		04:28			
	15:59	48	14:34 (E14)	17:03			18:05		20:10		6	06:59 (E8)	21:12		22:02			
10	08:46		13:46 (E13)	07:56			06:47		06:25			06:50 (E8)	05:13		04:28			
	16:01	45	14:32 (E14)	17:05			18:07		20:12		11	07:01 (E8)	21:14		22:03			
11	08:45		13:47 (E13)	07:54			06:45		06:22			06:48 (E8)	05:10		04:27			
	16:03	42	14:29 (E13)	17:08			18:09		20:14		14	07:02 (E8)	21:16		22:04			
12	08:44		13:46 (E13)	07:52			06:42		06:20			06:45 (E8)	05:08		04:27			
	16:04	43	14:29 (E13)	17:10			18:11		20:16		18	07:03 (E8)	21:18		22:05			
13	08:43		13:47 (E13)	07:49			06:39		06:17			06:43 (E8)	05:06		04:26			
	16:06	43	14:30 (E13)	17:12			18:13		20:18		21	07:04 (E8)	21:20		22:06			
14	08:42		13:48 (E13)	07:47			06:37		06:14			06:41 (E8)	05:04		04:26			
	16:08	42	14:30 (E13)	17:14			18:15		20:20		22	07:03 (E8)	21:22		22:07			
15	08:41		13:47 (E13)	07:45			06:34		06:12			06:41 (E8)	05:02		04:26			
	16:10	43	14:30 (E13)	17:17			18:17		20:22		23	07:04 (E8)	21:24		22:07			
16	08:40		13:48 (E13)	07:43			06:31		06:09			06:40 (E8)	05:01		04:25			
	16:12	43	14:31 (E13)	17:19			18:20		20:24		23	07:03 (E8)	21:25		22:08			
17	08:39		13:48 (E13)	07:40			06:29		06:07			06:41 (E8)	04:59		04:25			
	16:14	43	14:31 (E13)	17:21			18:22		20:26		22	07:03 (E8)	21:27		22:08			
18	08:37		13:49 (E13)	07:38			06:26		06:04			06:40 (E8)	04:57		04:25			
	16:16	43	14:32 (E13)	17:23			18:24		20:28		22	07:02 (E8)	21:29		22:09			
19	08:36		13:49 (E13)	07:35			06:23		06:02			06:41 (E8)	04:55		04:25			
	16:18	43	14:32 (E13)	17:25			18:26		20:30		21	07:02 (E8)	21:31		22:09			
20	08:35		13:50 (E13)	07:33			06:21		05:59			06:41 (E8)	04:53		04:25			
	16:20	43	14:33 (E13)	17:28			18:28		20:32		19	07:00 (E8)	21:33		22:10			
21	08:33		13:50 (E13)	07:31			06:18		05:57			06:42 (E8)	04:52		04:25			
	16:22	42	14:32 (E13)	17:30			18:30		20:35		17	06:59 (E8)	21:35		22:10			
22	08:32		13:50 (E13)	07:28			06:15		05:54			06:44 (E8)	04:50		04:25			
	16:24	42	14:32 (E13)	17:32			18:32		20:37		14	06:58 (E8)	21:36		22:10			
23	08:30		13:51 (E13)	07:26			06:13		05:52			06:45 (E8)	04:48		04:26			
	16:26	41	14:32 (E13)	17:34			18:34		20:39		10	06:55 (E8)	21:38		22:10			
24	08:29		13:51 (E13)	07:23			06:10		05:49				04:47		04:26			
	16:28	41	14:32 (E13)	17:37			18:36		20:41				21:40		22:10			
25	08:27		13:53 (E13)	07:21			06:07		05:47				04:45		04:26			
	16:30	40	14:33 (E13)	17:39			18:38		20:43				21:42		22:10			
26	08:25		13:53 (E13)	07:18			06:05		05:44				04:44		04:27			
	16:32	39	14:32 (E13)	17:41			18:40		20:45				21:43		22:10			
27	08:24		13:54 (E13)	07:16			06:02		05:42				04:42		04:27			
	16:34	38	14:32 (E13)	17:43			18:43		20:47				21:45		22:10			
28	08:22		13:55 (E13)	07:13			05:59		05:40				04:41		04:28			
	16:36	37	14:32 (E13)	17:45			18:45		20:49				21:47		22:10			
29	08:20		13:56 (E13)				06:57		05:37				04:39		04:28			
	16:39	35	14:31 (E13)				19:47		20:51				21:48		22:10			
30	08:18		13:57 (E13)				06:54		05:35				04:38		04:29			
	16:41	34	14:31 (E13)				19:49		20:53				21:50		22:09			
31	08:17		13:58 (E13)				06:51						04:37					
	16:43	31	14:29 (E13)				19:51						21:51					
Potential sun hours	235			266			366			426			508			529		
Total, worst case	1344			99						263								
Sun reduction	0.13			0.20						0.50								
Oper. time red.	0.96			0.96						0.96								
Wind dir. red.	0.66			0.66						0.66								
Total reduction	0.08			0.13						0.32								
Total, real	113			13						83								

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)
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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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E8)	07:17	07:23
	22:09	21:28	20:14	14 07:01 (E8)	18:54	16:36
2	04:31	05:17	06:19	06:49 (E8)	07:19	07:25
	22:08	21:26	20:11	11 07:00 (E8)	18:51	16:34
3	04:32	05:19	06:21	06:51 (E8)	07:21	07:27
	22:08	21:24	20:09	6 06:57 (E8)	18:48	16:31
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	21:19	20:03	18:43	16:27	15:42
6	04:35	05:25	06:27	07:27	07:33	13:41 (E13)
	22:06	21:17	20:01	18:40	16:25	8 13:49 (E13)
7	04:36	05:27	06:29	07:29	07:36	13:36 (E13)
	22:05	21:15	19:58	18:38	16:23	17 13:53 (E13)
8	04:37	05:29	06:31	07:32	07:38	13:34 (E13)
	22:04	21:13	19:55	18:35	16:21	22 13:56 (E13)
9	04:38	05:31	06:33	07:34	07:40	13:32 (E13)
	22:03	21:11	19:53	18:32	16:19	26 13:58 (E13)
10	04:39	05:33	06:35	07:36	07:42	13:30 (E13)
	22:02	21:08	19:50	18:30	16:17	29 13:59 (E13)
11	04:41	05:35	06:37	07:38	07:44	13:30 (E13)
	22:01	21:06	19:47	18:27	16:15	31 14:01 (E13)
12	04:42	05:37	06:39	07:40	07:46	13:28 (E13)
	22:00	21:04	19:45	18:25	16:13	33 14:01 (E13)
13	04:43	05:39	06:41	07:42	07:49	13:28 (E13)
	21:59	21:01	19:42	18:22	16:11	35 14:03 (E13)
14	04:45	05:41	06:43	07:44	07:51	13:27 (E13)
	21:58	20:59	19:39	18:19	16:09	37 14:04 (E13)
15	04:46	05:43	06:45	07:46	07:53	13:26 (E13)
	21:57	20:57	19:37	18:17	16:08	38 14:04 (E13)
16	04:48	05:45	06:47	07:48	07:55	13:26 (E13)
	21:55	20:54	19:34	18:14	16:06	39 14:05 (E13)
17	04:49	05:47	06:49	07:50	07:57	13:26 (E13)
	21:54	20:52	19:31	18:12	16:04	40 14:06 (E13)
18	04:51	05:49	06:51	07:52	07:59	13:25 (E13)
	21:52	20:49	19:29	18:09	16:02	41 14:06 (E13)
19	04:52	05:51	06:53	07:54	08:01	13:26 (E13)
	21:51	20:47	19:26	18:07	16:01	41 14:07 (E13)
20	04:54	05:53	06:55	07:57	08:03	13:25 (E13)
	21:49	20:45	11 07:01 (E8)	18:04	15:59	42 14:07 (E13)
21	04:56	05:55	06:57	07:59	08:05	13:25 (E13)
	21:48	20:42	15 07:03 (E8)	18:02	15:58	42 14:07 (E13)
22	04:57	05:57	06:59	08:01	08:07	13:26 (E13)
	21:46	20:40	17 07:04 (E8)	17:59	15:56	43 14:09 (E13)
23	04:59	05:59	07:01	08:03	08:09	13:26 (E13)
	21:45	20:37	19 07:05 (E8)	17:57	15:55	43 14:09 (E13)
24	05:01	06:01	07:03	08:05	08:11	13:26 (E13)
	21:43	20:35	20 07:05 (E8)	17:55	15:53	43 14:09 (E13)
25	05:03	06:03	07:05	08:07	08:13	13:26 (E13)
	21:41	20:32	22 07:06 (E8)	17:52	15:52	43 14:09 (E13)
26	05:04	06:05	07:07	08:09	08:15	13:26 (E13)
	21:39	20:29	22 07:05 (E8)	17:50	15:51	43 14:09 (E13)
27	05:06	06:07	07:09	08:11	08:17	13:27 (E13)
	21:37	20:27	23 07:05 (E8)	17:47	15:49	43 14:10 (E13)
28	05:08	06:09	07:11	08:13	08:19	13:28 (E13)
	21:36	20:24	23 07:05 (E8)	17:45	15:48	43 14:11 (E13)
29	05:10	06:11	07:13	08:15	08:21	13:28 (E13)
	21:34	20:22	22 07:04 (E8)	17:43	15:47	43 14:11 (E13)
30	05:12	06:13	07:15	08:17	08:22	13:28 (E13)
	21:32	20:19	20 07:03 (E8)	17:40	15:46	43 14:11 (E13)
31	05:14	06:15	07:17	08:19	08:25	13:29 (E13)
	21:30	20:17	17 07:02 (E8)	17:38	15:47	51 14:35 (E14)
Potential sun hours	529	469	385	324	247	216
Total, worst case		231	31		908	1561
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.96	0.96		0.96	0.96
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.31	0.27		0.05	0.04
Total, real		73	8		47	70

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January		February		March		April		May		June	
1	08:51	14:07 (E13)	08:15	14:13 (E13)	07:11	06:49			05:32	04:36		
	15:48	39	14:46 (E14)	16:45	38	14:51 (E13)	17:47	19:53	20:55	21:52		
2	08:50	14:07 (E13)	08:13	14:14 (E13)	07:08	06:46			05:30	04:35		
	15:49	40	14:47 (E14)	16:47	37	14:51 (E13)	17:50	19:55	20:57	21:54		
3	08:50	14:07 (E13)	08:11	14:15 (E13)	07:06	06:43			05:28	04:34		
	15:51	40	14:47 (E14)	16:50	36	14:51 (E13)	17:52	19:57	20:59	21:55		
4	08:50	14:07 (E13)	08:09	14:16 (E13)	07:03	06:41			05:26	04:33		
	15:52	40	14:47 (E14)	16:52	34	14:50 (E13)	17:54	19:59	21:02	21:57		
5	08:49	14:07 (E13)	08:07	14:18 (E13)	07:00	06:38			05:23	04:32		
	15:53	41	14:48 (E14)	16:54	31	14:49 (E13)	17:56	20:01	21:04	21:58		
6	08:49	14:07 (E13)	08:05	14:19 (E13)	06:58	06:35			05:21	04:31		
	15:55	41	14:48 (E14)	16:56	29	14:48 (E13)	17:58	20:03	21:06	21:59		
7	08:48	14:07 (E13)	08:03	14:21 (E13)	06:55	06:33			05:19	04:30		
	15:56	41	14:48 (E14)	16:59	25	14:46 (E13)	18:00	20:05	21:08	22:00		
8	08:47	14:07 (E13)	08:00	14:23 (E13)	06:53	06:30			05:17	04:29		
	15:58	41	14:48 (E14)	17:01	22	14:45 (E13)	18:03	20:07	21:10	22:01		
9	08:47	14:07 (E13)	07:58	14:26 (E13)	06:50	06:27			05:15	04:28		
	15:59	41	14:48 (E14)	17:03	15	14:41 (E13)	18:05	20:10	21:12	22:02		
10	08:46	14:07 (E13)	07:56	14:32 (E13)	06:47	06:25			05:13	04:28		
	16:01	41	14:48 (E14)	17:05	4	14:36 (E13)	18:07	20:12	21:14	22:03		
11	08:45	14:07 (E13)	07:54		06:45	06:22			05:10	04:27		
	16:03	40	14:47 (E14)	17:08		18:09	20:14		21:16	22:04		
12	08:44	14:07 (E13)	07:52		06:42	06:20		06:45 (E8)	05:08	04:27		
	16:04	39	14:46 (E14)	17:10		18:11	20:16	6	06:51 (E8)	21:18	22:05	
13	08:43	14:07 (E13)	07:49		06:39	06:17		06:43 (E8)	05:06	04:26		
	16:06	40	14:47 (E13)	17:12		18:13	20:18	11	06:54 (E8)	21:20	22:06	
14	08:42	14:07 (E13)	07:47		06:37	06:14		06:40 (E8)	05:04	04:26		
	16:08	41	14:48 (E13)	17:14		18:15	20:20	14	06:54 (E8)	21:22	22:07	
15	08:41	14:07 (E13)	07:45		06:34	06:12		06:38 (E8)	05:02	04:26		
	16:10	41	14:48 (E13)	17:17		18:17	20:22	18	06:56 (E8)	21:24	22:07	
16	08:40	14:07 (E13)	07:43		06:31	06:09		06:35 (E8)	05:01	04:25		
	16:12	42	14:49 (E13)	17:19		18:20	20:24	21	06:56 (E8)	21:25	22:08	
17	08:39	14:07 (E13)	07:40		06:29	06:07		06:34 (E8)	04:59	04:25		
	16:14	42	14:49 (E13)	17:21		18:22	20:26	23	06:57 (E8)	21:27	22:08	
18	08:37	14:08 (E13)	07:38		06:26	06:04		06:33 (E8)	04:57	04:25		
	16:16	42	14:50 (E13)	17:23		18:24	20:28	23	06:56 (E8)	21:29	22:09	
19	08:36	14:07 (E13)	07:35		06:23	06:02		06:33 (E8)	04:55	04:25		
	16:18	43	14:50 (E13)	17:25		18:26	20:30	24	06:57 (E8)	21:31	22:09	
20	08:35	14:08 (E13)	07:33		06:21	05:59		06:32 (E8)	04:53	04:25		
	16:20	43	14:51 (E13)	17:28		18:28	20:32	24	06:56 (E8)	21:33	22:10	
21	08:33	14:08 (E13)	07:31		06:18	05:57		06:33 (E8)	04:52	04:25		
	16:22	43	14:51 (E13)	17:30		18:30	20:35	23	06:56 (E8)	21:35	22:10	
22	08:32	14:08 (E13)	07:28		06:15	05:54		06:33 (E8)	04:50	04:25		
	16:24	44	14:52 (E13)	17:32		18:32	20:37	22	06:55 (E8)	21:36	22:10	
23	08:30	14:08 (E13)	07:26		06:13	05:52		06:33 (E8)	04:48	04:26		
	16:26	44	14:52 (E13)	17:34		18:34	20:39	21	06:54 (E8)	21:38	22:10	
24	08:29	14:08 (E13)	07:23		06:10	05:49		06:34 (E8)	04:47	04:26		
	16:28	44	14:52 (E13)	17:37		18:36	20:41	19	06:53 (E8)	21:40	22:10	
25	08:27	14:10 (E13)	07:21		06:07	05:47		06:35 (E8)	04:45	04:26		
	16:30	43	14:53 (E13)	17:39		18:38	20:43	17	06:52 (E8)	21:42	22:10	
26	08:25	14:10 (E13)	07:18		06:05	05:44		06:36 (E8)	04:44	04:27		
	16:32	43	14:53 (E13)	17:41		18:40	20:45	14	06:50 (E8)	21:43	22:10	
27	08:24	14:10 (E13)	07:16		06:02	05:42		06:38 (E8)	04:42	04:27		
	16:34	43	14:53 (E13)	17:43		18:43	20:47	10	06:48 (E8)	21:45	22:10	
28	08:22	14:11 (E13)	07:13		05:59	05:40			04:41	04:28		
	16:36	42	14:53 (E13)	17:45		18:45	20:49		21:47	22:10		
29	08:20	14:11 (E13)			06:57	05:37			04:39	04:28		
	16:39	42	14:53 (E13)			19:47	20:51		21:48	22:10		
30	08:18	14:12 (E13)				06:54	05:35		04:38	04:29		
	16:41	41	14:53 (E13)			19:49	20:53		21:50	22:09		
31	08:17	14:12 (E13)				06:51			04:37			
	16:43	40	14:52 (E13)			19:51			21:51			
Potential sun hours	235		266		366	426		508	529			
Total, worst case	1287		271			290						
Sun reduction	0.13		0.20			0.50						
Oper. time red.	0.96		0.96			0.96						
Wind dir. red.	0.66		0.66			0.65						
Total reduction	0.08		0.13			0.31						
Total, real	109		35			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)
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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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:22 16:36	14:00 (E13) 08:24 13:50 (E14)
2	04:31 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	14:07 (E13) 08:26 13:50 (E14)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	14:12 (E13) 08:27 13:50 (E14)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	14:15 (E13) 08:29 13:51 (E14)
5	04:34 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	14:16 (E13) 08:31 13:52 (E14)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	14:17 (E13) 08:32 13:53 (E14)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	14:19 (E13) 08:34 13:54 (E14)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	14:20 (E13) 08:35 13:55 (E14)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	14:22 (E13) 08:37 13:55 (E14)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	14:22 (E13) 08:38 13:56 (E14)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	14:22 (E13) 08:39 13:57 (E14)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	14:24 (E13) 08:40 13:58 (E14)
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	14:24 (E13) 08:41 13:59 (E14)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	14:25 (E13) 08:43 14:00 (E14)
15	04:46 21:57	05:43 20:57	06:45 (E8) 19:37	07:46 18:17	07:53 16:08	14:25 (E13) 08:44 14:00 (E14)
16	04:48 21:55	05:45 20:54	06:45 (E8) 19:34	07:48 18:14	07:55 16:06	14:25 (E13) 08:45 14:01 (E14)
17	04:49 21:54	05:47 20:52	06:42 (E8) 19:31	07:49 18:12	07:57 16:04	14:26 (E13) 08:45 14:02 (E14)
18	04:51 21:52	05:49 20:49	06:40 (E8) 19:29	07:52 18:09	07:59 16:02	14:26 (E13) 08:46 14:02 (E14)
19	04:52 21:51	05:51 20:47	06:39 (E8) 19:26	07:54 18:07	08:01 16:01	14:26 (E13) 08:47 14:03 (E14)
20	04:54 21:49	05:53 20:45	06:39 (E8) 19:23	07:57 18:04	08:03 15:59	14:27 (E13) 08:48 14:04 (E14)
21	04:56 21:48	05:55 20:42	06:38 (E8) 19:20	07:59 18:02	08:05 15:58	14:27 (E13) 08:49 14:04 (E14)
22	04:57 21:46	05:57 20:40	06:37 (E8) 19:18	08:01 17:59	08:07 15:56	14:28 (E13) 08:49 14:05 (E14)
23	04:59 21:45	05:59 20:37	06:37 (E8) 19:15	08:03 17:57	08:09 15:55	14:28 (E13) 08:49 14:05 (E14)
24	05:01 21:43	06:01 20:35	06:37 (E8) 19:12	08:05 17:55	08:11 15:53	14:28 (E13) 08:50 14:06 (E14)
25	05:03 21:41	06:03 20:32	06:37 (E8) 19:10	08:13 17:52	08:13 15:52	14:28 (E13) 08:50 14:06 (E14)
26	05:04 21:39	06:05 20:29	06:36 (E8) 19:07	08:15 17:50	08:15 15:51	14:28 (E13) 08:51 14:07 (E14)
27	05:06 21:37	06:07 20:27	06:37 (E8) 19:04	08:17 17:47	08:17 15:49	14:28 (E13) 08:51 14:07 (E14)
28	05:08 21:36	06:09 20:24	06:39 (E8) 19:02	08:19 17:45	08:19 15:48	14:28 (E13) 08:51 14:07 (E14)
29	05:10 21:34	06:11 20:22	06:41 (E8) 18:59	08:21 17:43	08:21 15:47	14:28 (E13) 08:51 14:07 (E14)
30	05:12 21:32	06:13 20:19	06:43 (E8) 18:56	08:22 17:41	08:22 15:46	14:28 (E13) 08:51 14:07 (E14)
31	05:14 21:30	06:15 20:17	06:45 (E8) 18:54	08:24 17:39	08:24 15:45	14:28 (E13) 08:51 14:07 (E14)
Potential sun hours	529	469	385	324	247	216
Total, worst case		295			1120	1207
Sun reduction		0.50			0.08	0.07
Oper. time red.		0.96			0.96	0.96
Wind dir. red.		0.65			0.66	0.66
Total reduction		0.31			0.05	0.04
Total, real		92			59	54

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	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 20:04	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	06:36 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 22:03	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 17:05	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 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 18:15	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 20:54	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 21:27	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 16:02	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	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	08:33 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 15:39
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	08:09 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 22:10	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 16:34	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 20:24	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			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

January		February		March		April		May		June	
1	08:51	12:40 (E16)	08:15	15:36 (E15)	07:11	15:41 (E15)	06:49	05:32		04:36	20:27 (E13)
	15:48	43	13:23 (E16)	16:45	19	15:51 (E15)	19:53	20:55		21:52	34
2	08:50	12:40 (E16)	08:13	15:34 (E15)	07:08		06:46	05:30		04:35	20:27 (E13)
	15:49	43	13:23 (E16)	16:47	23	15:57 (E15)	17:50	20:57		21:54	34
3	08:50	12:41 (E16)	08:11	15:33 (E15)	07:06		06:43	05:28		04:34	20:26 (E13)
	15:51	43	13:24 (E16)	16:50	26	15:59 (E15)	17:52	20:59		21:55	35
4	08:50	12:41 (E16)	08:09	15:32 (E15)	07:03		06:41	05:26		04:33	20:26 (E13)
	15:52	43	13:24 (E16)	16:52	29	16:01 (E15)	17:54	21:01		21:56	36
5	08:49	12:41 (E16)	08:07	15:30 (E15)	07:00		06:38	05:23		04:32	20:27 (E13)
	15:53	43	13:24 (E16)	16:54	32	16:02 (E15)	17:56	21:04		21:58	36
6	08:49	12:42 (E16)	08:05	15:29 (E15)	06:58		06:35	05:21		04:31	20:26 (E13)
	15:55	43	13:25 (E16)	16:56	34	16:03 (E15)	17:58	21:06		21:59	37
7	08:48	12:43 (E16)	08:03	15:29 (E15)	06:55		06:33	05:19		04:30	20:26 (E13)
	15:56	42	13:25 (E16)	16:59	35	16:04 (E15)	18:00	21:08		22:00	37
8	08:47	12:43 (E16)	08:00	15:28 (E15)	06:53		06:30	05:17		04:29	20:27 (E13)
	15:58	42	13:25 (E16)	17:01	38	16:06 (E15)	18:03	21:10		22:01	37
9	08:47	12:44 (E16)	07:58	15:27 (E15)	06:50		06:27	05:15		04:29	20:26 (E13)
	15:59	42	13:26 (E16)	17:03	39	16:06 (E15)	18:05	21:12		22:02	38
10	08:46	12:45 (E16)	07:56	15:27 (E15)	06:47		06:25	05:13		04:28	20:27 (E13)
	16:01	41	13:26 (E16)	17:05	40	16:07 (E15)	18:07	21:14		22:03	37
11	08:45	12:45 (E16)	07:54	15:26 (E15)	06:45		06:22	05:10		04:27	20:26 (E13)
	16:03	41	13:26 (E16)	17:08	40	16:06 (E15)	18:09	21:16		22:04	38
12	08:44	12:45 (E16)	07:52	15:26 (E15)	06:42		06:20	05:08		04:27	20:27 (E13)
	16:04	40	13:25 (E16)	17:10	41	16:07 (E15)	18:11	21:18		22:05	38
13	08:43	12:46 (E16)	07:49	15:26 (E15)	06:39		06:17	05:06		04:26	20:27 (E13)
	16:06	40	13:26 (E16)	17:12	42	16:08 (E15)	18:13	21:20		22:06	38
14	08:42	12:47 (E16)	07:47	15:25 (E15)	06:37		06:14	05:04		04:26	20:27 (E13)
	16:08	39	13:26 (E16)	17:14	43	16:08 (E15)	18:15	21:21		22:06	39
15	08:41	12:48 (E16)	07:45	15:26 (E15)	06:34		06:12	05:03		04:26	20:27 (E13)
	16:10	37	13:25 (E16)	17:17	42	16:08 (E15)	18:17	21:23		22:07	38
16	08:40	12:49 (E16)	07:42	15:25 (E15)	06:31		06:09	05:01		04:25	20:27 (E13)
	16:12	37	13:26 (E16)	17:19	43	16:08 (E15)	18:20	21:25		22:08	39
17	08:39	12:49 (E16)	07:40	15:26 (E15)	06:29		06:07	04:59		04:25	20:27 (E13)
	16:14	36	13:25 (E16)	17:21	42	16:08 (E15)	18:22	21:27		22:08	39
18	08:37	12:51 (E16)	07:38	15:26 (E15)	06:26		06:04	04:57		04:25	20:27 (E13)
	16:16	34	13:25 (E16)	17:23	41	16:07 (E15)	18:24	21:29		22:09	39
19	08:36	12:52 (E16)	07:35	15:26 (E15)	06:23		06:02	04:55		04:25	20:28 (E13)
	16:18	32	13:24 (E16)	17:25	41	16:07 (E15)	18:26	21:31		22:09	38
20	08:35	12:53 (E16)	07:33	15:26 (E15)	06:21		06:00	04:53		04:25	20:28 (E13)
	16:20	31	13:24 (E16)	17:28	40	16:06 (E15)	18:28	21:33		22:10	38
21	08:33	12:55 (E16)	07:31	15:27 (E15)	06:18		05:57	04:52		04:25	20:29 (E13)
	16:22	29	13:24 (E16)	17:30	39	16:06 (E15)	18:30	21:35		22:10	39
22	08:32	12:56 (E16)	07:28	15:28 (E15)	06:15		05:54	04:50		04:25	20:29 (E13)
	16:24	26	13:22 (E16)	17:32	37	16:05 (E15)	18:32	21:36		22:10	39
23	08:30	12:58 (E16)	07:26	15:29 (E15)	06:13		05:52	04:48		04:26	20:29 (E13)
	16:26	23	13:21 (E16)	17:34	36	16:05 (E15)	18:34	21:38		22:10	38
24	08:29	13:00 (E16)	07:23	15:30 (E15)	06:10		05:49	04:47		04:26	20:28 (E13)
	16:28	19	13:19 (E16)	17:37	33	16:03 (E15)	18:36	21:40		22:10	39
25	08:27	13:02 (E16)	07:21	15:30 (E15)	06:07		05:47	04:45		04:26	20:29 (E13)
	16:30	15	13:17 (E16)	17:39	31	16:01 (E15)	18:38	21:42		22:10	39
26	08:25	13:09 (E16)	07:18	15:33 (E15)	06:05		05:44	04:44		04:27	20:29 (E13)
	16:32	4	13:13 (E16)	17:41	27	16:00 (E15)	18:40	21:43		22:10	39
27	08:24		07:16	15:34 (E15)	06:02		05:42	04:42		04:27	20:30 (E13)
	16:34		17:43	15:58 (E15)	18:43		05:41	21:45		22:10	38
28	08:22		07:13	15:37 (E15)	05:59		05:40	04:41		04:28	20:30 (E13)
	16:36		17:45	15:56 (E15)	18:45		05:40	21:46		22:10	38
29	08:20				06:57		05:37	04:40		04:29	20:30 (E13)
	16:39				19:47		20:51	21:48		22:10	39
30	08:18	15:43 (E15)			06:54		05:35	04:38		04:29	20:31 (E13)
	16:41	3	15:46 (E15)		19:49		20:53	21:49		22:09	38
31	08:16	15:38 (E15)			06:51			04:37		20:27 (E13)	
	16:43	14	15:52 (E15)		19:51			21:51		21:00 (E13)	
Potential sun hours	235		266		366		426	508		528	
Total, worst case	925		976		516		189	283		1131	
Sun reduction	0.13		0.20		0.41		0.50	0.57		0.56	
Oper. time red.	0.96		0.96		0.96		0.96	0.96		0.96	
Wind dir. red.	0.64		0.66		0.65		0.66	0.62		0.62	
Total reduction	0.08		0.13		0.26		0.32	0.34		0.33	
Total, real	76		125		133		60	96		376	

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July			August			September			October			November			December		
1	04:30		20:30 (E13)	05:16		06:17		06:47 (E10)	07:17		18:02 (E14)	07:22		14:57 (E15)	08:24		12:28 (E16)	
	22:09	38	21:08 (E13)	21:28		20:14	12	06:59 (E10)	18:54	21	18:23 (E14)	16:36	39	15:36 (E15)	15:45	40	13:08 (E16)	
2	04:31		20:31 (E13)	05:18		06:19		06:49 (E10)	07:19		18:03 (E14)	07:25		14:57 (E15)	08:26		12:27 (E16)	
	22:08	38	21:09 (E13)	21:26		20:11	9	06:58 (E10)	18:51	18	18:21 (E14)	16:34	38	15:35 (E15)	15:44	41	13:08 (E16)	
3	04:32		20:31 (E13)	05:19		06:21		06:51 (E10)	07:21		18:05 (E14)	07:27		14:58 (E15)	08:27		12:27 (E16)	
	22:08	38	21:09 (E13)	21:24		20:09	5	06:56 (E10)	18:48	13	18:18 (E14)	16:32	37	15:35 (E15)	15:43	42	13:09 (E16)	
4	04:33		20:32 (E13)	05:21		06:23			07:23		18:08 (E14)	07:29		14:58 (E15)	08:29		12:27 (E16)	
	22:07	37	21:09 (E13)	21:21		20:06			18:46	7	18:15 (E14)	16:29	36	15:34 (E15)	15:42	42	13:09 (E16)	
5	04:34		20:32 (E13)	05:23		06:25			07:25			07:31		14:59 (E15)	08:31		12:28 (E16)	
	22:07	37	21:09 (E13)	21:19		20:03			18:43			16:27	34	15:33 (E15)	15:42	42	13:10 (E16)	
6	04:35		20:33 (E13)	05:25		06:27			07:27			07:33		15:01 (E15)	08:32		12:29 (E16)	
	22:06	36	21:09 (E13)	21:17		20:01			18:40			16:25	31	15:32 (E15)	15:41	42	13:11 (E16)	
7	04:36		20:33 (E13)	05:27		06:29			07:29			07:35		15:01 (E15)	08:34		12:28 (E16)	
	22:05	36	21:09 (E13)	21:15		19:58			18:38			16:23	30	15:31 (E15)	15:40	43	13:11 (E16)	
8	04:37		20:33 (E13)	05:29		06:31			07:31			07:38		15:03 (E15)	08:35		12:29 (E16)	
	22:04	36	21:09 (E13)	21:13		19:55			18:35			16:21	27	15:30 (E15)	15:40	43	13:12 (E16)	
9	04:38		20:34 (E13)	05:31		06:33			07:34			07:40		15:05 (E15)	08:36		12:29 (E16)	
	22:03	35	21:09 (E13)	21:11		19:53			18:32			16:19	23	15:28 (E15)	15:39	43	13:12 (E16)	
10	04:39		20:34 (E13)	05:33		06:35			07:36			07:42		15:07 (E15)	08:38		12:30 (E16)	
	22:02	35	21:09 (E13)	21:08		19:50			18:30			16:17	19	15:26 (E15)	15:39	43	13:13 (E16)	
11	04:41		20:34 (E13)	05:35		06:37			07:38			07:44		15:10 (E15)	08:39		12:30 (E16)	
	22:01	34	21:08 (E13)	21:06		19:47			18:27			16:15	14	15:24 (E15)	15:38	43	13:13 (E16)	
12	04:42		20:36 (E13)	05:37		06:39			07:40			07:46			08:40		12:30 (E16)	
	22:00	33	21:09 (E13)	21:04		19:45			18:25			16:13			15:38	43	13:13 (E16)	
13	04:43		20:36 (E13)	05:39		06:41			07:42		16:12 (E15)	07:48			08:41		12:31 (E16)	
	21:59	32	21:08 (E13)	21:01		19:42			18:22	14	16:26 (E15)	16:11			15:38	43	13:14 (E16)	
14	04:45		20:36 (E13)	05:41		06:43			07:44		16:08 (E15)	07:51			08:42		12:31 (E16)	
	21:58	32	21:08 (E13)	20:59		19:39			18:19	21	16:29 (E15)	16:09			15:38	44	13:15 (E16)	
15	04:46		20:37 (E13)	05:43		06:45		07:34 (E11)	07:46		16:06 (E15)	07:53			08:44		12:32 (E16)	
	21:56	30	21:07 (E13)	20:57		19:37	10	07:44 (E11)	18:17	26	16:32 (E15)	16:08			15:38	43	13:15 (E16)	
16	04:48		20:38 (E13)	05:45		06:47		07:32 (E11)	07:48		16:04 (E15)	07:55		12:41 (E16)	08:44		12:32 (E16)	
	21:55	29	21:07 (E13)	20:54		19:34	14	07:46 (E11)	18:14	29	16:33 (E15)	16:06	5	12:46 (E16)	15:38	44	13:16 (E16)	
17	04:49		20:38 (E13)	05:47		06:49		07:31 (E11)	07:50		16:02 (E15)	07:57		12:36 (E16)	08:45		12:33 (E16)	
	21:54	28	21:06 (E13)	20:52		19:31	16	07:47 (E11)	18:12	32	16:34 (E15)	16:04	15	12:51 (E16)	15:38	43	13:16 (E16)	
18	04:51		20:40 (E13)	05:49		06:51		07:29 (E11)	07:52		16:00 (E15)	07:59		12:34 (E16)	08:46		12:33 (E16)	
	21:52	26	21:06 (E13)	20:49		19:28	27	18:22 (E14)	18:09	35	16:35 (E15)	16:02	19	12:53 (E16)	15:38	44	13:17 (E16)	
19	04:52		20:40 (E13)	05:51		06:53		07:28 (E11)	07:54		15:59 (E15)	08:01		12:33 (E16)	08:47		12:33 (E16)	
	21:51	24	21:04 (E13)	20:47		19:26	34	18:24 (E14)	18:07	36	16:35 (E15)	16:01	23	12:56 (E16)	15:38	44	13:17 (E16)	
20	04:54		20:42 (E13)	05:53		06:55		07:27 (E11)	07:57		15:59 (E15)	08:03		12:31 (E16)	08:48		12:34 (E16)	
	21:49	22	21:04 (E13)	20:44		19:23	38	18:25 (E14)	18:04	37	16:36 (E15)	15:59	26	12:57 (E16)	15:39	43	13:17 (E16)	
21	04:56		20:43 (E13)	05:55		06:57		07:26 (E11)	07:59		15:57 (E15)	08:05		12:30 (E16)	08:48		12:34 (E16)	
	21:48	19	21:02 (E13)	20:42		19:20	41	18:26 (E14)	18:02	40	16:37 (E15)	15:58	29	12:59 (E16)	15:39	43	13:17 (E16)	
22	04:57		20:45 (E13)	05:57		06:59		07:27 (E11)	08:01		15:56 (E15)	08:07		12:30 (E16)	08:49		12:35 (E16)	
	21:46	16	21:01 (E13)	20:40	9	06:58 (E10)	42	18:27 (E14)	17:59	41	16:37 (E15)	15:56	31	13:01 (E16)	15:39	43	13:18 (E16)	
23	04:59		20:47 (E13)	05:59		06:47 (E10)		07:29 (E11)	08:03		15:57 (E15)	08:09		12:29 (E16)	08:49		12:35 (E16)	
	21:44	11	20:58 (E13)	20:37	13	07:00 (E10)	41	18:27 (E14)	17:57	41	16:38 (E15)	15:55	33	13:02 (E16)	15:40	43	13:18 (E16)	
24	05:01			06:01		06:45 (E10)		07:31 (E11)	08:05		15:56 (E15)	08:11		12:28 (E16)	08:50		12:36 (E16)	
	21:43			20:34	16	07:01 (E10)	38	18:27 (E14)	17:55	42	16:38 (E15)	15:53	34	13:02 (E16)	15:41	43	13:19 (E16)	
25	05:03			06:03		06:44 (E10)		07:33 (E11)	07:07		14:55 (E15)	08:13		12:28 (E16)	08:50		12:36 (E16)	
	21:41			20:32	18	07:02 (E10)	35	18:27 (E14)	16:52	42	15:37 (E15)	15:52	35	13:03 (E16)	15:41	44	13:20 (E16)	
26	05:04			06:05		06:42 (E10)		07:35 (E11)	07:09		14:56 (E15)	08:15		12:27 (E16)	08:50		12:36 (E16)	
	21:39			20:29	19	07:01 (E10)	31	18:27 (E14)	16:50	42	15:38 (E15)	15:51	37	13:04 (E16)	15:42	44	13:20 (E16)	
27	05:06			06:07		06:42 (E10)		07:09			14:55 (E15)	08:17		12:27 (E16)	08:51		12:37 (E16)	
	21:37			20:27	19	07:01 (E10)	26	18:26 (E14)	16:47	43	15:38 (E15)	15:49	38	13:05 (E16)	15:43	43	13:20 (E16)	
28	05:08			06:09		06:41 (E10)		07:11			14:55 (E15)	08:19		12:28 (E16)	08:51		12:37 (E16)	
	21:36			20:24	20	07:01 (E10)	25	18:25 (E14)	16:45	42	15:37 (E15)	15:48	38	13:06 (E16)	15:44	44	13:21 (E16)	
29	05:10			06:11		06:41 (E10)		07:13			14:56 (E15)	08:20		12:28 (E16)	08:51		12:38 (E16)	
	21:34			20:22	20	07:01 (E10)	25	18:26 (E14)	16:43	41	15:37 (E15)	15:47	39	13:07 (E16)	15:45	43	13:21 (E16)	
30	05:12			06:13		06:43 (E10)		07:15			14:55 (E15)	08:22		12:28 (E16)	08:51		12:39 (E16)	
	21:32			20:19	18	07:01 (E10)	22	18:24 (E14)	16:40	42	15:37 (E15)	15:46	40	13:08 (E16)	15:46	43	13:22 (E16)	
31	05:14			06:15		06:45 (E10)					14:55 (E15)				08:51		12:38 (E16)	
	21:30			20:16	15	07:00 (E10)					16:38	41	15:36 (E15)		15:47	44	13:22 (E16)	
Potential sun hours	529			469			385			324			247			216		
Total, worst case		702			167		491			746			770			1332		
Sun reduction		0.49			0.50		0.43			0.26			0.08			0.07		
Oper. time red.		0.96			0.96		0.96			0.96			0.96			0.96		
Wind dir. red.		0.62			0.66		0.65			0.66			0.65			0.64		
Total reduction		0.29			0.31		0.27			0.16			0.05			0.04		
Total, real		206			52		131			123			40			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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Muiž nieki (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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	09:00 (E13) 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	08:25 (E13) 15:45
2	08:50 15:49	08:13 16:47	08:59 (E13) 17:50	07:08 19:55	06:46 20:57	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:25 (E13) 15:44
3	08:50 15:51	08:11 16:50	08:58 (E13) 17:52	07:06 19:57	06:43 20:58	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:26 (E13) 15:43
4	08:50 15:52	08:09 16:52	08:58 (E13) 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	08:26 (E13) 15:42
5	08:49 15:53	08:07 16:54	08:58 (E13) 17:56	07:01 19:59	06:38 20:57	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:26 (E13) 15:42
6	08:49 15:55	08:05 16:56	08:57 (E13) 17:58	06:58 19:59	06:35 20:57	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:27 (E13) 15:41
7	08:48 15:56	08:03 16:59	08:56 (E13) 18:01	06:55 20:05	06:33 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 20:03	07:30 18:38	07:36 16:23	08:28 (E13) 15:40
8	08:48 15:58	08:01 17:01	08:57 (E13) 18:03	06:53 20:08	06:30 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 20:03	07:32 18:35	07:38 16:21	08:29 (E13) 15:40
9	08:47 15:59	07:58 17:03	08:56 (E13) 18:05	06:50 20:10	06:28 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 20:03	07:34 18:32	07:40 16:19	08:30 (E13) 15:39
10	08:46 16:01	07:56 17:05	08:56 (E13) 18:07	06:47 20:12	06:25 21:14	04:28 22:03	04:39 22:02	05:33 21:08	06:35 20:03	07:36 18:30	07:42 16:17	08:32 (E13) 15:39
11	08:45 16:03	07:54 17:08	08:56 (E13) 18:09	06:45 20:14	06:22 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 20:03	07:38 18:27	07:44 16:15	08:32 (E13) 15:38
12	08:44 16:05	07:52 17:10	08:56 (E13) 18:11	06:42 20:16	06:20 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 20:03	07:40 18:25	07:46 16:13	08:34 (E13) 15:38
13	08:43 16:06	07:50 17:12	08:56 (E13) 18:13	06:40 20:18	06:17 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 20:03	07:42 18:22	07:49 16:11	08:36 (E13) 15:38
14	08:42 16:08	07:47 17:14	08:56 (E13) 18:15	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 16:09	08:38 (E13) 15:38
15	08:41 16:10	07:45 17:17	08:57 (E13) 18:18	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	08:41 (E13) 15:38
16	08:40 16:12	07:43 17:19	08:57 (E13) 18:20	06:32 20:24	06:09 21:25	04:25 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:42 (E13) 15:38
17	08:39 16:14	07:40 17:21	08:58 (E13) 18:22	06:29 20:26	06:07 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	08:46 (E13) 15:38
18	08:37 16:16	07:38 17:23	08:58 (E13) 18:24	06:26 20:28	06:04 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:46 (E13) 15:38
19	08:36 16:18	07:36 17:26	08:59 (E13) 18:26	06:24 20:30	06:02 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 (E13) 15:38
20	08:35 16:20	07:33 17:28	08:59 (E13) 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 16:01	08:48 (E13) 15:39
21	08:33 16:22	07:31 17:30	09:01 (E13) 18:30	06:18 20:35	05:57 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 16:00	08:48 (E13) 15:39
22	08:32 16:24	07:28 17:32	09:02 (E13) 18:32	06:16 20:37	05:54 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 16:01	08:49 (E13) 15:39
23	08:30 16:26	07:26 17:34	09:05 (E13) 18:34	06:13 20:39	05:52 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 16:02	08:50 (E13) 15:40
24	08:29 16:28	07:23 17:37	09:07 (E13) 18:36	06:10 20:41	05:49 21:40	04:27 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 16:03	08:51 (E13) 15:41
25	08:27 16:30	07:21 17:39	09:21 (E13) 18:38	06:07 20:41	05:47 21:40	04:26 22:10	05:03 21:43	06:03 20:32	07:05 19:10	08:07 17:52	08:13 16:04	08:50 (E13) 15:41
26	08:26 16:32	07:18 17:41	09:26 (E13) 18:41	06:05 20:45	05:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 16:05	08:51 (E13) 15:42
27	08:24 16:34	07:16 17:43	09:28 (E13) 18:43	06:02 20:47	05:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:47	08:17 16:06	08:51 (E13) 15:43
28	08:22 16:36	9 09:18 (E13) 17:45	09:06 (E13) 18:45	05:59 20:49	05:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:19 16:07	08:51 (E13) 15:44
29	08:20 16:39	09:04 (E13) 17:45	09:24 (E13) 18:45	05:57 20:51	05:37 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 16:08	08:51 (E13) 15:45
30	08:18 16:41	09:03 (E13) 17:46	09:26 (E13) 18:46	05:54 20:54	05:35 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:25 16:09	08:51 (E13) 15:46
31	08:17 16:43	09:02 (E13) 17:46	09:28 (E13) 18:46	05:51 20:51	05:32 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:16 16:38	08:19 17:41	08:26 16:10	08:51 (E13) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	94	799								467	448	
Sun reduction	0.13	0.20								0.26	0.08	
Oper. time red.	0.96	0.96								0.96	0.96	
Wind dir. red.	0.59	0.59								0.59	0.59	
Total reduction	0.08	0.11								0.15	0.05	
Total, real	7	91								69	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 08:50 15:49	08:14 16:45 08:12 16:47	15:32 (E1) 17:47 15:33 (E1) 17:49	07:10 19:53 07:08 19:55	06:48 20:55 06:46 19:55	05:32 21:52 05:30 21:54	04:35 22:09 04:34 22:08	04:29 21:28 04:30 21:25	05:15 20:14 05:17 20:11	06:17 18:53 06:19 18:50	07:17 16:35 07:19 16:33	07:22 15:44 07:24 15:43
2	08:50 15:49	08:10 16:49	15:34 (E1) 17:51	07:05 19:57	06:43 20:59	05:27 21:55	04:33 22:08	04:31 21:23	05:19 20:08	06:21 18:48	07:21 16:31	07:27 15:43
3	08:50 15:49	08:10 16:49	15:34 (E1) 17:51	07:05 19:57	06:43 20:59	05:27 21:55	04:33 22:08	04:31 21:23	05:19 20:08	06:21 18:48	07:21 16:31	07:27 15:43
4	08:49 15:51	08:08 16:51	15:36 (E1) 17:50	07:03 19:59	06:40 21:01	05:25 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	07:29 15:42
5	08:49 15:53	08:06 16:54	15:37 (E1) 17:56	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
6	08:49 15:54	08:04 16:56	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
7	08:48 15:56	08:02 16:58	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
8	08:47 15:57	08:00 17:00	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
9	08:47 15:59	07:58 17:03	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
10	08:46 16:00	07:56 17:05	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
11	08:45 16:02	07:54 17:07	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
12	08:44 16:04	07:51 17:09	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
13	08:43 16:06	07:49 17:12	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
14	08:42 16:07	07:47 17:14	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
15	08:41 16:09	07:45 17:16	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
16	08:40 16:11	07:42 17:18	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
17	08:38 16:13	07:40 17:21	15:47 (E1) 17:58	07:00 19:59	06:38 21:03	05:23 21:58	04:31 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	15:11 (E1) 15:41
18	08:37 16:15	15:33 (E1) 17:23	07:38 17:23	07:38 17:23	07:38 17:23	07:38 17:23	07:38 17:23	07:38 17:23	07:38 17:23	07:38 17:23	07:38 17:23	07:38 17:23
19	08:36 16:17	4 15:38 (E1) 17:25	07:35 17:25	07:35 17:25	07:35 17:25	07:35 17:25	07:35 17:25	07:35 17:25	07:35 17:25	07:35 17:25	07:35 17:25	07:35 17:25
20	08:34 16:19	6 15:38 (E1) 17:27	07:33 17:27	07:33 17:27	07:33 17:27	07:33 17:27	07:33 17:27	07:33 17:27	07:33 17:27	07:33 17:27	07:33 17:27	07:33 17:27
21	08:33 16:21	9 15:40 (E1) 17:30	07:30 17:30	07:30 17:30	07:30 17:30	07:30 17:30	07:30 17:30	07:30 17:30	07:30 17:30	07:30 17:30	07:30 17:30	07:30 17:30
22	08:32 16:23	12 15:43 (E1) 17:32	07:29 17:32	07:29 17:32	07:29 17:32	07:29 17:32	07:29 17:32	07:29 17:32	07:29 17:32	07:29 17:32	07:29 17:32	07:29 17:32
23	08:30 16:25	16 15:46 (E1) 17:36	07:28 17:36	07:28 17:36	07:28 17:36	07:28 17:36	07:28 17:36	07:28 17:36	07:28 17:36	07:28 17:36	07:28 17:36	07:28 17:36
24	08:28 16:27	18 15:48 (E1) 17:40	07:25 17:40	07:25 17:40	07:25 17:40	07:25 17:40	07:25 17:40	07:25 17:40	07:25 17:40	07:25 17:40	07:25 17:40	07:25 17:40
25	08:27 16:29	20 15:50 (E1) 17:45	07:23 17:45	07:23 17:45	07:23 17:45	07:23 17:45	07:23 17:45	07:23 17:45	07:23 17:45	07:23 17:45	07:23 17:45	07:23 17:45
26	08:25 16:32	22 15:51 (E1) 17:50	07:20 17:50	07:20 17:50	07:20 17:50	07:20 17:50	07:20 17:50	07:20 17:50	07:20 17:50	07:20 17:50	07:20 17:50	07:20 17:50
27	08:24 16:34	22 15:51 (E1) 17:55	07:18 17:55	07:18 17:55	07:18 17:55	07:18 17:55	07:18 17:55	07:18 17:55	07:18 17:55	07:18 17:55	07:18 17:55	07:18 17:55
28	08:22 16:36	22 15:52 (E1) 17:59	07:13 17:59	07:13 17:59	07:13 17:59	07:13 17:59	07:13 17:59	07:13 17:59	07:13 17:59	07:13 17:59	07:13 17:59	07:13 17:59
29	08:20 16:38	22 15:52 (E1) 18:00	07:13 18:00	07:13 18:00	07:13 18:00	07:13 18:00	07:13 18:00	07:13 18:00	07:13 18:00	07:13 18:00	07:13 18:00	07:13 18:00
30	08:18 16:40	22 15:52 (E1) 18:05	07:13 18:05	07:13 18:05	07:13 18:05	07:13 18:05	07:13 18:05	07:13 18:05	07:13 18:05	07:13 18:05	07:13 18:05	07:13 18:05
31	08:16 16:42	21 15:52 (E1) 18:10	07:13 18:10	07:13 18:10	07:13 18:10	07:13 18:10	07:13 18:10	07:13 18:10	07:13 18:10	07:13 18:10	07:13 18:10	07:13 18:10
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	238	79										
Sun reduction	0.13	0.20										
Oper. time red.	0.96	0.96										
Wind dir. red.	0.65	0.65										
Total reduction	0.08	0.13										
Total, real	20	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	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 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	07:58 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 17:05	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 21:27	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	04:53 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	08:33 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 17:34	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 19:12	08:05 17:55	08:11 15:53	08:50 15:41
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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		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 15:50	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	05:21 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	07:51 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 20:56	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
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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
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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
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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 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	07:16 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	07:18 17:40	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
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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
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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 17:34	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 22:10	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 18:39	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 22:10	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 16:34	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
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	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 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 20:03	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 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 17:05	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 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 20:54	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	08:46 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	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
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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	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			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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 17:34	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 19:12	08:05 17:55	08:11 15:53	08:50 15:41
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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	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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	04:53 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	08:33 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 17:34	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 19:12	08:05 17:55	08:11 15:53	08:50 15:41
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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	08:15 15:51	08:51 15:42
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Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Neretas 7 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (87)

Assumptions for shadow calculations

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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 22:07	05:22 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
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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
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Total, worst case												
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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) []

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Operational time

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

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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
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Mezares_AB211223

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SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Nomales - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (160)

Assumptions for shadow calculations

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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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

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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
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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
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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
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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
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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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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Total, worst case												
Sun reduction												
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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:

25/06/2024 18:19/4.0.540

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

	January	February	March	April	May	June	July	August	September	October	November	December
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30			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.												
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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

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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 17:58	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
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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 17:14	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
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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 21:27	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	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 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	04:27 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
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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
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Total, worst case												
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Table layout: For each day in each month the following matrix apply

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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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) []

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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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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
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Total, worst case												
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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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	16:35 (E13) 17:47	06:49 19:53	05:32 20:55
2	08:50 15:49	08:13 16:47	07:08 17:50	16:36 (E13) 16:50 (E13)	06:46 19:55	05:30 20:57
3	08:50 15:51	08:11 16:50	07:06 17:52	16:40 (E13) 16:47 (E13)	06:43 19:57	05:28 20:59
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
5	08:49 15:53	08:07 16:54	08:36 (E10) 08:39 (E10)	07:00 17:56	06:38 20:01	05:23 21:04
6	08:49 15:55	08:05 16:56	08:34 (E10) 08:42 (E10)	06:58 17:58	06:35 20:03	05:21 21:06
7	08:48 15:56	08:03 16:58	08:32 (E10) 08:45 (E10)	06:55 18:00	07:21 (E9) 07:31 (E9)	06:33 20:05
8	08:47 15:58	08:00 17:01	08:30 (E10) 08:46 (E10)	06:53 18:03	07:15 (E9) 07:33 (E9)	06:30 20:07
9	08:47 15:59	07:58 17:03	08:27 (E10) 08:47 (E10)	06:50 18:05	07:17 (E9) 07:36 (E9)	06:27 20:10
10	08:46 16:01	07:56 17:05	08:26 (E10) 08:48 (E10)	06:47 18:07	07:15 (E9) 07:36 (E9)	06:25 20:12
11	08:45 16:03	07:54 17:07	08:25 (E10) 08:48 (E10)	06:45 18:09	07:13 (E9) 07:37 (E9)	06:22 20:14
12	08:44 16:04	07:52 17:10	08:25 (E10) 08:49 (E10)	06:42 18:11	07:12 (E9) 07:37 (E9)	06:20 20:16
13	08:43 16:06	07:49 17:12	08:26 (E10) 08:49 (E10)	06:39 18:13	07:12 (E9) 07:38 (E9)	06:17 20:18
14	08:42 16:08	07:47 17:14	08:25 (E10) 08:49 (E10)	06:37 18:15	07:11 (E9) 07:37 (E9)	06:14 20:20
15	08:41 16:10	07:45 17:16	08:26 (E10) 08:49 (E10)	06:34 18:17	07:11 (E9) 07:37 (E9)	06:12 20:22
16	08:40 16:12	07:42 17:19	08:25 (E10) 16:47 (E13)	06:31 18:19	07:11 (E9) 07:37 (E9)	06:09 20:24
17	08:39 16:14	07:40 17:21	08:26 (E10) 16:50 (E13)	06:29 18:22	07:11 (E9) 07:36 (E9)	06:07 20:26
18	08:37 16:16	07:38 17:23	08:27 (E10) 16:52 (E13)	06:26 18:24	07:11 (E9) 07:35 (E9)	06:04 20:28
19	08:36 16:18	07:35 17:25	08:28 (E10) 16:55 (E13)	06:23 18:26	07:12 (E9) 07:34 (E9)	06:02 20:30
20	08:35 16:20	07:33 17:28	08:29 (E10) 16:55 (E13)	06:21 18:28	07:13 (E9) 07:33 (E9)	05:59 20:32
21	08:33 16:22	07:31 17:30	08:32 (E10) 16:56 (E13)	06:18 18:30	07:14 (E9) 07:30 (E9)	04:52 20:35
22	08:32 16:24	07:28 17:32	16:32 (E13) 16:56 (E13)	06:15 18:32	07:15 (E9) 07:27 (E9)	04:50 20:37
23	08:30 16:26	07:26 17:34	16:33 (E13) 16:57 (E13)	06:13 18:34	05:52 20:39	04:48 21:38
24	08:29 16:28	07:23 17:36	16:32 (E13) 16:56 (E13)	06:10 18:36	05:49 20:41	04:47 21:40
25	08:27 16:30	07:21 17:39	16:32 (E13) 16:55 (E13)	06:07 18:38	05:47 20:43	04:45 21:42
26	08:25 16:32	07:18 17:41	16:33 (E13) 16:56 (E13)	06:05 18:40	05:44 20:45	04:44 21:43
27	08:24 16:34	07:16 17:43	16:33 (E13) 16:54 (E13)	06:02 18:42	05:42 20:47	04:42 21:45
28	08:22 16:36	07:13 17:45	16:34 (E13) 16:54 (E13)	05:59 18:45	05:39 20:49	04:41 21:46
29	08:20 16:38			06:57 19:47	05:37 20:51	04:39 21:48
30	08:18 16:41			06:54 19:49	05:35 20:53	04:38 21:50
31	08:16 16:43			06:51 19:51		04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		569	375		85	1131
Sun reduction		0.20	0.41		0.57	0.56
Oper. time red.		0.96	0.96		0.96	0.96
Wind dir. red.		0.64	0.63		0.67	0.67
Total reduction		0.12	0.25		0.37	0.36
Total, real		71	93		31	408

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July		August		September		October		November		December	
1	04:30	05:31 (E8)	05:16	06:17			07:17	07:52 (E9)	07:22	07:56 (E10)	08:24	
	22:09	38 06:09 (E8)	21:28	20:14			18:53	25 08:17 (E9)	16:36	21 08:17 (E10)	15:45	
2	04:31	05:32 (E8)	05:17	06:19			07:19	07:52 (E9)	07:25	07:57 (E10)	08:26	
	22:08	37 06:09 (E8)	21:26	20:11			18:51	24 08:16 (E9)	16:34	19 08:16 (E10)	15:44	
3	04:32	05:32 (E8)	05:19	06:21			07:21	07:52 (E9)	07:27	08:00 (E10)	08:27	
	22:08	37 06:09 (E8)	21:24	20:09			18:48	23 08:15 (E9)	16:31	16 08:16 (E10)	15:43	
4	04:32	05:33 (E8)	05:21	06:23			07:23	07:53 (E9)	07:29	08:02 (E10)	08:29	
	22:07	36 06:09 (E8)	21:22	20:06			18:45	20 08:13 (E9)	16:29	12 08:14 (E10)	15:42	
5	04:33	05:34 (E8)	05:23	06:25			07:25	07:54 (E9)	07:31	08:04 (E10)	08:31	
	22:07	35 06:09 (E8)	21:19	20:03			18:43	17 08:11 (E9)	16:27	8 08:12 (E10)	15:41	
6	04:35	05:34 (E8)	05:25	06:27			07:27	07:56 (E9)	07:33	08:07 (E10)	08:32	
	22:06	35 06:09 (E8)	21:17	20:01			18:40	13 08:09 (E9)	16:25	1 08:08 (E10)	15:41	
7	04:36	05:35 (E8)	05:27	06:29			07:29	08:00 (E9)	07:35		08:34	
	22:05	33 06:08 (E8)	21:15	19:58			18:38	4 08:04 (E9)	16:23		15:40	
8	04:37	05:36 (E8)	05:29	06:31			07:31		07:38		08:35	
	22:04	32 06:08 (E8)	21:13	19:55			18:35		16:21		15:40	
9	04:38	05:37 (E8)	05:31	06:33			07:34		07:40		08:36	
	22:03	30 06:07 (E8)	21:11	19:53			18:32		16:19		15:39	
10	04:39	05:37 (E8)	05:33	06:35			07:36		07:42		08:38	
	22:02	29 06:06 (E8)	21:08	19:50			18:30		16:17		15:39	
11	04:41	05:38 (E8)	05:35	06:37			07:38	17:12 (E13)	07:44		08:39	
	22:01	28 06:06 (E8)	21:06	19:47			18:27	11 17:23 (E13)	16:15		15:38	
12	04:42	05:39 (E8)	05:37	06:39			07:40	17:09 (E13)	07:46		08:40	
	22:00	25 06:04 (E8)	21:04	19:45			18:25	16 17:25 (E13)	16:13		15:38	
13	04:43	05:41 (E8)	05:39	06:41			07:42	17:07 (E13)	07:48		08:41	
	21:59	23 06:04 (E8)	21:01	19:42			18:22	19 17:26 (E13)	16:11		15:38	
14	04:45	05:43 (E8)	05:41	06:43			07:44	17:06 (E13)	07:51		08:43	
	21:58	19 06:02 (E8)	20:59	19:39			18:19	20 17:26 (E13)	16:09		15:38	
15	04:46	05:44 (E8)	05:43	06:45			07:46	17:04 (E13)	07:53		08:44	
	21:56	16 06:00 (E8)	20:57	19:37			18:17	23 17:27 (E13)	16:07		15:38	
16	04:48	05:48 (E8)	05:45	06:47			07:48	17:04 (E13)	07:55		08:45	
	21:55	11 05:59 (E8)	20:54	19:34			18:14	24 17:28 (E13)	16:06		15:38	
17	04:49		05:47	06:49			07:50	17:04 (E13)	07:57		08:45	
	21:54		20:52	19:31			18:12	24 17:28 (E13)	16:04		15:38	
18	04:51		05:49	06:51			07:52	17:03 (E13)	07:59		08:46	
	21:52		20:49	19:28			18:09	24 17:27 (E13)	16:02		15:38	
19	04:52		05:51	06:53			07:54	17:03 (E13)	08:01		08:47	
	21:51		20:47	19:26			18:07	24 17:27 (E13)	16:01		15:38	
20	04:54		05:53	06:55			07:57	09:05 (E10)	08:03		08:48	
	21:49		20:44	19:23			18:04	28 17:27 (E13)	15:59		15:38	
21	04:56		05:55	06:57		08:02 (E9)	07:59	09:01 (E10)	08:05		08:48	
	21:48		20:42	19:20	10	08:12 (E9)	18:02	17:26 (E13)	15:57		15:39	
22	04:57		05:57	06:59		07:59 (E9)	08:01	08:59 (E10)	08:07		08:49	
	21:46		20:40	19:18	15	08:14 (E9)	17:59	17:25 (E13)	15:56		15:39	
23	04:59		05:59	07:01		07:57 (E9)	08:03	08:58 (E10)	08:09		08:49	
	21:44		20:37	19:15	19	08:16 (E9)	17:57	17:25 (E13)	15:55		15:40	
24	05:01		06:01	07:03		07:55 (E9)	08:05	08:57 (E10)	08:11		08:50	
	21:43		20:34	19:12	22	08:17 (E9)	17:54	17:22 (E13)	15:53		15:40	
25	05:03		06:03	07:05		07:54 (E9)	07:07	07:56 (E10)	08:13		08:50	
	21:41		20:32	19:10	23	08:17 (E9)	16:52	16:19 (E13)	15:52		15:41	
26	05:04		06:05	07:07		07:53 (E9)	07:09	07:56 (E10)	08:15		08:50	
	21:39		20:29	19:07	25	08:18 (E9)	16:50	16:17 (E13)	15:51		15:42	
27	05:06		06:07	07:09		07:52 (E9)	07:12	07:55 (E10)	08:17		08:51	
	21:37		20:27	19:04	26	08:18 (E9)	16:47	08:18 (E10)	15:49		15:43	
28	05:08		06:09	07:11		07:52 (E9)	07:14	07:55 (E10)	08:19		08:51	
	21:36		20:24	19:02	26	08:18 (E9)	16:45	08:18 (E10)	15:48		15:44	
29	05:10		06:11	07:13		07:52 (E9)	07:16	07:55 (E10)	08:21		08:51	
	21:34		20:22	18:59	26	08:18 (E9)	16:43	08:19 (E10)	15:47		15:44	
30	05:12		06:13	07:15		07:52 (E9)	07:18	07:55 (E10)	08:22		08:51	
	21:32		20:19	18:56	26	08:18 (E9)	16:40	08:18 (E10)	15:46		15:45	
31	05:14		06:15				07:20	07:55 (E10)			08:51	
	21:30		20:16				16:38	22 08:17 (E10)			15:47	
Potential sun hours	529		469	385			324		247		216	
Total, worst case		464		218			664		77			
Sun reduction		0.49		0.43			0.26		0.08			
Oper. time red.		0.96		0.96			0.96		0.96			
Wind dir. red.		0.67		0.62			0.64		0.62			
Total reduction		0.32		0.25			0.16		0.05			
Total, real		148		56			106		4			

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	16:34 (E13) 16:50 (E13)	06:49 19:53	05:32 20:55
2	08:50 15:49	08:13 16:47	07:08 17:50	16:36 (E13) 16:47 (E13)	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 20:59	05:30 06:05 (E8)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	05:29 (E8) 06:06 (E8)
5	08:49 15:53	08:07 16:54	08:36 (E10) 08:38 (E10)	07:00 17:56	06:38 20:01	05:23 21:04
6	08:49 15:55	08:05 16:56	08:34 (E10) 08:42 (E10)	06:58 17:58	06:35 20:03	05:21 21:06
7	08:48 15:56	08:03 16:58	08:32 (E10) 08:44 (E10)	06:55 18:00	07:21 (E9) 07:32 (E9)	05:19 21:08
8	08:47 15:58	08:00 17:01	08:30 (E10) 08:46 (E10)	06:53 18:03	07:18 (E9) 07:34 (E9)	05:17 21:10
9	08:47 15:59	07:58 17:03	08:27 (E10) 08:46 (E10)	06:50 18:05	07:17 (E9) 07:36 (E9)	05:15 21:12
10	08:46 16:01	07:56 17:05	08:26 (E10) 08:47 (E10)	06:47 18:07	07:15 (E9) 07:37 (E9)	05:12 21:14
11	08:45 16:03	07:54 17:07	08:25 (E10) 08:47 (E10)	06:45 18:09	07:14 (E9) 07:37 (E9)	05:10 21:16
12	08:44 16:04	07:52 17:10	08:25 (E10) 08:48 (E10)	06:42 18:11	07:12 (E9) 07:37 (E9)	05:08 21:18
13	08:43 16:06	07:49 17:12	08:25 (E10) 08:49 (E10)	06:39 18:13	07:12 (E9) 07:38 (E9)	05:06 21:20
14	08:42 16:08	07:47 17:14	08:25 (E10) 08:48 (E10)	06:37 18:15	07:12 (E9) 07:38 (E9)	05:04 21:22
15	08:41 16:10	07:45 17:16	08:26 (E10) 16:45 (E13)	06:34 18:17	07:11 (E9) 07:37 (E9)	05:02 21:23
16	08:40 16:12	07:42 17:19	08:25 (E10) 16:47 (E13)	06:31 18:19	07:12 (E9) 07:37 (E9)	05:00 21:25
17	08:39 16:14	07:40 17:21	08:26 (E10) 16:50 (E13)	06:29 18:22	07:12 (E9) 07:36 (E9)	04:59 21:27
18	08:37 16:16	07:38 17:23	08:27 (E10) 16:52 (E13)	06:26 18:24	07:12 (E9) 07:35 (E9)	04:57 21:29
19	08:36 16:18	07:35 17:25	08:28 (E10) 16:54 (E13)	06:23 18:26	07:13 (E9) 07:34 (E9)	04:55 21:31
20	08:35 16:20	07:33 17:28	08:29 (E10) 16:54 (E13)	06:21 18:28	07:14 (E9) 07:32 (E9)	04:53 21:33
21	08:33 16:22	07:31 17:30	08:32 (E10) 16:55 (E13)	06:18 18:30	07:15 (E9) 07:30 (E9)	04:52 21:35
22	08:32 16:24	07:28 17:32	16:30 (E13) 16:55 (E13)	06:15 18:32	07:17 (E9) 07:26 (E9)	04:50 21:37
23	08:30 16:26	07:26 17:34	16:31 (E13) 16:55 (E13)	06:13 18:34	05:52 20:39	04:48 21:38
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25	08:27 16:30	07:21 17:39	16:30 (E13) 16:54 (E13)	06:07 18:38	05:47 20:43	04:45 21:42
26	08:25 16:32	07:18 17:41	16:31 (E13) 16:54 (E13)	06:05 18:40	05:44 20:45	04:44 21:43
27	08:24 16:34	07:16 17:43	16:31 (E13) 16:52 (E13)	06:02 18:42	05:42 20:47	04:42 21:45
28	08:22 16:36	07:13 17:45	16:33 (E13) 16:52 (E13)	05:59 18:45	05:39 20:49	04:41 21:46
29	08:20 16:38		06:57 19:47		05:37 20:51	04:39 21:48
30	08:18 16:41		06:54 19:49		05:35 20:53	04:38 21:50
31	08:16 16:43		06:51 19:51		04:37 21:51	05:32 (E8) 06:03 (E8)
Potential sun hours	235	266	366	426	508	529
Total, worst case		580	356		172	1237
Sun reduction		0.20	0.41		0.57	0.56
Oper. time red.		0.96	0.96		0.96	0.96
Wind dir. red.		0.64	0.62		0.67	0.67
Total reduction		0.12	0.25		0.37	0.36
Total, real		72	88		63	447

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)
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Mezares_AB211223

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SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

July		August		September		October		November		December	
1	04:30	05:32 (E8)	05:16	06:17		07:17	07:52 (E9)	07:22	07:56 (E10)	08:24	
	22:09	42 06:14 (E8)	21:28	20:14		18:53	25 08:17 (E9)	16:36	21 08:17 (E10)	15:45	
2	04:31	05:33 (E8)	05:17	06:19		07:19	07:52 (E9)	07:25	07:57 (E10)	08:26	
	22:08	41 06:14 (E8)	21:26	20:11		18:51	24 08:16 (E9)	16:34	19 08:16 (E10)	15:44	
3	04:32	05:34 (E8)	05:19	06:21		07:21	07:53 (E9)	07:27	08:00 (E10)	08:27	
	22:08	40 06:14 (E8)	21:24	20:09		18:48	22 08:15 (E9)	16:31	15 08:15 (E10)	15:43	
4	04:32	05:34 (E8)	05:21	06:23		07:23	07:53 (E9)	07:29	08:02 (E10)	08:29	
	22:07	40 06:14 (E8)	21:22	20:06		18:45	21 08:14 (E9)	16:29	12 08:14 (E10)	15:42	
5	04:33	05:35 (E8)	05:23	06:25		07:25	07:54 (E9)	07:31	08:04 (E10)	08:31	
	22:07	39 06:14 (E8)	21:19	20:03		18:43	18 08:12 (E9)	16:27	7 08:11 (E10)	15:41	
6	04:35	05:35 (E8)	05:25	06:27		07:27	07:56 (E9)	07:33	08:07 (E10)	08:32	
	22:06	39 06:14 (E8)	21:17	20:01		18:40	14 08:10 (E9)	16:25	1 08:08 (E10)	15:41	
7	04:36	05:36 (E8)	05:27	06:29		07:29	07:59 (E9)	07:35		08:34	
	22:05	38 06:14 (E8)	21:15	19:58		18:38	7 08:06 (E9)	16:23		15:40	
8	04:37	05:37 (E8)	05:29	06:31		07:31		07:38		08:35	
	22:04	37 06:14 (E8)	21:13	19:55		18:35		16:21		15:40	
9	04:38	05:37 (E8)	05:31	06:33		07:34		07:40		08:36	
	22:03	36 06:13 (E8)	21:11	19:53		18:32		16:19		15:39	
10	04:39	05:38 (E8)	05:33	06:35		07:36		07:42		08:38	
	22:02	35 06:13 (E8)	21:08	19:50		18:30		16:17		15:39	
11	04:41	05:38 (E8)	05:35	06:37		07:38	17:12 (E13)	07:44		08:39	
	22:01	34 06:12 (E8)	21:06	19:47		18:27	8 17:20 (E13)	16:15		15:38	
12	04:42	05:39 (E8)	05:37	06:39		07:40	17:08 (E13)	07:46		08:40	
	22:00	32 06:11 (E8)	21:04	19:45		18:25	14 17:22 (E13)	16:13		15:38	
13	04:43	05:41 (E8)	05:39	06:41		07:42	17:06 (E13)	07:48		08:41	
	21:59	30 06:11 (E8)	21:01	19:42		18:22	17 17:23 (E13)	16:11		15:38	
14	04:45	05:42 (E8)	05:41	06:43		07:44	17:04 (E13)	07:51		08:43	
	21:58	28 06:10 (E8)	20:59	19:39		18:19	20 17:24 (E13)	16:09		15:38	
15	04:46	05:43 (E8)	05:43	06:45		07:46	17:04 (E13)	07:53		08:44	
	21:56	26 06:09 (E8)	20:57	19:37		18:17	22 17:26 (E13)	16:07		15:38	
16	04:48	05:45 (E8)	05:45	06:47		07:48	17:03 (E13)	07:55		08:45	
	21:55	23 06:08 (E8)	20:54	19:34		18:14	23 17:26 (E13)	16:06		15:38	
17	04:49	05:46 (E8)	05:47	06:49		07:50	17:02 (E13)	07:57		08:45	
	21:54	20 06:06 (E8)	20:52	19:31		18:12	24 17:26 (E13)	16:04		15:38	
18	04:51	05:48 (E8)	05:49	06:51		07:52	17:01 (E13)	07:59		08:46	
	21:52	17 06:05 (E8)	20:49	19:28		18:09	25 17:26 (E13)	16:02		15:38	
19	04:52	05:51 (E8)	05:51	06:53		07:54	17:01 (E13)	08:01		08:47	
	21:51	11 06:02 (E8)	20:47	19:26		18:07	24 17:25 (E13)	16:01		15:38	
20	04:54		05:53	06:55		07:57	09:06 (E10)	08:03		08:48	
	21:49		20:45	19:23		18:04	27 17:26 (E13)	15:59		15:38	
21	04:56		05:55	06:57	08:04 (E9)	07:59	09:01 (E10)	08:05		08:48	
	21:48		20:42	19:20	6 08:10 (E9)	18:02	35 17:25 (E13)	15:57		15:39	
22	04:57		05:57	06:59	08:00 (E9)	08:01	08:59 (E10)	08:07		08:49	
	21:46		20:40	19:18	14 08:14 (E9)	17:59	37 17:24 (E13)	15:56		15:39	
23	04:59		05:59	07:01	07:58 (E9)	08:03	08:58 (E10)	08:09		08:49	
	21:44		20:37	19:15	18 08:16 (E9)	17:57	39 17:24 (E13)	15:55		15:40	
24	05:01		06:01	07:03	07:56 (E9)	08:05	08:57 (E10)	08:11		08:50	
	21:43		20:34	19:12	21 08:17 (E9)	17:54	38 17:22 (E13)	15:53		15:40	
25	05:03		06:03	07:05	07:55 (E9)	07:07	07:55 (E10)	08:13		08:50	
	21:41		20:32	19:10	22 08:17 (E9)	16:52	37 16:19 (E13)	15:52		15:41	
26	05:04		06:05	07:07	07:54 (E9)	07:09	07:56 (E10)	08:15		08:50	
	21:39		20:29	19:07	24 08:18 (E9)	16:50	32 16:17 (E13)	15:51		15:42	
27	05:06		06:07	07:09	07:53 (E9)	07:12	07:55 (E10)	08:17		08:51	
	21:37		20:27	19:04	25 08:18 (E9)	16:47	27 16:14 (E13)	15:49		15:43	
28	05:08		06:09	07:11	07:52 (E9)	07:14	07:54 (E10)	08:19		08:51	
	21:36		20:24	19:02	26 08:18 (E9)	16:45	24 08:18 (E10)	15:48		15:44	
29	05:10		06:11	07:13	07:53 (E9)	07:16	07:55 (E10)	08:21		08:51	
	21:34		20:22	18:59	26 08:19 (E9)	16:43	23 08:18 (E10)	15:47		15:44	
30	05:12		06:13	07:15	07:52 (E9)	07:18	07:55 (E10)	08:22		08:51	
	21:32		20:19	18:56	26 08:18 (E9)	16:40	23 08:18 (E10)	15:46		15:45	
31	05:14		06:15			07:20	07:55 (E10)			08:51	
	21:30		20:16			16:38	22 08:17 (E10)			15:47	
Potential sun hours	529		469	385		324		247		216	
Total, worst case		608		208		672		75			
Sun reduction		0.49		0.43		0.26		0.08			
Oper. time red.		0.96		0.96		0.96		0.96			
Wind dir. red.		0.67		0.62		0.64		0.62			
Total reduction		0.32		0.25		0.16		0.05			
Total, real		194		53		107		4			

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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.												
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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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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	04:25 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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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 17:57	08:09 15:55	08:50 15:40
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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	08:51 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	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 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
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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 17:05	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 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
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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
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30			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												
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:
25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14) 20:55	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	07:03 (E14) 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 (E14) 20:58	05:30 21:54	04:35 22:09	05:18 21:26	05:19 20:11	07:02 (E14) 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 (E14) 21:00	05:28 21:55	04:34 22:08	05:20 21:24	06:21 20:09	07:01 (E14) 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 (E14) 21:02	05:26 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:00 (E14) 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 (E14) 21:04	05:24 21:58	04:32 22:07	05:24 21:20	06:25 20:04	07:00 (E14) 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 (E14) 21:06	05:21 21:59	04:31 22:06	05:26 21:17	06:27 20:01	07:00 (E14) 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	07:03 (E14) 21:08	05:19 22:00	04:30 22:05	05:27 21:15	06:29 19:58	06:59 (E14) 18:38	07:30 16:23	07:36 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:03 (E14) 21:10	05:17 22:01	04:29 22:04	05:29 21:13	06:31 19:56	07:00 (E14) 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	07:03 (E14) 21:12	05:15 22:02	04:28 22:03	05:31 21:11	06:33 19:53	07:02 (E14) 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	07:03 (E14) 21:14	05:13 22:03	04:28 22:02	05:33 21:08	06:35 19:50	07:04 (E14) 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	07:04 (E14) 21:16	05:11 22:04	04:28 22:01	05:35 21:06	06:37 19:48	07:06 (E14) 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	07:04 (E14) 21:18	05:09 22:05	04:27 22:00	05:37 21:04	06:39 19:45	07:08 (E14) 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	07:06 (E14) 21:20	05:07 22:06	04:27 21:59	05:39 21:02	06:41 19:42	07:10 (E14) 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	07:07 (E14) 21:22	05:05 22:07	04:26 21:58	05:41 20:59	06:43 19:39	07:11 (E14) 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	07:11 (E14) 21:24	05:03 22:07	04:26 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	07:15 (E14) 21:25	05:01 22:08	04:26 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	05:09 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 17:23	06:26 18:24	06:04 20:28	05:07 21:29	04:25 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	05:05 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	05:04 21:33	04:25 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	05:02 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	05:04 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 18:36	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 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	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	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 17:45	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 (E14) 19:02	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:46	06:57 18:46	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:08 (E14) 18:59	08:16 17:43	08:21 15:47	08:51 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 22:09	05:12 21:32	06:13 20:19	12 07:05 (E14) 18:56	07:15 17:42	08:22 15:46	08:51 15:46
31	08:17 16:43	07:07 19:51	06:52 19:51	07:17 (E14) 20:53	04:37 21:51	05:14 21:30	06:15 20:17	07:04 (E14) 19 07:23 (E14)	18:56	07:20 16:38	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			7	283				54	243			
Sun reduction			0.41	0.50				0.50	0.43			
Oper. time red.			0.96	0.96				0.96	0.96			
Wind dir. red.			0.66	0.66				0.66	0.66			
Total reduction			0.26	0.32				0.32	0.27			
Total, real			2	90				17	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		14:01 (E13)	08:15		14:16 (E13)	07:11		06:49				05:32		04:36			
	15:48	34	14:35 (E13)	16:45	24	14:40 (E13)	17:47		19:53				20:55		21:53			
2	08:50		14:01 (E13)	08:13		14:18 (E13)	07:08		06:46				05:30		04:35			
	15:49	35	14:36 (E13)	16:47	20	14:38 (E13)	17:50		19:55				20:57		21:54			
3	08:50		14:01 (E13)	08:11		14:21 (E13)	07:06		06:43				05:28		04:34			
	15:51	35	14:36 (E13)	16:50	15	14:36 (E13)	17:52		19:57				20:59		21:55			
4	08:50		14:01 (E13)	08:09		14:27 (E13)	07:03		06:41				05:26		04:33			
	15:52	36	14:37 (E13)	16:52	4	14:31 (E13)	17:54		19:59				21:02		21:57			
5	08:49		14:02 (E13)	08:07			07:00		06:38				05:23		04:32			
	15:53	36	14:38 (E13)	16:54			17:56		20:01				21:04		21:58			
6	08:49		14:02 (E13)	08:05			06:58		06:35				05:21		04:31			
	15:55	36	14:38 (E13)	16:56			17:58		20:03				21:06		21:59			
7	08:48		14:02 (E13)	08:03			06:55		06:33			06:58 (E8)	05:19		04:30			
	15:56	37	14:39 (E13)	16:59			18:00		20:05		6	07:04 (E8)	21:08		22:00			
8	08:47		14:02 (E13)	08:00			06:53		06:30			06:55 (E8)	05:17		04:29			
	15:58	37	14:39 (E13)	17:01			18:03		20:07		11	07:06 (E8)	21:10		22:01			
9	08:47		14:03 (E13)	07:58			06:50		06:27			06:53 (E8)	05:15		04:28			
	15:59	37	14:40 (E13)	17:03			18:05		20:10		15	07:08 (E8)	21:12		22:02			
10	08:46		14:03 (E13)	07:56			06:47		06:25			06:50 (E8)	05:13		04:28			
	16:01	38	14:41 (E13)	17:05			18:07		20:12		19	07:09 (E8)	21:14		22:03			
11	08:45		14:03 (E13)	07:54			06:45		06:22			06:48 (E8)	05:10		04:27			
	16:03	38	14:41 (E13)	17:08			18:09		20:14		22	07:10 (E8)	21:16		22:04			
12	08:44		14:03 (E13)	07:52			06:42		06:20			06:47 (E8)	05:08		04:27			
	16:04	38	14:41 (E13)	17:10			18:11		20:16		23	07:10 (E8)	21:18		22:05			
13	08:43		14:03 (E13)	07:49			06:39		06:17			06:47 (E8)	05:06		04:26			
	16:06	39	14:42 (E13)	17:12			18:13		20:18		23	07:10 (E8)	21:20		22:06			
14	08:42		14:04 (E13)	07:47			06:37		06:14			06:46 (E8)	05:04		04:26			
	16:08	39	14:43 (E13)	17:14			18:15		20:20		24	07:10 (E8)	21:22		22:07			
15	08:41		14:04 (E13)	07:45			06:34		06:12			06:46 (E8)	05:02		04:26			
	16:10	39	14:43 (E13)	17:17			18:17		20:22		24	07:10 (E8)	21:24		22:07			
16	08:40		14:04 (E13)	07:43			06:31		06:09			06:45 (E8)	05:01		04:25			
	16:12	40	14:44 (E13)	17:19			18:20		20:24		24	07:09 (E8)	21:25		22:08			
17	08:39		14:04 (E13)	07:40			06:29		06:07			06:46 (E8)	04:59		04:25			
	16:14	39	14:43 (E13)	17:21			18:22		20:26		23	07:09 (E8)	21:27		22:08			
18	08:37		14:05 (E13)	07:38			06:26		06:04			06:46 (E8)	04:57		04:25			
	16:16	39	14:44 (E13)	17:23			18:24		20:28		21	07:07 (E8)	21:29		22:09			
19	08:36		14:05 (E13)	07:35			06:23		06:02			06:47 (E8)	04:55		04:25			
	16:18	39	14:44 (E13)	17:25			18:26		20:30		20	07:07 (E8)	21:31		22:09			
20	08:35		14:06 (E13)	07:33			06:21		05:59			06:47 (E8)	04:53		04:25			
	16:20	39	14:45 (E13)	17:28			18:28		20:32		18	07:05 (E8)	21:33		22:10			
21	08:33		14:06 (E13)	07:31			06:18		05:57			06:49 (E8)	04:52		04:25			
	16:22	39	14:45 (E13)	17:30			18:30		20:35		14	07:03 (E8)	21:35		22:10			
22	08:32		14:07 (E13)	07:28			06:15		05:54			06:51 (E8)	04:50		04:25			
	16:24	38	14:45 (E13)	17:32			18:32		20:37		10	07:01 (E8)	21:36		22:10			
23	08:30		14:07 (E13)	07:26			06:13		05:52				04:48		04:26			
	16:26	38	14:45 (E13)	17:34			18:34		20:39				21:38		22:10			
24	08:29		14:07 (E13)	07:23			06:10		05:49				04:47		04:26			
	16:28	37	14:44 (E13)	17:37			18:36		20:41				21:40		22:10			
25	08:27		14:09 (E13)	07:21			06:07		05:47				04:45		04:26			
	16:30	36	14:45 (E13)	17:39			18:38		20:43				21:42		22:10			
26	08:25		14:10 (E13)	07:18			06:05		05:44				04:44		04:27			
	16:32	35	14:45 (E13)	17:41			18:40		20:45				21:43		22:10			
27	08:24		14:11 (E13)	07:16			06:02		05:42				04:42		04:27			
	16:34	33	14:44 (E13)	17:43			18:43		20:47				21:45		22:10			
28	08:22		14:11 (E13)	07:13			05:59		05:39				04:41		04:28			
	16:36	33	14:44 (E13)	17:45			18:45		20:49				21:47		22:10			
29	08:20		14:13 (E13)				06:57		05:37				04:39		04:28			
	16:39	30	14:43 (E13)				19:47		20:51				21:48		22:10			
30	08:18		14:14 (E13)				06:54		05:35				04:38		04:29			
	16:41	29	14:43 (E13)				19:49		20:53				21:50		22:09			
31	08:17		14:14 (E13)				06:51						04:37					
	16:43	27	14:41 (E13)				19:51						21:51					
Potential sun hours	235			266			366			426			508			529		
Total, worst case	1125			63						297								
Sun reduction	0.13			0.20						0.50								
Oper. time red.	0.96			0.96						0.96								
Wind dir. red.	0.66			0.66						0.66								
Total reduction	0.08			0.13						0.32								
Total, real	95			8						94								

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E8)	07:17	07:23
	22:09	21:28	20:14	22	07:09 (E8)	18:54
2	04:31	05:17	06:19	06:49 (E8)	07:19	07:25
	22:08	21:26	20:11	19	07:08 (E8)	18:51
3	04:32	05:19	06:21	06:51 (E8)	07:21	07:27
	22:08	21:24	20:09	15	07:06 (E8)	18:48
4	04:33	05:21	06:23	06:53 (E8)	07:23	07:29
	22:07	21:22	20:06	11	07:04 (E8)	18:46
5	04:34	05:23	06:25	06:54 (E8)	07:25	07:31
	22:07	21:19	20:03	7	07:01 (E8)	18:43
6	04:35	05:25	06:27	07:27	07:33	08:32
	22:06	21:17	20:01	18:40	16:25	15:41
7	04:36	05:27	06:29	07:29	07:36	13:56 (E13)
	22:05	21:15	19:58	18:38	16:23	6
8	04:37	05:29	06:31	07:32	07:38	13:52 (E13)
	22:04	21:13	19:55	18:35	16:21	15
9	04:38	05:31	06:33	07:34	07:40	13:49 (E13)
	22:03	21:11	19:53	18:32	16:19	20
10	04:39	05:33	06:35	07:36	07:42	13:47 (E13)
	22:02	21:08	19:50	18:30	16:17	24
11	04:41	05:35	06:37	07:38	07:44	13:46 (E13)
	22:01	21:06	19:47	18:27	16:15	27
12	04:42	05:37	06:39	07:40	07:46	13:45 (E13)
	22:00	21:04	19:45	18:25	16:13	29
13	04:43	05:39	06:41	07:42	07:49	13:44 (E13)
	21:59	21:01	19:42	18:22	16:11	31
14	04:45	05:41	06:43	07:44	07:51	13:43 (E13)
	21:58	20:59	19:39	18:19	16:09	33
15	04:46	05:43	06:45	07:46	07:53	13:42 (E13)
	21:57	20:57	19:37	18:17	16:08	34
16	04:48	05:45	06:47	07:48	07:55	13:43 (E13)
	21:55	20:54	19:34	18:14	16:06	35
17	04:49	05:47	06:49	07:50	07:57	13:42 (E13)
	21:54	20:52	19:31	18:12	16:04	36
18	04:51	05:49	06:51	07:52	07:59	13:41 (E13)
	21:52	20:49	19:29	18:09	16:02	37
19	04:52	05:51	06:53	07:54	08:01	13:42 (E13)
	21:51	20:47	19:26	18:07	16:01	38
20	04:54	05:53	07:00 (E8)	06:55	07:57	08:03
	21:49	20:45	2	07:02 (E8)	19:23	18:04
21	04:56	05:55	06:55 (E8)	06:57	07:59	08:05
	21:48	20:42	11	07:06 (E8)	19:20	18:02
22	04:57	05:57	06:53 (E8)	06:59	08:01	08:07
	21:46	20:40	15	07:08 (E8)	19:18	17:59
23	04:59	05:59	06:52 (E8)	07:01	08:03	08:09
	21:45	20:37	18	07:10 (E8)	19:15	17:57
24	05:01	06:01	06:50 (E8)	07:03	08:05	08:11
	21:43	20:35	20	07:10 (E8)	19:12	17:55
25	05:03	06:03	06:49 (E8)	07:05	07:07	08:13
	21:41	20:32	22	07:11 (E8)	19:10	16:52
26	05:04	06:05	06:48 (E8)	07:07	07:09	08:15
	21:39	20:29	22	07:10 (E8)	19:07	16:50
27	05:06	06:07	06:47 (E8)	07:09	07:12	08:17
	21:37	20:27	24	07:11 (E8)	19:04	16:47
28	05:08	06:09	06:47 (E8)	07:11	07:14	08:19
	21:36	20:24	24	07:11 (E8)	19:02	16:45
29	05:10	06:11	06:47 (E8)	07:13	07:16	08:21
	21:34	20:22	23	07:10 (E8)	18:59	16:43
30	05:12	06:13	06:47 (E8)	07:15	07:18	08:22
	21:32	20:19	23	07:10 (E8)	18:56	16:40
31	05:14	06:15	06:47 (E8)		07:20	
	21:30	20:17	23	07:10 (E8)		16:38
Potential sun hours	529	469	385	324	247	216
Total, worst case		227	74		794	1056
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.96	0.96		0.96	0.96
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.31	0.27		0.05	0.04
Total, real		71	20		42	47

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	05:22 21:22	06:23 20:06	07:23 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 20:03	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 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 17:05	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 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	04:26 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	08:46 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	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	08:33 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 17:34	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 22:10	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 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 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 22:10	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 16:34	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 20:24	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 22:09	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			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:50 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	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 17:59	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	08:48 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 21:08	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	08:42 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 17:23	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	07:53 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	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	08:26 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	06:11 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	06:13 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	05:22 21:22	06:23 20:06	07:23 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 21:17	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
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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 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	04:44 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	08:46 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	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	08:33 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 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	04:27 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	05:45 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
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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			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	09:17 (E13) 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	09:18 (E13) 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	09:20 (E13) 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	09:22 (E13) 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	09:33 (E13) 17:56	07:01 19:59	06:38 20:53	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	09:36 (E13) 17:58	06:58 20:03	06:35 21:06	05:21 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	09:38 (E13) 18:01	06:55 20:06	06:33 21:08	05:19 22:00	04:36 22:05	05:27 21:15	06:29 20:06	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	09:41 (E13) 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	08:35 15:40
9	08:47 15:59	07:58 17:03	09:44 (E13) 18:05	06:50 20:10	06:28 21:12	05:15 22:02	04:38 22:03	05:31 21:11	06:33 20:06	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	09:47 (E13) 18:07	06:47 20:12	06:25 21:14	05:13 22:03	04:39 22:02	05:33 21:09	06:35 20:06	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	09:22 (E13) 17:08	09:49 (E13) 18:09	06:45 20:14	06:22 21:16	05:11 22:04	04:41 22:01	05:35 21:06	06:37 20:06	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	09:21 (E13) 17:10	09:52 (E13) 18:11	06:42 20:16	06:20 21:18	05:08 22:05	04:42 22:00	05:37 21:04	06:39 20:06	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	09:27 (E13) 17:12	09:57 (E13) 18:13	06:40 20:18	06:17 21:20	05:06 22:06	04:43 21:59	05:39 21:02	06:41 20:06	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	09:28 (E13) 17:14	09:58 (E13) 18:15	06:37 20:20	06:15 21:22	05:04 22:07	04:45 21:58	05:41 20:59	06:43 20:06	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	09:31 (E13) 17:17	09:59 (E13) 18:18	06:34 20:22	06:12 21:24	05:03 22:07	04:46 21:57	05:43 20:57	06:45 20:06	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	09:32 (E13) 17:19	09:59 (E13) 18:20	06:32 20:24	06:09 21:26	05:01 22:08	04:48 21:55	05:45 20:54	06:47 20:06	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	09:33 (E13) 17:21	09:59 (E13) 18:22	06:29 20:26	06:07 21:27	05:04 22:09	04:49 21:54	05:47 20:52	06:49 20:06	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	09:34 (E13) 17:23	09:59 (E13) 18:24	06:26 20:28	06:04 21:29	05:04 22:09	04:51 21:53	05:49 20:50	06:51 20:06	07:52 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	09:35 (E13) 17:26	09:59 (E13) 18:26	06:24 20:31	06:02 21:31	05:05 22:09	04:52 21:51	05:51 20:47	06:53 20:06	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	09:36 (E13) 17:28	09:59 (E13) 18:28	06:21 20:33	06:01 21:33	05:06 22:10	04:54 21:50	05:53 20:45	06:55 20:06	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	09:37 (E13) 17:30	09:59 (E13) 18:30	06:18 20:35	06:02 21:35	05:07 22:10	04:56 21:48	05:55 20:42	06:57 20:06	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	09:38 (E13) 17:32	09:59 (E13) 18:32	06:16 20:37	06:04 21:37	05:08 22:10	04:57 21:46	05:57 20:40	06:59 20:06	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	09:39 (E13) 17:34	09:59 (E13) 18:34	06:13 20:39	06:05 21:38	05:09 22:10	04:59 21:45	05:59 20:37	07:01 20:06	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	09:40 (E13) 17:37	09:59 (E13) 18:36	06:10 20:41	06:07 21:40	05:10 22:10	05:01 21:43	06:01 20:35	07:03 20:06	08:05 17:55	08:11 15:53	08:51 15:41
25	08:27 16:30	09:41 (E13) 17:39	09:59 (E13) 18:38	06:08 20:43	06:05 21:42	05:11 22:10	05:03 21:41	06:03 20:32	07:05 20:06	08:07 17:52	08:13 15:52	08:51 15:41
26	08:26 16:32	09:42 (E13) 17:41	09:59 (E13) 18:41	06:05 20:45	06:04 21:43	05:12 22:10	05:05 21:39	06:05 20:30	07:07 20:06	08:09 17:50	08:15 15:51	08:52 15:42
27	08:24 16:34	09:43 (E13) 17:43	09:59 (E13) 18:43	06:02 20:47	06:04 21:45	05:13 22:10	05:06 21:38	06:07 20:27	07:09 20:06	08:11 17:44	08:17 15:49	08:53 15:43
28	08:22 16:36	09:44 (E13) 17:45	09:59 (E13) 18:45	05:59 20:49	06:06 21:47	05:14 22:10	05:08 21:36	06:09 20:24	07:11 20:06	08:13 17:42	08:19 15:48	08:54 15:44
29	08:20 16:39	09:45 (E13) 17:46	09:59 (E13) 18:47	05:57 20:51	06:07 21:48	05:15 22:10	05:10 21:34	06:11 20:22	07:13 20:06	08:15 17:41	08:21 15:47	08:55 15:45
30	08:19 16:41	09:46 (E13) 17:47	09:59 (E13) 18:48	05:54 20:52	06:08 21:49	05:16 22:10	05:12 21:32	06:13 20:19	07:15 20:06	08:17 17:40	08:23 15:46	08:56 15:46
31	08:17 16:43	09:47 (E13) 17:48	09:59 (E13) 18:49	05:51 20:53	06:09 21:50	05:17 22:10	05:14 21:30	06:15 20:17	07:17 20:06	08:19 17:40	08:25 15:47	08:58 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	409	62								469		2
Sun reduction	0.13	0.20								0.08		0.07
Oper. time red.	0.96	0.96								0.96		0.96
Wind dir. red.	0.59	0.59								0.59		0.59
Total reduction	0.08	0.11								0.05		0.04
Total, real	31	7								22		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14)	06:46	05:30
	15:50	16:48	17:50	8 07:42 (E14)	19:55	20:58
3	08:50	08:11	07:06	07:32 (E14)	06:44	05:28
	15:51	16:50	17:52	12 07:44 (E14)	19:57	21:00
4	08:50	08:09	07:03	07:29 (E14)	06:41	05:26
	15:52	16:52	17:54	17 07:46 (E14)	19:59	21:02
5	08:49	08:07	07:01	07:26 (E14)	06:38	05:24
	15:54	16:54	17:56	20 07:46 (E14)	20:01	21:04
6	08:49	08:05	06:58	07:24 (E14)	06:36	05:21
	15:55	16:57	17:58	24 07:48 (E14)	20:03	21:06
7	08:48	08:03	06:55	07:21 (E14)	06:33	05:19
	15:56	16:59	18:01	27 07:48 (E14)	20:06	21:08
8	08:48	08:01	06:53	07:20 (E14)	06:30	05:17
	15:58	17:01	18:03	28 07:48 (E14)	20:08	21:10
9	08:47	07:58	06:50	07:20 (E14)	06:28	05:15
	16:00	17:03	18:05	28 07:48 (E14)	20:10	21:12
10	08:46	07:56	06:48	07:20 (E14)	06:25	05:13
	16:01	17:05	18:07	28 07:48 (E14)	20:12	21:14
11	08:45	07:54	06:45	07:19 (E14)	06:22	05:11
	16:03	17:08	18:09	28 07:47 (E14)	20:14	21:16
12	08:44	07:52	06:42	07:20 (E14)	06:20	05:09
	16:05	17:10	18:11	27 07:47 (E14)	20:16	21:18
13	08:43	07:50	06:40	07:20 (E14)	06:17	06:43 (E13)
	16:06	17:12	18:13	26 07:46 (E14)	20:18	1 06:44 (E13)
14	08:42	07:47	06:37	07:20 (E14)	06:15	06:40 (E13)
	16:08	17:14	18:15	25 07:45 (E14)	20:20	5 06:45 (E13)
15	08:41	07:45	06:34	07:21 (E14)	06:12	06:38 (E13)
	16:10	17:17	18:18	23 07:44 (E14)	20:22	8 06:46 (E13)
16	08:40	07:43	06:32	07:22 (E14)	06:09	06:35 (E13)
	16:12	17:19	18:20	21 07:43 (E14)	20:24	11 06:46 (E13)
17	08:39	07:40	06:29	07:23 (E14)	06:07	06:33 (E13)
	16:14	17:21	18:22	17 07:40 (E14)	20:26	14 06:47 (E13)
18	08:38	07:38	06:26	07:25 (E14)	06:04	06:30 (E13)
	16:16	17:23	18:24	12 07:37 (E14)	20:28	17 06:47 (E13)
19	08:36	07:36	06:24	06:02	06:02	06:28 (E13)
	16:18	17:26	18:26	20:31	19 06:47 (E13)	21:31
20	08:35	07:33	06:21	05:59	06:27 (E13)	04:54
	16:20	17:28	18:28	20:33	20 06:47 (E13)	21:33
21	08:33	07:31	06:18	05:57	06:26 (E13)	04:52
	16:22	17:30	18:30	20:35	20 06:46 (E13)	21:35
22	08:32	07:28	06:16	05:54	06:27 (E13)	04:50
	16:24	17:32	18:32	20:37	18 06:45 (E13)	21:37
23	08:30	07:26	06:13	05:52	06:27 (E13)	04:48
	16:26	17:34	18:34	20:39	17 06:44 (E13)	21:38
24	08:29	07:23	06:10	05:49	06:28 (E13)	04:47
	16:28	17:37	18:36	20:41	15 06:43 (E13)	21:40
25	08:27	07:21	06:08	05:47	06:30 (E13)	04:45
	16:30	17:39	18:39	20:43	11 06:41 (E13)	21:42
26	08:26	07:18	06:05	05:45	06:31 (E13)	04:44
	16:32	17:41	18:41	20:45	7 06:38 (E13)	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			371	183		
Sun reduction			0.41	0.50		
Oper. time red.			0.96	0.96		
Wind dir. red.			0.62	0.65		
Total reduction			0.25	0.31		
Total, real			91	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14)	07:23
	22:09	21:28	20:14	18:54	27 08:26 (E14)	16:36
2	04:31	05:18	06:19	07:19	07:58 (E14)	07:25
	22:09	21:26	20:11	18:51	28 08:26 (E14)	16:34
3	04:32	05:20	06:21	07:21	07:58 (E14)	07:27
	22:08	21:24	20:09	18:48	28 08:26 (E14)	16:32
4	04:33	05:22	06:23	07:23	07:57 (E14)	07:29
	22:07	21:22	20:06	18:46	28 08:25 (E14)	16:30
5	04:34	05:24	06:25	07:25	07:57 (E14)	07:31
	22:07	21:20	20:04	18:43	28 08:25 (E14)	16:27
6	04:35	05:25	06:27	07:28	07:57 (E14)	07:33
	22:06	21:17	20:01	18:40	27 08:24 (E14)	16:25
7	04:36	05:27	06:29	07:30	07:58 (E14)	07:36
	22:05	21:15	19:58	18:38	25 08:23 (E14)	16:23
8	04:37	05:29	06:31	07:32	08:00 (E14)	07:38
	22:04	21:13	19:56	18:35	22 08:22 (E14)	16:21
9	04:38	05:31	06:33	07:34	08:03 (E14)	07:40
	22:03	21:11	19:53	18:33	18 08:21 (E14)	16:19
10	04:40	05:33	06:35	07:36	08:05 (E14)	07:42
	22:02	21:08	19:50	18:30	15 08:20 (E14)	16:17
11	04:41	05:35	06:37	07:38	08:07 (E14)	07:44
	22:01	21:06	19:48	18:27	10 08:17 (E14)	16:15
12	04:42	05:37	06:39	07:40	08:09 (E14)	07:46
	22:00	21:04	19:45	18:25	5 08:14 (E14)	16:13
13	04:44	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		16:10
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	8 06:46 (E13)	18:12		16:04
18	04:51	05:49	06:51	07:52		07:59
	21:52	20:50	12 06:48 (E13)	18:09		16:03
19	04:53	05:51	06:53	07:55		08:01
	21:51	20:47	16 06:49 (E13)	18:07		16:01
20	04:54	05:53	06:55	07:57		08:03
	21:49	20:45	18 06:50 (E13)	18:04		15:59
21	04:56	05:55	06:57	07:59		08:05
	21:48	20:42	19 06:50 (E13)	18:02		15:58
22	04:58	05:57	06:59	08:01		08:07
	21:46	20:40	20 06:51 (E13)	18:00		15:56
23	04:59	05:59	07:01	08:03		08:09
	21:45	20:37	21 06:51 (E13)	17:57		15:55
24	05:01	06:01	07:03	08:05		08:11
	21:43	20:35	19 06:51 (E13)	17:55		15:53
25	05:03	06:03	07:05	08:10 (E14)		08:13
	21:41	20:32	16 06:50 (E13)	10 08:20 (E14)		15:52
26	05:05	06:05	07:07	08:06 (E14)		08:15
	21:39	20:30	14 06:50 (E13)	16 08:22 (E14)		15:51
27	05:06	06:07	07:09	08:04 (E14)		08:17
	21:38	20:27	11 06:49 (E13)	20 08:24 (E14)		15:50
28	05:08	06:09	07:11	08:02 (E14)		08:19
	21:36	20:24	8 06:47 (E13)	23 08:25 (E14)		15:48
29	05:10	06:11	07:13	08:01 (E14)		08:21
	21:34	20:22	5 06:46 (E13)	25 08:26 (E14)		15:47
30	05:12	06:13	07:15	08:00 (E14)		08:22
	21:32	20:19	1 06:44 (E13)	26 08:26 (E14)		15:46
31	05:14	06:15	18:56			08:51
	21:30	20:17		16:38		15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		188	120		261	
Sun reduction		0.50	0.43		0.26	
Oper. time red.		0.96	0.96		0.96	
Wind dir. red.		0.65	0.62		0.62	
Total reduction		0.31	0.26		0.15	
Total, real		59	31		40	

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:26 (E14) 07:32 (E14)	06:38 20:01	05:24 21:04
6	08:49 15:55	08:05 16:57	06:58 17:58	07:24 (E14) 07:35 (E14)	06:36 20:03	05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:01	07:21 (E14) 07:36 (E14)	06:33 20:06	05:19 21:08
8	08:48 15:58	08:01 17:01	06:53 18:03	07:18 (E14) 07:37 (E14)	06:30 20:08	05:17 21:10
9	08:47 16:00	07:58 17:03	06:50 18:05	07:16 (E14) 07:38 (E14)	06:28 20:10	05:15 21:12
10	08:46 16:01	07:56 17:05	06:48 18:07	07:13 (E14) 07:39 (E14)	06:25 20:12	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	07:12 (E14) 07:38 (E14)	06:22 20:14	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11	07:12 (E14) 07:39 (E14)	06:20 20:16	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	07:11 (E14) 07:39 (E14)	06:17 20:18	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:16	07:11 (E14) 07:38 (E14)	06:15 20:20	05:05 21:22
15	08:41 16:10	07:45 17:17	06:34 18:18	07:11 (E14) 07:38 (E14)	06:12 20:22	06:38 (E13) 06:41 (E13)
16	08:40 16:12	07:43 17:19	06:32 18:20	07:11 (E14) 07:37 (E14)	06:09 20:24	06:35 (E13) 06:42 (E13)
17	08:39 16:14	07:40 17:21	06:29 18:22	07:11 (E14) 07:36 (E14)	06:07 20:26	06:33 (E13) 06:43 (E13)
18	08:38 16:16	07:38 17:23	06:26 18:24	07:12 (E14) 07:34 (E14)	06:04 20:28	06:30 (E13) 06:43 (E13)
19	08:36 16:18	07:36 17:26	06:24 18:26	07:14 (E14) 07:33 (E14)	06:02 20:31	06:28 (E13) 06:43 (E13)
20	08:35 16:20	07:33 17:28	06:21 18:28	07:15 (E14) 07:30 (E14)	05:59 20:33	06:26 (E13) 06:43 (E13)
21	08:33 16:22	07:31 17:30	06:18 18:30	07:17 (E14) 07:27 (E14)	05:57 20:35	06:23 (E13) 06:42 (E13)
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:23 (E13) 06:42 (E13)	04:50 21:37
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:23 (E13) 06:41 (E13)	04:48 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:24 (E13) 06:40 (E13)	04:47 21:40
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	06:25 (E13) 06:39 (E13)	04:45 21:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	06:25 (E13) 06:37 (E13)	04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:28 (E13) 06:35 (E13)	04:42 21:45
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	06:35 (E13)	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			04:37 21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case			351	170		
Sun reduction			0.41	0.50		
Oper. time red.			0.96	0.96		
Wind dir. red.			0.62	0.65		
Total reduction			0.24	0.31		
Total, real			86	53		

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)
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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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:51 (E14) 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:51 (E14) 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:51 (E14) 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 (E14) 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 (E14) 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 (E14) 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 (E14) 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 (E14) 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 (E14) 16:19	08:37 15:39
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:06 (E14) 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	07:46 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 21:52	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 21:49	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 19:21	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	08:04 (E14) 18:00	08:07 15:56	08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:00 (E14) 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	07:58 (E14) 17:55	08:05 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	07:56 (E14) 17:52	08:13 15:52	08:50 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	07:55 (E14) 17:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	07:53 (E14) 17:48	08:17 15:50	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:52 (E14) 17:46	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:52 (E14) 17:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	07:51 (E14) 17:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		08:19 (E14) 17:20	15:46 15:47	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		171	190	167		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.65	0.62	0.62		
Total reduction		0.31	0.25	0.15		
Total, real		53	48	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:06 (E13) 04:36
	15:48	16:45	17:48	19:53	20:55	19 06:25 (E13) 21:53
2	08:50	08:13	07:08	06:46	05:30	06:06 (E13) 04:35
	15:50	16:48	17:50	19:55	20:58	19 06:25 (E13) 21:54
3	08:50	08:11	07:06	06:44	05:28	06:07 (E13) 04:34
	15:51	16:50	17:52	19:57	21:00	17 06:24 (E13) 21:55
4	08:50	08:09	07:03	06:41	05:26	06:08 (E13) 04:33
	15:52	16:52	17:54	19:59	21:02	15 06:23 (E13) 21:57
5	08:49	08:07	07:01	06:38	05:24	06:10 (E13) 04:32
	15:54	16:54	17:56	20:01	21:04	11 06:21 (E13) 21:58
6	08:49	08:05	06:58	06:36	05:21	06:12 (E13) 04:31
	15:55	16:57	17:58	20:03	21:06	6 06:18 (E13) 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	6 07:16 (E14) 20:14	21:16	22:04
12	08:44	07:52	06:42	07:08 (E14) 06:20	05:09	04:27
	16:05	17:10	18:11	12 07:20 (E14) 20:16	21:18	22:05
13	08:43	07:50	06:40	07:05 (E14) 06:17	05:07	04:27
	16:06	17:12	18:13	17 07:22 (E14) 20:18	21:20	22:06
14	08:42	07:47	06:37	07:02 (E14) 06:15	05:05	04:26
	16:08	17:14	18:15	21 07:23 (E14) 20:20	21:22	22:07
15	08:41	07:45	06:34	07:00 (E14) 06:12	05:03	04:26
	16:10	17:17	18:18	24 07:24 (E14) 20:22	21:24	22:07
16	08:40	07:43	06:32	06:58 (E14) 06:09	05:01	04:26
	16:12	17:19	18:20	27 07:25 (E14) 20:24	21:25	22:08
17	08:39	07:40	06:29	06:56 (E14) 06:07	04:59	04:25
	16:14	17:21	18:22	29 07:25 (E14) 20:26	21:27	22:08
18	08:38	07:38	06:26	06:55 (E14) 06:04	04:57	04:25
	16:16	17:23	18:24	30 07:25 (E14) 20:28	21:29	22:09
19	08:36	07:36	06:24	06:55 (E14) 06:02	04:55	04:25
	16:18	17:26	18:26	30 07:25 (E14) 20:31	21:31	22:09
20	08:35	07:33	06:21	06:55 (E14) 05:59	04:54	04:25
	16:20	17:28	18:28	30 07:25 (E14) 20:33	21:33	22:10
21	08:33	07:31	06:18	06:54 (E14) 05:57	04:52	04:25
	16:22	17:30	18:30	30 07:24 (E14) 20:35	21:35	22:10
22	08:32	07:28	06:16	06:55 (E14) 05:54	06:21 (E13) 04:50	04:26
	16:24	17:32	18:32	29 07:24 (E14) 20:37	3 06:24 (E13) 21:37	22:10
23	08:30	07:26	06:13	06:54 (E14) 05:52	06:18 (E13) 04:48	04:26
	16:26	17:34	18:34	29 07:23 (E14) 20:39	7 06:25 (E13) 21:38	22:10
24	08:29	07:23	06:10	06:54 (E14) 05:49	06:16 (E13) 04:47	04:26
	16:28	17:37	18:36	28 07:22 (E14) 20:41	10 06:26 (E13) 21:40	22:10
25	08:27	07:21	06:08	06:56 (E14) 05:47	06:14 (E13) 04:45	04:27
	16:30	17:39	18:39	26 07:22 (E14) 20:43	13 06:27 (E13) 21:42	22:10
26	08:26	07:18	06:05	06:56 (E14) 05:45	06:11 (E13) 04:44	04:27
	16:32	17:41	18:41	24 07:20 (E14) 20:45	15 06:26 (E13) 21:43	22:10
27	08:24	07:16	06:02	06:57 (E14) 05:42	06:09 (E13) 04:42	04:28
	16:34	17:43	18:43	21 07:18 (E14) 20:47	18 06:27 (E13) 21:45	22:10
28	08:22	07:13	06:00	06:59 (E14) 05:40	06:07 (E13) 04:41	04:28
	16:37	17:45	18:45	17 07:16 (E14) 20:49	20 06:27 (E13) 21:47	22:10
29	08:20		06:57	08:01 (E14) 05:37	06:06 (E13) 04:40	04:29
	16:39		19:47	11 08:12 (E14) 20:51	21 06:27 (E13) 21:48	22:10
30	08:19		06:54		06:06 (E13) 04:38	04:29
	16:41		19:49		21 06:27 (E13) 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	528
Total, worst case			441	128	87	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.96	0.96	0.96	
Wind dir. red.			0.63	0.66	0.66	
Total reduction			0.25	0.32	0.36	
Total, real			111	41	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14) 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 (E14) 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:57 (E14) 16:32	08:28 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	07:23 18:46		08:29 15:43
5	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43		08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40		08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 (E13) 19:58	07:30 18:38		08:34 15:40
8	04:37 22:04	05:29 21:13	06:19 (E13) 19:56	07:32 18:35		08:35 15:40
9	04:38 22:03	05:31 21:11	06:17 (E13) 19:53	07:34 18:33		08:37 15:39
10	04:40 22:02	05:33 21:08	06:16 (E13) 19:50	07:36 18:30		08:38 15:39
11	04:41 22:01	05:35 21:06	06:16 (E13) 19:47	07:38 18:27		08:39 15:39
12	04:42 22:00	05:37 21:04	06:14 (E13) 19:45	07:40 18:25		08:40 15:38
13	04:44 21:59	05:39 21:02	06:14 (E13) 19:42	07:42 18:22		08:42 15:38
14	04:45 21:58	05:41 20:59	06:14 (E13) 19:39	07:44 18:20		08:43 15:38
15	04:46 21:57	05:43 20:57	06:15 (E13) 19:37	07:49 (E14) 18:17		08:44 15:38
16	04:48 21:55	05:45 20:54	06:17 (E13) 19:34	07:47 (E14) 18:15		08:45 15:38
17	04:49 21:54	05:47 20:52	06:19 (E13) 19:31	07:45 (E14) 18:12		08:46 15:38
18	04:51 21:52	05:49 20:50	06:21 (E13) 19:29	07:43 (E14) 18:09		08:46 15:38
19	04:53 21:51	05:51 20:47	06:22 (E13) 19:26	07:42 (E14) 18:07		08:47 15:38
20	04:54 21:49	05:53 20:45	06:24 (E13) 19:23	07:41 (E14) 18:04		08:48 15:39
21	04:56 21:48	05:55 20:42	06:26 (E13) 19:21	07:40 (E14) 18:02		08:48 15:39
22	04:58 21:46	05:57 20:40	06:29 (E13) 19:18	07:40 (E14) 18:00		08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	07:39 (E14) 17:57		08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	07:39 (E14) 17:55		08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	07:39 (E14) 17:52		08:51 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	07:39 (E14) 17:50		08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	07:39 (E14) 17:48		08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:40 (E14) 17:45		08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:42 (E14) 17:43		08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	07:44 (E14) 17:41		08:51 15:46
31	05:14 21:30	06:15 20:17		08:02 (E14) 17:20		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		211	425	23		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.66	0.63	0.63		
Total reduction		0.32	0.26	0.16		
Total, real		67	111	4		

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:11 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	07:14 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	07:16 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	07:18 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March	April	May	June		
1	08:51		09:56 (E13)	08:15		10:03 (E13)	07:11	06:49	05:33			04:36
	15:48	31	10:27 (E13)	16:45	37	10:40 (E13)	17:48	19:53	20:55			21:53
2	08:50		09:57 (E13)	08:13		10:04 (E13)	07:08	06:46	05:30		05:58 (E7)	04:35
	15:49	31	10:28 (E13)	16:47	36	10:40 (E13)	17:50	19:55	20:57	2	06:00 (E7)	21:54
3	08:50		09:57 (E13)	08:11		10:05 (E13)	07:06	06:43	05:28		05:56 (E7)	04:34
	15:51	31	10:28 (E13)	16:50	34	10:39 (E13)	17:52	19:57	21:00	6	06:02 (E7)	21:55
4	08:50		09:56 (E13)	08:09		10:06 (E13)	07:03	06:41	05:26		05:54 (E7)	04:33
	15:52	33	10:29 (E13)	16:52	32	10:38 (E13)	17:54	19:59	21:02	9	06:03 (E7)	21:57
5	08:49		09:57 (E13)	08:07		10:08 (E13)	07:00	06:38	05:23		05:52 (E7)	04:32
	15:53	33	10:30 (E13)	16:54	29	10:37 (E13)	17:56	20:01	21:04	12	06:04 (E7)	21:58
6	08:49		09:57 (E13)	08:05		10:09 (E13)	06:58	06:35	05:21		05:50 (E7)	04:31
	15:55	34	10:31 (E13)	16:56	26	10:35 (E13)	17:58	20:03	21:06	14	06:04 (E7)	21:59
7	08:48		09:57 (E13)	08:03		10:11 (E13)	06:55	06:33	05:19		05:48 (E7)	04:30
	15:56	35	10:32 (E13)	16:59	23	10:34 (E13)	18:00	20:05	21:08	17	06:05 (E7)	22:00
8	08:48		09:57 (E13)	08:01		10:13 (E13)	06:53	06:30	05:17		05:46 (E7)	04:29
	15:58	35	10:32 (E13)	17:01	19	10:32 (E13)	18:03	20:08	21:10	19	06:05 (E7)	22:01
9	08:47		09:57 (E13)	07:58		10:17 (E13)	06:50	06:28	05:15		05:45 (E7)	04:29
	15:59	36	10:33 (E13)	17:03	10	10:27 (E13)	18:05	20:10	21:12	20	06:05 (E7)	22:02
10	08:46		09:57 (E13)	07:56			06:47	06:25	05:13		05:45 (E7)	04:28
	16:01	37	10:34 (E13)	17:05			18:07	20:12	21:14	20	06:05 (E7)	22:03
11	08:45		09:57 (E13)	07:54			06:45	06:22	05:11		05:45 (E7)	04:27
	16:03	38	10:35 (E13)	17:08			18:09	20:14	21:16	19	06:04 (E7)	22:04
12	08:44		09:57 (E13)	07:52			06:42	06:20	05:08		05:45 (E7)	04:27
	16:04	39	10:36 (E13)	17:10			18:11	20:16	21:18	19	06:04 (E7)	22:05
13	08:43		09:57 (E13)	07:49			06:40	06:17	05:06		05:45 (E7)	04:26
	16:06	39	10:36 (E13)	17:12			18:13	20:18	21:20	18	06:03 (E7)	22:06
14	08:42		09:57 (E13)	07:47			06:37	06:14	05:04		05:46 (E7)	04:26
	16:08	40	10:37 (E13)	17:14			18:15	20:20	21:22	18	06:04 (E7)	22:07
15	08:41		09:57 (E13)	07:45			06:34	06:12	05:03		05:46 (E7)	04:26
	16:10	40	10:37 (E13)	17:17			18:18	20:22	21:24	17	06:03 (E7)	22:07
16	08:40		09:57 (E13)	07:43			06:32	06:09	05:01		05:47 (E7)	04:25
	16:12	41	10:38 (E13)	17:19			18:20	20:24	21:25	15	06:02 (E7)	22:08
17	08:39		09:58 (E13)	07:40			06:29	06:07	04:59		05:48 (E7)	04:25
	16:14	41	10:39 (E13)	17:21			18:22	20:26	21:27	14	06:02 (E7)	22:08
18	08:37		09:57 (E13)	07:38			06:26	06:04	04:57		05:49 (E7)	04:25
	16:16	42	10:39 (E13)	17:23			18:24	20:28	21:29	11	06:00 (E7)	22:09
19	08:36		09:57 (E13)	07:36			06:24	06:02	04:55		05:51 (E7)	04:25
	16:18	42	10:39 (E13)	17:26			18:26	20:30	21:31	7	05:58 (E7)	22:09
20	08:35		09:58 (E13)	07:33			06:21	05:59	04:53			04:25
	16:20	43	10:41 (E13)	17:28			18:28	20:33	21:33			22:10
21	08:33		09:58 (E13)	07:31			06:18	05:57	04:52			04:25
	16:22	43	10:41 (E13)	17:30			18:30	20:35	21:35			22:10
22	08:32		09:58 (E13)	07:28			06:16	05:54	04:50			04:25
	16:24	43	10:41 (E13)	17:32			18:32	20:37	21:37			22:10
23	08:30		09:58 (E13)	07:26			06:13	05:52	04:48			04:26
	16:26	43	10:41 (E13)	17:34			18:34	20:39	21:38			22:10
24	08:29		09:59 (E13)	07:23			06:10	05:49	04:47			04:26
	16:28	43	10:42 (E13)	17:37			18:36	20:41	21:40			22:10
25	08:27		09:59 (E13)	07:21			06:07	05:47	04:45			04:26
	16:30	43	10:42 (E13)	17:39			18:38	20:43	21:42			22:10
26	08:26		10:00 (E13)	07:18			06:05	05:44	04:44			04:27
	16:32	42	10:42 (E13)	17:41			18:41	20:45	21:43			22:10
27	08:24		10:00 (E13)	07:16			06:02	05:42	04:42			04:27
	16:34	42	10:42 (E13)	17:43			18:43	20:47	21:45			22:10
28	08:22		10:01 (E13)	07:13			05:59	05:40	04:41			04:28
	16:36	41	10:42 (E13)	17:45			18:45	20:49	21:47			22:10
29	08:20		10:01 (E13)				06:57	05:37	04:40			04:29
	16:39	41	10:42 (E13)				19:47	20:51	21:48			22:10
30	08:18		10:02 (E13)				06:54	05:35	04:38			04:29
	16:41	40	10:42 (E13)				19:49	20:53	21:50			22:09
31	08:17		10:03 (E13)				06:51		04:37			
	16:43	38	10:41 (E13)				19:51		21:51			
Potential sun hours	235			266			366	426	508	529		
Total, worst case	1200			246					257			
Sun reduction	0.13			0.20					0.57			
Oper. time red.	0.96			0.96					0.96			
Wind dir. red.	0.61			0.61					0.67			
Total reduction	0.08			0.12					0.37			
Total, real	94			29					94			

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

July		August		September		October		November		December	
1	04:30	05:16	05:55 (E7)	06:17	07:17	07:23				08:24	09:39 (E13)
	22:09	21:28	19 06:14 (E7)	20:14	18:54	16:36				15:45	38 10:17 (E13)
2	04:31	05:18	05:55 (E7)	06:19	07:19	07:25		09:45 (E13)		08:26	09:40 (E13)
	22:09	21:26	20 06:15 (E7)	20:11	18:51	16:34	13	09:58 (E13)		15:44	37 10:17 (E13)
3	04:32	05:19	05:55 (E7)	06:21	07:21	07:27		09:43 (E13)		08:28	09:40 (E13)
	22:08	21:24	20 06:15 (E7)	20:09	18:48	16:32	19	10:02 (E13)		15:43	36 10:16 (E13)
4	04:33	05:21	05:55 (E7)	06:23	07:23	07:29		09:40 (E13)		08:29	09:41 (E13)
	22:07	21:22	20 06:15 (E7)	20:06	18:46	16:29	24	10:04 (E13)		15:42	36 10:17 (E13)
5	04:34	05:23	05:56 (E7)	06:25	07:25	07:31		09:38 (E13)		08:31	09:42 (E13)
	22:07	21:20	18 06:14 (E7)	20:03	18:43	16:27	27	10:05 (E13)		15:42	35 10:17 (E13)
6	04:35	05:25	05:58 (E7)	06:27	07:27	07:33		09:37 (E13)		08:32	09:43 (E13)
	22:06	21:17	16 06:14 (E7)	20:01	18:40	16:25	30	10:07 (E13)		15:41	34 10:17 (E13)
7	04:36	05:27	06:00 (E7)	06:29	07:30	07:36		09:36 (E13)		08:34	09:43 (E13)
	22:05	21:15	13 06:13 (E7)	19:58	18:38	16:23	32	10:08 (E13)		15:40	34 10:17 (E13)
8	04:37	05:29	06:02 (E7)	06:31	07:32	07:38		09:35 (E13)		08:35	09:44 (E13)
	22:04	21:13	11 06:13 (E7)	19:55	18:35	16:21	35	10:10 (E13)		15:40	33 10:17 (E13)
9	04:38	05:31	06:04 (E7)	06:33	07:34	07:40		09:34 (E13)		08:37	09:45 (E13)
	22:03	21:11	8 06:12 (E7)	19:53	18:32	16:19	36	10:10 (E13)		15:39	32 10:17 (E13)
10	04:39	05:33	06:06 (E7)	06:35	07:36	07:42		09:34 (E13)		08:38	09:46 (E13)
	22:02	21:08	5 06:11 (E7)	19:50	18:30	16:17	38	10:12 (E13)		15:39	31 10:17 (E13)
11	04:41	05:35		06:37	07:38	07:44		09:34 (E13)		08:39	09:46 (E13)
	22:01	21:06		19:47	18:27	16:15	38	10:12 (E13)		15:38	31 10:17 (E13)
12	04:42	05:37		06:39	07:40	07:46		09:33 (E13)		08:40	09:48 (E13)
	22:00	21:04		19:45	18:25	16:13	40	10:13 (E13)		15:38	30 10:18 (E13)
13	04:43	05:39		06:41	07:42	07:49		09:33 (E13)		08:42	09:48 (E13)
	21:59	21:02		19:42	18:22	16:11	41	10:14 (E13)		15:38	30 10:18 (E13)
14	04:45	05:41		06:43	07:44	07:51		09:33 (E13)		08:43	09:49 (E13)
	21:58	20:59		19:39	18:19	16:09	41	10:14 (E13)		15:38	29 10:18 (E13)
15	04:46	05:43		06:45	07:46	07:53		09:32 (E13)		08:44	09:50 (E13)
	21:57	20:57		19:37	18:17	16:08	42	10:14 (E13)		15:38	28 10:18 (E13)
16	04:48	05:45		06:47	07:48	07:55		09:33 (E13)		08:45	09:50 (E13)
	21:55	20:54		19:34	18:14	16:06	42	10:15 (E13)		15:38	28 10:18 (E13)
17	04:49	05:47		06:49	07:50	07:57		09:32 (E13)		08:46	09:51 (E13)
	21:54	20:52		19:31	18:12	16:04	43	10:15 (E13)		15:38	27 10:18 (E13)
18	04:51	05:49		06:51	07:52	07:59		09:33 (E13)		08:46	09:52 (E13)
	21:52	20:50		19:29	18:09	16:02	43	10:16 (E13)		15:38	27 10:19 (E13)
19	04:52	05:51		06:53	07:55	08:01		09:33 (E13)		08:47	09:52 (E13)
	21:51	20:47		19:26	18:07	16:01	43	10:16 (E13)		15:38	26 10:18 (E13)
20	04:54	05:53		06:55	07:57	08:03		09:33 (E13)		08:48	09:53 (E13)
	21:49	20:45		19:23	18:04	15:59	43	10:16 (E13)		15:39	26 10:19 (E13)
21	04:56	05:55		06:57	07:59	08:05		09:33 (E13)		08:48	09:54 (E13)
	21:48	20:42		19:20	18:02	15:58	43	10:16 (E13)		15:39	26 10:20 (E13)
22	04:57	05:57		06:59	08:01	08:07		09:34 (E13)		08:49	09:54 (E13)
	21:46	20:40		19:18	17:59	15:56	43	10:17 (E13)		15:39	26 10:20 (E13)
23	04:59	05:59		07:01	08:03	08:09		09:34 (E13)		08:50	09:55 (E13)
	21:45	20:37		19:15	17:57	15:55	42	10:16 (E13)		15:40	26 10:21 (E13)
24	05:01	06:03 (E7)	06:01	07:03	08:05	08:11		09:35 (E13)		08:50	09:55 (E13)
	21:43	4 06:07 (E7)	20:35	19:12	17:55	15:53	41	10:16 (E13)		15:41	26 10:21 (E13)
25	05:03	06:01 (E7)	06:03	07:05	07:07	08:13		09:35 (E13)		08:50	09:55 (E13)
	21:41	9 06:10 (E7)	20:32	19:10	16:52	15:52	41	10:16 (E13)		15:41	26 10:21 (E13)
26	05:04	05:59 (E7)	06:05	07:07	07:10	08:15		09:35 (E13)		08:51	09:55 (E13)
	21:39	12 06:11 (E7)	20:30	19:07	16:50	15:51	41	10:16 (E13)		15:42	27 10:22 (E13)
27	05:06	05:58 (E7)	06:07	07:09	07:12	08:17		09:37 (E13)		08:51	09:55 (E13)
	21:38	14 06:12 (E7)	20:27	19:04	16:47	15:49	40	10:17 (E13)		15:43	28 10:23 (E13)
28	05:08	05:57 (E7)	06:09	07:11	07:14	08:19		09:37 (E13)		08:51	09:56 (E13)
	21:36	15 06:12 (E7)	20:24	19:02	16:45	15:48	40	10:17 (E13)		15:44	27 10:23 (E13)
29	05:10	05:56 (E7)	06:11	07:13	07:16	08:21		09:38 (E13)		08:51	09:56 (E13)
	21:34	17 06:13 (E7)	20:22	18:59	16:43	15:47	39	10:17 (E13)		15:45	28 10:24 (E13)
30	05:12	05:56 (E7)	06:13	07:15	07:18	08:22		09:38 (E13)		08:51	09:56 (E13)
	21:32	18 06:14 (E7)	20:19	18:56	16:40	15:46	39	10:17 (E13)		15:46	29 10:25 (E13)
31	05:14	05:56 (E7)	06:15		07:20					08:51	09:57 (E13)
	21:30	19 06:15 (E7)	20:17		16:38					15:47	29 10:26 (E13)
Potential sun hours	529		469		385	324	247			216	
Total, worst case		108		150			1079			926	
Sun reduction		0.49		0.50			0.08			0.07	
Oper. time red.		0.96		0.96			0.96			0.96	
Wind dir. red.		0.67		0.67			0.61			0.61	
Total reduction		0.32		0.32			0.05			0.04	
Total, real		34		48			52			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March	April	May	June		
1	08:51		10:00 (E13)	08:15		10:06 (E13)	07:11	06:49	05:33		04:36	
	15:48	32	10:32 (E13)	16:45	39	10:45 (E13)	17:48	19:53	20:55		21:53	
2	08:50		10:00 (E13)	08:13		10:07 (E13)	07:08	06:46	05:30		04:35	
	15:49	33	10:33 (E13)	16:47	38	10:45 (E13)	17:50	19:55	20:57		21:54	
3	08:50		10:00 (E13)	08:11		10:08 (E13)	07:06	06:43	05:28		04:34	
	15:51	33	10:33 (E13)	16:50	37	10:45 (E13)	17:52	19:57	21:00		21:55	
4	08:50		10:00 (E13)	08:09		10:09 (E13)	07:03	06:41	05:26	05:54 (E7)	04:33	
	15:52	34	10:34 (E13)	16:52	35	10:44 (E13)	17:54	19:59	21:02	2	05:56 (E7)	21:57
5	08:49		10:00 (E13)	08:07		10:10 (E13)	07:00	06:38	05:23		05:52 (E7)	04:32
	15:53	35	10:35 (E13)	16:54	33	10:43 (E13)	17:56	20:01	21:04	6	05:58 (E7)	21:58
6	08:49		10:00 (E13)	08:05		10:11 (E13)	06:58	06:35	05:21		05:50 (E7)	04:31
	15:55	36	10:36 (E13)	16:56	30	10:41 (E13)	17:58	20:03	21:06	9	05:59 (E7)	21:59
7	08:48		10:00 (E13)	08:03		10:13 (E13)	06:55	06:33	05:19		05:48 (E7)	04:30
	15:56	37	10:37 (E13)	16:59	27	10:40 (E13)	18:00	20:05	21:08	12	06:00 (E7)	22:00
8	08:48		10:00 (E13)	08:01		10:15 (E13)	06:53	06:30	05:17		05:46 (E7)	04:29
	15:58	37	10:37 (E13)	17:01	23	10:38 (E13)	18:03	20:08	21:10	15	06:01 (E7)	22:01
9	08:47		10:00 (E13)	07:58		10:17 (E13)	06:50	06:28	05:15		05:44 (E7)	04:29
	15:59	38	10:38 (E13)	17:03	18	10:35 (E13)	18:05	20:10	21:12	17	06:01 (E7)	22:02
10	08:46		10:00 (E13)	07:56		10:22 (E13)	06:47	06:25	05:13		05:42 (E7)	04:28
	16:01	39	10:39 (E13)	17:05	9	10:31 (E13)	18:07	20:12	21:14	19	06:01 (E7)	22:03
11	08:45		10:01 (E13)	07:54			06:45	06:22	05:11		05:41 (E7)	04:27
	16:03	39	10:40 (E13)	17:08			18:09	20:14	21:16	20	06:01 (E7)	22:04
12	08:44		10:01 (E13)	07:52			06:42	06:20	05:08		05:40 (E7)	04:27
	16:04	40	10:41 (E13)	17:10			18:11	20:16	21:18	21	06:01 (E7)	22:05
13	08:43		10:00 (E13)	07:49			06:40	06:17	05:06		05:40 (E7)	04:26
	16:06	41	10:41 (E13)	17:12			18:13	20:18	21:20	21	06:01 (E7)	22:06
14	08:42		10:01 (E13)	07:47			06:37	06:14	05:04		05:41 (E7)	04:26
	16:08	41	10:42 (E13)	17:14			18:15	20:20	21:22	20	06:01 (E7)	22:07
15	08:41		10:00 (E13)	07:45			06:34	06:12	05:03		05:41 (E7)	04:26
	16:10	42	10:42 (E13)	17:17			18:18	20:22	21:24	20	06:01 (E7)	22:07
16	08:40		10:01 (E13)	07:43			06:32	06:09	05:01		05:41 (E7)	04:25
	16:12	42	10:43 (E13)	17:19			18:20	20:24	21:25	19	06:00 (E7)	22:08
17	08:39		10:01 (E13)	07:40			06:29	06:07	04:59		05:42 (E7)	04:25
	16:14	43	10:44 (E13)	17:21			18:22	20:26	21:27	18	06:00 (E7)	22:08
18	08:37		10:01 (E13)	07:38			06:26	06:04	04:57		05:43 (E7)	04:25
	16:16	43	10:44 (E13)	17:23			18:24	20:28	21:29	16	05:59 (E7)	22:09
19	08:36		10:01 (E13)	07:36			06:24	06:02	04:55		05:43 (E7)	04:25
	16:18	43	10:44 (E13)	17:26			18:26	20:30	21:31	15	05:58 (E7)	22:09
20	08:35		10:01 (E13)	07:33			06:21	05:59	04:53		05:45 (E7)	04:25
	16:20	45	10:46 (E13)	17:28			18:28	20:33	21:33	12	05:57 (E7)	22:10
21	08:33		10:01 (E13)	07:31			06:18	05:57	04:52		05:45 (E7)	04:25
	16:22	45	10:46 (E13)	17:30			18:30	20:35	21:35	11	05:56 (E7)	22:10
22	08:32		10:01 (E13)	07:28			06:16	05:54	04:50		05:48 (E7)	04:25
	16:24	45	10:46 (E13)	17:32			18:32	20:37	21:37	6	05:54 (E7)	22:10
23	08:30		10:01 (E13)	07:26			06:13	05:52	04:48			04:26
	16:26	45	10:46 (E13)	17:34			18:34	20:39	21:38			22:10
24	08:29		10:03 (E13)	07:23			06:10	05:49	04:47			04:26
	16:28	44	10:47 (E13)	17:37			18:36	20:41	21:40			22:10
25	08:27		10:03 (E13)	07:21			06:07	05:47	04:45			04:26
	16:30	44	10:47 (E13)	17:39			18:38	20:43	21:42			22:10
26	08:26		10:03 (E13)	07:18			06:05	05:44	04:44			04:27
	16:32	44	10:47 (E13)	17:41			18:41	20:45	21:43			22:10
27	08:24		10:03 (E13)	07:16			06:02	05:42	04:42			04:27
	16:34	44	10:47 (E13)	17:43			18:43	20:47	21:45			22:10
28	08:22		10:04 (E13)	07:13			05:59	05:40	04:41			04:28
	16:36	43	10:47 (E13)	17:45			18:45	20:49	21:47			22:10
29	08:20		10:04 (E13)				06:57	05:37	04:40			04:29
	16:39	43	10:47 (E13)				19:47	20:51	21:48			22:10
30	08:18		10:05 (E13)				06:54	05:35	04:38			04:29
	16:41	42	10:47 (E13)				19:49	20:53	21:50			22:09
31	08:17		10:06 (E13)				06:51		04:37			
	16:43	41	10:47 (E13)				19:51		21:51			
Potential sun hours	235			266			366	426	508	529		
Total, worst case	1253			289					279			
Sun reduction	0.13			0.20					0.57			
Oper. time red.	0.96			0.96					0.96			
Wind dir. red.	0.61			0.61					0.67			
Total reduction	0.08			0.12					0.37			
Total, real	98			34					102			

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

July		August		September		October		November		December	
1	04:30	05:16	05:51 (E7)	06:17	07:17	07:23	09:50 (E13)	08:24	09:43 (E13)		
	22:09	21:28	20	06:11 (E7)	20:14	18:54	16:36	12	10:02 (E13)	15:45	39
2	04:31	05:18	05:51 (E7)	06:19	07:19	07:25	09:46 (E13)	08:26	09:43 (E13)		
	22:09	21:26	20	06:11 (E7)	20:11	18:51	16:34	19	10:05 (E13)	15:44	39
3	04:32	05:19	05:53 (E7)	06:21	07:21	07:27	09:45 (E13)	08:28	09:43 (E13)		
	22:08	21:24	18	06:11 (E7)	20:09	18:48	16:32	23	10:08 (E13)	15:43	38
4	04:33	05:21	05:55 (E7)	06:23	07:23	07:29	09:42 (E13)	08:29	09:44 (E13)		
	22:07	21:22	16	06:11 (E7)	20:06	18:46	16:29	28	10:10 (E13)	15:42	38
5	04:34	05:23	05:56 (E7)	06:25	07:25	07:31	09:40 (E13)	08:31	09:45 (E13)		
	22:07	21:20	14	06:10 (E7)	20:03	18:43	16:27	31	10:11 (E13)	15:42	37
6	04:35	05:25	05:58 (E7)	06:27	07:27	07:33	09:40 (E13)	08:32	09:46 (E13)		
	22:06	21:17	11	06:09 (E7)	20:01	18:40	16:25	33	10:13 (E13)	15:41	36
7	04:36	05:27	06:00 (E7)	06:29	07:30	07:36	09:39 (E13)	08:34	09:46 (E13)		
	22:05	21:15	8	06:08 (E7)	19:58	18:38	16:23	35	10:14 (E13)	15:40	36
8	04:37	05:29	06:02 (E7)	06:31	07:32	07:38	09:38 (E13)	08:35	09:48 (E13)		
	22:04	21:13	5	06:07 (E7)	19:55	18:35	16:21	37	10:15 (E13)	15:40	34
9	04:38	05:31	06:04 (E7)	06:33	07:34	07:40	09:37 (E13)	08:37	09:48 (E13)		
	22:03	21:11	1	06:05 (E7)	19:53	18:32	16:19	39	10:16 (E13)	15:39	34
10	04:39	05:33	06:06 (E7)	06:35	07:36	07:42	09:37 (E13)	08:38	09:49 (E13)		
	22:02	21:08		19:50	18:30	16:17	40	10:17 (E13)	15:39	33	10:22 (E13)
11	04:41	05:35	06:09 (E7)	06:37	07:38	07:44	09:37 (E13)	08:39	09:50 (E13)		
	22:01	21:06		19:47	18:27	16:15	41	10:18 (E13)	15:38	32	10:22 (E13)
12	04:42	05:37	06:12 (E7)	06:39	07:40	07:46	09:36 (E13)	08:40	09:51 (E13)		
	22:00	21:04		19:45	18:25	16:13	42	10:18 (E13)	15:38	32	10:23 (E13)
13	04:43	05:39	06:14 (E7)	06:41	07:42	07:49	09:36 (E13)	08:42	09:52 (E13)		
	21:59	21:02		19:42	18:22	16:11	43	10:19 (E13)	15:38	31	10:23 (E13)
14	04:45	05:41	06:16 (E7)	06:43	07:44	07:51	09:36 (E13)	08:43	09:52 (E13)		
	21:58	20:59		19:39	18:19	16:09	43	10:19 (E13)	15:38	31	10:23 (E13)
15	04:46	05:43	06:18 (E7)	06:45	07:46	07:53	09:35 (E13)	08:44	09:53 (E13)		
	21:57	20:57		19:37	18:17	16:08	44	10:19 (E13)	15:38	30	10:23 (E13)
16	04:48	05:45	06:20 (E7)	06:47	07:48	07:55	09:36 (E13)	08:45	09:54 (E13)		
	21:55	20:54		19:34	18:14	16:06	44	10:20 (E13)	15:38	29	10:23 (E13)
17	04:49	05:47	06:22 (E7)	06:49	07:50	07:57	09:36 (E13)	08:46	09:54 (E13)		
	21:54	20:52		19:31	18:12	16:04	44	10:20 (E13)	15:38	29	10:23 (E13)
18	04:51	05:49	06:24 (E7)	06:51	07:52	07:59	09:37 (E13)	08:46	09:55 (E13)		
	21:52	20:50		19:29	18:09	16:02	44	10:21 (E13)	15:38	29	10:24 (E13)
19	04:52	05:51	06:26 (E7)	06:53	07:55	08:01	09:36 (E13)	08:47	09:55 (E13)		
	21:51	20:47		19:26	18:07	16:01	45	10:21 (E13)	15:38	28	10:23 (E13)
20	04:54	05:53	06:28 (E7)	06:55	07:57	08:03	09:36 (E13)	08:48	09:56 (E13)		
	21:49	20:45		19:23	18:04	15:59	45	10:21 (E13)	15:39	28	10:24 (E13)
21	04:56	06:00 (E7)	05:55	06:57	07:59	08:05	09:36 (E13)	08:48	09:57 (E13)		
	21:48	20:42		19:20	18:02	15:58	45	10:21 (E13)	15:39	28	10:25 (E13)
22	04:57	05:57 (E7)	05:57	06:59	08:01	08:07	09:38 (E13)	08:49	09:57 (E13)		
	21:46	20:40		19:18	17:59	15:56	44	10:22 (E13)	15:39	28	10:25 (E13)
23	04:59	05:55 (E7)	05:59	07:01	08:03	08:09	09:38 (E13)	08:50	09:58 (E13)		
	21:45	20:37		19:15	17:57	15:55	43	10:21 (E13)	15:40	28	10:26 (E13)
24	05:01	05:55 (E7)	06:01	07:03	08:05	08:11	09:38 (E13)	08:50	09:58 (E13)		
	21:43	20:35		19:12	17:55	15:53	43	10:21 (E13)	15:41	28	10:26 (E13)
25	05:03	05:54 (E7)	06:03	07:05	08:07	08:13	09:38 (E13)	08:50	09:58 (E13)		
	21:41	20:32		19:10	16:52	15:52	43	10:21 (E13)	15:41	29	10:27 (E13)
26	05:04	05:53 (E7)	06:05	07:07	08:09	08:15	09:39 (E13)	08:51	09:58 (E13)		
	21:39	20:30		19:07	16:50	15:51	42	10:21 (E13)	15:42	29	10:27 (E13)
27	05:06	05:53 (E7)	06:07	07:09	08:11	08:17	09:40 (E13)	08:51	09:59 (E13)		
	21:38	20:27		19:04	16:47	15:49	42	10:22 (E13)	15:43	29	10:28 (E13)
28	05:08	05:51 (E7)	06:09	07:11	08:13	08:19	09:41 (E13)	08:51	09:59 (E13)		
	21:36	20:24		19:02	16:45	15:48	41	10:22 (E13)	15:44	29	10:28 (E13)
29	05:10	05:51 (E7)	06:11	07:13	08:15	08:21	09:41 (E13)	08:51	09:59 (E13)		
	21:34	20:22		18:59	16:43	15:47	41	10:22 (E13)	15:45	30	10:29 (E13)
30	05:12	05:51 (E7)	06:13	07:15	08:17	08:22	09:42 (E13)	08:51	10:00 (E13)		
	21:32	20:19		18:56	16:40	15:46	40	10:22 (E13)	15:46	30	10:30 (E13)
31	05:14	05:52 (E7)	06:15		07:20			08:51	10:00 (E13)		
	21:30	20:17			16:38			15:47	10:31 (E13)		
Potential sun hours	529	469		385	324	247		216			
Total, worst case	165	113				1156		982			
Sun reduction	0.49	0.50				0.08		0.07			
Oper. time red.	0.96	0.96				0.96		0.96			
Wind dir. red.	0.67	0.67				0.61		0.61			
Total reduction	0.32	0.32				0.05		0.04			
Total, real	52	36				56		41			

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

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0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March	April	May		June
1	08:51		10:04 (E13)	08:15		10:13 (E13)	07:11	06:49	05:33		04:36
	15:48	36	10:40 (E13)	16:45	37	10:50 (E13)	17:48	19:53	20:55		21:53
2	08:50		10:05 (E13)	08:13		10:15 (E13)	07:08	06:46	05:30		04:35
	15:49	36	10:41 (E13)	16:47	35	10:50 (E13)	17:50	19:55	20:57		21:54
3	08:50		10:05 (E13)	08:11		10:16 (E13)	07:06	06:43	05:28		04:34
	15:51	36	10:41 (E13)	16:50	33	10:49 (E13)	17:52	19:57	21:00		21:55
4	08:50		10:05 (E13)	08:09		10:17 (E13)	07:03	06:41	05:26		04:33
	15:52	37	10:42 (E13)	16:52	31	10:48 (E13)	17:54	19:59	21:02	4	05:54 (E7)
5	08:49		10:05 (E13)	08:07		10:19 (E13)	07:00	06:38	05:23		04:32
	15:53	38	10:43 (E13)	16:54	28	10:47 (E13)	17:56	20:01	21:04	7	05:59 (E7)
6	08:49		10:05 (E13)	08:05		10:20 (E13)	06:58	06:35	05:21		04:31
	15:55	39	10:44 (E13)	16:56	25	10:45 (E13)	17:58	20:03	21:06	10	06:00 (E7)
7	08:48		10:05 (E13)	08:03		10:23 (E13)	06:55	06:33	05:19		04:30
	15:56	39	10:44 (E13)	16:59	20	10:43 (E13)	18:00	20:05	21:08	13	06:01 (E7)
8	08:48		10:05 (E13)	08:01		10:27 (E13)	06:53	06:30	05:17		04:29
	15:58	40	10:45 (E13)	17:01	12	10:39 (E13)	18:03	20:08	21:10	16	06:02 (E7)
9	08:47		10:06 (E13)	07:58			06:50	06:28	05:15		04:28
	15:59	40	10:46 (E13)	17:03			18:05	20:10	21:12	18	06:02 (E7)
10	08:46		10:06 (E13)	07:56			06:47	06:25	05:13		04:28
	16:01	41	10:47 (E13)	17:05			18:07	20:12	21:14	20	06:02 (E7)
11	08:45		10:06 (E13)	07:54			06:45	06:22	05:11		04:27
	16:03	41	10:47 (E13)	17:08			18:09	20:14	21:16	21	06:02 (E7)
12	08:44		10:06 (E13)	07:52			06:42	06:20	05:08		04:27
	16:04	42	10:48 (E13)	17:10			18:11	20:16	21:18	21	06:02 (E7)
13	08:43		10:06 (E13)	07:49			06:40	06:17	05:06		04:26
	16:06	42	10:48 (E13)	17:12			18:13	20:18	21:20	21	06:02 (E7)
14	08:42		10:06 (E13)	07:47			06:37	06:14	05:04		04:26
	16:08	43	10:49 (E13)	17:14			18:15	20:20	21:22	20	06:02 (E7)
15	08:41		10:06 (E13)	07:45			06:34	06:12	05:03		04:26
	16:10	43	10:49 (E13)	17:17			18:18	20:22	21:24	19	06:01 (E7)
16	08:40		10:07 (E13)	07:43			06:32	06:09	05:01		04:25
	16:12	43	10:50 (E13)	17:19			18:20	20:24	21:25	19	06:01 (E7)
17	08:39		10:07 (E13)	07:40			06:29	06:07	04:59		04:25
	16:14	44	10:51 (E13)	17:21			18:22	20:26	21:27	18	06:01 (E7)
18	08:37		10:07 (E13)	07:38			06:26	06:04	04:57		04:25
	16:16	44	10:51 (E13)	17:23			18:24	20:28	21:29	16	06:00 (E7)
19	08:36		10:07 (E13)	07:35			06:24	06:02	04:55		04:25
	16:18	44	10:51 (E13)	17:26			18:26	20:30	21:31	15	05:59 (E7)
20	08:35		10:08 (E13)	07:33			06:21	05:59	04:53		04:25
	16:20	44	10:52 (E13)	17:28			18:28	20:33	21:33	12	05:58 (E7)
21	08:33		10:08 (E13)	07:31			06:18	05:57	04:52		04:25
	16:22	44	10:52 (E13)	17:30			18:30	20:35	21:35	9	05:56 (E7)
22	08:32		10:08 (E13)	07:28			06:16	05:54	04:50		04:25
	16:24	44	10:52 (E13)	17:32			18:32	20:37	21:37	6	05:55 (E7)
23	08:30		10:08 (E13)	07:26			06:13	05:52	04:48		04:26
	16:26	44	10:52 (E13)	17:34			18:34	20:39	21:38		22:10
24	08:29		10:09 (E13)	07:23			06:10	05:49	04:47		04:26
	16:28	44	10:53 (E13)	17:37			18:36	20:41	21:40		22:10
25	08:27		10:10 (E13)	07:21			06:07	05:47	04:45		04:26
	16:30	43	10:53 (E13)	17:39			18:38	20:43	21:42		22:10
26	08:26		10:10 (E13)	07:18			06:05	05:44	04:44		04:27
	16:32	43	10:53 (E13)	17:41			18:41	20:45	21:43		22:10
27	08:24		10:10 (E13)	07:16			06:02	05:42	04:42		04:27
	16:34	43	10:53 (E13)	17:43			18:43	20:47	21:45		22:10
28	08:22		10:11 (E13)	07:13			05:59	05:40	04:41		04:28
	16:36	42	10:53 (E13)	17:45			18:45	20:49	21:47		22:10
29	08:20		10:12 (E13)				06:57	05:37	04:40		04:29
	16:39	41	10:53 (E13)				19:47	20:51	21:48		22:10
30	08:18		10:12 (E13)				06:54	05:35	04:38		04:29
	16:41	40	10:52 (E13)				19:49	20:53	21:50		22:09
31	08:17		10:13 (E13)				06:51		04:37		
	16:43	39	10:52 (E13)				19:51		21:51		
Potential sun hours	235			266			366	426	508		529
Total, worst case		1279			221				285		
Sun reduction		0.13			0.20				0.57		
Oper. time red.		0.96			0.96				0.96		
Wind dir. red.		0.61			0.61				0.67		
Total reduction		0.08			0.12				0.37		
Total, real		100			26				104		

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July		August		September		October		November		December	
1	04:30		05:16	05:51 (E7)	06:17	07:17	07:23				08:24	09:48 (E13)
	22:09		21:28	21	06:12 (E7)	20:14	18:54	16:36			15:45	41 10:29 (E13)
2	04:31		05:18	05:52 (E7)	06:19	07:19	07:25				08:26	09:49 (E13)
	22:09		21:26	20	06:12 (E7)	20:11	18:51	16:34			15:44	41 10:30 (E13)
3	04:32		05:19	05:53 (E7)	06:21	07:21	07:27		09:56 (E13)		08:28	09:49 (E13)
	22:08		21:24	19	06:12 (E7)	20:09	18:48	16:32	14	10:10 (E13)	15:43	40 10:29 (E13)
4	04:33		05:21	05:55 (E7)	06:23	07:23	07:29		09:52 (E13)		08:29	09:50 (E13)
	22:07		21:22	17	06:12 (E7)	20:06	18:46	16:29	21	10:13 (E13)	15:42	39 10:29 (E13)
5	04:34		05:23	05:56 (E7)	06:25	07:25	07:31		09:50 (E13)		08:31	09:50 (E13)
	22:07		21:20	15	06:11 (E7)	20:03	18:43	16:27	25	10:15 (E13)	15:42	40 10:30 (E13)
6	04:35		05:25	05:58 (E7)	06:27	07:27	07:33		09:49 (E13)		08:32	09:51 (E13)
	22:06		21:17	12	06:10 (E7)	20:01	18:40	16:25	28	10:17 (E13)	15:41	39 10:30 (E13)
7	04:36		05:27	06:00 (E7)	06:29	07:30	07:36		09:47 (E13)		08:34	09:52 (E13)
	22:05		21:15	9	06:09 (E7)	19:58	18:38	16:23	31	10:18 (E13)	15:40	37 10:29 (E13)
8	04:37		05:29	06:02 (E7)	06:31	07:32	07:38		09:47 (E13)		08:35	09:53 (E13)
	22:04		21:13	6	06:08 (E7)	19:55	18:35	16:21	33	10:20 (E13)	15:40	37 10:30 (E13)
9	04:38		05:31	06:04 (E7)	06:33	07:34	07:40		09:45 (E13)		08:37	09:53 (E13)
	22:03		21:11	3	06:07 (E7)	19:53	18:32	16:19	36	10:21 (E13)	15:39	37 10:30 (E13)
10	04:39		05:33		06:35	07:36	07:42		09:45 (E13)		08:38	09:54 (E13)
	22:02		21:08		19:50	18:30	16:17	37	10:22 (E13)		15:39	36 10:30 (E13)
11	04:41		05:35		06:37	07:38	07:44		09:44 (E13)		08:39	09:54 (E13)
	22:01		21:06		19:47	18:27	16:15	39	10:23 (E13)		15:38	36 10:30 (E13)
12	04:42		05:37		06:39	07:40	07:46		09:43 (E13)		08:40	09:56 (E13)
	22:00		21:04		19:45	18:25	16:13	40	10:23 (E13)		15:38	35 10:31 (E13)
13	04:43		05:39		06:41	07:42	07:49		09:44 (E13)		08:42	09:56 (E13)
	21:59		21:02		19:42	18:22	16:11	40	10:24 (E13)		15:38	35 10:31 (E13)
14	04:45		05:41		06:43	07:44	07:51		09:43 (E13)		08:43	09:57 (E13)
	21:58		20:59		19:39	18:19	16:09	42	10:25 (E13)		15:38	34 10:31 (E13)
15	04:46		05:43		06:45	07:46	07:53		09:42 (E13)		08:44	09:57 (E13)
	21:57		20:57		19:37	18:17	16:08	43	10:25 (E13)		15:38	34 10:31 (E13)
16	04:48		05:45		06:47	07:48	07:55		09:43 (E13)		08:45	09:58 (E13)
	21:55		20:54		19:34	18:14	16:06	43	10:26 (E13)		15:38	33 10:31 (E13)
17	04:49		05:47		06:49	07:50	07:57		09:43 (E13)		08:46	09:59 (E13)
	21:54		20:52		19:31	18:12	16:04	43	10:26 (E13)		15:38	33 10:32 (E13)
18	04:51		05:49		06:51	07:52	07:59		09:43 (E13)		08:46	10:00 (E13)
	21:52		20:50		19:29	18:09	16:02	44	10:27 (E13)		15:38	32 10:32 (E13)
19	04:52		05:51		06:53	07:55	08:01		09:43 (E13)		08:47	09:59 (E13)
	21:51		20:47		19:26	18:07	16:01	44	10:27 (E13)		15:38	33 10:32 (E13)
20	04:54		05:53		06:55	07:57	08:03		09:43 (E13)		08:48	10:00 (E13)
	21:49		20:45		19:23	18:04	15:59	44	10:27 (E13)		15:39	33 10:33 (E13)
21	04:56		05:55		06:57	07:59	08:05		09:43 (E13)		08:48	10:01 (E13)
	21:48		20:42		19:20	18:02	15:58	44	10:27 (E13)		15:39	33 10:34 (E13)
22	04:57	05:58 (E7)	05:57		06:59	08:01	08:07		09:44 (E13)		08:49	10:01 (E13)
	21:46	8 06:06 (E7)	20:40		19:18	17:59	15:56	44	10:28 (E13)		15:39	33 10:34 (E13)
23	04:59	05:56 (E7)	05:59		07:01	08:03	08:09		09:44 (E13)		08:50	10:02 (E13)
	21:45	11 06:07 (E7)	20:37		19:15	17:57	15:55	44	10:28 (E13)		15:40	33 10:35 (E13)
24	05:01	05:55 (E7)	06:01		07:03	08:05	08:11		09:44 (E13)		08:50	10:02 (E13)
	21:43	14 06:09 (E7)	20:35		19:12	17:55	15:53	44	10:28 (E13)		15:41	33 10:35 (E13)
25	05:03	05:55 (E7)	06:03		07:05	07:07	08:13		09:44 (E13)		08:50	10:02 (E13)
	21:41	15 06:10 (E7)	20:32		19:10	16:52	15:52	44	10:28 (E13)		15:41	33 10:35 (E13)
26	05:04	05:54 (E7)	06:05		07:07	07:10	08:15		09:45 (E13)		08:51	10:03 (E13)
	21:39	16 06:10 (E7)	20:30		19:07	16:50	15:51	43	10:28 (E13)		15:42	33 10:36 (E13)
27	05:06	05:53 (E7)	06:07		07:09	07:12	08:17		09:46 (E13)		08:51	10:03 (E13)
	21:38	18 06:11 (E7)	20:27		19:04	16:47	15:49	43	10:29 (E13)		15:43	33 10:36 (E13)
28	05:08	05:52 (E7)	06:09		07:11	07:14	08:19		09:46 (E13)		08:51	10:03 (E13)
	21:36	19 06:11 (E7)	20:24		19:02	16:45	15:48	43	10:29 (E13)		15:44	34 10:37 (E13)
29	05:10	05:52 (E7)	06:11		07:13	07:16	08:21		09:47 (E13)		08:51	10:04 (E13)
	21:34	20 06:12 (E7)	20:22		18:59	16:43	15:47	42	10:29 (E13)		15:45	34 10:38 (E13)
30	05:12	05:52 (E7)	06:13		07:15	07:18	08:22		09:48 (E13)		08:51	10:04 (E13)
	21:32	20 06:12 (E7)	20:19		18:56	16:40	15:46	41	10:29 (E13)		15:46	35 10:39 (E13)
31	05:14	05:52 (E7)	06:15			07:20					08:51	10:05 (E13)
	21:30	21 06:13 (E7)	20:17			16:38					15:47	35 10:40 (E13)
Potential sun hours	529		469			385	324	247			216	
Total, worst case		162		122				1079			1094	
Sun reduction		0.49		0.50				0.08			0.07	
Oper. time red.		0.96		0.96				0.96			0.96	
Wind dir. red.		0.67		0.67				0.61			0.61	
Total reduction		0.32		0.32				0.05			0.04	
Total, real		51		39				52			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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 16:33	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	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	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	04:33 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	04:34 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	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	05:14 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	04:40 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	07:51 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	06:36 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 16:13	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	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	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 16:23	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	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	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	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	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	06:04 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 15:43
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 20:21	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 15:46
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	09:12 (E13) 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	08:41 (E13) 15:45
2	08:50 15:49	08:13 16:47	09:11 (E13) 17:50	07:08 19:55	06:46 20:57	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:41 (E13) 15:44
3	08:50 15:51	08:11 16:50	09:11 (E13) 17:52	07:06 19:57	06:43 20:58	04:34 21:55	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:41 (E13) 15:43
4	08:50 15:52	08:09 16:52	09:12 (E13) 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	08:41 (E13) 15:42
5	08:49 15:53	08:07 16:54	09:12 (E13) 17:56	07:00 19:53	06:38 20:51	04:32 21:04	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:41 (E13) 15:42
6	08:49 15:55	08:05 16:56	09:11 (E13) 17:58	06:58 20:03	06:35 21:06	05:21 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:41 (E13) 15:41
7	08:48 15:56	08:03 16:59	09:11 (E13) 18:01	06:55 20:05	06:33 21:08	05:19 22:00	04:30 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:41 (E13) 15:40
8	08:48 15:58	08:01 17:01	09:12 (E13) 18:03	06:53 20:08	06:30 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:42 (E13) 15:40
9	08:47 15:59	07:58 17:03	09:11 (E13) 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	08:42 (E13) 15:39
10	08:46 16:01	07:56 17:05	09:12 (E13) 18:07	06:47 20:12	06:25 21:14	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:43 (E13) 15:39
11	08:45 16:03	07:54 17:08	09:12 (E13) 18:09	06:45 20:14	06:22 21:16	05:11 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:44 (E13) 15:38
12	08:44 16:05	07:52 17:10	09:12 (E13) 18:11	06:42 20:16	06:20 21:18	05:08 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:44 (E13) 15:38
13	08:43 16:06	07:50 17:12	09:13 (E13) 18:13	06:40 20:18	06:17 21:20	05:06 22:06	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:46 (E13) 15:38
14	08:42 16:08	07:47 17:14	09:13 (E13) 18:15	06:37 20:20	06:15 21:22	05:04 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:46 (E13) 15:38
15	08:41 16:10	07:45 17:17	09:14 (E13) 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	08:47 (E13) 15:38
16	08:40 16:12	07:43 17:19	09:15 (E13) 18:20	06:32 20:24	06:09 21:25	05:01 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:49 (E13) 15:38
17	08:39 16:14	07:40 17:21	09:16 (E13) 18:22	06:29 20:26	06:07 21:27	04:59 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:50 (E13) 15:38
18	08:37 16:16	07:38 17:23	09:17 (E13) 18:24	06:26 20:28	06:04 21:29	04:57 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:52 (E13) 15:38
19	08:36 16:18	07:36 17:26	09:19 (E13) 18:26	06:24 20:30	06:02 21:31	04:55 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:53 (E13) 15:38
20	08:35 16:20	07:33 17:28	09:21 (E13) 18:28	06:21 20:33	05:59 21:33	04:53 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 16:05	08:55 (E13) 15:39
21	08:33 16:22	07:29 (E13) 17:30	09:24 (E13) 18:30	06:18 20:35	05:57 21:35	04:52 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 16:10	08:58 (E13) 15:39
22	08:32 16:24	07:28 (E13) 17:32	09:30 (E13) 18:32	06:16 20:37	05:54 21:37	04:50 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 16:12	09:04 (E13) 15:39
23	08:30 16:26	07:26 (E13) 17:34	09:37 (E13) 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 16:15	09:06 (E13) 15:40
24	08:29 16:28	07:23 (E13) 17:37	09:38 (E13) 18:36	06:10 20:41	05:49 21:40	04:47 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 16:16	09:07 (E13) 15:41
25	08:27 16:30	07:21 (E13) 17:39	09:42 (E13) 18:38	06:07 20:43	05:47 21:42	04:45 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 16:17	09:08 (E13) 15:41
26	08:26 16:32	07:18 (E13) 17:41	09:46 (E13) 18:41	06:05 20:45	05:44 21:43	04:44 22:10	05:04 21:39	06:05 20:30	07:07 19:07	08:15 17:50	08:19 16:18	09:09 (E13) 15:42
27	08:24 16:34	07:16 (E13) 17:43	09:45 (E13) 18:43	06:02 20:47	05:42 21:45	04:42 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:17 17:47	08:21 16:19	09:10 (E13) 15:43
28	08:22 16:36	07:13 (E13) 17:45	09:46 (E13) 18:44	05:59 20:49	05:40 21:47	04:41 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:19 17:45	08:25 16:20	09:11 (E13) 15:44
29	08:20 16:39	07:11 (E13) 17:48	09:47 (E13) 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 17:43	08:27 16:21	09:12 (E13) 15:45
30	08:18 16:41	07:09 (E13) 17:51	09:48 (E13) 18:46	05:54 20:53	05:35 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:22 17:41	08:29 16:22	09:13 (E13) 15:46
31	08:17 16:43	07:07 (E13) 17:50	09:49 (E13) 18:47	05:51 20:53	05:32 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:20 16:38	08:23 (E13) 17:40	08:30 16:23	09:14 (E13) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	301	750								355	708	
Sun reduction	0.13	0.20								0.26	0.08	
Oper. time red.	0.96	0.96								0.96	0.96	
Wind dir. red.	0.59	0.59								0.59	0.59	
Total reduction	0.08	0.11								0.15	0.05	
Total, real	23	86								52	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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)	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 19:53	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 19:55	05:19 20:06	04:30 21:08	04:36 22:05	05:27 21:15	06:29 20:00	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 20:00	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 20:00	07:34 18:32	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 22:02	05:33 21:09	06:35 20:00	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 20:00	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 20:00	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	04:26 22:06	04:43 21:59	05:39 21:02	06:41 20:00	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 20:54	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 21:27	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	07:52 18:09	07:59 16:02	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	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 16:00	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 16:00	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 16:00	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	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 16:00	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 19:12	08:05 17:55	08:11 16:00	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	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 16:00	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	08:15 17:50	08:21 16:00	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	08:17 17:44	08:23 16:00	08:51 15:43
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	08:19 17:45	08:25 16:00	08:51 15:44
29	08:20 16:39		05:57 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	08:27 16:00	08:51 15:45
30	08:19 16:41		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 17:41	08:28 16:00	08:51 15:46
31	08:17 16:43		05:51 19:51	05:32 20:51	04:37 21:51	04:30 22:10	05:14 21:30	06:15 20:17	07:20 18:58	08:29 17:41	08:35 16:00	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		320										99
Sun reduction		0.20										0.07
Oper. time red.		0.96										0.96
Wind dir. red.		0.61										0.61
Total reduction		0.12										0.04
Total, real		38										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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	05:22 21:22	06:23 20:06	07:23 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 21:17	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 17:05	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	04:44 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 20:55	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 18:09	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	04:53 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	08:33 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 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	04:27 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 16:34	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 20:53	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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March	April			May			June		
1	08:51		10:07 (E13)	08:15		07:11	06:49				05:33		06:23 (E7)	04:36		
	15:48	33	10:40 (E13)	16:45		17:48	19:53				20:55	7	06:30 (E7)	21:53		
2	08:51		10:08 (E13)	08:13		07:08	06:46				05:30			04:35		
	15:49	33	10:41 (E13)	16:47		17:50	19:55				20:58			21:54		
3	08:50		10:08 (E13)	08:11		07:06	06:43				05:28			04:34		
	15:51	33	10:41 (E13)	16:50		17:52	19:57				21:00			21:55		
4	08:50		10:08 (E13)	08:09		07:03	06:41				05:26			04:33		
	15:52	33	10:41 (E13)	16:52		17:54	19:59				21:02			21:57		
5	08:49		10:09 (E13)	08:07		07:00	06:38				05:23			04:32		
	15:53	33	10:42 (E13)	16:54		17:56	20:01				21:04			21:58		
6	08:49		10:09 (E13)	08:05		06:58	06:35				05:21			04:31		
	15:55	34	10:43 (E13)	16:56		17:58	20:03				21:06			21:59		
7	08:48		10:10 (E13)	08:03		06:55	06:33				05:19			04:30		
	15:56	33	10:43 (E13)	16:59		18:00	20:05				21:08			22:00		
8	08:48		10:10 (E13)	08:01		06:53	06:30				05:17			04:29		
	15:58	33	10:43 (E13)	17:01		18:03	20:08				21:10			22:01		
9	08:47		10:11 (E13)	07:58		06:50	06:28				05:15			04:28		
	15:59	32	10:43 (E13)	17:03		18:05	20:10				21:12			22:02		
10	08:46		10:11 (E13)	07:56		06:47	06:25				05:13			04:28		
	16:01	33	10:44 (E13)	17:05		18:07	20:12				21:14			22:03		
11	08:45		10:12 (E13)	07:54		06:45	06:22				05:11			04:27		
	16:03	32	10:44 (E13)	17:08		18:09	20:14				21:16			22:04		
12	08:44		10:13 (E13)	07:52		06:42	06:20				05:08			04:27		
	16:04	32	10:45 (E13)	17:10		18:11	20:16				21:18			22:05		
13	08:43		10:13 (E13)	07:50		06:40	06:17				05:06			04:26		
	16:06	31	10:44 (E13)	17:12		18:13	20:18				21:20			22:06		
14	08:42		10:14 (E13)	07:47		06:37	06:14				05:04			04:26		
	16:08	31	10:45 (E13)	17:14		18:15	20:20				21:22			22:07		
15	08:41		10:15 (E13)	07:45		06:34	06:12				05:03			04:26		
	16:10	30	10:45 (E13)	17:17		18:18	20:22				21:24			22:07		
16	08:40		10:15 (E13)	07:43		06:32	06:09				05:01			04:25		
	16:12	29	10:44 (E13)	17:19		18:20	20:24				21:26			22:08		
17	08:39		10:16 (E13)	07:40		06:29	06:07				04:59			04:25		
	16:14	29	10:45 (E13)	17:21		18:22	20:26				21:27			22:08		
18	08:38		10:17 (E13)	07:38		06:26	06:04			06:30 (E7)	04:57			04:25		
	16:16	27	10:44 (E13)	17:23		18:24	20:28	5		06:35 (E7)	21:29			22:09		
19	08:36		10:17 (E13)	07:36		06:24	06:02			06:28 (E7)	04:55			04:25		
	16:18	26	10:43 (E13)	17:26		18:26	20:30	8		06:36 (E7)	21:31			22:09		
20	08:35		10:19 (E13)	07:33		06:21	05:59			06:25 (E7)	04:53			04:25		
	16:20	25	10:44 (E13)	17:28		18:28	20:33	12		06:37 (E7)	21:33			22:10		
21	08:33		10:20 (E13)	07:31		06:18	05:57			06:23 (E7)	04:52			04:25		
	16:22	23	10:43 (E13)	17:30		18:30	20:35	15		06:38 (E7)	21:35			22:10		
22	08:32		10:21 (E13)	07:28		06:16	05:54			06:21 (E7)	04:50			04:25		
	16:24	21	10:42 (E13)	17:32		18:32	20:37	17		06:38 (E7)	21:37			22:10		
23	08:30		10:22 (E13)	07:26		06:13	05:52			06:18 (E7)	04:48			04:26		
	16:26	18	10:40 (E13)	17:34		18:34	20:39	20		06:38 (E7)	21:38			22:10		
24	08:29		10:25 (E13)	07:23		06:10	05:49			06:18 (E7)	04:47			04:26		
	16:28	14	10:39 (E13)	17:37		18:36	20:41	20		06:38 (E7)	21:40			22:10		
25	08:27		10:29 (E13)	07:21		06:07	05:47			06:18 (E7)	04:45			04:26		
	16:30	7	10:36 (E13)	17:39		18:38	20:43	20		06:38 (E7)	21:42			22:10		
26	08:26			07:18		06:05	05:44			06:18 (E7)	04:44			04:27		
	16:32			17:41		18:41	20:45	19		06:37 (E7)	21:43			22:10		
27	08:24			07:16		06:02	05:42			06:18 (E7)	04:42			04:27		
	16:34			17:43		18:43	20:47	18		06:36 (E7)	21:45			22:10		
28	08:22			07:13		05:59	05:40			06:19 (E7)	04:41			04:28		
	16:36			17:45		18:45	20:49	17		06:36 (E7)	21:47			22:10		
29	08:20					06:57	05:37			06:20 (E7)	04:40			04:29		
	16:39					19:47	20:51	15		06:35 (E7)	21:48			22:10		
30	08:18					06:54	05:35			06:20 (E7)	04:38			04:29		
	16:41					19:49	20:53	12		06:32 (E7)	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		705						198			7					
Sun reduction		0.13						0.50			0.57					
Oper. time red.		0.96						0.96			0.96					
Wind dir. red.		0.61						0.65			0.65					
Total reduction		0.08						0.31			0.36					
Total, real		55						62			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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E7) 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 (E7) 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 (E7) 19:39	07:44 18:19	07:51 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 (E7) 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 (E7) 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 (E7) 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 (E7) 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 (E7) 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 (E7) 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 (E7) 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 (E7) 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 (E7) 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 (E7) 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 (E7) 19:10	08:13 17:52	08:19 15:52	08:51 15:41
26	05:04 21:39	06:05 20:30	07:07 19:07	08:15 17:50	08:21 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:17 17:47	08:23 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:19 17:45	08:25 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:21 17:43	08:27 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:23 17:41	08:29 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:25 17:39	08:31 15:45	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		206			344	1019
Sun reduction		0.50			0.08	0.07
Oper. time red.		0.96			0.96	0.96
Wind dir. red.		0.65			0.61	0.61
Total reduction		0.31			0.05	0.04
Total, real		64			17	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		10:10 (E13)	08:15		10:24 (E13)	07:11		06:49				05:33		06:00 (E7)	04:36		
	15:48	36	10:46 (E13)	16:45	27	10:51 (E13)	17:48		19:53				20:55	6	06:06 (E7)	21:53		
2	08:50		10:10 (E13)	08:13		10:26 (E13)	07:08		06:46				05:30		05:58 (E7)	04:35		
	15:49	38	10:48 (E13)	16:47	24	10:50 (E13)	17:50		19:55				20:57	9	06:07 (E7)	21:54		
3	08:50		10:10 (E13)	08:11		10:29 (E13)	07:06		06:43				05:28		05:56 (E7)	04:34		
	15:51	38	10:48 (E13)	16:50	19	10:48 (E13)	17:52		19:57				21:00	12	06:08 (E7)	21:55		
4	08:50		10:10 (E13)	08:09		10:32 (E13)	07:03		06:41				05:26		05:54 (E7)	04:33		
	15:52	38	10:48 (E13)	16:52	13	10:45 (E13)	17:54		19:59				21:02	15	06:09 (E7)	21:57		
5	08:49		10:11 (E13)	08:07			07:00		06:38				05:23		05:52 (E7)	04:32		
	15:53	38	10:49 (E13)	16:54			17:56		20:01				21:04	18	06:10 (E7)	21:58		
6	08:49		10:11 (E13)	08:05			06:58		06:35				05:21		05:50 (E7)	04:31		
	15:55	39	10:50 (E13)	16:56			17:58		20:03				21:06	20	06:10 (E7)	21:59		
7	08:48		10:11 (E13)	08:03			06:55		06:33				05:19		05:50 (E7)	04:30		
	15:56	39	10:50 (E13)	16:59			18:00		20:05				21:08	20	06:10 (E7)	22:00		
8	08:48		10:11 (E13)	08:01			06:53		06:30				05:17		05:49 (E7)	04:29		
	15:58	40	10:51 (E13)	17:01			18:03		20:08				21:10	21	06:10 (E7)	22:01		
9	08:47		10:12 (E13)	07:58			06:50		06:28				05:15		05:49 (E7)	04:28		
	15:59	40	10:52 (E13)	17:03			18:05		20:10				21:12	21	06:10 (E7)	22:02		
10	08:46		10:12 (E13)	07:56			06:47		06:25				05:13		05:49 (E7)	04:28		
	16:01	40	10:52 (E13)	17:05			18:07		20:12				21:14	21	06:10 (E7)	22:03		
11	08:45		10:12 (E13)	07:54			06:45		06:22				05:11		05:49 (E7)	04:27		
	16:03	41	10:53 (E13)	17:08			18:09		20:14				21:16	20	06:09 (E7)	22:04		
12	08:44		10:13 (E13)	07:52			06:42		06:20				05:08		05:50 (E7)	04:27		
	16:04	41	10:54 (E13)	17:10			18:11		20:16				21:18	19	06:09 (E7)	22:05		
13	08:43		10:12 (E13)	07:49			06:40		06:17				05:06		05:50 (E7)	04:26		
	16:06	41	10:53 (E13)	17:12			18:13		20:18				21:20	18	06:08 (E7)	22:06		
14	08:42		10:13 (E13)	07:47			06:37		06:14				05:04		05:51 (E7)	04:26		
	16:08	41	10:54 (E13)	17:14			18:15		20:20				21:22	17	06:08 (E7)	22:07		
15	08:41		10:13 (E13)	07:45			06:34		06:12				05:03		05:52 (E7)	04:26		
	16:10	41	10:54 (E13)	17:17			18:18		20:22				21:24	15	06:07 (E7)	22:07		
16	08:40		10:13 (E13)	07:43			06:32		06:09				05:01		05:53 (E7)	04:25		
	16:12	42	10:55 (E13)	17:19			18:20		20:24				21:25	12	06:05 (E7)	22:08		
17	08:39		10:14 (E13)	07:40			06:29		06:07				04:59		05:55 (E7)	04:25		
	16:14	42	10:56 (E13)	17:21			18:22		20:26				21:27	9	06:04 (E7)	22:08		
18	08:37		10:14 (E13)	07:38			06:26		06:04				04:57		05:57 (E7)	04:25		
	16:16	42	10:56 (E13)	17:23			18:24		20:28				21:29	4	06:01 (E7)	22:09		
19	08:36		10:14 (E13)	07:36			06:24		06:02				04:55			04:25		
	16:18	42	10:56 (E13)	17:26			18:26		20:30				21:31			22:09		
20	08:35		10:15 (E13)	07:33			06:21		05:59				04:53			04:25		
	16:20	41	10:56 (E13)	17:28			18:28		20:33				21:33			22:10		
21	08:33		10:16 (E13)	07:31			06:18		05:57				04:52			04:25		
	16:22	40	10:56 (E13)	17:30			18:30		20:35				21:35			22:10		
22	08:32		10:16 (E13)	07:28			06:16		05:54				04:50			04:25		
	16:24	40	10:56 (E13)	17:32			18:32		20:37				21:37			22:10		
23	08:30		10:16 (E13)	07:26			06:13		05:52				04:48			04:26		
	16:26	40	10:56 (E13)	17:34			18:34		20:39				21:38			22:10		
24	08:29		10:18 (E13)	07:23			06:10		05:49				04:47			04:26		
	16:28	39	10:57 (E13)	17:37			18:36		20:41				21:40			22:10		
25	08:27		10:18 (E13)	07:21			06:07		05:47				04:45			04:26		
	16:30	38	10:56 (E13)	17:39			18:38		20:43				21:42			22:10		
26	08:26		10:19 (E13)	07:18			06:05		05:44				04:44			04:27		
	16:32	37	10:56 (E13)	17:41			18:41		20:45				21:43			22:10		
27	08:24		10:19 (E13)	07:16			06:02		05:42				04:42			04:27		
	16:34	37	10:56 (E13)	17:43			18:43		20:47				21:45			22:10		
28	08:22		10:20 (E13)	07:13			05:59		05:40				04:41			04:28		
	16:36	35	10:55 (E13)	17:45			18:45		20:49				21:47			22:10		
29	08:20		10:21 (E13)				06:57		05:37				04:40			04:29		
	16:39	34	10:55 (E13)				19:47		20:51				21:48			22:10		
30	08:18		10:22 (E13)				06:54		05:35				04:38			04:29		
	16:41	32	10:54 (E13)				19:49		20:53	1	06:02 (E7)		21:50			22:09		
31	08:17		10:24 (E13)				06:51						04:37					
	16:43	29	10:53 (E13)				19:51						21:51					
Potential sun hours	235			266			366		426				508			529		
Total, worst case		1201			83					1				277				
Sun reduction		0.13			0.20					0.50				0.57				
Oper. time red.		0.96			0.96					0.96				0.96				
Wind dir. red.		0.61			0.61					0.67				0.67				
Total reduction		0.08			0.12					0.32				0.36				
Total, real		94			10					0				101				

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)
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Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

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Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:00 (E7) 19 06:19 (E7)	06:17 20:14	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	06:00 (E7) 20 06:20 (E7)	06:19 20:11	07:19 18:51	07:25 16:34
3	04:32 22:08	05:19 21:24	06:00 (E7) 20 06:20 (E7)	06:21 20:09	07:21 18:48	07:27 16:32
4	04:33 22:07	05:21 21:22	06:00 (E7) 20 06:20 (E7)	06:23 20:06	07:23 18:46	07:29 16:29
5	04:34 22:07	05:23 21:20	05:59 (E7) 20 06:19 (E7)	06:25 20:03	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	05:59 (E7) 20 06:19 (E7)	06:27 20:01	07:27 18:40	07:33 16:25
7	04:36 22:05	05:27 21:15	06:00 (E7) 19 06:19 (E7)	06:29 19:58	07:30 18:38	10:01 (E13) 16:23
8	04:37 22:04	05:29 21:13	06:02 (E7) 17 06:19 (E7)	06:31 19:55	07:32 18:35	09:59 (E13) 16:21
9	04:38 22:03	05:31 21:11	06:04 (E7) 14 06:18 (E7)	06:33 19:53	07:34 18:32	09:57 (E13) 16:19
10	04:39 22:02	05:33 21:08	06:06 (E7) 12 06:18 (E7)	06:35 19:50	07:36 18:30	09:56 (E13) 16:17
11	04:41 22:01	05:35 21:06	06:07 (E7) 8 06:15 (E7)	06:37 19:47	07:38 18:27	09:55 (E13) 16:15
12	04:42 22:00	05:37 21:04	06:09 (E7) 5 06:14 (E7)	06:39 19:45	07:40 18:25	09:53 (E13) 16:13
13	04:43 21:59	05:39 21:02	06:11 19:42	07:42 18:22	07:49 16:11	09:53 (E13) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	09:52 (E13) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	09:51 (E13) 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	09:52 (E13) 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	09:51 (E13) 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	09:52 (E13) 15:38
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	09:51 (E13) 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	09:51 (E13) 15:39
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	09:51 (E13) 15:39
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	09:51 (E13) 15:39
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	09:51 (E13) 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	09:51 (E13) 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	09:51 (E13) 15:41
26	05:04 21:39	06:06 (E7) 7 06:13 (E7)	06:05 20:30	07:07 19:07	08:15 16:50	09:52 (E13) 15:42
27	05:06 21:38	06:05 (E7) 10 06:15 (E7)	06:07 20:27	07:09 19:04	08:17 16:47	09:53 (E13) 15:43
28	05:08 21:36	06:03 (E7) 13 06:16 (E7)	06:09 20:24	07:11 19:02	08:19 16:45	09:53 (E13) 15:44
29	05:10 21:34	06:02 (E7) 15 06:17 (E7)	06:11 20:22	07:13 18:59	08:21 16:43	09:54 (E13) 15:45
30	05:12 21:32	06:01 (E7) 18 06:19 (E7)	06:13 20:19	07:15 18:56	08:22 16:40	09:54 (E13) 15:46
31	05:14 21:30	06:01 (E7) 18 06:19 (E7)	06:15 20:17	07:20 16:38	15:46	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case	81	194			858	1135
Sun reduction	0.49	0.50			0.08	0.07
Oper. time red.	0.96	0.96			0.96	0.96
Wind dir. red.	0.67	0.67			0.61	0.61
Total reduction	0.32	0.32			0.05	0.04
Total, real	26	62			42	47

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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		09:39 (E13)	08:15	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23	08:24	09:24 (E13)
	15:48	25	10:04 (E13)	16:45	17:48	19:53	20:55	21:53	22:09	21:28	20:14	18:54	16:36	15:45	29 09:53 (E13)
2	08:51		09:40 (E13)	08:13	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26	09:24 (E13)
	15:49	25	10:05 (E13)	16:47	17:50	19:55	20:58	21:54	22:09	21:26	20:11	18:51	16:34	15:44	29 09:53 (E13)
3	08:50		09:40 (E13)	08:11	07:06	06:43	05:28	04:34	04:32	05:19	06:21	07:21	07:27	08:28	09:25 (E13)
	15:51	25	10:05 (E13)	16:50	17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:32	15:43	28 09:53 (E13)
4	08:50		09:40 (E13)	08:09	07:03	06:41	05:26	04:33	04:33	05:21	06:23	07:23	07:29	08:29	09:25 (E13)
	15:52	26	10:06 (E13)	16:52	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:46	16:29	15:42	28 09:53 (E13)
5	08:49		09:41 (E13)	08:07	07:01	06:38	05:23	04:32	04:34	05:23	06:25	07:25	07:31	08:31	09:26 (E13)
	15:53	26	10:07 (E13)	16:54	17:56	20:01	21:04	21:58	22:07	21:20	20:03	18:43	16:27	15:42	27 09:53 (E13)
6	08:49		09:41 (E13)	08:05	06:58	06:35	05:21	04:31	04:35	05:25	06:27	07:27	07:33	08:32	09:27 (E13)
	15:55	26	10:07 (E13)	16:56	17:58	20:03	21:06	21:59	22:06	21:17	20:01	18:40	16:25	15:41	27 09:54 (E13)
7	08:48		09:41 (E13)	08:03	06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:30	07:36	08:34	09:27 (E13)
	15:56	27	10:08 (E13)	16:59	18:01	20:05	21:08	22:00	22:05	21:15	19:58	18:38	16:23	15:40	26 09:53 (E13)
8	08:48		09:41 (E13)	08:01	06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:32	07:38	08:35	09:28 (E13)
	15:58	28	10:09 (E13)	17:01	18:03	20:08	21:10	22:01	22:04	21:13	19:55	18:35	16:21	15:40	26 09:54 (E13)
9	08:47		09:41 (E13)	07:58	06:50	06:28	05:15	04:28	04:38	05:31	06:33	07:34	07:40	08:37	09:29 (E13)
	15:59	28	10:09 (E13)	17:03	18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:32	16:19	15:39	25 09:54 (E13)
10	08:46		09:41 (E13)	07:56	06:47	06:25	05:13	04:28	04:39	05:33	06:35	07:36	07:42	08:38	09:29 (E13)
	16:01	29	10:10 (E13)	17:05	18:07	20:12	21:14	22:03	22:02	21:08	19:50	18:30	16:17	15:39	25 09:54 (E13)
11	08:45		09:42 (E13)	07:54	06:45	06:22	05:11	04:27	04:41	05:35	06:37	07:38	07:44	08:39	09:29 (E13)
	16:03	28	10:10 (E13)	17:08	18:09	20:14	21:16	22:04	22:01	21:06	19:47	18:27	16:15	15:38	25 09:54 (E13)
12	08:44		09:42 (E13)	07:52	06:42	06:20	05:08	04:27	04:42	05:37	06:39	07:40	07:46	08:40	09:31 (E13)
	16:04	29	10:11 (E13)	17:10	18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:25	16:13	15:38	24 09:55 (E13)
13	08:43		09:42 (E13)	07:50	06:40	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:49	08:42	09:31 (E13)
	16:06	29	10:11 (E13)	17:12	18:13	20:18	21:20	22:06	21:59	21:02	19:42	18:22	16:11	15:38	24 09:55 (E13)
14	08:42		09:42 (E13)	07:47	06:37	06:15	05:04	04:26	04:45	05:41	06:43	07:44	07:51	08:43	09:32 (E13)
	16:08	30	10:12 (E13)	17:14	18:15	20:20	21:22	22:07	21:58	20:59	19:39	18:20	16:09	15:38	23 09:55 (E13)
15	08:41		09:43 (E13)	07:45	06:34	06:12	05:03	04:26	04:46	05:43	06:45	07:46	07:53	08:44	09:32 (E13)
	16:10	30	10:13 (E13)	17:17	18:18	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:08	15:38	23 09:55 (E13)
16	08:40		09:43 (E13)	07:43	06:32	06:09	05:01	04:25	04:48	05:45	06:47	07:48	07:55	08:45	09:33 (E13)
	16:12	29	10:12 (E13)	17:19	18:20	20:24	21:26	22:08	21:55	20:54	19:34	18:14	16:06	15:38	22 09:55 (E13)
17	08:39		09:44 (E13)	07:40	06:29	06:07	04:59	04:25	04:49	05:47	06:49	07:50	07:57	08:46	09:34 (E13)
	16:14	29	10:13 (E13)	17:21	18:22	20:26	21:27	22:09	21:54	20:52	19:31	18:12	16:04	15:38	22 09:56 (E13)
18	08:38		09:44 (E13)	07:38	06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:52	07:59	08:46	09:34 (E13)
	16:16	29	10:13 (E13)	17:23	18:24	20:28	21:29	22:09	21:52	20:50	19:29	18:09	16:02	15:38	22 09:56 (E13)
19	08:36		09:44 (E13)	07:36	06:24	06:02	04:55	04:25	04:52	05:51	06:53	07:55	08:01	08:47	09:35 (E13)
	16:18	29	10:13 (E13)	17:26	18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:01	15:38	22 09:57 (E13)
20	08:35		09:45 (E13)	07:33	06:21	05:59	04:53	04:25	04:54	05:53	06:55	07:57	08:03	08:48	09:35 (E13)
	16:20	28	10:13 (E13)	17:28	18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:04	15:59	15:39	22 09:57 (E13)
21	08:33		09:46 (E13)	07:31	06:18	05:57	04:52	04:25	04:56	05:55	06:57	07:59	08:05	08:49	09:36 (E13)
	16:22	27	10:13 (E13)	17:30	18:30	20:35	21:35	22:10	21:48	20:42	19:20	18:02	15:58	15:39	22 09:58 (E13)
22	08:32		09:46 (E13)	07:28	06:16	05:54	04:50	04:25	04:57	05:57	06:59	08:01	08:07	08:49	09:36 (E13)
	16:24	27	10:13 (E13)	17:32	18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56	15:39	22 09:58 (E13)
23	08:30		09:47 (E13)	07:26	06:13	05:52	04:48	04:26	04:59	05:59	07:01	08:03	08:09	08:49	09:37 (E13)
	16:26	25	10:12 (E13)	17:34	18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:55	15:40	22 09:59 (E13)
24	08:29		09:49 (E13)	07:23	06:10	05:49	04:47	04:26	05:01	06:01	07:03	08:05	08:11	08:50	09:37 (E13)
	16:28	24	10:13 (E13)	17:37	18:36	20:41	21:40	22:10	21:43	20:35	19:12	17:55	15:53	15:41	22 09:59 (E13)
25	08:27		09:50 (E13)	07:21	06:07	05:47	04:45	04:26	05:03	06:03	07:05	08:07	08:13	08:50	09:37 (E13)
	16:30	22	10:12 (E13)	17:39	18:38	20:43	21:42	22:10	21:41	20:32	19:10	16:52	15:52	15:41	22 09:59 (E13)
26	08:26		09:51 (E13)	07:18	06:05	05:44	04:44	04:27	05:04	06:05	07:07	08:09	08:15	08:51	09:37 (E13)
	16:32	20	10:11 (E13)	17:41	18:41	20:45	21:43	22:10	21:39	20:30	19:07	16:50	15:51	15:42	23 10:00 (E13)
27	08:24		09:52 (E13)	07:16	06:02	05:42	04:42	04:27	05:06	06:07	07:09	08:12	08:17	08:51	09:38 (E13)
	16:34	18	10:10 (E13)	17:43	18:43	20:47	21:45	22:10	21:38	20:27	19:04	16:47	15:49	15:43	22 10:00 (E13)
28	08:22		09:54 (E13)	07:13	05:59	05:40	04:41	04:28	05:08	06:09	07:11	08:14	08:19	08:51	09:38 (E13)
	16:36	14	10:08 (E13)	17:45	18:45	20:49	21:47	22:10	21:36	20:24	19:02	16:45	15:48	15:44	23 10:01 (E13)
29	08:20		09:57 (E13)		06:57	05:37	04:40	04:29	05:10	06:11	07:13	08:16	08:21	08:51	09:38 (E13)
	16:39	9	10:06 (E13)		19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	15:45	24 10:02 (E13)
30	08:19				06:54	05:35	04:38	04:29	05:12	06:13	07:15	08:18	08:22	08:51	09:39 (E13)
	16:41				19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:41	15:46	15:46	24 10:03 (E13)
31	08:17				06:51		04:37		05:14	06:15		07:20	08:24	08:51	09:39 (E13)
	16:43				19:51		21:51		21:30	20:17		16:38	15:47	15:47	25 10:04 (E13)
Potential sun hours	235		266	366	426	508	529	529	529	469	385	324	247	216	
Total, worst case		741											447		750
Sun reduction		0.13											0.08		0.07
Oper. time red.		0.96											0.96		0.96
Wind dir. red.		0.61											0.61		0.61
Total reduction		0.08											0.05		0.04
Total, real		58											22		31

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 43	10:50 (E5) 11:33 (E5) 16:45	08:15 07:11 17:47	06:49 19:53 20:55	05:32 21:53 21:53	04:35 22:09 21:28	04:30 22:09 21:28	05:15 20:14 18:53	06:17 20:19 16:36	07:17 16:36 16:36	07:23 16:36 16:36	08:24 15:45 41 11:18 (E5)
2	08:51 15:49 42	10:51 (E5) 11:33 (E5) 16:47	08:13 07:08 17:50	06:46 19:55 20:57	05:30 21:54 21:54	04:34 22:09 21:26	04:30 22:09 21:26	05:17 20:11 18:51	06:19 20:21 16:34	07:19 16:34 16:34	07:25 16:34 16:34	08:26 15:44 41 11:19 (E5)
3	08:50 15:50 42	10:51 (E5) 11:33 (E5) 16:49	08:11 07:06 17:52	06:43 19:57 21:00	05:28 21:55 21:55	04:33 22:08 21:24	04:31 22:08 21:24	05:19 20:09 18:48	06:21 20:09 16:31	07:21 16:31 16:31	07:27 16:31 16:31	08:28 15:43 42 11:20 (E5)
4	08:50 15:52 43	10:51 (E5) 11:34 (E5) 16:52	08:09 07:03 17:54	06:41 19:59 21:02	05:25 21:57 21:57	04:32 22:07 21:22	04:32 22:07 21:22	05:21 20:06 18:45	06:23 20:06 16:29	07:23 16:29 16:29	07:29 16:29 16:29	08:29 15:42 42 11:19 (E5)
5	08:49 15:53 43	10:52 (E5) 11:35 (E5) 16:54	08:07 07:00 17:56	06:38 20:01 21:04	05:23 21:58 21:58	04:31 22:07 21:19	04:33 22:07 21:19	05:23 20:03 18:43	06:25 20:03 16:27	07:25 16:27 16:27	07:31 16:27 16:27	08:31 15:41 42 11:20 (E5)
6	08:49 15:54 43	10:52 (E5) 11:35 (E5) 16:56	08:05 07:58 17:58	06:58 20:03 21:06	05:58 21:59 21:59	04:30 22:06 21:17	04:34 22:06 21:17	05:25 20:01 18:40	06:27 20:01 16:25	07:27 16:25 16:25	07:33 16:25 16:25	08:32 15:41 42 11:21 (E5)
7	08:48 15:56 42	10:53 (E5) 11:35 (E5) 16:58	08:03 07:58 18:00	06:55 20:05 21:08	05:59 22:00 22:00	04:30 22:05 21:15	04:35 22:05 21:15	05:27 19:58 18:38	06:29 19:58 16:23	07:29 18:38 16:23	07:36 16:23 16:23	08:34 15:40 43 11:21 (E5)
8	08:48 15:58 42	10:53 (E5) 11:35 (E5) 17:01	08:00 07:58 18:02	06:53 20:07 21:10	05:57 22:01 22:01	04:29 22:04 21:13	04:37 22:04 21:13	05:29 19:55 18:35	06:31 19:55 16:21	07:31 18:35 16:21	07:38 16:21 16:21	08:35 15:39 43 11:22 (E5)
9	08:47 15:59 42	10:54 (E5) 11:36 (E5) 17:03	07:58 07:58 18:05	06:50 20:10 21:12	05:14 22:02 22:02	04:28 22:03 21:11	04:38 22:03 21:11	05:31 19:53 18:32	06:33 19:53 16:19	07:34 18:32 16:19	07:40 16:19 16:19	08:37 15:39 43 11:23 (E5)
10	08:46 16:01 42	10:54 (E5) 11:36 (E5) 17:05	07:56 07:56 18:07	06:47 20:12 21:14	05:12 22:03 22:03	04:28 22:03 21:11	04:39 22:03 21:11	05:33 19:50 18:30	06:35 19:50 16:17	07:36 18:30 16:17	07:42 16:17 16:17	08:38 15:38 43 11:23 (E5)
11	08:45 16:02 41	10:55 (E5) 11:36 (E5) 17:07	07:54 07:52 18:09	06:45 20:14 21:16	05:10 22:04 22:04	04:27 22:01 21:06	04:40 22:01 21:06	05:35 19:47 18:27	06:37 19:47 16:15	07:38 18:27 16:15	07:44 16:15 16:15	08:39 15:38 43 11:23 (E5)
12	08:44 16:04 41	10:56 (E5) 11:37 (E5) 17:10	07:52 07:49 18:11	06:42 20:16 21:18	05:08 22:05 22:05	04:26 22:00 21:04	04:42 22:00 21:04	05:37 19:45 18:24	06:39 19:45 16:13	07:40 18:24 16:13	07:46 16:13 16:13	08:40 15:38 43 11:24 (E5)
13	08:43 16:06 40	10:56 (E5) 11:37 (E5) 17:12	07:49 07:46 18:13	06:39 20:18 21:20	05:06 22:06 22:06	04:26 22:06 21:09	04:43 22:06 21:09	05:39 19:42 18:22	06:41 19:42 16:11	07:42 18:22 16:11	07:49 16:11 16:11	08:42 15:38 43 11:24 (E5)
14	08:42 16:08 40	10:57 (E5) 11:37 (E5) 17:14	07:47 07:44 18:15	06:37 20:20 21:22	05:04 22:07 22:07	04:26 22:07 21:58	04:44 22:07 21:58	05:41 19:39 18:19	06:43 19:39 16:09	07:44 18:19 16:09	07:51 16:09 16:09	08:43 15:38 42 11:24 (E5)
15	08:41 16:10 39	10:58 (E5) 11:37 (E5) 17:16	07:45 07:46 18:17	06:34 20:22 21:24	05:02 22:07 22:07	04:25 22:07 21:57	04:45 22:07 21:57	05:43 19:37 18:17	06:45 19:37 16:07	07:46 18:17 16:07	07:53 16:07 16:07	08:44 15:37 43 11:25 (E5)
16	08:40 16:12 39	10:58 (E5) 11:37 (E5) 17:19	07:43 07:49 18:19	06:31 20:24 21:25	05:00 22:08 22:08	04:25 22:08 21:55	04:47 22:08 21:55	05:45 19:34 18:14	06:47 19:34 16:06	07:48 18:14 16:06	07:55 16:06 16:06	08:45 15:37 43 11:25 (E5)
17	08:39 16:13 38	10:59 (E5) 11:37 (E5) 17:21	07:40 07:46 18:22	06:29 20:26 21:27	04:58 22:09 22:09	04:25 22:09 21:54	04:49 22:09 21:54	05:47 19:31 18:12	06:49 19:31 16:04	07:50 18:12 16:04	07:57 16:04 16:04	08:46 15:38 43 11:26 (E5)
18	08:37 16:15 36	11:00 (E5) 11:36 (E5) 17:23	07:38 07:23 18:24	06:26 20:28 21:29	06:04 22:09 22:09	04:57 22:09 21:52	05:49 22:09 21:52	06:51 19:28 18:09	07:52 18:09 16:02	07:59 16:02 16:02	07:59 16:02 16:02	08:46 15:38 42 11:26 (E5)
19	08:36 16:17 36	11:00 (E5) 11:36 (E5) 17:25	07:35 07:25 18:26	06:23 20:30 21:31	06:01 22:09 22:09	04:55 22:09 21:51	05:45 22:09 21:51	06:53 19:26 18:07	07:54 18:07 16:00	08:01 16:00 16:00	08:01 16:00 16:00	08:47 15:38 43 11:27 (E5)
20	08:35 16:19 34	11:02 (E5) 11:36 (E5) 17:28	07:33 07:28 18:28	06:21 20:32 21:33	05:59 22:10 22:10	04:53 22:10 21:49	05:43 22:10 21:49	06:55 19:23 18:04	07:57 19:23 16:59	08:03 16:59 16:59	08:03 16:59 16:59	08:48 15:38 43 11:27 (E5)
21	08:33 16:21 32	11:03 (E5) 11:35 (E5) 17:30	07:31 07:30 18:30	06:18 20:35 21:35	05:56 22:10 22:10	04:51 22:10 21:48	05:45 22:10 21:48	06:57 19:20 18:02	07:59 19:20 16:57	08:05 16:57 16:57	08:05 16:57 16:57	08:49 15:39 43 11:28 (E5)
22	08:32 16:23 30	11:04 (E5) 11:34 (E5) 17:32	07:28 07:32 18:32	06:15 20:37 21:37	05:54 22:10 22:10	04:50 22:10 21:46	05:45 22:10 21:46	06:59 19:18 18:01	07:59 19:18 16:56	08:01 16:56 16:56	08:01 16:56 16:56	08:49 15:39 43 11:28 (E5)
23	08:30 16:26 28	11:05 (E5) 11:33 (E5) 17:34	07:26 07:34 18:34	06:13 20:39 21:38	05:51 22:10 22:10	04:48 22:10 21:45	05:49 22:10 21:45	06:59 19:15 18:03	07:01 19:15 16:54	08:03 16:54 16:54	08:03 16:54 16:54	08:50 15:40 43 11:29 (E5)
24	08:29 16:28 26	11:07 (E5) 11:33 (E5) 17:36	07:23 07:36 18:36	06:10 20:41 21:40	05:49 22:10 22:10	04:46 22:10 21:43	05:01 22:10 21:43	06:01 19:12 18:05	07:03 19:12 16:53	08:05 16:53 16:53	08:05 16:53 16:53	08:51 15:40 43 11:29 (E5)
25	08:27 16:30 23	11:09 (E5) 11:32 (E5) 17:39	07:21 07:39 18:38	06:07 20:43 21:42	05:47 22:10 22:10	04:45 22:10 21:41	05:02 22:10 21:41	06:03 19:10 18:05	07:05 19:10 16:52	08:07 16:52 16:52	08:07 16:52 16:52	08:51 15:41 42 11:29 (E5)
26	08:26 16:32 19	11:11 (E5) 11:30 (E5) 17:41	07:18 07:41 18:40	06:05 20:45 21:43	05:44 22:10 22:10	04:43 22:10 21:39	05:04 22:10 21:39	06:05 19:07 18:01	07:07 19:07 16:50	08:09 16:50 16:50	08:09 16:50 16:50	08:51 15:42 42 11:29 (E5)
27	08:24 16:34 13	11:14 (E5) 11:27 (E5) 17:43	07:16 07:43 18:42	06:02 20:42 21:45	05:42 22:10 22:10	04:42 22:10 21:38	05:06 22:10 21:38	06:07 19:04 18:01	07:09 19:04 16:47	08:11 16:47 16:47	08:11 16:47 16:47	08:51 15:42 43 11:30 (E5)
28	08:22 16:36 13	11:14 (E5) 11:27 (E5) 17:43	07:16 07:43 18:42	06:02 20:42 21:45	05:42 22:10 22:10	04:42 22:10 21:38	05:06 22:10 21:38	06:07 19:04 18:01	07:09 19:04 16:47	08:11 16:47 16:47	08:11 16:47 16:47	08:51 15:42 43 11:30 (E5)
29	08:20 16:38 13	11:14 (E5) 11:27 (E5) 17:43	07:16 07:43 18:42	06:02 20:42 21:45	05:42 22:10 22:10	04:42 22:10 21:38	05:06 22:10 21:38	06:07 19:04 18:01	07:09 19:04 16:47	08:11 16:47 16:47	08:11 16:47 16:47	08:51 15:42 43 11:30 (E5)
30	08:18 16:41 13	11:14 (E5) 11:27 (E5) 17:43	07:16 07:43 18:42	06:02 20:42 21:45	05:42 22:10 22:10	04:42 22:10 21:38	05:06 22:10 21:38	06:07 19:04 18:01	07:09 19:04 16:47	08:11 16:47 16:47	08:11 16:47 16:47	08:51 15:42 43 11:30 (E5)
31	08:17 16:43	11:14 (E5) 11:27 (E5) 17:43	07:16 07:43 18:42	06:02 20:42 21:45	05:42 22:10 22:10	04:42 22:10 21:38	05:06 22:10 21:38	06:07 19:04 18:01	07:09 19:04 16:47	08:11 16:47 16:47	08:11 16:47 16:47	08:51 15:42 43 11:30 (E5)
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	979											1319
Sun reduction	0.13										0.08	0.07
Oper. time red.	0.96										0.96	0.96
Wind dir. red.	0.60										0.60	0.60
Total reduction	0.08										0.05	0.04
Total, real	75										24	53

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:47 (E14) 07:02 (E14)	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		06:19 20:11	06:49 (E14) 07:00 (E14)	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	06:51 (E14) 06:56 (E14)	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	07:25 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	05:25 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	05:27 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	5	06:53 (E14) 06:58 (E14)	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	11	06:50 (E14) 07:01 (E14)	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	15	06:48 (E14) 07:03 (E14)	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	19	06:45 (E14) 07:04 (E14)	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	22	06:43 (E14) 07:05 (E14)	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	24	06:41 (E14) 07:05 (E14)	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	25	06:41 (E14) 07:06 (E14)	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	26	06:40 (E14) 07:06 (E14)	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	26	06:40 (E14) 07:06 (E14)	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 17:23	06:26 18:24	06:04 20:28	27	06:39 (E14) 07:06 (E14)	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	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	27	06:39 (E14) 07:06 (E14)	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	27	06:39 (E14) 07:06 (E14)	04:54 21:33	04:25 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	25	06:39 (E14) 07:04 (E14)	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	24	06:40 (E14) 07:04 (E14)	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	23	06:39 (E14) 07:02 (E14)	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 18:36	05:49 20:41	21	06:41 (E14) 07:02 (E14)	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 18:39	05:47 20:43	18	06:42 (E14) 07:00 (E14)	04:45 21:42	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	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	15	06:44 (E14) 06:59 (E14)	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	10	06:45 (E14) 06:55 (E14)	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 17:45	06:00 18:45	05:40 20:49			04:41	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:46	08:19 15:48	08:51 15:44	
29	08:20 16:39		06:57 19:47	05:37 20:51			04:40	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	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	08:17 16:43		06:52 19:51				04:37		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		385	324	247	216
Total, worst case					390						31				
Sun reduction					0.50						0.43				
Oper. time red.					0.96						0.96				
Wind dir. red.					0.66						0.66				
Total reduction					0.32						0.27				
Total, real				123						115		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February		March		April		May		June	
1	08:51		09:50 (E14)	08:15		07:11			06:49	05:33	04:36		
	15:48	30	10:20 (E14)	16:45		17:48			19:53	20:55	21:53		
2	08:50		09:51 (E14)	08:13		07:08			06:46	05:30	04:35		
	15:49	30	10:21 (E14)	16:48		17:50			19:55	20:58	21:54		
3	08:50		09:51 (E14)	08:11		07:06			06:43	05:28	04:34		
	15:51	30	10:21 (E14)	16:50		17:52			19:57	21:00	21:55		
4	08:50		09:51 (E14)	08:09		07:03			06:41	05:26	04:33		
	15:52	30	10:21 (E14)	16:52		17:54			19:59	21:02	21:57		
5	08:49		09:52 (E14)	08:07		07:01			06:38	05:23	04:32		
	15:53	31	10:23 (E14)	16:54		17:56			20:01	21:04	21:58		
6	08:49		09:52 (E14)	08:05		06:58			06:36	05:21	04:31		
	15:55	31	10:23 (E14)	16:56		17:58			20:03	21:06	21:59		
7	08:48		09:52 (E14)	08:03		06:55		07:23 (E13)	06:33	05:19	04:30		
	15:56	31	10:23 (E14)	16:59		18:01	9	07:32 (E13)	20:06	21:08	22:00		
8	08:48		09:53 (E14)	08:01		06:53		07:19 (E13)	06:30	05:17	04:29		
	15:58	31	10:24 (E14)	17:01		18:03	16	07:35 (E13)	20:08	21:10	22:01		
9	08:47		09:53 (E14)	07:58		06:50		07:17 (E13)	06:28	05:15	04:29		
	16:00	31	10:24 (E14)	17:03		18:05	21	07:38 (E13)	20:10	21:12	22:02		
10	08:46		09:54 (E14)	07:56		06:47		07:15 (E13)	06:25	05:13	04:28		
	16:01	31	10:25 (E14)	17:05		18:07	24	07:39 (E13)	20:12	21:14	22:03		
11	08:45		09:54 (E14)	07:54		06:45		07:14 (E13)	06:22	05:11	04:27		
	16:03	31	10:25 (E14)	17:08		18:09	25	07:39 (E13)	20:14	21:16	22:04		
12	08:44		09:55 (E14)	07:52		06:42		07:13 (E13)	06:20	05:09	04:27		
	16:05	31	10:26 (E14)	17:10		18:11	27	07:40 (E13)	20:16	21:18	22:05		
13	08:43		09:55 (E14)	07:50		06:40		07:12 (E13)	06:17	05:07	04:26		
	16:06	30	10:25 (E14)	17:12		18:13	29	07:41 (E13)	20:18	21:20	22:06		
14	08:42		09:56 (E14)	07:47		06:37		07:11 (E13)	06:15	05:05	04:26		
	16:08	30	10:26 (E14)	17:14		18:15	29	07:40 (E13)	20:20	21:22	22:07		
15	08:41		09:57 (E14)	07:45		06:34		07:11 (E13)	06:12	05:03	04:26		
	16:10	29	10:26 (E14)	17:17		18:18	30	07:41 (E13)	20:22	21:24	22:07		
16	08:40		09:57 (E14)	07:43		06:32		07:10 (E13)	06:09	05:01	04:26		
	16:12	29	10:26 (E14)	17:19		18:20	31	07:41 (E13)	20:24	21:26	22:08		
17	08:39		09:58 (E14)	07:40		06:29		07:10 (E13)	06:07	04:59	04:25		
	16:14	28	10:26 (E14)	17:21		18:22	30	07:40 (E13)	20:26	21:27	22:08		
18	08:38		09:58 (E14)	07:38		06:26		07:10 (E13)	06:04	04:57	04:25		
	16:16	28	10:26 (E14)	17:23		18:24	29	07:39 (E13)	20:28	21:29	22:09		
19	08:36		09:59 (E14)	07:36		06:24		07:10 (E13)	06:02	04:55	04:25		
	16:18	26	10:25 (E14)	17:26		18:26	29	07:39 (E13)	20:31	21:31	22:09		
20	08:35		10:00 (E14)	07:33		06:21		07:10 (E13)	05:59	04:53	04:25		
	16:20	26	10:26 (E14)	17:28		18:28	28	07:38 (E13)	20:33	21:33	22:10		
21	08:33		10:01 (E14)	07:31		06:18		07:11 (E13)	05:57	04:52	04:25		
	16:22	24	10:25 (E14)	17:30		18:30	25	07:36 (E13)	20:35	21:35	22:10		
22	08:32		10:02 (E14)	07:28		06:16		07:12 (E13)	05:54	04:50	04:26		
	16:24	22	10:24 (E14)	17:32		18:32	24	07:36 (E13)	20:37	21:37	22:10		
23	08:30		10:03 (E14)	07:26		06:13		07:13 (E13)	05:52	04:48	04:26		
	16:26	20	10:23 (E14)	17:34		18:34	20	07:33 (E13)	20:39	21:38	22:10		
24	08:29		10:05 (E14)	07:23		06:10		07:14 (E13)	05:49	04:47	04:26		
	16:28	18	10:23 (E14)	17:37		18:36	17	07:31 (E13)	20:41	21:40	22:10		
25	08:27		10:07 (E14)	07:21		06:08		07:18 (E13)	05:47	04:45	04:26		
	16:30	14	10:21 (E14)	17:39		18:38	10	07:28 (E13)	20:43	21:42	22:10		
26	08:26		10:10 (E14)	07:18		06:05			05:44	04:44	04:27		
	16:32	8	10:18 (E14)	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		05:59			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					06:51				04:37			
	16:43					19:51				21:51			
Potential sun hours	235			266		366			426	508	529		
Total, worst case		700				453							
Sun reduction		0.13				0.41							
Oper. time red.		0.96				0.96							
Wind dir. red.		0.61				0.62							
Total reduction		0.08				0.25							
Total, real		55				111							

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:52 (E13)	07:23
	22:09	21:28	20:14	18:54	28 08:20 (E13)	16:36
2	04:31	05:18	06:19	07:19	07:52 (E13)	07:25
	22:09	21:26	20:11	18:51	27 08:19 (E13)	16:34
3	04:32	05:20	06:21	07:21	07:53 (E13)	07:27
	22:08	21:24	20:09	18:48	24 08:17 (E13)	16:32
4	04:33	05:21	06:23	07:23	07:54 (E13)	07:29
	22:07	21:22	20:06	18:46	21 08:15 (E13)	16:29
5	04:34	05:23	06:25	07:25	07:55 (E13)	07:31
	22:07	21:20	20:03	18:43	18 08:13 (E13)	16:27
6	04:35	05:25	06:27	07:28	07:57 (E13)	07:33
	22:06	21:17	20:01	18:40	13 08:10 (E13)	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	18:32		16:19
10	04:39	05:33	06:35	07:36		07:42
	22:02	21:08	19:50	18:30		16:17
11	04:41	05:35	06:37	07:38		07:44
	22:01	21:06	19:47	18:27		16:15
12	04:42	05:37	06:39	07:40		07:46
	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	18:14	8 09:43 (E14)	08:45
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	19:31	18:12	14 09:54 (E14)	08:46
18	04:51	05:49	06:51	08:06 (E13)	07:52	07:59
	21:52	20:50	19:29	8 08:14 (E13)	18:09	16:02
19	04:53	05:51	06:53	08:02 (E13)	07:55	08:01
	21:51	20:47	19:26	16 08:18 (E13)	18:07	16:01
20	04:54	05:53	06:55	08:00 (E13)	07:57	08:03
	21:49	20:45	19:23	20 08:20 (E13)	18:04	15:59
21	04:56	05:55	06:57	07:58 (E13)	07:59	08:05
	21:48	20:42	19:21	23 08:21 (E13)	18:02	15:58
22	04:58	05:57	06:59	07:57 (E13)	08:01	08:07
	21:46	20:40	19:18	25 08:22 (E13)	18:00	15:56
23	04:59	05:59	07:01	07:55 (E13)	08:03	08:09
	21:45	20:37	19:15	27 08:22 (E13)	17:57	15:55
24	05:01	06:01	07:03	07:54 (E13)	08:05	08:11
	21:43	20:35	19:12	29 08:23 (E13)	17:55	15:53
25	05:03	06:03	07:05	07:53 (E13)	07:07	08:13
	21:41	20:32	19:10	30 08:23 (E13)	16:52	15:52
26	05:05	06:05	07:07	07:53 (E13)	07:10	08:15
	21:39	20:30	19:07	30 08:23 (E13)	16:50	15:51
27	05:06	06:07	07:09	07:52 (E13)	07:12	08:17
	21:38	20:27	19:04	30 08:22 (E13)	16:48	15:49
28	05:08	06:09	07:11	07:52 (E13)	07:14	08:19
	21:36	20:24	19:02	30 08:22 (E13)	16:45	15:48
29	05:10	06:11	07:13	07:52 (E13)	07:16	08:21
	21:34	20:22	18:59	29 08:21 (E13)	16:43	15:47
30	05:12	06:13	07:15	07:52 (E13)	07:18	08:22
	21:32	20:19	18:56	29 08:21 (E13)	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			326	131	363	922
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.96	0.96	0.96	0.96
Wind dir. red.			0.62	0.62	0.61	0.61
Total reduction			0.25	0.15	0.05	0.04
Total, real			83	20	18	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	05:08 (E14) 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	05:09 (E14) 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	05:09 (E14) 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 21:57	05:08 (E14) 22:07	05:10 (E14) 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	05:07 (E14) 22:07	05:11 (E14) 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	05:06 (E14) 22:06	05:12 (E14) 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	05:06 (E14) 22:05	05:13 (E14) 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	05:05 (E14) 22:04	05:14 (E14) 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	05:12 (E14) 22:03	05:16 (E14) 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	05:13 (E14) 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	05:04 (E14) 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	05:03 (E14) 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	05:14 (E14) 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	05:03 (E14) 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	05:03 (E14) 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	05:03 (E14) 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	05:02 (E14) 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	05:02 (E14) 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	05:03 (E14) 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	05:03 (E14) 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	05:03 (E14) 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	05:03 (E14) 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	05:03 (E14) 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	05:04 (E14) 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	04:45 21:42	04:27 22:10	05:04 (E14) 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	05:45 20:45	04:44 21:43	04:27 22:10	05:05 (E14) 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	05:05 (E14) 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	05:06 (E14) 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	05:06 (E14) 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	05:07 (E14) 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							50					
Sun reduction							0.49					
Oper. time red.							0.96					
Wind dir. red.							0.66					
Total reduction							0.36					
Total, real							104					

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Tadalinas - 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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		10:51 (E13)	08:15		07:11	06:49			05:32		06:19 (E7)	04:36					
	15:48	30	11:21 (E13)	16:45		17:48	19:53			20:55	17	06:36 (E7)	21:53					
2	08:50		10:52 (E13)	08:13		07:08	06:46			05:30		06:20 (E7)	04:35					
	15:49	30	11:22 (E13)	16:47		17:50	19:55			20:57	15	06:35 (E7)	21:54					
3	08:50		10:52 (E13)	08:11		07:06	06:43			05:28		06:22 (E7)	04:34					
	15:51	30	11:22 (E13)	16:50		17:52	19:57			21:00	11	06:33 (E7)	21:55					
4	08:50		10:52 (E13)	08:09		07:03	06:41			05:26		06:25 (E7)	04:33					
	15:52	30	11:22 (E13)	16:52		17:54	19:59			21:02	5	06:30 (E7)	21:57					
5	08:49		10:54 (E13)	08:07		07:00	06:38			05:23			04:32					
	15:53	28	11:22 (E13)	16:54		17:56	20:01			21:04			21:58					
6	08:49		10:54 (E13)	08:05		06:58	06:35			05:21			04:31					
	15:55	28	11:22 (E13)	16:56		17:58	20:03			21:06			21:59					
7	08:48		10:55 (E13)	08:03		06:55	06:33			05:19			04:30					
	15:56	27	11:22 (E13)	16:59		18:00	20:05			21:08			22:00					
8	08:48		10:56 (E13)	08:01		06:53	06:30			05:17			04:29					
	15:58	26	11:22 (E13)	17:01		18:03	20:08			21:10			22:01					
9	08:47		10:57 (E13)	07:58		06:50	06:28			05:15			04:28					
	15:59	25	11:22 (E13)	17:03		18:05	20:10			21:12			22:02					
10	08:46		10:58 (E13)	07:56		06:47	06:25			05:13			04:28					
	16:01	24	11:22 (E13)	17:05		18:07	20:12			21:14			22:03					
11	08:45		10:59 (E13)	07:54		06:45	06:22			05:10			04:27					
	16:03	23	11:22 (E13)	17:08		18:09	20:14			21:16			22:04					
12	08:44		11:01 (E13)	07:52		06:42	06:20			05:08			04:27					
	16:04	20	11:21 (E13)	17:10		18:11	20:16			21:18			22:05					
13	08:43		11:02 (E13)	07:50		06:40	06:17			05:06			04:26					
	16:06	18	11:20 (E13)	17:12		18:13	20:18			21:20			22:06					
14	08:42		11:04 (E13)	07:47		06:37	06:14			05:04			04:26					
	16:08	15	11:19 (E13)	17:14		18:15	20:20			21:22			22:07					
15	08:41		11:06 (E13)	07:45		06:34	06:12			05:02			04:26					
	16:10	12	11:18 (E13)	17:17		18:18	20:22			21:24			22:07					
16	08:40		11:09 (E13)	07:43		06:32	06:09			05:01			04:25					
	16:12	6	11:15 (E13)	17:19		18:20	20:24			21:25			22:08					
17	08:39			07:40		06:29	06:07			04:59			04:25					
	16:14			17:21		18:22	20:26			21:27			22:08					
18	08:37			07:38		06:26	06:04			06:30 (E7)		04:57	04:25					
	16:16			17:23		18:24	20:28	5		06:35 (E7)		21:29	22:09					
19	08:36			07:36		06:24	06:02			06:28 (E7)		04:55	04:25					
	16:18			17:25		18:26	20:30	9		06:37 (E7)		21:31	22:09					
20	08:35			07:33		06:21	05:59			06:25 (E7)		04:53	04:25					
	16:20			17:28		18:28	20:33	13		06:38 (E7)		21:33	22:10					
21	08:33			07:31		06:18	05:57			06:23 (E7)		04:52	04:25					
	16:22			17:30		18:30	20:35	16		06:39 (E7)		21:35	22:10					
22	08:32			07:28		06:16	05:54			06:21 (E7)		04:50	04:25					
	16:24			17:32		18:32	20:37	19		06:40 (E7)		21:37	22:10					
23	08:30			07:26		06:13	05:52			06:18 (E7)		04:48	04:26					
	16:26			17:34		18:34	20:39	22		06:40 (E7)		21:38	22:10					
24	08:29			07:23		06:10	05:49			06:18 (E7)		04:47	04:26					
	16:28			17:37		18:36	20:41	22		06:40 (E7)		21:40	22:10					
25	08:27			07:21		06:07	05:47			06:18 (E7)		04:45	04:26					
	16:30			17:39		18:38	20:43	22		06:40 (E7)		21:42	22:10					
26	08:26			07:18		06:05	05:44			06:17 (E7)		04:44	04:27					
	16:32			17:41		18:41	20:45	23		06:40 (E7)		21:43	22:10					
27	08:24			07:16		06:02	05:42			06:17 (E7)		04:42	04:27					
	16:34			17:43		18:43	20:47	22		06:39 (E7)		21:45	22:10					
28	08:22			07:13		05:59	05:40			06:18 (E7)		04:41	04:28					
	16:36			17:45		18:45	20:49	21		06:39 (E7)		21:47	22:10					
29	08:20					06:57	05:37			06:18 (E7)		04:39	04:28					
	16:39					19:47	20:51	21		06:39 (E7)		21:48	22:10					
30	08:18					06:54	05:35			06:18 (E7)		04:38	04:29					
	16:41					19:49	20:53	19		06:37 (E7)		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		372						234			48							
Sun reduction		0.13						0.50			0.57							
Oper. time red.		0.96						0.96			0.96							
Wind dir. red.		0.60						0.65			0.65							
Total reduction		0.08						0.31			0.36							
Total, real		29						73			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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Tadalinas - 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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E7) 06:41 (E7)	07:34 18:32	07:40 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:31 (E7) 06:43 (E7)	07:35 18:30	07:42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:28 (E7) 06:44 (E7)	07:38 18:27	07:44 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:27 (E7) 06:45 (E7)	07:39 18:25	07:46 16:13	08:40 15:38
13	04:43 21:59	05:39 21:02	06:26 (E7) 06:46 (E7)	07:42 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:26 (E7) 06:46 (E7)	07:44 18:19	07:51 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:25 (E7) 06:47 (E7)	07:45 18:17	07:53 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:25 (E7) 06:47 (E7)	07:48 18:14	07:55 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:25 (E7) 06:47 (E7)	07:49 18:12	07:57 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:24 (E7) 06:46 (E7)	07:52 18:09	07:59 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:24 (E7) 06:46 (E7)	07:55 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:24 (E7) 06:45 (E7)	07:57 18:04	08:03 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:26 (E7) 06:45 (E7)	07:59 18:02	08:05 15:58	08:49 15:39
22	04:57 21:46	05:57 20:40	06:28 (E7) 06:44 (E7)	08:01 17:59	08:07 15:56	08:49 15:39
23	04:59 21:45	05:59 20:37	06:30 (E7) 06:42 (E7)	08:03 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	06:32 (E7) 06:41 (E7)	08:05 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	06:34 (E7) 06:38 (E7)	07:05 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 16:40	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17	07:20 16:38	08:24 16:38	08:24 15:47	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		285			71	935
Sun reduction		0.50			0.08	0.07
Oper. time red.		0.96			0.96	0.96
Wind dir. red.		0.65			0.60	0.60
Total reduction		0.31			0.05	0.04
Total, real		89			3	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 15:42
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 21:17	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 17:05	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 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	04:44 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	08:46 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	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	08:33 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 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	04:27 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	05:45 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 16:34	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 20:53	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			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												
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

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Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	05:22 21:22	06:23 20:06	07:23 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 21:17	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 17:05	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 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 20:54	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	08:46 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	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	08:33 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 17:34	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 19:12	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 22:10	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 16:34	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 20:24	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		06:52 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	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		10:08 (E13)	08:15		10:22 (E13)	07:11		06:49				05:33		06:00 (E7)	04:36		
	15:48	36	10:44 (E13)	16:45	27	10:49 (E13)	17:48		19:53				20:55	7	06:07 (E7)	21:53		
2	08:50		10:09 (E13)	08:13		10:23 (E13)	07:08		06:46				05:30		05:58 (E7)	04:35		
	15:49	36	10:45 (E13)	16:47	25	10:48 (E13)	17:50		19:55				20:57	10	06:08 (E7)	21:54		
3	08:50		10:08 (E13)	08:11		10:26 (E13)	07:06		06:43				05:28		05:56 (E7)	04:34		
	15:51	37	10:45 (E13)	16:50	20	10:46 (E13)	17:52		19:57				21:00	13	06:09 (E7)	21:55		
4	08:50		10:08 (E13)	08:09		10:29 (E13)	07:03		06:41				05:26		05:54 (E7)	04:33		
	15:52	37	10:45 (E13)	16:52	15	10:44 (E13)	17:54		19:59				21:02	16	06:10 (E7)	21:57		
5	08:49		10:09 (E13)	08:07		10:34 (E13)	07:00		06:38				05:23		05:52 (E7)	04:32		
	15:53	38	10:47 (E13)	16:54	6	10:40 (E13)	17:56		20:01				21:04	18	06:10 (E7)	21:58		
6	08:49		10:09 (E13)	08:05			06:58		06:35				05:21		05:50 (E7)	04:31		
	15:55	38	10:47 (E13)	16:56			17:58		20:03				21:06	20	06:10 (E7)	21:59		
7	08:48		10:09 (E13)	08:03			06:55		06:33				05:19		05:50 (E7)	04:30		
	15:56	39	10:48 (E13)	16:59			18:00		20:05				21:08	21	06:11 (E7)	22:00		
8	08:48		10:09 (E13)	08:01			06:53		06:30				05:17		05:50 (E7)	04:29		
	15:58	39	10:48 (E13)	17:01			18:03		20:08				21:10	20	06:10 (E7)	22:01		
9	08:47		10:10 (E13)	07:58			06:50		06:28				05:15		05:50 (E7)	04:28		
	15:59	39	10:49 (E13)	17:03			18:05		20:10				21:12	20	06:10 (E7)	22:02		
10	08:46		10:10 (E13)	07:56			06:47		06:25				05:13		05:50 (E7)	04:28		
	16:01	40	10:50 (E13)	17:05			18:07		20:12				21:14	20	06:10 (E7)	22:03		
11	08:45		10:10 (E13)	07:54			06:45		06:22				05:11		05:50 (E7)	04:27		
	16:03	40	10:50 (E13)	17:08			18:09		20:14				21:16	19	06:09 (E7)	22:04		
12	08:44		10:11 (E13)	07:52			06:42		06:20				05:08		05:50 (E7)	04:27		
	16:04	40	10:51 (E13)	17:10			18:11		20:16				21:18	19	06:09 (E7)	22:05		
13	08:43		10:10 (E13)	07:49			06:40		06:17				05:06		05:51 (E7)	04:26		
	16:06	41	10:51 (E13)	17:12			18:13		20:18				21:20	17	06:08 (E7)	22:06		
14	08:42		10:11 (E13)	07:47			06:37		06:14				05:04		05:52 (E7)	04:26		
	16:08	41	10:52 (E13)	17:14			18:15		20:20				21:22	16	06:08 (E7)	22:07		
15	08:41		10:11 (E13)	07:45			06:34		06:12				05:03		05:53 (E7)	04:26		
	16:10	41	10:52 (E13)	17:17			18:18		20:22				21:24	14	06:07 (E7)	22:07		
16	08:40		10:11 (E13)	07:43			06:32		06:09				05:01		05:54 (E7)	04:25		
	16:12	42	10:53 (E13)	17:19			18:20		20:24				21:25	11	06:05 (E7)	22:08		
17	08:39		10:12 (E13)	07:40			06:29		06:07				04:59		05:56 (E7)	04:25		
	16:14	41	10:53 (E13)	17:21			18:22		20:26				21:27	8	06:04 (E7)	22:08		
18	08:37		10:12 (E13)	07:38			06:26		06:04				04:57			04:25		
	16:16	41	10:53 (E13)	17:23			18:24		20:28				21:29			22:09		
19	08:36		10:12 (E13)	07:36			06:24		06:02				04:55			04:25		
	16:18	41	10:53 (E13)	17:26			18:26		20:30				21:31			22:09		
20	08:35		10:13 (E13)	07:33			06:21		05:59				04:53			04:25		
	16:20	41	10:54 (E13)	17:28			18:28		20:33				21:33			22:10		
21	08:33		10:13 (E13)	07:31			06:18		05:57				04:52			04:25		
	16:22	41	10:54 (E13)	17:30			18:30		20:35				21:35			22:10		
22	08:32		10:13 (E13)	07:28			06:16		05:54				04:50			04:25		
	16:24	41	10:54 (E13)	17:32			18:32		20:37				21:37			22:10		
23	08:30		10:14 (E13)	07:26			06:13		05:52				04:48			04:26		
	16:26	40	10:54 (E13)	17:34			18:34		20:39				21:38			22:10		
24	08:29		10:15 (E13)	07:23			06:10		05:49				04:47			04:26		
	16:28	40	10:55 (E13)	17:37			18:36		20:41				21:40			22:10		
25	08:27		10:16 (E13)	07:21			06:07		05:47				04:45			04:26		
	16:30	38	10:54 (E13)	17:39			18:38		20:43				21:42			22:10		
26	08:26		10:16 (E13)	07:18			06:05		05:44				04:44			04:27		
	16:32	38	10:54 (E13)	17:41			18:41		20:45				21:43			22:10		
27	08:24		10:17 (E13)	07:16			06:02		05:42				04:42			04:27		
	16:34	37	10:54 (E13)	17:43			18:43		20:47				21:45			22:10		
28	08:22		10:18 (E13)	07:13			05:59		05:40				04:41			04:28		
	16:36	35	10:53 (E13)	17:45			18:45		20:49				21:47			22:10		
29	08:20		10:19 (E13)				06:57		05:37				04:40			04:29		
	16:39	34	10:53 (E13)				19:47		20:51				21:48			22:10		
30	08:18		10:20 (E13)				06:54		05:35				04:38			04:29		
	16:41	32	10:52 (E13)				19:49		20:53		2	06:02 (E7)	21:50			22:09		
31	08:17		10:21 (E13)				06:51						04:37					
	16:43	30	10:51 (E13)				19:51						21:51					
Potential sun hours	235			266			366		426				508			529		
Total, worst case		1194			93				2				269					
Sun reduction		0.13			0.20				0.50				0.57					
Oper. time red.		0.96			0.96				0.96				0.96					
Wind dir. red.		0.61			0.61				0.67				0.67					
Total reduction		0.08			0.12				0.32				0.36					
Total, real		94			11				1				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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:00 (E7) 20:14	06:17 18:54	07:17 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:00 (E7) 20:11	06:19 18:51	07:19 16:34	08:26 15:44
3	04:32 22:08	05:19 21:24	06:00 (E7) 20:09	06:21 18:48	07:27 16:32	08:28 15:43
4	04:33 22:07	05:21 21:22	06:00 (E7) 20:06	06:23 18:46	07:29 16:29	08:29 15:42
5	04:34 22:07	05:23 21:20	06:00 (E7) 20:03	06:25 18:43	07:31 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:00 (E7) 20:01	06:27 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:00 (E7) 19:58	06:29 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:02 (E7) 19:55	06:31 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:04 (E7) 19:53	06:33 18:32	07:40 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:06 (E7) 19:50	06:35 18:30	07:42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:07 (E7) 19:47	06:37 18:27	07:44 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:09 (E7) 19:45	06:39 18:25	07:46 16:13	08:40 15:38
13	04:43 21:59	05:39 21:02	06:11 (E7) 19:42	06:41 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:12 (E7) 19:39	06:43 18:19	07:51 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:14 (E7) 19:37	06:45 18:17	07:53 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:16 (E7) 19:34	06:47 18:14	07:55 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:18 (E7) 19:31	06:49 18:12	07:57 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:20 (E7) 19:29	06:51 18:09	07:59 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:22 (E7) 19:26	06:53 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:24 (E7) 19:23	06:55 18:04	08:03 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:26 (E7) 19:20	06:57 18:02	08:05 15:58	08:48 15:39
22	04:57 21:46	05:57 20:40	06:28 (E7) 19:18	06:59 17:59	08:07 15:56	08:49 15:39
23	04:59 21:45	05:59 20:37	06:30 (E7) 19:15	07:01 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	06:32 (E7) 19:12	07:03 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	06:34 (E7) 19:10	07:05 17:52	08:13 15:52	08:50 15:41
26	05:04 21:39	06:05 20:30	06:36 (E7) 19:07	07:07 17:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	06:38 (E7) 19:04	07:09 17:47	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	06:40 (E7) 19:02	07:11 17:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	06:42 (E7) 18:59	07:13 17:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	06:44 (E7) 18:56	07:15 17:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17	06:46 (E7) 18:54	07:17 17:39	08:24 15:44	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case	75	202			873	1111
Sun reduction	0.49	0.50			0.08	0.07
Oper. time red.	0.96	0.96			0.96	0.96
Wind dir. red.	0.67	0.67			0.61	0.61
Total reduction	0.32	0.32			0.05	0.04
Total, real	24	65			42	46

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:51 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 & Lithuanian environment

Vilandes 3-6

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Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	15:34 (E14) 17:47	07:11 17:47	16:02 (E13) 17:47	06:49 19:53	05:32 20:55			04:36 21:52	05:10 (E6) 06:06 (E8)
2	08:50 15:49	08:13 16:47	15:35 (E14) 17:50	07:08 17:50	16:02 (E13) 17:50	06:46 19:55	05:30 20:57			04:35 21:54	05:09 (E6) 06:05 (E8)
3	08:50 15:51	08:11 16:50	15:37 (E14) 17:52	07:06 17:52	16:04 (E13) 17:52	06:43 19:57	05:28 20:59			04:34 21:55	05:08 (E6) 06:05 (E8)
4	08:50 15:52	08:09 16:52	15:39 (E14) 17:54	07:03 17:54	16:04 (E13) 17:54	06:41 19:59	05:26 21:01			04:33 21:56	05:07 (E6) 06:04 (E8)
5	08:49 15:53	08:07 16:54	15:47 (E14) 17:54	07:00 17:56	16:05 (E13) 17:56	06:38 20:01	05:23 21:04			04:32 21:58	05:07 (E6) 06:05 (E8)
6	08:49 15:55	08:05 16:56	15:47 (E14) 17:58	06:58 17:58	16:06 (E13) 17:58	06:35 20:03	05:21 21:06			04:31 21:59	05:06 (E6) 06:04 (E8)
7	08:48 15:56	08:03 16:59	15:47 (E14) 17:59	06:55 18:00	16:08 (E13) 18:00	06:33 20:05	05:19 21:08	05:50 (E8) 6	04:30 22:00	05:05 (E6) 06:04 (E8)	05:05 (E6) 06:04 (E8)
8	08:47 15:58	08:00 17:01	15:47 (E14) 18:03	06:53 18:03	16:09 (E13) 18:03	06:30 20:07	05:17 21:10	05:47 (E8) 12	04:29 22:01	05:05 (E6) 06:04 (E8)	05:05 (E6) 06:04 (E8)
9	08:47 15:59	07:58 17:03	15:47 (E14) 18:05	06:50 18:05	16:13 (E13) 18:05	06:27 20:10	05:15 21:12	05:45 (E8) 16	04:28 22:02	05:04 (E6) 06:03 (E8)	05:04 (E6) 06:03 (E8)
10	08:46 16:01	07:56 17:05	15:47 (E14) 18:07	06:47 18:07	16:17 (E13) 18:07	06:25 20:12	05:13 21:14	05:43 (E8) 19	04:28 22:03	05:04 (E6) 06:03 (E8)	05:04 (E6) 06:03 (E8)
11	08:45 16:03	07:54 17:08	15:47 (E14) 18:09	06:45 18:09	16:17 (E13) 18:09	06:22 20:14	05:10 21:16	05:42 (E8) 21	04:27 22:04	05:03 (E6) 06:02 (E8)	05:03 (E6) 06:02 (E8)
12	08:44 16:04	07:52 17:10	15:47 (E14) 18:11	06:42 18:11	16:17 (E13) 18:11	06:20 20:16	05:08 21:18	05:41 (E8) 23	04:27 22:05	05:03 (E6) 06:02 (E8)	05:03 (E6) 06:02 (E8)
13	08:43 16:06	07:49 17:12	15:47 (E14) 18:13	06:39 18:13	16:17 (E13) 18:13	06:17 20:18	05:06 21:20	05:40 (E8) 25	04:26 22:06	05:03 (E6) 06:02 (E8)	05:03 (E6) 06:02 (E8)
14	08:42 16:08	07:47 17:14	15:47 (E14) 18:15	06:37 18:15	16:13 (E13) 18:15	06:14 20:20	05:04 21:22	05:40 (E8) 26	04:26 22:07	05:02 (E6) 06:01 (E8)	05:02 (E6) 06:01 (E8)
15	08:41 16:10	07:45 17:17	15:47 (E14) 18:17	06:34 18:17	16:11 (E13) 18:17	06:12 20:22	05:02 21:23	05:39 (E8) 27	04:26 22:07	05:02 (E6) 06:01 (E8)	05:02 (E6) 06:01 (E8)
16	08:40 16:12	07:43 17:19	15:47 (E14) 18:20	06:31 18:20	16:09 (E13) 18:20	06:09 20:24	05:01 21:25	05:39 (E8) 27	04:25 22:08	05:02 (E6) 06:01 (E8)	05:02 (E6) 06:01 (E8)
17	08:39 16:14	07:40 17:21	15:47 (E14) 18:22	06:29 18:22	16:08 (E13) 18:22	06:07 20:26	04:59 21:27	05:39 (E8) 28	04:25 22:08	05:02 (E6) 06:01 (E8)	05:02 (E6) 06:01 (E8)
18	08:37 16:16	15:34 (E14) 17:23	15:47 (E14) 18:24	06:26 18:24	16:06 (E13) 18:24	06:04 20:28	04:57 21:29	05:38 (E8) 29	04:25 22:09	05:02 (E6) 06:01 (E8)	05:02 (E6) 06:01 (E8)
19	08:36 16:18	15:32 (E14) 17:25	15:47 (E14) 18:26	06:23 18:26	16:06 (E13) 18:26	06:02 20:30	04:55 21:31	05:38 (E8) 29	04:25 22:09	05:02 (E6) 06:01 (E8)	05:02 (E6) 06:01 (E8)
20	08:35 16:20	15:39 (E14) 17:28	15:47 (E14) 18:28	06:21 18:28	16:04 (E13) 18:28	05:59 20:32	04:53 21:33	05:38 (E8) 29	04:25 22:10	05:02 (E6) 06:00 (E8)	05:02 (E6) 06:00 (E8)
21	08:33 16:22	15:42 (E14) 17:30	15:47 (E14) 18:30	06:18 18:30	16:04 (E13) 18:30	05:57 20:35	04:52 21:35	05:38 (E8) 29	04:25 22:10	05:03 (E6) 06:01 (E8)	05:03 (E6) 06:01 (E8)
22	08:32 16:24	15:31 (E14) 17:32	15:47 (E14) 18:32	06:15 18:32	16:03 (E13) 18:32	05:54 20:37	04:50 21:36	05:38 (E8) 29	04:25 22:10	05:03 (E6) 06:01 (E8)	05:03 (E6) 06:01 (E8)
23	08:30 16:26	15:46 (E14) 17:34	15:47 (E14) 18:34	06:13 18:34	16:03 (E13) 18:34	05:52 20:39	04:48 21:38	05:38 (E8) 29	04:26 22:10	05:03 (E6) 06:01 (E8)	05:03 (E6) 06:01 (E8)
24	08:29 16:28	15:48 (E14) 17:36	15:47 (E14) 18:36	06:10 18:36	16:02 (E13) 18:36	05:49 20:41	04:47 21:40	05:38 (E8) 29	04:26 22:10	05:03 (E6) 06:01 (E8)	05:03 (E6) 06:01 (E8)
25	08:27 16:30	15:50 (E14) 17:39	15:47 (E14) 18:38	06:07 18:38	16:02 (E13) 18:38	05:47 20:43	04:45 21:42	06:07 (E8) 28	04:26 22:10	05:04 (E6) 06:03 (E8)	05:04 (E6) 06:03 (E8)
26	08:25 16:32	15:52 (E14) 17:41	15:47 (E14) 18:40	06:05 18:40	16:02 (E13) 18:40	05:44 20:45	04:44 21:43	05:40 (E8) 27	04:27 22:10	05:04 (E6) 06:03 (E8)	05:04 (E6) 06:03 (E8)
27	08:24 16:34	15:52 (E14) 17:43	15:47 (E14) 18:43	06:02 18:43	16:02 (E13) 18:43	05:42 20:47	04:42 21:45	05:39 (E8) 28	04:27 22:10	05:05 (E6) 06:04 (E8)	05:05 (E6) 06:04 (E8)
28	08:22 16:36	15:52 (E14) 17:45	15:47 (E14) 18:45	05:59 18:45	16:03 (E13) 18:45	05:39 20:49	04:41 21:46	05:40 (E8) 27	04:28 22:10	05:05 (E6) 06:04 (E8)	05:05 (E6) 06:04 (E8)
29	08:20 16:39	15:52 (E14) 17:47	15:47 (E14) 18:47	05:57 18:47	16:04 (E13) 18:47	05:37 20:51	04:39 21:48	05:40 (E8) 26	04:28 22:10	05:06 (E6) 06:05 (E8)	05:06 (E6) 06:05 (E8)
30	08:18 16:41	15:53 (E14) 17:49	15:47 (E14) 18:49	05:54 18:49	16:04 (E13) 18:49	05:35 20:53	04:38 21:50	05:41 (E8) 25	04:29 22:09	05:07 (E6) 06:06 (E8)	05:07 (E6) 06:06 (E8)
31	08:17 16:43	15:33 (E14) 15:51 (E14)	15:47 (E14) 19:51	06:51 19:51	16:05 (E13) 19:51	04:37 21:51	04:37 21:51	05:11 (E6) 28	04:29 22:09	05:07 (E6) 06:06 (E8)	05:07 (E6) 06:06 (E8)
Potential sun hours	235	266	366	426	508	529	878	0.56	0.96	0.67	0.36
Total, worst case	222	559	257	622	878	0.56	0.96	0.67	0.36	0.36	0.36
Sun reduction	0.13	0.20	0.41	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Oper. time red.	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Wind dir. red.	0.65	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Total reduction	0.08	0.13	0.27	0.37	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Total, real	19	73	68	228	315	315	315	315	315	315	315

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

July		August		September		October		November		December	
1	04:30	05:07 (E6)	05:16	05:51 (E8)	06:17	07:17		07:22		08:24	
	22:09	31 06:06 (E8)	21:28	23 06:14 (E8)	20:14	18:54		16:36		15:45	
2	04:31	05:08 (E6)	05:17	05:52 (E8)	06:19	07:19		07:25		08:26	
	22:08	31 06:07 (E8)	21:26	21 06:13 (E8)	20:11	18:51		16:34		15:44	
3	04:32	05:09 (E6)	05:19	05:54 (E8)	06:21	07:21		07:27		08:27	
	22:08	32 06:08 (E8)	21:24	18 06:12 (E8)	20:09	18:48		16:31		15:43	
4	04:33	05:10 (E6)	05:21	05:56 (E8)	06:23	07:23	16:52 (E13)	07:29		08:29	
	22:07	32 06:09 (E8)	21:22	15 06:11 (E8)	20:06	18:46	10 17:02 (E13)	16:29		15:42	
5	04:34	05:11 (E6)	05:23	05:57 (E8)	06:25	07:25		16:48 (E13)	07:31	08:31	
	22:07	32 06:10 (E8)	21:19	11 06:08 (E8)	20:03	18:43	18 17:06 (E13)	16:27		15:42	
6	04:35	05:12 (E6)	05:25		06:27	07:27		16:45 (E13)	07:33	08:32	
	22:06	32 06:10 (E8)	21:17		20:01	18:40	23 17:08 (E13)	16:25		15:41	
7	04:36	05:13 (E6)	05:27		06:29	07:29		16:42 (E13)	07:36	08:34	
	22:05	32 06:11 (E8)	21:15		19:58	18:38	27 17:09 (E13)	16:23	8 15:09 (E14)	15:40	
8	04:37	05:14 (E6)	05:29		06:31	07:31		16:40 (E13)	07:38	15:07 (E14)	08:35
	22:04	31 06:12 (E8)	21:13		19:55	18:35	30 17:10 (E13)	16:21	13 15:20 (E14)	15:40	
9	04:38	05:15 (E6)	05:31		06:33	07:34		16:39 (E13)	07:40	15:06 (E14)	08:36
	22:03	31 06:12 (E8)	21:11		19:53	18:32	32 17:11 (E13)	16:19	15 15:21 (E14)	15:39	
10	04:39	05:16 (E6)	05:33		06:35	07:36		16:38 (E13)	07:42	15:05 (E14)	08:38
	22:02	30 06:13 (E8)	21:08		19:50	18:30	34 17:12 (E13)	16:17	17 15:22 (E14)	15:39	
11	04:41	05:17 (E6)	05:35		06:37	07:38		16:37 (E13)	07:44	15:05 (E14)	08:39
	22:01	30 06:13 (E8)	21:06		19:47	18:27	35 17:12 (E13)	16:15	18 15:23 (E14)	15:38	
12	04:42	05:19 (E6)	05:37		06:39	07:40		16:36 (E13)	07:46	15:04 (E14)	08:40
	22:00	28 06:14 (E8)	21:04		19:45	18:25	37 17:13 (E13)	16:13	19 15:23 (E14)	15:38	
13	04:43	05:20 (E6)	05:39		06:41	07:42		16:35 (E13)	07:48	15:04 (E14)	08:41
	21:59	28 06:15 (E8)	21:01		19:42	18:22	38 17:13 (E13)	16:11	20 15:24 (E14)	15:38	
14	04:45	05:49 (E8)	05:41		06:43	07:44		16:34 (E13)	07:51	15:04 (E14)	08:43
	21:58	26 06:15 (E8)	20:59		19:39	18:19	38 17:12 (E13)	16:09	20 15:24 (E14)	15:38	
15	04:46	05:48 (E8)	05:43		06:45	07:46		16:35 (E13)	07:53	15:04 (E14)	08:44
	21:56	27 06:15 (E8)	20:57		19:37	18:17	38 17:13 (E13)	16:07	20 15:24 (E14)	15:38	
16	04:48	05:49 (E8)	05:45		06:47	07:48		16:34 (E13)	07:55	15:04 (E14)	08:45
	21:55	27 06:16 (E8)	20:54		19:34	18:14	39 17:13 (E13)	16:06	21 15:25 (E14)	15:38	
17	04:49	05:48 (E8)	05:47		06:49	07:50		16:34 (E13)	07:57	15:04 (E14)	08:45
	21:54	28 06:16 (E8)	20:52		19:31	18:12	38 17:12 (E13)	16:04	21 15:25 (E14)	15:38	
18	04:51	05:49 (E8)	05:49		06:51	07:52		16:34 (E13)	07:59	15:05 (E14)	08:46
	21:52	28 06:17 (E8)	20:49		19:28	18:09	38 17:12 (E13)	16:02	19 15:24 (E14)	15:38	3 13:45 (E15)
19	04:52	05:48 (E8)	05:51		06:53	07:54		16:33 (E13)	08:01	15:06 (E14)	08:47
	21:51	29 06:17 (E8)	20:47		19:26	18:07	38 17:11 (E13)	16:01	17 15:23 (E14)	15:38	5 13:49 (E15)
20	04:54	05:49 (E8)	05:53		06:55	07:57		16:34 (E13)	08:03	15:06 (E14)	08:48
	21:49	28 06:17 (E8)	20:45		19:23	18:04	37 17:11 (E13)	15:59	15 15:21 (E14)	15:39	6 13:50 (E15)
21	04:56	05:48 (E8)	05:55		06:57	07:59		16:35 (E13)	08:05	15:07 (E14)	08:48
	21:48	29 06:17 (E8)	20:42		19:20	18:02	35 17:10 (E13)	15:58	12 15:19 (E14)	15:39	6 13:51 (E15)
22	04:57	05:49 (E8)	05:57		06:59	08:01		16:35 (E13)	08:07	15:09 (E14)	08:49
	21:46	29 06:18 (E8)	20:40		19:18	17:59	34 17:09 (E13)	15:56	9 15:18 (E14)	15:39	6 13:51 (E15)
23	04:59	05:48 (E8)	05:59		07:01	08:03		16:36 (E13)	08:09	15:09 (E14)	08:49
	21:44	29 06:17 (E8)	20:37		19:15	17:57	33 17:09 (E13)	15:55	7 15:16 (E14)	15:40	6 13:51 (E15)
24	05:01	05:49 (E8)	06:01		07:03	08:05		16:37 (E13)	08:11	15:11 (E14)	08:50
	21:43	29 06:18 (E8)	20:35		19:12	17:55	30 17:07 (E13)	15:53	3 15:14 (E14)	15:40	5 13:52 (E15)
25	05:03	05:48 (E8)	06:03		07:05	07:07		15:38 (E13)	08:13	08:50	13:47 (E15)
	21:41	29 06:17 (E8)	20:32		19:10	16:52	28 16:06 (E13)	15:52		15:41	4 13:51 (E15)
26	05:04	05:49 (E8)	06:05		07:07	07:09		15:40 (E13)	08:15	08:50	13:49 (E15)
	21:39	28 06:17 (E8)	20:29		19:07	16:50	25 16:05 (E13)	15:51		15:42	2 13:51 (E15)
27	05:06	05:49 (E8)	06:07		07:09	07:12		15:41 (E13)	08:17	08:51	
	21:37	28 06:17 (E8)	20:27		19:04	16:47	21 16:02 (E13)	15:49		15:43	
28	05:08	05:49 (E8)	06:09		07:11	07:14		15:43 (E13)	08:19	08:51	
	21:36	27 06:16 (E8)	20:24		19:02	16:45	17 16:00 (E13)	15:48		15:44	
29	05:10	05:50 (E8)	06:11		07:13	07:16		15:47 (E13)	08:21	08:51	
	21:34	26 06:16 (E8)	20:22		18:59	16:43	9 15:56 (E13)	15:47		15:45	
30	05:12	05:50 (E8)	06:13		07:15	07:18		08:22		08:51	
	21:32	26 06:16 (E8)	20:19		18:56	16:40		15:46		15:46	
31	05:14	05:51 (E8)	06:15			07:20				08:51	
	21:30	25 06:16 (E8)	20:17			16:38				15:47	
Potential sun hours	529		469		385	324		247		216	
Total, worst case		898		88		782		274		43	
Sun reduction		0.49		0.50		0.26		0.08		0.07	
Oper. time red.		0.96		0.96		0.96		0.96		0.96	
Wind dir. red.		0.67		0.67		0.67		0.65		0.65	
Total reduction		0.32		0.32		0.17		0.05		0.04	
Total, real		285		28		131		14		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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 08:50	08:14 16:45 08:12	07:10 17:47 07:08	16:18 (E1) 16:47 (E1) 16:18 (E1)	06:48 19:53 06:46	05:32 20:55 05:30	04:35 21:52 04:34	04:29 22:09 04:30	05:15 21:28 05:17	06:17 20:14 06:19	07:17 18:53 07:19	07:22 16:35 07:24
2	15:49 08:50	16:47 08:10	17:49 07:05	16:46 (E1) 16:18 (E1)	19:55 06:43	20:57 05:27	21:54 04:33	22:08 04:31	21:25 05:19	20:11 06:21	18:50 07:21	16:33 07:27
3	15:50 08:49	16:49 08:08	17:51 07:03	16:45 (E1) 16:20 (E1)	19:57 06:40	20:59 05:25	21:55 04:32	22:08 04:32	21:23 05:21	20:08 06:23	18:48 07:23	16:31 07:29
4	15:51 08:49	16:51 08:06	17:54 07:00	16:44 (E1) 16:21 (E1)	19:59 06:38	21:01 05:23	21:56 04:31	22:07 04:33	21:21 05:23	20:06 06:25	18:45 07:25	16:29 07:31
5	15:53 08:48	16:54 08:04	17:56 06:57	16:42 (E1) 16:23 (E1)	20:01 06:35	21:03 05:21	21:58 04:30	22:06 04:34	21:19 05:25	20:03 06:27	18:43 07:27	16:27 07:33
6	15:54 08:48	16:56 08:02	17:58 06:55	16:39 (E1) 16:27 (E1)	20:03 06:32	21:05 05:18	21:59 04:29	22:06 04:35	21:17 05:27	20:00 06:29	18:40 07:29	16:25 17:01 (E1)
7	15:56 08:47	16:58 08:00	18:00 06:52	16:36 (E1) 06:30	20:05 05:16	21:07 05:16	22:00 04:29	22:05 04:36	21:15 05:29	19:58 06:31	18:37 07:31	16:23 17:14 (E1)
8	15:57 08:46	17:00 07:58	18:02 06:50	20:07 06:27	21:09 05:14	22:01 04:28	22:04 04:38	21:13 05:31	19:55 06:33	18:35 07:33	17:16 (E1) 16:55 (E1)	16:20 07:40
9	15:59 08:46	17:03 07:56	18:04 06:47	20:09 06:24	21:11 05:12	22:02 04:27	22:03 04:39	21:10 05:33	19:52 06:35	18:32 07:35	17:17 (E1) 16:53 (E1)	16:18 07:42
10	16:01 08:45	17:05 07:54	18:06 06:44	20:11 06:22	21:13 05:10	22:03 04:27	22:02 04:40	21:08 05:35	19:50 06:37	18:29 07:37	17:18 (E1) 16:52 (E1)	16:16 07:44
11	16:02 08:44	17:07 07:51	18:09 06:42	20:13 06:19	21:15 05:08	22:04 04:26	22:01 04:41	21:06 05:37	19:47 06:39	18:27 07:39	17:19 (E1) 16:52 (E1)	16:14 07:46
12	16:04 08:43	17:09 07:49	18:11 06:39	20:15 06:17	21:17 05:06	22:05 04:26	22:00 04:43	21:03 05:39	19:44 06:41	18:24 07:42	17:20 (E1) 16:50 (E1)	16:13 07:48
13	16:06 08:42	17:12 07:47	18:13 06:36	20:18 06:14	21:19 05:04	22:06 04:25	21:59 04:44	21:01 05:41	19:42 06:43	18:22 07:44	17:21 (E1) 16:50 (E1)	16:11 07:50
14	16:08 08:41	17:14 07:45	18:15 06:34	20:20 06:11	21:21 05:02	22:06 04:25	21:58 04:46	20:59 05:43	19:39 06:45	18:19 07:46	17:21 (E1) 16:49 (E1)	16:09 07:52
15	16:09 08:40	17:16 07:42	18:17 06:31	20:22 06:09	21:23 05:00	22:07 04:25	21:56 04:47	20:56 05:45	19:36 06:47	18:16 07:48	17:21 (E1) 16:48 (E1)	16:07 07:55
16	16:11 08:38	17:18 07:40	18:19 06:28	20:24 06:06	21:25 04:58	22:08 04:25	21:55 04:49	20:54 05:47	19:34 06:49	18:14 07:50	17:20 (E1) 16:49 (E1)	16:05 07:57
17	16:13 08:37	17:21 07:38	18:21 06:26	20:26 06:04	21:27 04:56	22:08 04:25	21:54 04:50	20:52 05:49	19:31 06:51	18:11 07:52	17:21 (E1) 16:48 (E1)	16:04 07:59
18	16:15 08:36	17:23 07:35	18:23 06:23	20:28 06:01	21:29 04:55	22:09 04:25	21:52 04:52	20:49 05:51	19:28 06:53	18:09 07:54	17:20 (E1) 16:48 (E1)	16:02 08:01
19	16:17 08:34	17:25 07:33	18:25 06:20	20:30 05:59	21:31 04:53	22:09 04:25	21:51 04:54	20:47 05:53	19:25 06:55	18:06 07:56	17:20 (E1) 16:48 (E1)	16:00 08:03
20	16:19 08:33	17:27 07:30	18:28 06:18	20:32 05:56	21:33 04:51	22:09 04:25	21:49 04:55	20:44 05:55	19:23 06:57	18:04 07:58	17:19 (E1) 16:49 (E1)	15:59 08:05
21	16:21 08:32	17:29 07:28	18:30 06:15	20:34 05:54	21:34 04:49	22:10 04:25	21:48 04:57	20:42 05:57	19:20 06:59	18:01 08:01	17:19 (E1) 16:49 (E1)	15:57 08:07
22	16:23 08:30	17:32 07:25	18:32 06:12	20:36 05:51	21:36 04:48	22:10 04:25	21:46 04:59	20:39 05:59	19:17 07:01	17:59 08:03	17:18 (E1) 16:50 (E1)	15:56 08:09
23	16:25 08:28	17:34 07:23	18:34 06:10	20:38 05:49	21:38 04:46	22:10 04:25	21:44 05:00	20:37 06:01	19:15 07:03	17:57 08:05	17:16 (E1) 16:52 (E1)	15:54 08:11
24	16:27 08:27	17:36 07:20	18:36 06:07	20:41 05:46	21:40 04:45	22:10 04:26	21:43 05:02	20:34 06:03	19:12 07:05	17:54 07:07	17:16 (E1) 15:53 (E1)	15:53 08:13
25	16:29 08:25	17:38 07:18	18:38 06:04	20:43 05:44	21:41 04:43	22:10 04:26	21:41 05:04	20:32 06:05	19:09 07:07	16:52 07:09	16:14 (E1) 15:54 (E1)	15:51 08:15
26	16:32 08:23	17:40 07:15	18:40 06:02	20:45 05:41	21:43 04:42	22:10 04:27	21:39 05:06	20:29 06:07	19:07 07:09	16:49 07:11	16:12 (E1) 15:57 (E1)	15:41 08:17
27	16:34 08:22	17:43 07:13	18:42 05:59	20:47 05:39	21:45 04:40	22:10 04:27	21:37 05:08	20:27 06:09	19:04 07:11	16:47 07:13	16:10 (E1) 15:49 (E1)	15:42 08:18
28	16:36 08:20	17:45 07:10	18:44 06:56	20:49 05:37	21:46 04:39	22:10 04:28	21:35 05:09	20:24 06:11	19:01 07:13	16:45 07:16	15:48 15:47	15:43 08:51
29	16:38 08:18	17:46 07:09	19:46 06:54	20:51 05:34	21:48 04:38	22:09 04:29	21:33 05:11	20:21 06:13	18:59 07:15	16:42 07:18	15:47 08:22	15:44 08:51
30	16:40 08:16	17:48 07:08	19:48 06:51	20:53 05:30	21:49 04:36	22:09 04:25	21:31 05:13	20:19 06:15	18:56 07:20	16:40 07:20	15:45 15:46	15:45 08:51
31	16:42 Potential sun hours	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction		392	154							547		
Oper. time red.		0.20	0.41							0.26		
Wind dir. red.		0.96	0.96							0.96		
Total reduction		0.67	0.67							0.67		
Total, real		0.13	0.27							0.17		
		51	41							92		

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)	Minutes with flicker	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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April			May			June		
1	08:51		14:05 (E15)	08:15			07:11		07:43 (E10)	06:49		05:32				04:36		05:29 (E8)
	15:48	12	14:17 (E15)	16:45			17:47	52	16:52 (E13)	19:53		20:55				21:52	33	06:02 (E8)
2	08:50		14:05 (E15)	08:13			07:08		07:42 (E10)	06:46		05:30				04:35		05:29 (E8)
	15:49	11	14:16 (E15)	16:47			17:50	52	16:51 (E13)	19:55		20:57				21:54	33	06:02 (E8)
3	08:50		14:07 (E15)	08:11			07:06		07:43 (E10)	06:43		05:28				04:34		05:29 (E8)
	15:51	9	14:16 (E15)	16:50			17:52	50	16:51 (E13)	19:57		20:59				21:55	33	06:02 (E8)
4	08:50		14:09 (E15)	08:09			07:03		07:44 (E10)	06:41		05:26				04:33		05:29 (E8)
	15:52	6	14:15 (E15)	16:52			17:54	47	16:50 (E13)	19:59		21:01				21:56	33	06:02 (E8)
5	08:49			08:07			07:00		07:45 (E10)	06:38		05:23				04:32		05:30 (E8)
	15:53			16:54			17:56	41	16:49 (E13)	20:01		21:04				21:58	33	06:03 (E8)
6	08:49			08:05			06:58		07:48 (E10)	06:35		05:21				04:31		05:30 (E8)
	15:55			16:56			17:58	35	16:49 (E13)	20:03		21:06				21:59	33	06:03 (E8)
7	08:48			08:03			06:55		16:22 (E13)	06:33		05:19				04:30		05:30 (E8)
	15:56			16:59			18:00	25	16:47 (E13)	20:05		21:08				22:00	32	06:02 (E8)
8	08:47			08:00			06:53		16:23 (E13)	06:30		05:17				04:29		05:31 (E8)
	15:58			17:01			18:03	22	16:45 (E13)	20:07		21:10				22:01	32	06:03 (E8)
9	08:47			07:58			06:50		16:26 (E13)	06:27		05:15				04:28		05:31 (E8)
	15:59			17:03			18:05	17	16:43 (E13)	20:10		21:12				22:02	32	06:03 (E8)
10	08:46			07:56			06:47		16:29 (E13)	06:25		05:13				04:28		05:31 (E8)
	16:01			17:05			18:07	10	16:39 (E13)	20:12		21:14				22:03	32	06:03 (E8)
11	08:45			07:54			06:45			06:22		05:10				04:27		05:03 (E6)
	16:03			17:08			18:09			20:14		21:16				22:04	34	06:03 (E8)
12	08:44			07:52			06:42			06:20		05:08				04:27		05:03 (E6)
	16:04			17:10			18:11			20:16		21:18				22:05	34	06:03 (E8)
13	08:43			07:49			06:39			06:17		05:06		05:42 (E8)		04:26		05:03 (E6)
	16:06			17:12			18:13			20:18		21:20		4	05:46 (E8)	22:06	36	06:04 (E8)
14	08:42			07:47			06:37			06:14		05:04			05:39 (E8)	04:26		05:02 (E6)
	16:08			17:14			18:15			20:20		21:22		12	05:51 (E8)	22:07	36	06:03 (E8)
15	08:41			07:45			06:34			06:12		05:02			05:36 (E8)	04:26		05:02 (E6)
	16:10			17:16			18:17			20:22		21:23		16	05:52 (E8)	22:07	37	06:03 (E8)
16	08:40			07:42			06:31			06:09		05:01			05:35 (E8)	04:25		05:02 (E6)
	16:12			17:19			18:20			20:24		21:25		19	05:54 (E8)	22:08	37	06:04 (E8)
17	08:39			07:40		16:31 (E13)	06:29			06:07		04:59			05:34 (E8)	04:25		05:02 (E6)
	16:14			17:21	12	16:43 (E13)	18:22			20:26		21:27		22	05:56 (E8)	22:08	38	06:04 (E8)
18	08:37			07:38		16:27 (E13)	06:26		06:51 (E9)	06:04		04:57			05:33 (E8)	04:25		05:02 (E6)
	16:16			17:23	18	16:45 (E13)	18:24	1	06:52 (E9)	20:28		21:29		23	05:56 (E8)	22:09	38	06:04 (E8)
19	08:36			07:35		16:26 (E13)	06:23		06:49 (E9)	06:02		04:55			05:31 (E8)	04:25		05:02 (E6)
	16:18			17:25	22	16:48 (E13)	18:26	7	06:56 (E9)	20:30		21:31		26	05:57 (E8)	22:09	38	06:04 (E8)
20	08:35			07:33		16:24 (E13)	06:21		06:46 (E9)	05:59		04:53			05:31 (E8)	04:25		05:02 (E6)
	16:20			17:28	25	16:49 (E13)	18:28	11	06:57 (E9)	20:32		21:33		27	05:58 (E8)	22:10	37	06:04 (E8)
21	08:33			07:31		16:23 (E13)	06:18		06:43 (E9)	05:57		04:52			05:30 (E8)	04:25		05:03 (E6)
	16:22			17:30	27	16:50 (E13)	18:30	15	06:58 (E9)	20:35		21:35		28	05:58 (E8)	22:10	37	06:05 (E8)
22	08:32			07:28		07:55 (E10)	06:15		06:41 (E9)	05:54		04:50			05:30 (E8)	04:25		05:03 (E6)
	16:24			17:32	32	16:51 (E13)	18:32	18	06:59 (E9)	20:37		21:36		29	05:59 (E8)	22:10	37	06:05 (E8)
23	08:30			07:26		07:53 (E10)	06:13		06:39 (E9)	05:52		04:48			05:29 (E8)	04:26		05:03 (E6)
	16:26			17:34	38	16:52 (E13)	18:34	20	06:59 (E9)	20:39		21:38		30	05:59 (E8)	22:10	37	06:05 (E8)
24	08:29			07:23		07:50 (E10)	06:10		06:38 (E9)	05:49		04:47			05:29 (E8)	04:26		05:03 (E6)
	16:28			17:36	43	16:52 (E13)	18:36	20	06:58 (E9)	20:41		21:40		31	06:00 (E8)	22:10	38	06:05 (E8)
25	08:27			07:21		07:47 (E10)	06:07		06:37 (E9)	05:47		04:45			05:30 (E8)	04:26		05:04 (E6)
	16:30			17:39	47	16:52 (E13)	18:38	21	06:58 (E9)	20:43		21:42		30	06:00 (E8)	22:10	38	06:06 (E8)
26	08:25			07:18		07:45 (E10)	06:05		06:38 (E9)	05:44		04:44			05:30 (E8)	04:27		05:04 (E6)
	16:32			17:41	51	16:53 (E13)	18:40	20	06:58 (E9)	20:45		21:43		31	06:01 (E8)	22:10	37	06:06 (E8)
27	08:24			07:16		07:43 (E10)	06:02		06:38 (E9)	05:42		04:42			05:29 (E8)	04:27		05:05 (E6)
	16:34			17:43	52	16:52 (E13)	18:43	19	06:57 (E9)	20:47		21:45		31	06:00 (E8)	22:10	37	06:06 (E8)
28	08:22			07:13		07:43 (E10)	05:59		06:38 (E9)	05:39		04:41			05:29 (E8)	04:28		05:05 (E6)
	16:36			17:45	54	16:53 (E13)	18:45	17	06:55 (E9)	20:49		21:46		32	06:01 (E8)	22:10	36	06:06 (E8)
29	08:20						06:57		07:39 (E9)	05:37		04:39			05:29 (E8)	04:28		05:06 (E6)
	16:39						19:47	15	07:54 (E9)	20:51		21:48		32	06:01 (E8)	22:10	35	06:07 (E8)
30	08:18						06:54		07:41 (E9)	05:35		04:38			05:29 (E8)	04:29		05:07 (E6)
	16:41						19:49	11	07:52 (E9)	20:53		21:50		33	06:02 (E8)	22:09	34	06:07 (E8)
31	08:17						06:51		07:45 (E9)			04:37			05:29 (E8)			
	16:43						19:51	1	07:46 (E9)			21:51		33	06:02 (E8)			
Potential sun hours	235			266			366			426		508				529		
Total, worst case		38			421			547				489					1057	
Sun reduction		0.13			0.20			0.41				0.57					0.56	
Oper. time red.		0.96			0.96			0.96				0.96					0.96	
Wind dir. red.		0.66			0.66			0.66				0.67					0.67	
Total reduction		0.08			0.13			0.26				0.37					0.36	
Total, real		3			54			142				179					381	

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July		August		September		October		November		December	
1	04:30	05:07 (E6)	05:16	06:17			07:17		07:22	08:24		
	22:09	34 06:07 (E8)	21:28	20:14			18:54		16:36	15:45		
2	04:31	05:08 (E6)	05:17	06:19			07:19		07:25	08:26		
	22:08	32 06:07 (E8)	21:26	20:11			18:51		16:34	15:44		
3	04:32	05:36 (E8)	05:19	06:21			07:21	17:10 (E13)	07:27	08:27		
	22:08	32 06:08 (E8)	21:24	20:09			18:48	3 17:13 (E13)	16:31	15:43		
4	04:33	05:36 (E8)	05:21	06:23			07:23	17:04 (E13)	07:29	08:29		
	22:07	32 06:08 (E8)	21:22	20:06			18:46	15 17:19 (E13)	16:29	15:42		
5	04:34	05:37 (E8)	05:23	06:25			07:25	17:01 (E13)	07:31	08:31		
	22:07	32 06:09 (E8)	21:19	20:03			18:43	20 17:21 (E13)	16:27	15:42		
6	04:35	05:37 (E8)	05:25	06:27			07:27	16:59 (E13)	07:33	08:32		
	22:06	32 06:09 (E8)	21:17	20:01			18:40	23 17:22 (E13)	16:25	15:41		
7	04:36	05:37 (E8)	05:27	06:29			07:29	16:57 (E13)	07:36	08:34		
	22:05	32 06:09 (E8)	21:15	19:58			18:38	26 17:23 (E13)	16:23	15:40		
8	04:37	05:37 (E8)	05:29	06:31			07:31	08:21 (E10)	07:38	08:35	13:57 (E15)	
	22:04	32 06:09 (E8)	21:13	19:55			18:35	40 17:24 (E13)	16:21	15:40	6 14:03 (E15)	
9	04:38	05:37 (E8)	05:31	06:33			07:34	08:19 (E10)	07:40	08:36	13:56 (E15)	
	22:03	32 06:09 (E8)	21:11	19:53			18:32	44 17:24 (E13)	16:19	15:39	8 14:04 (E15)	
10	04:39	05:37 (E8)	05:33	06:35			07:36	08:18 (E10)	07:42	08:38	13:56 (E15)	
	22:02	32 06:09 (E8)	21:08	19:50			18:30	48 17:25 (E13)	16:17	15:39	10 14:06 (E15)	
11	04:41	05:37 (E8)	05:35	06:37			07:38	08:17 (E10)	07:44	08:39	13:55 (E15)	
	22:01	32 06:09 (E8)	21:06	19:47			18:27	51 17:26 (E13)	16:15	15:38	12 14:07 (E15)	
12	04:42	05:38 (E8)	05:37	06:39			07:40	08:16 (E10)	07:46	08:40	13:55 (E15)	
	22:00	32 06:10 (E8)	21:04	19:45			18:25	52 17:25 (E13)	16:13	15:38	12 14:07 (E15)	
13	04:43	05:38 (E8)	05:39	06:41		07:32 (E9)	07:42	08:15 (E10)	07:48	08:41	13:55 (E15)	
	21:59	32 06:10 (E8)	21:01	19:42	11 07:43 (E9)	18:22	54 17:25 (E13)	16:11	15:38	14 14:09 (E15)		
14	04:45	05:38 (E8)	05:41	06:43		07:30 (E9)	07:44	08:15 (E10)	07:51	08:43	13:55 (E15)	
	21:58	32 06:10 (E8)	20:59	19:39	14 07:44 (E9)	18:19	54 17:25 (E13)	16:09	15:38	15 14:10 (E15)		
15	04:46	05:37 (E8)	05:43	06:45		07:28 (E9)	07:46	08:16 (E10)	07:53	08:44	13:55 (E15)	
	21:56	33 06:10 (E8)	20:57	19:37	17 07:45 (E9)	18:17	52 17:25 (E13)	16:07	15:38	15 14:10 (E15)		
16	04:48	05:38 (E8)	05:45	06:47		07:27 (E9)	07:48	08:18 (E10)	07:55	08:45	13:56 (E15)	
	21:55	32 06:10 (E8)	20:54	19:34	19 07:46 (E9)	18:14	50 17:25 (E13)	16:06	15:38	15 14:11 (E15)		
17	04:49	05:38 (E8)	05:47	06:49		07:26 (E9)	07:50	08:20 (E10)	07:57	08:45	13:56 (E15)	
	21:54	32 06:10 (E8)	20:52	19:31	20 07:46 (E9)	18:12	46 17:24 (E13)	16:04	15:38	16 14:12 (E15)		
18	04:51	05:39 (E8)	05:49	06:51		07:26 (E9)	07:52	08:22 (E10)	07:59	08:46	13:56 (E15)	
	21:52	31 06:10 (E8)	20:49	19:28	20 07:46 (E9)	18:09	42 17:23 (E13)	16:02	15:38	17 14:13 (E15)		
19	04:52	05:39 (E8)	05:51	06:53		07:25 (E9)	07:54	08:24 (E10)	08:01	08:47	13:56 (E15)	
	21:51	31 06:10 (E8)	20:47	19:26	21 07:46 (E9)	18:07	35 17:22 (E13)	16:01	15:38	16 14:12 (E15)		
20	04:54	05:40 (E8)	05:53	06:55		07:24 (E9)	07:57	16:53 (E13)	08:03	08:48	13:57 (E15)	
	21:49	30 06:10 (E8)	20:45	19:23	20 07:44 (E9)	18:04	29 17:22 (E13)	15:59	15:38	16 14:13 (E15)		
21	04:56	05:40 (E8)	05:55	06:57		07:25 (E9)	07:59	16:54 (E13)	08:05	08:48	13:58 (E15)	
	21:48	29 06:09 (E8)	20:42	19:20	19 07:44 (E9)	18:02	26 17:20 (E13)	15:58	15:39	16 14:14 (E15)		
22	04:57	05:41 (E8)	05:57	06:59		07:27 (E9)	08:01	16:54 (E13)	08:07	08:49	13:58 (E15)	
	21:46	28 06:09 (E8)	20:40	19:18	16 07:43 (E9)	17:59	24 17:18 (E13)	15:56	15:39	16 14:14 (E15)		
23	04:59	05:41 (E8)	05:59	07:01		07:29 (E9)	08:03	16:57 (E13)	08:09	08:49	13:58 (E15)	
	21:44	27 06:08 (E8)	20:37	19:15	12 07:41 (E9)	17:57	20 17:17 (E13)	15:55	15:40	16 14:14 (E15)		
24	05:01	05:42 (E8)	06:01	07:03		07:31 (E9)	08:05	16:58 (E13)	08:11	08:50	13:59 (E15)	
	21:43	26 06:08 (E8)	20:35	19:12	8 07:39 (E9)	17:55	17 17:15 (E13)	15:53	15:40	16 14:15 (E15)		
25	05:03	05:42 (E8)	06:03	07:05		07:33 (E9)	07:07	16:01 (E13)	08:13	08:50	13:59 (E15)	
	21:41	25 06:07 (E8)	20:32	19:10	3 07:36 (E9)	16:52	10 16:11 (E13)	15:52	15:41	17 14:16 (E15)		
26	05:04	05:43 (E8)	06:05	07:07				08:15	08:50	14:00 (E15)		
	21:39	23 06:06 (E8)	20:29	19:07				15:51	15:42	16 14:16 (E15)		
27	05:06	05:45 (E8)	06:07	07:09				08:17	08:51	14:00 (E15)		
	21:37	20 06:05 (E8)	20:27	19:04				15:49	15:43	16 14:16 (E15)		
28	05:08	05:45 (E8)	06:09	07:11				08:19	08:51	14:01 (E15)		
	21:36	18 06:03 (E8)	20:24	19:02				15:48	15:44	15 14:16 (E15)		
29	05:10	05:48 (E8)	06:11	07:13				08:21	08:51	14:02 (E15)		
	21:34	14 06:02 (E8)	20:22	18:59				15:47	15:44	15 14:17 (E15)		
30	05:12	05:50 (E8)	06:13	07:15				08:22	08:51	14:03 (E15)		
	21:32	10 06:00 (E8)	20:19	18:56				15:46	15:46	14 14:17 (E15)		
31	05:14		06:15					08:21	08:51	14:03 (E15)		
	21:30		20:16					15:47	15:47	13 14:16 (E15)		
Potential sun hours	529		469	385			324		247	216		
Total, worst case		859			200		781			342		
Sun reduction		0.49			0.43		0.26			0.07		
Oper. time red.		0.96			0.96		0.96			0.96		
Wind dir. red.		0.67			0.65		0.66			0.66		
Total reduction		0.32			0.27		0.16			0.04		
Total, real		274		53			128			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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	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 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 20:03	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 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 17:05	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 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 20:54	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	08:46 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	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	08:33 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 17:34	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 19:12	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
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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	08:19 15:48	08:51 15:44
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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		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	05:13 (E14) 22:09	04:30 22:09	05:20 (E14) 21:28	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	05:13 (E14) 22:08	04:31 22:08	05:19 (E14) 21:26	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	06:44 19:57	05:28 21:00	04:34 21:55	05:14 (E14) 22:08	04:32 22:08	05:20 (E14) 21:24	06:21 20:09	07:21 18:48	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 21:57	05:14 (E14) 22:07	04:33 22:07	05:20 (E14) 21:22	06:23 20:06	07:23 18:46	07:29 16:30
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	05:14 (E14) 22:07	04:34 22:07	05:20 (E14) 21:19	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	05:14 (E14) 22:06	04:35 22:06	05:20 (E14) 21:17	06:27 20:01	07:28 18:40	07:33 16:25
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	05:15 (E14) 22:05	04:36 22:05	05:20 (E14) 21:15	06:29 19:58	07:30 18:38	07:36 16:23
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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	05:17 (E14) 21:57	04:47 21:57	05:23 (E14) 20:57	06:45 19:37	07:46 18:17	07:53 16:08
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	05:17 (E14) 21:55	04:48 21:55	05:24 (E14) 20:54	06:47 19:34	07:48 18:15	07:55 16:06
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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	05:17 (E14) 21:52	04:51 21:52	05:27 (E14) 20:50	06:51 19:29	07:52 18:10	07:59 16:03
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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	05:18 (E14) 21:49	04:54 21:49	05:30 (E14) 20:45	06:55 19:23	07:57 18:05	08:03 15:59
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	05:18 (E14) 21:48	04:56 21:48	05:31 (E14) 20:42	06:57 19:21	07:59 18:02	08:05 15:58
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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	05:19 (E14) 21:43	05:01 21:43	05:36 (E14) 20:35	07:03 19:12	08:05 17:55	08:11 15:54
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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	05:19 (E14) 21:39	05:05 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51
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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	05:20 (E14) 21:36	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	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	05:19 (E14) 21:34	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47
30	08:18 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:20 (E14) 21:32	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:41	08:22 15:46
31	08:17 16:43		06:52 19:51	05:33 21:51	04:37 21:51	04:37 22:09	05:13 (E14) 21:30	05:14 21:30	06:15 20:17	07:20 16:38	08:20 16:41	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	440	469	384	324	216
Total, worst case					180	657		440				
Sun reduction					0.57	0.56		0.49				
Oper. time red.					0.96	0.96		0.96				
Wind dir. red.					0.67	0.67		0.67				
Total reduction					0.37	0.36		0.32				
Total, real					66	237		140				

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	05:56 (E14) 20:16 (E14)	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 20:58	04:35 21:54	04:31 22:08	05:18 21:26	05:55 (E14) 20:15 (E14)	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	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	05:55 (E14) 20:15 (E14)	06:21 20:09	07:21 18:48	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 21:57	04:33 22:07	05:22 21:22	05:55 (E14) 20:15 (E14)	06:23 20:06	07:23 18:46	07:29 16:30
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	05:57 (E14) 20:15 (E14)	06:25 20:04	07:26 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 (E14) 20:14 (E14)	06:27 20:01	07:28 18:40	07:33 16:25
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	06:00 (E14) 20:14 (E14)	06:29 19:58	07:30 18:38	07:36 16:23
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	05:29 21:13	06:02 (E14) 20:13 (E14)	06:31 19:56	07:32 18:35	07:38 16:21
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	06:04 (E14) 20:12 (E14)	06:33 19:53	07:34 18:33	07:40 16:19
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	06:06 (E14) 20:11 (E14)	06:35 19:50	07:36 18:30	07:42 16:17
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	06:08 (E14) 20:09 (E14)	06:37 19:48	07:38 18:27	07:44 16:15
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	06:09 (E14)	06:39 19:45	07:40 18:25	07:46 16:13
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 20:02	07:42 19:42	07:49 18:22	08:42 16:11
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 17:23	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	07:53 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	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 18:05	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	08:50 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	06:03 (E14) 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	06:01 (E14) 20:32	07:05 19:10	08:07 16:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	05:59 (E14) 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	06:12 (E14) 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	05:58 (E14) 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	06:57 18:45	05:37 20:49	04:40 21:48	04:29 22:10	05:10 21:34	05:56 (E14) 20:22	07:13 19:03	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:09 17:49	06:54 18:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	05:56 (E14) 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:07 17:51	06:52 18:51	05:33 20:51	04:37 21:51	05:14 21:30	05:14 21:30	05:56 (E14) 20:17	07:15 18:56	07:20 16:38	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					259		110	153				
Sun reduction					0.57		0.49	0.50				
Oper. time red.					0.96		0.96	0.96				
Wind dir. red.					0.67		0.67	0.67				
Total reduction					0.37		0.32	0.32				
Total, real					95		35	49				

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:39 (E15) 07:48 (E15)	05:33 20:55
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	36 20:57	06:36 (E14) 07:12 (E14)
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	35 20:58	06:37 (E14) 07:12 (E14)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	34 21:00	06:38 (E14) 07:11 (E14)
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	32 21:02	06:39 (E14) 07:10 (E14)
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	30 21:04	06:40 (E14) 07:09 (E14)
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	28 21:06	06:41 (E14) 07:08 (E14)
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	26 21:08	06:42 (E14) 07:07 (E14)
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	23 21:10	06:44 (E14) 07:05 (E14)
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	19 21:12	06:46 (E14) 07:03 (E14)
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	15 21:14	06:49 (E14) 07:01 (E14)
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	8 21:16	06:57 (E14) 07:04 (E14)
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	05:09 21:18	04:27 07:00 (E14)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	22:05 21:20	04:26 07:08 (E14)
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	21:22 21:24	04:26 07:11 (E14)
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	20:22 21:25	04:26 07:12 (E14)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 07:13 (E14)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	31 21:29	04:25 07:14 (E14)
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	34 21:31	04:25 07:15 (E14)
20	08:35 16:20	07:33 17:28	06:21 18:28	06:49 (E15) 06:52 (E15)	06:39 (E14) 07:15 (E14)	04:55 21:33
21	08:33 16:22	07:31 17:30	06:18 18:30	05:59 20:35	06:39 (E14) 07:15 (E14)	04:54 21:35
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:37 (E14) 07:16 (E14)	04:50 21:36
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:36 (E14) 07:15 (E14)	04:48 21:38
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:35 (E14) 07:15 (E14)	04:47 21:40
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	06:36 (E14) 07:15 (E14)	04:45 21:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	06:35 (E14) 07:15 (E14)	04:44 21:43
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:36 (E14) 07:14 (E14)	04:42 21:45
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	06:36 (E14) 07:14 (E14)	04:41 21:47
29	08:20 16:39		06:57 19:47	05:37 20:51	06:36 (E14) 07:14 (E14)	04:40 21:48
30	08:18 16:41		06:54 19:49	05:35 20:53	06:37 (E14) 07:14 (E14)	04:38 21:50
31	08:17 16:43		06:51 19:51	05:38 20:55	07:14 (E14) 07:51 (E15)	04:37 21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case			217	637	465	625
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.96	0.96	0.96	0.96
Wind dir. red.			0.65	0.66	0.66	0.67
Total reduction			0.26	0.32	0.36	0.36
Total, real			56	201	168	225

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July			August			September			October	November	December
1	04:30	05:20 (E13)	05:16				06:17			07:17	07:23	08:24
	22:09	21	05:41 (E13)	21:28			20:14			18:54	16:36	15:45
2	04:31	05:19 (E13)	05:18			06:58 (E14)	06:19			07:19	07:25	08:26
	22:08	21	05:40 (E13)	21:26	11	07:09 (E14)	20:11			18:51	16:34	15:44
3	04:32	05:19 (E13)	05:20			06:55 (E14)	06:21			07:21	07:27	08:28
	22:08	22	05:41 (E13)	21:24	17	07:12 (E14)	20:09			18:48	16:32	15:43
4	04:33	05:20 (E13)	05:22			06:53 (E14)	06:23			07:23	07:29	08:29
	22:07	21	05:41 (E13)	21:22	21	07:14 (E14)	20:06			18:46	16:30	15:43
5	04:34	05:20 (E13)	05:24			06:52 (E14)	06:25			07:25	07:31	08:31
	22:07	22	05:42 (E13)	21:19	24	07:16 (E14)	20:03			18:43	16:27	15:42
6	04:35	05:20 (E13)	05:25			06:50 (E14)	06:27			07:28	07:33	08:32
	22:06	22	05:42 (E13)	21:17	26	07:16 (E14)	20:01			18:40	16:25	15:41
7	04:36	05:20 (E13)	05:27			06:49 (E14)	06:29			07:30	07:36	08:34
	22:05	22	05:42 (E13)	21:15	29	07:18 (E14)	19:58			18:38	16:23	15:40
8	04:37	05:20 (E13)	05:29			06:48 (E14)	06:31			07:32	07:38	08:35
	22:04	22	05:42 (E13)	21:13	31	07:19 (E14)	19:56			18:35	16:21	15:40
9	04:38	05:20 (E13)	05:31			06:47 (E14)	06:33			07:34	07:40	08:37
	22:03	23	05:43 (E13)	21:11	33	07:20 (E14)	19:53			18:33	16:19	15:39
10	04:40	05:20 (E13)	05:33			06:46 (E14)	06:35			07:36	07:42	08:38
	22:02	23	05:43 (E13)	21:08	35	07:21 (E14)	19:50			18:30	16:17	15:39
11	04:41	05:21 (E13)	05:35			06:46 (E14)	06:37		07:32 (E15)	07:38	07:44	08:39
	22:01	23	05:44 (E13)	21:06	35	07:21 (E14)	19:47	8	07:40 (E15)	18:27	16:15	15:39
12	04:42	05:21 (E13)	05:37			06:44 (E14)	06:39		07:29 (E15)	07:40	07:46	08:40
	22:00	22	05:43 (E13)	21:04	37	07:21 (E14)	19:45	13	07:42 (E15)	18:25	16:13	15:38
13	04:44	05:21 (E13)	05:39			06:44 (E14)	06:41		07:27 (E15)	07:42	07:49	08:42
	21:59	22	05:43 (E13)	21:02	37	07:21 (E14)	19:42	17	07:44 (E15)	18:22	16:11	15:38
14	04:45	05:21 (E13)	05:41			06:44 (E14)	06:43		07:26 (E15)	07:44	07:51	08:43
	21:58	22	05:43 (E13)	20:59	38	07:22 (E14)	19:39	19	07:45 (E15)	18:20	16:10	15:38
15	04:46	05:23 (E13)	05:43			06:43 (E14)	06:45		07:25 (E15)	07:46	07:53	08:44
	21:57	21	05:44 (E13)	20:57	39	07:22 (E14)	19:37	20	07:45 (E15)	18:17	16:08	15:38
16	04:48	05:24 (E13)	05:45			06:43 (E14)	06:47		07:24 (E15)	07:48	07:55	08:45
	21:55	19	05:43 (E13)	20:54	39	07:22 (E14)	19:34	21	07:45 (E15)	18:15	16:06	15:38
17	04:49	05:25 (E13)	05:47			06:43 (E14)	06:49		07:23 (E15)	07:50	07:57	08:46
	21:54	18	05:43 (E13)	20:52	39	07:22 (E14)	19:31	22	07:45 (E15)	18:12	16:04	15:38
18	04:51	05:27 (E13)	05:49			06:43 (E14)	06:51		07:23 (E15)	07:52	07:59	08:46
	21:52	16	05:43 (E13)	20:50	39	07:22 (E14)	19:29	22	07:45 (E15)	18:09	16:03	15:38
19	04:53	05:28 (E13)	05:51			06:42 (E14)	06:53		07:23 (E15)	07:55	08:01	08:47
	21:51	14	05:42 (E13)	20:47	39	07:21 (E14)	19:26	22	07:45 (E15)	18:07	16:01	15:38
20	04:54	05:30 (E13)	05:53			06:42 (E14)	06:55		07:24 (E15)	07:57	08:03	08:48
	21:49	12	05:42 (E13)	20:45	39	07:21 (E14)	19:23	20	07:44 (E15)	18:04	15:59	15:39
21	04:56	05:31 (E13)	05:55			06:42 (E14)	06:57		07:26 (E15)	07:59	08:05	08:48
	21:48	10	05:41 (E13)	20:42	38	07:20 (E14)	19:21	17	07:43 (E15)	18:02	15:58	15:39
22	04:58	05:33 (E13)	05:57			06:42 (E14)	06:59		07:28 (E15)	08:01	08:07	08:49
	21:46	8	05:41 (E13)	20:40	38	07:20 (E14)	19:18	14	07:42 (E15)	18:00	15:56	15:40
23	04:59	05:34 (E13)	05:59			06:43 (E14)	07:01		07:30 (E15)	08:03	08:09	08:49
	21:45	5	05:39 (E13)	20:37	36	07:19 (E14)	19:15	10	07:40 (E15)	17:57	15:55	15:40
24	05:01	05:36 (E13)	06:01			06:43 (E14)	07:03		07:32 (E15)	08:05	08:11	08:50
	21:43	2	05:38 (E13)	20:35	35	07:18 (E14)	19:12	5	07:37 (E15)	17:55	15:53	15:41
25	05:03		06:03			06:44 (E14)	07:05			07:07	08:13	08:50
	21:41		20:32	33		07:17 (E14)	19:10			16:52	15:52	15:41
26	05:05		06:05			06:45 (E14)	07:07			07:10	08:15	08:51
	21:39		20:30	31		07:16 (E14)	19:07			16:50	15:51	15:42
27	05:06		06:07			06:46 (E14)	07:09			07:12	08:17	08:51
	21:38		20:27	29		07:15 (E14)	19:04			16:48	15:50	15:43
28	05:08		06:09			06:46 (E14)	07:11			07:14	08:19	08:51
	21:36		20:24	26		07:12 (E14)	19:02			16:45	15:48	15:44
29	05:10		06:11			06:47 (E14)	07:13			07:16	08:21	08:51
	21:34		20:22	23		07:10 (E14)	18:59			16:43	15:47	15:45
30	05:12		06:13			06:50 (E14)	07:15			07:18	08:22	08:51
	21:32		20:19	18		07:08 (E14)	18:56			16:41	15:46	15:46
31	05:14		06:15			06:53 (E14)				07:20		08:51
	21:30		20:17	11		07:04 (E14)				16:38		15:47
Potential sun hours	529		469			385				324	247	216
Total, worst case		433		926		230						
Sun reduction		0.49		0.50		0.43						
Oper. time red.		0.96		0.96		0.96						
Wind dir. red.		0.67		0.66		0.65						
Total reduction		0.32		0.31		0.27						
Total, real		138		291		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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	09:03 (E13) 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	09:04 (E13) 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	09:05 (E13) 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	09:06 (E13) 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	09:08 (E13) 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	09:09 (E13) 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	09:11 (E13) 18:01	06:55 20:06	06:33 21:08	04:30 22:00	04:36 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 17:01	09:20 (E13) 18:01	06:53 20:06	06:30 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 20:03	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	09:21 (E13) 18:05	06:50 20:10	06:28 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 20:03	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	09:22 (E13) 18:07	06:47 20:12	06:25 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 20:03	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	09:23 (E13) 18:09	06:45 20:14	06:22 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 20:03	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	09:24 (E13) 18:11	06:42 20:16	06:20 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 20:03	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	09:25 (E13) 18:13	06:40 20:18	06:17 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 20:03	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	09:26 (E13) 18:15	06:37 20:20	06:15 21:22	04:25 22:07	04:45 21:58	05:41 20:59	06:43 20:03	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	09:27 (E13) 18:18	06:34 20:22	06:12 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 20:03	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	09:28 (E13) 18:20	06:32 20:24	06:09 21:26	04:25 22:08	04:48 21:55	05:45 20:54	06:47 20:03	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	09:29 (E13) 18:22	06:29 20:26	06:07 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 20:03	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	09:30 (E13) 18:24	06:26 20:28	06:04 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 20:03	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:36 17:26	09:31 (E13) 18:26	06:24 20:31	06:02 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 20:03	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	09:32 (E13) 18:28	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 20:03	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	09:33 (E13) 18:30	06:18 20:35	05:57 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 20:03	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	09:34 (E13) 18:32	06:16 20:37	05:54 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 20:03	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	09:35 (E13) 18:34	06:13 20:39	05:52 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 20:03	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	09:36 (E13) 18:36	06:10 20:41	05:49 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 20:03	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	09:37 (E13) 18:38	06:08 20:43	05:47 21:42	04:26 22:10	05:03 21:41	06:03 20:32	07:05 20:03	08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	09:38 (E13) 18:41	06:05 20:45	05:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 20:03	08:09 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	09:39 (E13) 18:43	06:02 20:47	05:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 20:03	08:11 17:47	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	09:40 (E13) 18:45	05:59 20:49	05:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 20:03	08:13 17:44	08:19 15:48	08:51 15:44
29	08:20 16:39	07:03 17:48	09:41 (E13) 18:47	05:57 20:51	05:37 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 20:03	08:15 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:03 17:49	09:42 (E13) 18:49	05:54 20:53	05:35 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 20:03	08:17 17:42	08:22 15:46	08:51 15:46
31	08:17 16:43	07:04 17:51	09:43 (E13) 18:51	05:51 20:51	05:37 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:17 20:03	08:19 17:42	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	257	123									381	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.96	0.96									0.96	
Wind dir. red.	0.59	0.59									0.59	
Total reduction	0.07	0.11									0.05	
Total, real	19	14									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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 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	05:50 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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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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
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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
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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	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	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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March	April	May	June
1	08:51	13:46 (E13)	08:15	14:04 (E13)	07:11	06:49			05:32	04:36
	15:48	49	14:35 (E14)	16:45	23	14:27 (E13)	17:47	19:53	20:55	21:53
2	08:50	13:47 (E13)	08:13	14:06 (E13)	07:08	06:46			05:30	04:35
	15:49	49	14:36 (E14)	16:47	19	14:25 (E13)	17:50	19:55	20:57	21:54
3	08:50	13:47 (E13)	08:11	14:10 (E13)	07:06	06:43			05:28	04:34
	15:51	49	14:36 (E14)	16:50	13	14:23 (E13)	17:52	19:57	20:59	21:55
4	08:50	13:47 (E13)	08:09		07:03	06:41			05:26	04:33
	15:52	48	14:35 (E14)	16:52		17:54	19:59		21:02	21:57
5	08:49	13:48 (E13)	08:07		07:00	06:38			05:23	04:32
	15:53	48	14:36 (E14)	16:54		17:56	20:01		21:04	21:58
6	08:49	13:48 (E13)	08:05		06:58	06:35			05:21	04:31
	15:55	48	14:36 (E14)	16:56		17:58	20:03		21:06	21:59
7	08:48	13:48 (E13)	08:03		06:55	06:33			05:19	04:30
	15:56	47	14:35 (E14)	16:59		18:00	20:05		21:08	22:00
8	08:47	13:48 (E13)	08:00		06:53	06:30			05:17	04:29
	15:58	46	14:34 (E14)	17:01		18:03	20:07	7	07:02 (E8)	21:10
9	08:47	13:48 (E13)	07:58		06:50	06:27			06:53 (E8)	05:15
	15:59	45	14:33 (E14)	17:03		18:05	20:10	12	07:05 (E8)	21:12
10	08:46	13:49 (E13)	07:56		06:47	06:25			06:50 (E8)	05:13
	16:01	41	14:30 (E13)	17:05		18:07	20:12	15	07:05 (E8)	21:14
11	08:45	13:49 (E13)	07:54		06:45	06:22			06:48 (E8)	05:10
	16:03	41	14:30 (E13)	17:08		18:09	20:14	18	07:06 (E8)	21:16
12	08:44	13:49 (E13)	07:52		06:42	06:20			06:45 (E8)	05:08
	16:04	41	14:30 (E13)	17:10		18:11	20:16	21	07:06 (E8)	21:18
13	08:43	13:49 (E13)	07:49		06:39	06:17			06:45 (E8)	05:06
	16:06	42	14:31 (E13)	17:12		18:13	20:18	22	07:07 (E8)	21:20
14	08:42	13:50 (E13)	07:47		06:37	06:14			06:44 (E8)	05:04
	16:08	42	14:32 (E13)	17:14		18:15	20:20	23	07:07 (E8)	21:22
15	08:41	13:50 (E13)	07:45		06:34	06:12			06:44 (E8)	05:02
	16:10	41	14:31 (E13)	17:17		18:17	20:22	23	07:07 (E8)	21:24
16	08:40	13:50 (E13)	07:43		06:31	06:09			06:43 (E8)	05:01
	16:12	42	14:32 (E13)	17:19		18:20	20:24	23	07:06 (E8)	21:25
17	08:39	13:50 (E13)	07:40		06:29	06:07			06:44 (E8)	04:59
	16:14	42	14:32 (E13)	17:21		18:22	20:26	22	07:06 (E8)	21:27
18	08:37	13:51 (E13)	07:38		06:26	06:04			06:44 (E8)	04:57
	16:16	42	14:33 (E13)	17:23		18:24	20:28	20	07:04 (E8)	21:29
19	08:36	13:51 (E13)	07:35		06:23	06:02			06:45 (E8)	04:55
	16:18	42	14:33 (E13)	17:25		18:26	20:30	19	07:04 (E8)	21:31
20	08:35	13:53 (E13)	07:33		06:21	05:59			06:45 (E8)	04:53
	16:20	40	14:33 (E13)	17:28		18:28	20:32	17	07:02 (E8)	21:33
21	08:33	13:53 (E13)	07:31		06:18	05:57			06:47 (E8)	04:52
	16:22	40	14:33 (E13)	17:30		18:30	20:35	13	07:00 (E8)	21:35
22	08:32	13:53 (E13)	07:28		06:15	05:54			06:49 (E8)	04:50
	16:24	40	14:33 (E13)	17:32		18:32	20:37	9	06:58 (E8)	21:36
23	08:30	13:54 (E13)	07:26		06:13	05:52				04:48
	16:26	39	14:33 (E13)	17:34		18:34	20:39			21:38
24	08:29	13:54 (E13)	07:23		06:10	05:49				04:47
	16:28	39	14:33 (E13)	17:37		18:36	20:41			21:40
25	08:27	13:56 (E13)	07:21		06:07	05:47				04:45
	16:30	37	14:33 (E13)	17:39		18:38	20:43			21:42
26	08:25	13:57 (E13)	07:18		06:05	05:44				04:44
	16:32	36	14:33 (E13)	17:41		18:40	20:45			21:43
27	08:24	13:57 (E13)	07:16		06:02	05:42				04:42
	16:34	35	14:32 (E13)	17:43		18:43	20:47			21:45
28	08:22	13:59 (E13)	07:13		05:59	05:40				04:41
	16:36	33	14:32 (E13)	17:45		18:45	20:49			21:47
29	08:20	14:00 (E13)			06:57	05:37				04:39
	16:39	31	14:31 (E13)			19:47	20:51			21:48
30	08:18	14:01 (E13)			06:54	05:35				04:38
	16:41	29	14:30 (E13)			19:49	20:53			21:50
31	08:17	14:02 (E13)			06:51					04:37
	16:43	26	14:28 (E13)			19:51				21:51
Potential sun hours	235		266		366	426		508		529
Total, worst case	1270		55			264				
Sun reduction	0.13		0.20			0.50				
Oper. time red.	0.96		0.96			0.96				
Wind dir. red.	0.66		0.66			0.66				
Total reduction	0.08		0.13			0.32				
Total, real	107		7			83				

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E8)	07:17	07:23
	22:09	21:28	20:14	18:05 (E8)	18:54	16:36
2	04:31	05:17	06:19	06:49 (E8)	07:19	07:25
	22:08	21:26	20:11	18:04 (E8)	18:51	16:34
3	04:32	05:19	06:21	06:51 (E8)	07:21	07:27
	22:08	21:24	20:09	18:03 (E8)	18:48	16:31
4	04:33	05:21	06:23	06:53 (E8)	07:23	07:29
	22:07	21:22	20:06	18:00 (E8)	18:46	16:29
5	04:34	05:23	06:25	06:54 (E8)	07:25	07:31
	22:07	21:19	20:03	18:03 (E8)	18:43	16:27
6	04:35	05:25	06:27	06:55 (E8)	07:27	07:33
	22:06	21:17	20:01	18:40	16:25	15:41
7	04:36	05:27	06:29	07:29	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	19:55	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	18:32	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	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	21:01	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	18:19	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	08:45
	21:54	20:52	19:31	18:12	16:04	15:38
18	04:51	05:49	06:51	07:52	07:59	08:46
	21:52	20:49	19:29	18:09	16:02	15:38
19	04:52	05:51	06:53	07:54	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
	21:49	20:45	19:23	18:04	15:59	15:39
21	04:56	05:55	06:57	07:59	08:05	08:48
	21:48	20:42	19:20	18:02	15:58	15:39
22	04:57	05:57	06:59	08:01	08:07	08:49
	21:46	20:40	19:18	17:59	15:56	15:39
23	04:59	05:59	07:01	08:03	08:09	08:49
	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	15:40
25	05:03	06:03	07:05	08:07	08:13	08:50
	21:41	20:32	19:10	16:52	15:52	15:41
26	05:04	06:05	07:07	08:09	08:15	08:51
	21:39	20:29	19:07	16:50	15:51	15:42
27	05:06	06:07	07:09	08:12	08:17	08:51
	21:37	20:27	19:04	16:47	15:49	15:43
28	05:08	06:09	07:11	08:14	08:19	08:51
	21:36	20:24	19:02	16:45	15:48	15:44
29	05:10	06:11	07:13	08:16	08:21	08:51
	21:34	20:22	18:59	16:43	15:47	15:45
30	05:12	06:13	07:15	08:18	08:22	08:51
	21:32	20:19	18:56	16:40	15:46	15:46
31	05:14	06:15	07:17	08:20		08:51
	21:30	20:17	18:53	16:38		15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		215	53		814	1507
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.96	0.96		0.96	0.96
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.31	0.27		0.05	0.04
Total, real		68	14		43	67

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	04:26 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	04:53 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	08:33 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 15:39
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	08:09 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 22:10	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 16:34	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 20:24	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		06:52 19:51		04:37 21:51		05:14 21:30			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	05:22 21:22	06:23 20:06	07:23 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 21:17	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 17:05	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 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	04:26 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	08:46 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	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	08:33 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 17:34	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 22:10	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 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 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 22:10	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 16:34	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 20:24	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 22:09	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			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												
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Table layout: For each day in each month the following matrix apply

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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Vuš karnieki - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (219)

Assumptions for shadow calculations

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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	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	08:01 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 20:38	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	08:28 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 16:32	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	08:23 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	05:08 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	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:01 (E13) 04:36
	15:48	16:45	17:48	19:53	20:55	22 06:23 (E13) 21:53
2	08:50	08:13	07:08	07:34 (E15) 06:46	05:30	06:01 (E13) 04:35
	15:50	16:48	17:50	5 07:39 (E15) 19:55	20:58	22 06:23 (E13) 21:54
3	08:50	08:11	07:06	07:32 (E15) 06:43	05:28	06:01 (E13) 04:34
	15:51	16:50	17:52	8 07:40 (E15) 19:57	21:00	22 06:23 (E13) 21:55
4	08:50	08:09	07:03	07:29 (E15) 06:41	05:26	06:01 (E13) 04:33
	15:52	16:52	17:54	12 07:41 (E15) 19:59	21:02	22 06:23 (E13) 21:57
5	08:49	08:07	07:01	07:26 (E15) 06:38	05:24	06:01 (E13) 04:32
	15:54	16:54	17:56	15 07:41 (E15) 20:01	21:04	21 06:22 (E13) 21:58
6	08:49	08:05	06:58	07:24 (E15) 06:36	05:21	06:02 (E13) 04:31
	15:55	16:57	17:58	18 07:42 (E15) 20:03	21:06	20 06:22 (E13) 21:59
7	08:48	08:03	06:55	07:21 (E15) 06:33	05:19	06:03 (E13) 04:30
	15:56	16:59	18:01	20 07:41 (E15) 20:06	21:08	18 06:21 (E13) 22:00
8	08:48	08:01	06:53	07:21 (E15) 06:30	05:17	06:03 (E13) 04:29
	15:58	17:01	18:03	19 07:40 (E15) 20:08	21:10	17 06:20 (E13) 22:01
9	08:47	07:58	06:50	07:17 (E14) 06:28	05:15	06:04 (E13) 04:29
	16:00	17:03	18:05	23 07:40 (E15) 20:10	21:12	14 06:18 (E13) 22:02
10	08:46	07:56	06:48	07:13 (E14) 06:25	05:13	06:06 (E13) 04:28
	16:01	17:05	18:07	26 07:39 (E15) 20:12	21:14	11 06:17 (E13) 22:03
11	08:45	07:54	06:45	07:10 (E14) 06:22	05:11	06:09 (E13) 04:27
	16:03	17:08	18:09	27 07:37 (E15) 20:14	21:16	4 06:13 (E13) 22:04
12	08:44	07:52	06:42	07:09 (E14) 06:20	05:09	04:27
	16:05	17:10	18:11	27 07:36 (E15) 20:16	21:18	22:05
13	08:43	07:50	06:40	07:07 (E14) 06:17	05:07	04:27
	16:06	17:12	18:13	28 07:35 (E14) 20:18	21:20	22:06
14	08:42	07:47	06:37	07:06 (E14) 06:15	05:05	04:26
	16:08	17:14	18:15	30 07:36 (E14) 20:20	21:22	22:07
15	08:41	07:45	06:34	07:05 (E14) 06:12	05:03	04:26
	16:10	17:17	18:18	32 07:37 (E14) 20:22	21:24	22:07
16	08:40	07:43	06:32	07:04 (E14) 06:09	05:01	04:26
	16:12	17:19	18:20	33 07:37 (E14) 20:24	21:25	22:08
17	08:39	07:40	06:29	07:03 (E14) 06:07	04:59	04:25
	16:14	17:21	18:22	34 07:37 (E14) 20:26	21:27	22:08
18	08:37	07:38	06:26	07:02 (E14) 06:04	04:57	04:25
	16:16	17:23	18:24	34 07:36 (E14) 20:28	21:29	22:09
19	08:36	07:36	06:24	07:03 (E14) 06:02	04:55	04:25
	16:18	17:26	18:26	34 07:37 (E14) 20:31	21:31	22:09
20	08:35	07:33	06:21	07:02 (E14) 05:59	04:53	04:25
	16:20	17:28	18:28	34 07:36 (E14) 20:33	21:33	22:10
21	08:33	07:31	06:18	07:02 (E14) 05:57	04:52	04:25
	16:22	17:30	18:30	33 07:35 (E14) 20:35	21:35	22:10
22	08:32	07:28	06:16	07:02 (E14) 05:54	04:50	04:26
	16:24	17:32	18:32	33 07:35 (E14) 20:37	21:37	22:10
23	08:30	07:26	06:13	07:02 (E14) 05:52	04:48	04:26
	16:26	17:34	18:34	32 07:34 (E14) 20:39	21:38	22:10
24	08:29	07:23	06:10	07:02 (E14) 05:49	06:16 (E13) 04:47	04:26
	16:28	17:37	18:36	31 07:33 (E14) 20:41	3 06:19 (E13) 21:40	22:10
25	08:27	07:21	06:08	07:03 (E14) 05:47	06:14 (E13) 04:45	04:27
	16:30	17:39	18:39	29 07:32 (E14) 20:43	7 06:21 (E13) 21:42	22:10
26	08:26	07:18	06:05	07:04 (E14) 05:44	06:11 (E13) 04:44	04:27
	16:32	17:41	18:41	27 07:31 (E14) 20:45	11 06:22 (E13) 21:43	22:10
27	08:24	07:16	06:02	07:05 (E14) 05:42	06:09 (E13) 04:42	04:27
	16:34	17:43	18:43	23 07:28 (E14) 20:47	14 06:23 (E13) 21:45	22:10
28	08:22	07:13	06:00	07:07 (E14) 05:40	06:07 (E13) 04:41	04:28
	16:37	17:45	18:45	20 07:27 (E14) 20:49	16 06:23 (E13) 21:47	22:10
29	08:20		06:57	08:09 (E14) 05:37	06:05 (E13) 04:40	04:29
	16:39		19:47	14 08:23 (E14) 20:51	19 06:24 (E13) 21:48	22:10
30	08:18		06:54	08:13 (E14) 05:35	06:03 (E13) 04:38	04:29
	16:41		19:49	4 08:17 (E14) 20:53	21 06:24 (E13) 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	528
Total, worst case			705	91	193	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.96	0.96	0.96	
Wind dir. red.			0.63	0.66	0.66	
Total reduction			0.25	0.32	0.36	
Total, real			174	29	70	

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)
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Mezares_AB211223

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LV-1010 Riga

0037167242411

Anna / anna@environment.lv

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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 (E14)	07:23
	22:09	21:28	20:14	18:54	27 08:14 (E14)	16:36
2	04:31	05:18	06:18 (E13)	07:19	07:48 (E14)	07:25
	22:08	21:26	7 06:25 (E13)	18:51	28 08:16 (E15)	16:34
3	04:32	05:20	06:16 (E13)	07:21	07:50 (E14)	07:27
	22:08	21:24	12 06:28 (E13)	18:48	27 08:17 (E15)	16:32
4	04:33	05:22	06:14 (E13)	07:23	07:52 (E14)	07:29
	22:07	21:22	15 06:29 (E13)	18:46	25 08:17 (E15)	16:30
5	04:34	05:24	06:13 (E13)	07:25	07:57 (E14)	07:31
	22:07	21:20	18 06:31 (E13)	18:43	20 08:17 (E15)	16:27
6	04:35	05:25	06:12 (E13)	07:28	07:57 (E15)	07:33
	22:06	21:17	19 06:31 (E13)	18:40	20 08:17 (E15)	16:25
7	04:36	05:27	06:11 (E13)	07:30	07:58 (E15)	07:36
	22:05	21:15	20 06:31 (E13)	18:38	19 08:17 (E15)	16:23
8	04:37	05:29	06:11 (E13)	07:32	08:00 (E15)	07:38
	22:04	21:13	21 06:32 (E13)	18:35	16 08:16 (E15)	16:21
9	04:38	05:31	06:10 (E13)	07:34	08:03 (E15)	07:40
	22:03	21:11	22 06:32 (E13)	18:33	13 08:16 (E15)	16:19
10	04:40	05:33	06:10 (E13)	07:36	08:05 (E15)	07:42
	22:02	21:08	23 06:33 (E13)	18:30	10 08:15 (E15)	16:17
11	04:41	05:35	06:10 (E13)	07:38	08:07 (E15)	07:44
	22:01	21:06	23 06:33 (E13)	18:27	7 08:14 (E15)	16:15
12	04:42	05:37	06:09 (E13)	07:40	08:09 (E15)	07:46
	22:00	21:04	23 06:32 (E13)	18:25	3 08:12 (E15)	16:13
13	04:44	05:39	06:11 (E13)	07:42		07:49
	21:59	21:02	21 06:32 (E13)	18:22		16:11
14	04:45	05:41	06:13 (E13)	07:44	08:00 (E14)	07:51
	21:58	20:59	18 06:31 (E13)	18:20	13 08:13 (E14)	16:10
15	04:46	05:43	06:15 (E13)	07:46	07:57 (E14)	07:53
	21:57	20:57	16 06:31 (E13)	18:17	19 08:16 (E14)	16:08
16	04:48	05:45	06:17 (E13)	07:48	07:54 (E14)	07:55
	21:55	20:54	13 06:30 (E13)	18:15	24 08:18 (E14)	16:06
17	04:49	05:47	06:19 (E13)	07:50	07:53 (E14)	07:57
	21:54	20:52	10 06:29 (E13)	18:12	26 08:19 (E14)	16:04
18	04:51	05:49	06:21 (E13)	07:52	07:51 (E14)	07:59
	21:52	20:50	7 06:28 (E13)	18:09	29 08:20 (E14)	16:03
19	04:53	05:51	06:22 (E13)	07:55	07:50 (E14)	08:01
	21:51	20:47	2 06:24 (E13)	18:07	30 08:20 (E14)	16:01
20	04:54	05:53	06:55	07:57	07:49 (E14)	08:03
	21:49	20:45	19:23	18:04	32 08:21 (E14)	15:59
21	04:56	05:55	06:57	07:59	07:48 (E14)	08:05
	21:48	20:42	19:21	18:02	33 08:21 (E14)	15:58
22	04:58	05:57	06:59	08:01	07:47 (E14)	08:07
	21:46	20:40	19:18	18:00	34 08:21 (E14)	15:56
23	04:59	05:59	07:01	08:03	07:47 (E14)	08:09
	21:45	20:37	19:15	17:57	34 08:21 (E14)	15:55
24	05:01	06:01	07:03	08:05	07:46 (E14)	08:11
	21:43	20:35	19:12	17:55	35 08:21 (E14)	15:53
25	05:03	06:03	07:05	07:07	07:46 (E14)	08:13
	21:41	20:32	19:10	16:52	34 08:20 (E14)	15:52
26	05:05	06:05	07:07	07:10	07:46 (E14)	08:15
	21:39	20:30	19:07	16:50	34 08:20 (E14)	15:51
27	05:06	06:07	07:09	07:12	07:46 (E14)	08:17
	21:38	20:27	19:04	16:48	33 08:19 (E14)	15:50
28	05:08	06:09	07:11	07:14	07:46 (E14)	08:19
	21:36	20:24	19:02	16:45	32 08:18 (E14)	15:48
29	05:10	06:11	07:13	07:16	07:46 (E14)	08:21
	21:34	20:22	18:59	16:43	31 08:17 (E14)	15:47
30	05:12	06:13	07:15	07:18	07:47 (E14)	08:22
	21:32	20:19	18:56	16:41	29 08:16 (E14)	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		290	502	215		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.66	0.63	0.62		
Total reduction		0.32	0.26	0.15		
Total, real		92	129	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	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 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 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 17:05	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 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 18:15	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	04:26 22:08	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	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 16:02	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	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	08:33 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 17:34	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 19:12	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 22:10	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 16:34	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 20:24	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		06:52 19:51		04:37 21:51		05:14 21:30			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 17:58	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	04:39 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	04:27 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 20:55	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 18:09	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	04:53 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	08:33 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 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	04:27 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 16:34	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 20:53	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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	26	07:48 (E14) 08:14 (E14)	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	06:19 20:11		07:19 18:51	25	07:48 (E14) 08:13 (E14)	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	22	07:50 (E14) 08:12 (E14)	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	19	07:52 (E14) 08:11 (E14)	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		07:25 18:43	15	07:54 (E14) 08:09 (E14)	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	4	07:24 (E14) 07:28 (E14)	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	11	07:56 (E14) 08:07 (E14)	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	9	07:21 (E14) 07:30 (E14)	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	7	07:58 (E14) 08:05 (E14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	14	07:18 (E14) 07:32 (E14)	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		07:58 (E14) 08:05 (E14)	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	17	07:16 (E14) 07:33 (E14)	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		07:59 (E14) 08:06 (E14)	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	21	07:13 (E14) 07:34 (E14)	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		08:00 (E14) 08:07 (E14)	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	24	07:10 (E14) 07:34 (E14)	06:22 20:14	05:11 21:16	04:27 22:01	04:41 22:01	05:35 21:06	06:37 19:48		07:38 18:27		08:01 (E14) 08:08 (E14)	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	26	07:09 (E14) 07:35 (E14)	06:20 20:16	05:09 21:18	04:27 22:00	04:42 22:00	05:37 21:04	06:39 19:45		07:40 18:25		08:02 (E14) 08:09 (E14)	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	27	07:08 (E14) 07:35 (E14)	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		08:03 (E14) 08:10 (E14)	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	27	07:07 (E14) 07:34 (E14)	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		08:04 (E14) 08:11 (E14)	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	27	07:08 (E14) 07:35 (E14)	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		08:05 (E14) 08:12 (E14)	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	27	07:07 (E14) 07:34 (E14)	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		08:06 (E14) 08:13 (E14)	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	26	07:07 (E14) 07:33 (E14)	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		08:07 (E14) 08:14 (E14)	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	24	07:07 (E14) 07:31 (E14)	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29		07:53 18:09		08:08 (E14) 08:15 (E14)	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	22	07:09 (E14) 07:31 (E14)	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		08:09 (E14) 08:16 (E14)	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	20	07:09 (E14) 07:29 (E14)	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		08:09 (E14) 08:16 (E14)	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	16	07:10 (E14) 07:26 (E14)	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	7	07:59 (E14) 08:08 (E14)	7	08:01 (E14) 08:15 (E14)	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	10	07:14 (E14) 07:24 (E14)	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	14	07:57 (E14) 08:11 (E14)	14	07:57 (E14) 08:11 (E14)	08:01 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 21:45	05:59 20:37	07:01 19:15	19	07:54 (E14) 08:13 (E14)	19	07:54 (E14) 08:13 (E14)	08:03 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	04:59 21:43	06:01 20:35	07:03 19:12	21	07:53 (E14) 08:14 (E14)	21	07:53 (E14) 08:14 (E14)	08:05 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 22:10	05:03 21:41	06:03 20:32	07:05 19:10	24	07:51 (E14) 08:15 (E14)	24	07:51 (E14) 08:15 (E14)	07:07 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	25	07:50 (E14) 08:15 (E14)	25	07:50 (E14) 08:15 (E14)	07:10 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	26	07:49 (E14) 08:15 (E14)	26	07:49 (E14) 08:15 (E14)	07:12 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 20:24	07:11 19:02	26	07:48 (E14) 08:15 (E14)	26	07:48 (E14) 08:15 (E14)	07:14 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	27	07:48 (E14) 08:15 (E14)	27	07:48 (E14) 08:15 (E14)	07:16 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49			05:35 21:50	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	28	07:48 (E14) 08:15 (E14)	28	07:48 (E14) 08:15 (E14)	07:18 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		27	07:49 (E14) 08:16 (E14)	27	07:49 (E14) 08:16 (E14)	07:20 15:47	08:51 15:47
Potential sun hours	235	266	366			426	508	528	529	469	385		324		247	216	
Total, worst case				341							216		125				
Sun reduction				0.41							0.43		0.26				
Oper. time red.				0.96							0.96		0.96				
Wind dir. red.				0.62							0.62		0.62				
Total reduction				0.25							0.26		0.15				
Total, real				84							55		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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	24	07:46 (E14) 08:10 (E14)	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	06:19 20:11		07:19 18:51	21	07:48 (E14) 08:09 (E14)	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	18	07:50 (E14) 08:08 (E14)	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	14	07:52 (E14) 08:06 (E14)	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		07:25 18:43	10	07:54 (E14) 08:04 (E14)	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	05:25 21:17	06:27 20:01		07:28 18:40	5	07:56 (E14) 08:01 (E14)	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	1	07:21 (E14) 07:22 (E14)	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	8	07:18 (E14) 07:26 (E14)	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	12	07:16 (E14) 07:28 (E14)	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	16	07:13 (E14) 07:29 (E14)	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	20	07:10 (E14) 07:30 (E14)	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	23	07:08 (E14) 07:31 (E14)	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	26	07:05 (E14) 07:31 (E14)	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	27	07:04 (E14) 07:31 (E14)	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	27	07:04 (E14) 07:31 (E14)	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	26	07:04 (E14) 07:30 (E14)	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	26	07:04 (E14) 07:30 (E14)	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	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	26	07:03 (E14) 07:29 (E14)	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50		06:51 19:29		07:53 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	24	07:04 (E14) 07:28 (E14)	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	22	07:05 (E14) 07:27 (E14)	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45		06:55 19:23	9	07:57 (E14) 08:06 (E14)	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	20	07:05 (E14) 07:25 (E14)	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42		06:57 19:21	14	07:54 (E14) 08:08 (E14)	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	15	07:08 (E14) 07:23 (E14)	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40		06:59 19:18	18	07:52 (E14) 08:10 (E14)	08:01 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	10	07:10 (E14) 07:20 (E14)	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37		07:01 19:15	21	07:50 (E14) 08:11 (E14)	08:03 17:57	08:09 15:55
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	20:39 21:40	22:10 21:40	21:45 21:43	05:01 20:35	06:01 19:12		07:03 19:12	24	07:03 (E14) 08:12 (E14)	08:05 17:55	08:11 15:53
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	20:47 21:42	22:10 22:10	21:44 21:41	06:01 20:32	07:03 19:10		07:05 19:05	25	07:04 (E14) 08:12 (E14)	08:07 17:52	08:13 15:52
26	08:26 16:32	07:18 17:41	06:05 18:41		05:45 20:45	20:44 21:43	22:10 22:10	21:45 21:39	06:05 20:30	07:07 19:07		07:07 19:07	26	07:06 (E14) 08:12 (E14)	08:08 17:50	08:15 15:51
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	20:42 21:45	22:10 22:10	21:46 21:38	06:06 20:27	07:09 19:04		07:09 17:48	26	07:06 (E14) 08:12 (E14)	08:09 17:48	08:51 15:50
28	08:22 16:37	07:13 17:45	06:00 18:45		05:40 20:49	20:41 21:47	22:10 22:10	21:47 21:36	06:09 20:24	07:11 19:02		07:11 17:45	27	07:07 (E14) 08:12 (E14)	08:10 17:43	08:19 15:48
29	08:20 16:39		06:57 19:47		05:37 20:51	20:40 21:48	22:10 22:10	21:48 21:34	06:11 20:22	07:13 18:59		07:13 17:43	27	07:07 (E14) 08:12 (E14)	08:11 17:43	08:21 15:47
30	08:19 16:41		06:54 19:49		05:35 20:53	20:48 21:50	22:09 22:09	21:34 21:32	06:13 20:19	07:15 18:56		07:15 17:41	27	07:07 (E14) 08:11 (E14)	08:12 17:41	08:22 15:46
31	08:17 16:43		06:52 19:51		05:37 21:51	20:53 21:51	22:09 21:30	21:32 20:17	06:15 20:17	07:18 20:17		07:18 17:38	26	07:07 (E14) 08:11 (E14)	08:13 17:38	08:51 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385		324		247	216	
Total, worst case				329						243		92				
Sun reduction				0.41						0.43		0.26				
Oper. time red.				0.96						0.96		0.96				
Wind dir. red.				0.63						0.63		0.63				
Total reduction				0.25						0.26		0.16				
Total, real				81						62		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)
	Minutes with flicker		

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March			April	May	June
1	08:51	09:32 (E14)	08:15	09:48 (E14)	07:11		06:49	05:33	04:36			
	15:48	23 09:55 (E14)	16:45	11 09:59 (E14)	17:48		19:53	20:55	21:53			
2	08:50	09:33 (E14)	08:13		07:08		06:46	05:30	04:35			
	15:49	24 09:57 (E14)	16:48		17:50		19:55	20:58	21:54			
3	08:50	09:33 (E14)	08:11		07:06		06:43	05:28	04:34			
	15:51	24 09:57 (E14)	16:50		17:52		19:57	21:00	21:55			
4	08:50	09:32 (E14)	08:09		07:03		06:41	05:26	04:33			
	15:52	25 09:57 (E14)	16:52		17:54		19:59	21:02	21:57			
5	08:49	09:33 (E14)	08:07		07:01		06:38	05:23	04:32			
	15:53	26 09:59 (E14)	16:54		17:56		20:01	21:04	21:58			
6	08:49	09:33 (E14)	08:05		06:58		06:36	05:21	04:31			
	15:55	26 09:59 (E14)	16:56		17:58		20:03	21:06	21:59			
7	08:48	09:33 (E14)	08:03		06:55		06:33	05:19	04:30			
	15:56	27 10:00 (E14)	16:59		18:01		20:06	21:08	22:00			
8	08:48	09:33 (E14)	08:01		06:53		06:30	05:17	04:29			
	15:58	28 10:01 (E14)	17:01		18:03		20:08	21:10	22:01			
9	08:47	09:33 (E14)	07:58		06:50		06:28	05:15	04:29			
	16:00	28 10:01 (E14)	17:03		18:05		20:10	21:12	22:02			
10	08:46	09:33 (E14)	07:56		06:47		06:25	05:13	04:28			
	16:01	29 10:02 (E14)	17:05		18:07		20:12	21:14	22:03			
11	08:45	09:34 (E14)	07:54		06:45		06:22	05:11	04:27			
	16:03	29 10:03 (E14)	17:08		18:09		20:14	21:16	22:04			
12	08:44	09:34 (E14)	07:52		06:42		06:20	05:09	04:27			
	16:05	30 10:04 (E14)	17:10		18:11		20:16	21:18	22:05			
13	08:43	09:34 (E14)	07:50		06:40	07:05 (E13)	06:17	05:07	04:26			
	16:06	30 10:04 (E14)	17:12		18:13	10 07:15 (E13)	20:18	21:20	22:06			
14	08:42	09:34 (E14)	07:47		06:37	07:02 (E13)	06:15	05:05	04:26			
	16:08	31 10:05 (E14)	17:14		18:15	15 07:17 (E13)	20:20	21:22	22:07			
15	08:41	09:35 (E14)	07:45		06:34	07:00 (E13)	06:12	05:03	04:26			
	16:10	31 10:06 (E14)	17:17		18:18	20 07:20 (E13)	20:22	21:24	22:07			
16	08:40	09:34 (E14)	07:43		06:32	06:57 (E13)	06:09	05:01	04:26			
	16:12	32 10:06 (E14)	17:19		18:20	23 07:20 (E13)	20:24	21:26	22:08			
17	08:39	09:35 (E14)	07:40		06:29	06:55 (E13)	06:07	04:59	04:25			
	16:14	31 10:06 (E14)	17:21		18:22	26 07:21 (E13)	20:26	21:27	22:08			
18	08:38	09:35 (E14)	07:38		06:26	06:54 (E13)	06:04	04:57	04:25			
	16:16	31 10:06 (E14)	17:23		18:24	27 07:21 (E13)	20:28	21:29	22:09			
19	08:36	09:35 (E14)	07:36		06:24	06:54 (E13)	06:02	04:55	04:25			
	16:18	31 10:06 (E14)	17:26		18:26	28 07:22 (E13)	20:31	21:31	22:09			
20	08:35	09:36 (E14)	07:33		06:21	06:53 (E13)	05:59	04:53	04:25			
	16:20	31 10:07 (E14)	17:28		18:28	28 07:21 (E13)	20:33	21:33	22:10			
21	08:33	09:36 (E14)	07:31		06:18	06:52 (E13)	05:57	04:52	04:25			
	16:22	31 10:07 (E14)	17:30		18:30	29 07:21 (E13)	20:35	21:35	22:10			
22	08:32	09:37 (E14)	07:28		06:16	06:53 (E13)	05:54	04:50	04:26			
	16:24	30 10:07 (E14)	17:32		18:32	28 07:21 (E13)	20:37	21:37	22:10			
23	08:30	09:37 (E14)	07:26		06:13	06:52 (E13)	05:52	04:48	04:26			
	16:26	30 10:07 (E14)	17:34		18:34	29 07:21 (E13)	20:39	21:38	22:10			
24	08:29	09:38 (E14)	07:23		06:10	06:52 (E13)	05:49	04:47	04:26			
	16:28	29 10:07 (E14)	17:37		18:36	27 07:19 (E13)	20:41	21:40	22:10			
25	08:27	09:39 (E14)	07:21		06:08	06:53 (E13)	05:47	04:45	04:26			
	16:30	28 10:07 (E14)	17:39		18:38	26 07:19 (E13)	20:43	21:42	22:10			
26	08:26	09:40 (E14)	07:18		06:05	06:53 (E13)	05:44	04:44	04:27			
	16:32	27 10:07 (E14)	17:41		18:41	25 07:18 (E13)	20:45	21:43	22:10			
27	08:24	09:41 (E14)	07:16		06:02	06:54 (E13)	05:42	04:42	04:27			
	16:34	25 10:06 (E14)	17:43		18:43	22 07:16 (E13)	20:47	21:45	22:10			
28	08:22	09:42 (E14)	07:13		05:59	06:55 (E13)	05:40	04:41	04:28			
	16:37	24 10:06 (E14)	17:45		18:45	20 07:15 (E13)	20:49	21:47	22:10			
29	08:20	09:43 (E14)			06:57	07:57 (E13)	05:37	04:40	04:29			
	16:39	22 10:05 (E14)			19:47	15 08:12 (E13)	20:51	21:48	22:10			
30	08:19	09:44 (E14)			06:54	07:59 (E13)	05:35	04:38	04:29			
	16:41	20 10:04 (E14)			19:49	9 08:08 (E13)	20:53	21:50	22:09			
31	08:17	09:46 (E14)			06:51			04:37				
	16:43	16 10:02 (E14)			19:51			21:51				
Potential sun hours	235		266		366		426	508	529			
Total, worst case	849		11		407							
Sun reduction	0.13		0.20		0.41							
Oper. time red.	0.96		0.96		0.96							
Wind dir. red.	0.61		0.61		0.64							
Total reduction	0.08		0.12		0.25							
Total, real	66		1		102							

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E13) 07:52 (E13)	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:24 15:45
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	29 09:45 (E14)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	28 09:45 (E14)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	27 09:45 (E14)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:33 16:25	27 09:46 (E14)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	26 09:45 (E14)
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	26 09:46 (E14)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	24 09:45 (E14)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:20 (E14) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	11 09:31 (E14)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	16 09:33 (E14)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	20 09:35 (E14)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	22 09:37 (E14)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:45 18:17	07:53 16:08	25 09:38 (E14)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:47 18:14	07:55 16:06	26 09:38 (E14)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:49 18:12	07:57 16:04	27 09:40 (E14)
18	04:51 21:52	05:49 20:50	06:51 19:29	07:51 18:09	07:59 16:02	28 09:40 (E14)
19	04:53 21:51	05:51 20:47	06:53 19:26	07:53 18:07	08:01 16:01	29 09:41 (E14)
20	04:54 21:49	05:53 20:45	06:55 19:23	07:55 18:04	08:03 15:59	30 09:42 (E14)
21	04:56 21:48	05:55 20:42	06:57 19:21	07:57 18:02	08:05 15:58	31 09:42 (E14)
22	04:58 21:46	05:57 20:40	06:59 19:18	07:59 18:00	08:07 15:56	31 09:43 (E14)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:01 17:57	08:09 15:55	31 09:43 (E14)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:03 17:55	08:11 15:53	31 09:43 (E14)
25	05:03 21:41	06:03 20:32	07:05 19:10	08:05 17:52	08:13 15:52	31 09:43 (E14)
26	05:05 21:39	06:05 20:30	07:07 19:07	08:07 17:50	08:15 15:51	32 09:44 (E14)
27	05:06 21:38	06:07 20:27	07:09 19:04	08:09 17:48	08:17 15:49	32 09:45 (E14)
28	05:08 21:36	06:09 20:24	07:11 19:02	08:11 17:46	08:19 15:48	31 09:45 (E14)
29	05:10 21:34	06:11 20:22	07:13 18:59	08:13 17:43	08:21 15:47	31 09:45 (E14)
30	05:12 21:32	06:13 20:19	07:15 18:56	08:15 17:41	08:22 15:46	30 09:45 (E14)
31	05:14 21:30	06:15 20:17		07:20 16:38		30 09:45 (E14)
Potential sun hours	529	469	385	324	247	216
Total, worst case			408	6	574	692
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.96	0.96	0.96	0.96
Wind dir. red.			0.64	0.64	0.61	0.61
Total reduction			0.26	0.16	0.05	0.04
Total, real			107	1	28	28

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	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 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	07:58 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 17:05	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 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 20:54	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	08:46 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	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	08:33 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 17:34	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 19:12	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 22:10	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 16:34	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 20:24	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		06:52 19:51		04:37 21:51		05:14 21:30			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												
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E15) 07:23 (E15)	05:33 20:55
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:11 (E15) 07:24 (E15)	05:30 20:57
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	07:09 (E15) 07:26 (E15)	05:28 21:00
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:06 (E15) 07:26 (E15)	05:26 21:02
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:04 (E15) 07:26 (E15)	05:24 21:04
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:04 (E15) 07:26 (E15)	05:21 21:06
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	07:03 (E15) 07:26 (E15)	05:19 21:08
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:03 (E15) 07:26 (E15)	05:17 21:10
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:03 (E15) 07:25 (E15)	05:15 21:12
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	07:03 (E15) 07:23 (E15)	05:13 21:14
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:04 (E15) 07:23 (E15)	05:11 21:16
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:04 (E15) 07:21 (E15)	05:09 21:18
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:06 (E15) 07:19 (E15)	05:07 21:20
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	07:09 (E15) 07:16 (E15)	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	05:47 (E14) 06:23 (E14)
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	05:46 (E14) 06:23 (E14)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	05:47 (E14) 06:24 (E14)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	05:46 (E14) 06:24 (E14)
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	05:46 (E14) 06:25 (E14)
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	05:46 (E14) 06:24 (E14)
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	05:46 (E14) 06:25 (E14)
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	05:46 (E14) 06:25 (E14)
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	05:46 (E14) 06:25 (E14)
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	05:46 (E14) 06:25 (E14)
25	08:27 16:30	07:21 17:39	06:08 18:38	05:47 20:43	04:45 21:42	05:46 (E14) 06:25 (E14)
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	05:47 (E14) 06:25 (E14)
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	05:47 (E14) 06:25 (E14)
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	05:46 (E14) 06:24 (E14)
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	05:47 (E14) 06:25 (E14)
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:50	05:47 (E14) 06:25 (E14)
31	08:17 16:43		06:51 19:51	07:17 (E15) 07:22 (E15)	04:37 21:51	05:47 (E14) 06:24 (E14)
Potential sun hours	235	266	366	426	508	528
Total, worst case			5	247	920	1086
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.96	0.96	0.96	0.96
Wind dir. red.			0.66	0.66	0.67	0.67
Total reduction			0.26	0.32	0.37	0.36
Total, real			1	78	336	390

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July		August		September		October		November		December	
1	04:30	05:08 (E13)	05:16	06:00 (E14)	06:17	07:03 (E15)	07:17	07:23	08:24			
	22:09	35	06:28 (E14)	21:28	32	06:32 (E14)	20:14	19	07:22 (E15)	18:54	16:36	15:45
2	04:31	05:08 (E14)	05:18	06:00 (E14)	06:19	07:02 (E15)	07:19	07:25	08:26			
	22:08	35	06:28 (E14)	21:26	31	06:31 (E14)	20:11	20	07:22 (E15)	18:51	16:34	15:44
3	04:32	05:09 (E13)	05:20	06:01 (E14)	06:21	07:01 (E15)	07:21	07:27	08:28			
	22:08	34	06:29 (E14)	21:24	29	06:30 (E14)	20:09	22	07:23 (E15)	18:48	16:32	15:43
4	04:33	05:56 (E14)	05:22	06:02 (E14)	06:23	07:00 (E15)	07:23	07:29	08:29			
	22:07	33	06:29 (E14)	21:22	27	06:29 (E14)	20:06	23	07:23 (E15)	18:46	16:30	15:43
5	04:34	05:56 (E14)	05:24	06:04 (E14)	06:25	07:00 (E15)	07:25	07:31	08:31			
	22:07	34	06:30 (E14)	21:19	24	06:28 (E14)	20:03	23	07:23 (E15)	18:43	16:27	15:42
6	04:35	05:56 (E14)	05:25	06:04 (E14)	06:27	07:00 (E15)	07:28	07:33	08:32			
	22:06	34	06:30 (E14)	21:17	21	06:25 (E14)	20:01	22	07:22 (E15)	18:40	16:25	15:41
7	04:36	05:56 (E14)	05:27	06:07 (E14)	06:29	06:59 (E15)	07:30	07:36	08:34			
	22:05	35	06:31 (E14)	21:15	16	06:23 (E14)	19:58	22	07:21 (E15)	18:38	16:23	15:40
8	04:37	05:56 (E14)	05:29	06:10 (E14)	06:31	07:00 (E15)	07:32	07:38	08:35			
	22:04	35	06:31 (E14)	21:13	10	06:20 (E14)	19:55	20	07:20 (E15)	18:35	16:21	15:40
9	04:38	05:56 (E14)	05:31	06:33 (E14)	06:33	07:02 (E15)	07:34	07:40	08:37			
	22:03	35	06:31 (E14)	21:11	17	07:19 (E15)	18:33	16:19	15:39			
10	04:40	05:56 (E14)	05:33	06:35 (E14)	06:35	07:04 (E15)	07:36	07:42	08:38			
	22:02	36	06:32 (E14)	21:08	14	07:18 (E15)	18:30	16:17	15:39			
11	04:41	05:56 (E14)	05:35	06:37 (E14)	06:37	07:06 (E15)	07:38	07:44	08:39			
	22:01	37	06:33 (E14)	21:06	10	07:16 (E15)	18:27	16:15	15:39			
12	04:42	05:56 (E14)	05:37	06:39 (E14)	06:39	07:08 (E15)	07:40	07:46	08:40			
	22:00	37	06:33 (E14)	21:04	5	07:13 (E15)	18:25	16:13	15:38			
13	04:44	05:56 (E14)	05:39	06:41 (E14)	06:41	07:10 (E15)	07:42	07:49	08:41			
	21:59	37	06:33 (E14)	21:02	18	07:12 (E15)	18:22	16:11	15:38			
14	04:45	05:55 (E14)	05:41	06:43 (E14)	06:43	07:11 (E15)	07:44	07:51	08:43			
	21:58	38	06:33 (E14)	20:59	19	07:14 (E15)	18:20	16:10	15:38			
15	04:46	05:56 (E14)	05:43	06:45 (E14)	06:45	07:12 (E15)	07:46	07:53	08:44			
	21:57	38	06:34 (E14)	20:57	19	07:15 (E15)	18:17	16:08	15:38			
16	04:48	05:56 (E14)	05:45	06:47 (E14)	06:47	07:14 (E15)	07:48	07:55	08:45			
	21:55	38	06:34 (E14)	20:54	19	07:16 (E15)	18:15	16:06	15:38			
17	04:49	05:55 (E14)	05:47	06:49 (E14)	06:49	07:16 (E15)	07:50	07:57	08:45			
	21:54	39	06:34 (E14)	20:52	19	07:18 (E15)	18:12	16:04	15:38			
18	04:51	05:56 (E14)	05:49	06:51 (E14)	06:51	07:18 (E15)	07:52	07:59	08:46			
	21:52	38	06:34 (E14)	20:50	19	07:20 (E15)	18:09	16:03	15:38			
19	04:53	05:55 (E14)	05:51	06:53 (E14)	06:53	07:20 (E15)	07:55	08:01	08:47			
	21:51	39	06:34 (E14)	20:47	19	07:22 (E15)	18:07	16:01	15:38			
20	04:54	05:56 (E14)	05:53	06:55 (E14)	06:55	07:21 (E15)	07:57	08:03	08:48			
	21:49	39	06:35 (E14)	20:45	19	07:24 (E15)	18:04	15:59	15:39			
21	04:56	05:56 (E14)	05:55	06:57 (E14)	06:57	07:23 (E15)	07:59	08:05	08:48			
	21:48	38	06:34 (E14)	20:42	19	07:26 (E15)	18:02	15:58	15:39			
22	04:58	05:56 (E14)	05:57	06:59 (E14)	06:59	07:24 (E15)	08:01	08:07	08:49			
	21:46	39	06:35 (E14)	20:40	19	07:27 (E15)	18:00	15:56	15:40			
23	04:59	05:56 (E14)	05:59	07:01 (E14)	07:01	07:27 (E15)	08:03	08:09	08:49			
	21:45	38	06:34 (E14)	20:37	19	07:30 (E15)	17:57	15:55	15:40			
24	05:01	05:56 (E14)	06:01	07:03 (E14)	07:03	07:30 (E15)	08:05	08:11	08:50			
	21:43	39	06:35 (E14)	20:35	19	07:33 (E15)	17:55	15:53	15:41			
25	05:03	05:57 (E14)	06:03	07:05 (E14)	07:05	07:33 (E15)	07:07	08:13	08:50			
	21:41	38	06:35 (E14)	20:32	19	07:36 (E15)	16:52	15:52	15:41			
26	05:05	05:56 (E14)	06:05	07:07 (E14)	07:07	07:36 (E15)	07:10	08:15	08:51			
	21:39	38	06:34 (E14)	20:30	19	07:39 (E15)	16:50	15:51	15:42			
27	05:06	05:57 (E14)	06:07	07:09 (E14)	07:09	07:39 (E15)	07:12	08:17	08:51			
	21:37	37	06:34 (E14)	20:27	19	07:42 (E15)	16:48	15:50	15:43			
28	05:08	05:58 (E14)	06:09	07:11 (E14)	07:11	07:42 (E15)	07:14	08:19	08:51			
	21:36	36	06:34 (E14)	20:24	19	07:45 (E15)	16:45	15:48	15:44			
29	05:10	05:57 (E14)	06:11	07:09 (E15)	07:13	07:45 (E15)	07:16	08:21	08:51			
	21:34	36	06:33 (E14)	20:22	8	07:17 (E15)	16:43	15:47	15:45			
30	05:12	05:58 (E14)	06:13	07:06 (E15)	07:15	07:46 (E15)	07:18	08:22	08:51			
	21:32	35	06:33 (E14)	20:19	13	07:19 (E15)	16:41	15:46	15:46			
31	05:14	05:59 (E14)	06:15	07:04 (E15)	07:15	07:47 (E15)	07:20	08:25	08:51			
	21:30	34	06:33 (E14)	20:17	17	07:21 (E15)	16:38	15:47	15:47			
Potential sun hours	529		469		385		324		248		216	
Total, worst case	1134		228		217							
Sun reduction	0.49		0.50		0.43							
Oper. time red.	0.96		0.96		0.96							
Wind dir. red.	0.67		0.67		0.66							
Total reduction	0.32		0.32		0.27							
Total, real	359		73		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)
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Calculated:

25/06/2024 18:19/4.0.540

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Shadow receptor: Veveri 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (92)

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Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	07:28 (E15) 21 07:49 (E15)	05:33 20:55	06:21 (E14) 41 07:02 (E14)	04:36 21:52	05:10 (E13) 14 05:24 (E13)
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:29 (E15) 18 07:47 (E15)	05:30 20:57	06:21 (E14) 41 07:02 (E14)	04:35 21:54	05:09 (E13) 15 05:24 (E13)
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	07:30 (E15) 16 07:46 (E15)	05:28 21:00	06:21 (E14) 42 07:03 (E14)	04:34 21:55	05:08 (E13) 16 05:24 (E13)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:32 (E15) 11 07:43 (E15)	05:26 21:02	06:21 (E14) 42 07:03 (E14)	04:33 21:57	05:08 (E13) 18 05:26 (E13)
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:34 (E15) 20:06	05:24 21:04	06:21 (E14) 41 07:02 (E14)	04:32 21:58	05:07 (E13) 19 05:26 (E13)
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7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	07:36 (E15) 20:06	05:19 21:08	06:21 (E14) 41 07:02 (E14)	04:30 22:00	05:06 (E13) 21 05:27 (E13)
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:37 (E15) 20:08	05:17 21:10	06:21 (E14) 41 07:02 (E14)	04:29 22:01	05:05 (E13) 22 05:27 (E13)
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:38 (E15) 20:10	05:15 21:12	06:21 (E14) 40 07:01 (E14)	04:29 22:02	05:04 (E13) 23 05:27 (E13)
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	07:39 (E15) 20:12	05:13 21:14	06:21 (E14) 40 07:01 (E14)	04:28 22:03	05:05 (E13) 22 05:27 (E13)
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:40 (E15) 20:14	05:11 21:16	06:22 (E14) 38 07:00 (E14)	04:27 22:04	05:05 (E13) 23 05:28 (E13)
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:41 (E15) 20:16	05:09 21:18	06:22 (E14) 37 06:59 (E14)	04:27 22:05	05:05 (E13) 23 05:28 (E13)
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:42 (E15) 20:18	05:07 21:20	06:23 (E14) 36 06:59 (E14)	04:27 22:06	05:05 (E13) 23 05:28 (E13)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	07:43 (E15) 20:20	05:05 21:22	06:24 (E14) 35 06:59 (E14)	04:26 22:07	05:06 (E13) 23 05:29 (E13)
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	07:44 (E15) 20:22	05:03 21:24	06:24 (E14) 34 06:58 (E14)	04:26 22:07	05:06 (E13) 23 05:29 (E13)
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	07:45 (E15) 20:24	05:01 21:25	06:24 (E14) 32 06:56 (E14)	04:26 22:08	05:05 (E13) 23 05:28 (E13)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	07:46 (E15) 20:26	04:59 21:27	06:26 (E14) 30 06:56 (E14)	04:25 22:08	05:06 (E13) 23 05:29 (E13)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	07:47 (E15) 20:28	04:57 21:29	06:26 (E14) 29 06:55 (E14)	04:25 22:09	05:06 (E13) 23 05:29 (E13)
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	07:48 (E15) 20:30	04:55 21:31	06:28 (E14) 26 06:54 (E14)	04:25 22:09	05:06 (E13) 23 05:29 (E13)
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	07:49 (E15) 20:33	04:54 21:33	06:29 (E14) 24 06:53 (E14)	04:25 22:10	05:07 (E13) 23 05:30 (E13)
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	07:50 (E15) 20:35	04:52 21:35	06:31 (E14) 21 06:52 (E14)	04:25 22:10	05:07 (E13) 23 05:30 (E13)
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	07:51 (E15) 20:37	04:50 21:36	06:32 (E14) 18 06:50 (E14)	04:26 22:10	05:07 (E13) 23 05:30 (E13)
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	07:52 (E15) 20:39	04:48 21:38	06:34 (E14) 14 06:48 (E14)	04:26 22:10	05:07 (E13) 23 05:30 (E13)
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	07:53 (E15) 20:41	04:47 21:40	06:36 (E14) 9 06:45 (E14)	04:26 22:10	05:08 (E13) 23 05:31 (E13)
25	08:27 16:30	07:21 17:39	06:08 18:38	05:47 20:43	07:54 (E15) 20:43	04:45 21:42	06:45 (E14) 2 05:17 (E13)	04:27 22:10	05:08 (E13) 23 05:31 (E13)
26	08:26 16:32	07:18 17:41	06:05 18:41	05:44 20:45	07:55 (E15) 20:45	04:44 21:43	06:46 (E14) 2 05:18 (E13)	04:27 22:10	05:08 (E13) 23 05:31 (E13)
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	07:56 (E15) 20:47	04:42 21:45	06:47 (E14) 4 05:20 (E13)	04:28 22:10	05:08 (E13) 23 05:31 (E13)
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	07:57 (E15) 20:49	04:41 21:47	06:48 (E14) 7 05:21 (E13)	04:28 22:10	05:09 (E13) 23 05:32 (E13)
29	08:20 16:39	07:11 17:47	06:57 18:47	05:37 20:51	07:58 (E15) 20:51	04:40 21:48	06:49 (E14) 9 05:22 (E13)	04:29 22:10	05:08 (E13) 23 05:31 (E13)
30	08:18 16:41	07:09 17:49	06:54 18:49	05:35 20:53	07:59 (E15) 20:53	04:38 21:50	06:50 (E14) 10 05:23 (E13)	04:29 22:09	05:09 (E13) 23 05:32 (E13)
31	08:17 16:43	07:08 17:51	06:51 18:51	05:33 20:55	08:00 (E15) 20:55	04:37 21:51	06:51 (E14) 12 05:24 (E13)	04:29 22:09	05:09 (E13) 23 05:32 (E13)
Potential sun hours	235	266	366	426	508	528			
Total, worst case			184	443	837	650			
Sun reduction			0.41	0.50	0.57	0.56			
Oper. time red.			0.96	0.96	0.96	0.96			
Wind dir. red.			0.65	0.65	0.65	0.67			
Total reduction			0.26	0.31	0.36	0.36			
Total, real			47	139	298	233			

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July			August			September			October	November	December
1	04:30		05:10 (E13)	05:16		06:32 (E14)	06:17			07:17	07:23	08:24
	22:09	22	05:32 (E13)	21:28	38	07:10 (E14)	20:14			18:54	16:36	15:45
2	04:31		05:09 (E13)	05:18		06:32 (E14)	06:19			07:19	07:25	08:26
	22:08	23	05:32 (E13)	21:26	38	07:10 (E14)	20:11			18:51	16:34	15:44
3	04:32		05:09 (E13)	05:20		06:32 (E14)	06:21			07:21	07:27	08:28
	22:08	23	05:32 (E13)	21:24	39	07:11 (E14)	20:09			18:48	16:32	15:43
4	04:33		05:10 (E13)	05:22		06:31 (E14)	06:23			07:23	07:29	08:29
	22:07	22	05:32 (E13)	21:22	41	07:12 (E14)	20:06			18:46	16:30	15:43
5	04:34		05:11 (E13)	05:24		06:31 (E14)	06:25			07:25	07:31	08:31
	22:07	21	05:32 (E13)	21:19	41	07:12 (E14)	20:03			18:43	16:27	15:42
6	04:35		05:12 (E13)	05:25		06:30 (E14)	06:27			07:28	07:33	08:32
	22:06	20	05:32 (E13)	21:17	41	07:11 (E14)	20:01			18:40	16:25	15:41
7	04:36		05:13 (E13)	05:27		06:30 (E14)	06:29			07:30	07:36	08:34
	22:05	19	05:32 (E13)	21:15	42	07:12 (E14)	19:58			18:38	16:23	15:40
8	04:37		05:14 (E13)	05:29		06:30 (E14)	06:31		07:26 (E15)	07:32	07:38	08:35
	22:04	18	05:32 (E13)	21:13	42	07:12 (E14)	19:55	11	07:37 (E15)	18:35	16:21	15:40
9	04:38		05:15 (E13)	05:31		06:30 (E14)	06:33		07:24 (E15)	07:34	07:40	08:37
	22:03	17	05:32 (E13)	21:11	42	07:12 (E14)	19:53	15	07:39 (E15)	18:33	16:19	15:39
10	04:40		05:16 (E13)	05:33		06:30 (E14)	06:35		07:22 (E15)	07:36	07:42	08:38
	22:02	16	05:32 (E13)	21:08	42	07:12 (E14)	19:50	18	07:40 (E15)	18:30	16:17	15:39
11	04:41		05:18 (E13)	05:35		06:30 (E14)	06:37		07:21 (E15)	07:38	07:44	08:39
	22:01	14	05:32 (E13)	21:06	42	07:12 (E14)	19:47	20	07:41 (E15)	18:27	16:15	15:39
12	04:42		05:19 (E13)	05:37		06:30 (E14)	06:39		07:20 (E15)	07:40	07:46	08:40
	22:00	13	05:32 (E13)	21:04	41	07:11 (E14)	19:45	21	07:41 (E15)	18:25	16:13	15:38
13	04:44		05:20 (E13)	05:39		06:30 (E14)	06:41		07:19 (E15)	07:42	07:49	08:42
	21:59	11	05:31 (E13)	21:02	40	07:10 (E14)	19:42	23	07:42 (E15)	18:22	16:11	15:38
14	04:45		05:21 (E13)	05:41		06:30 (E14)	06:43		07:18 (E15)	07:44	07:51	08:43
	21:58	10	05:31 (E13)	20:59	40	07:10 (E14)	19:39	23	07:41 (E15)	18:20	16:10	15:38
15	04:46		05:23 (E13)	05:43		06:31 (E14)	06:45		07:18 (E15)	07:46	07:53	08:44
	21:57	8	05:31 (E13)	20:57	38	07:09 (E14)	19:37	23	07:41 (E15)	18:17	16:08	15:38
16	04:48		05:24 (E13)	05:45		06:31 (E14)	06:47		07:18 (E15)	07:48	07:55	08:45
	21:55	5	05:29 (E13)	20:54	38	07:09 (E14)	19:34	23	07:41 (E15)	18:15	16:06	15:38
17	04:49		05:25 (E13)	05:47		06:32 (E14)	06:49		07:18 (E15)	07:50	07:57	08:45
	21:54	3	05:28 (E13)	20:52	36	07:08 (E14)	19:31	22	07:40 (E15)	18:12	16:04	15:38
18	04:51			05:49		06:33 (E14)	06:51		07:20 (E15)	07:52	07:59	08:46
	21:52			20:50	34	07:07 (E14)	19:29	19	07:39 (E15)	18:09	16:03	15:38
19	04:53		06:49 (E14)	05:51		06:33 (E14)	06:53		07:22 (E15)	07:55	08:01	08:47
	21:51	2	06:51 (E14)	20:47	32	07:05 (E14)	19:26	16	07:38 (E15)	18:07	16:01	15:38
20	04:54		06:45 (E14)	05:53		06:34 (E14)	06:55		07:24 (E15)	07:57	08:03	08:48
	21:49	12	06:57 (E14)	20:45	30	07:04 (E14)	19:23	12	07:36 (E15)	18:04	15:59	15:39
21	04:56		06:42 (E14)	05:55		06:35 (E14)	06:57		07:26 (E15)	07:59	08:05	08:48
	21:48	16	06:58 (E14)	20:42	27	07:02 (E14)	19:21	8	07:34 (E15)	18:02	15:58	15:39
22	04:58		06:41 (E14)	05:57		06:37 (E14)	06:59		07:28 (E15)	08:01	08:07	08:49
	21:46	20	07:01 (E14)	20:40	23	07:00 (E14)	19:18	2	07:30 (E15)	18:00	15:56	15:40
23	04:59		06:39 (E14)	05:59		06:39 (E14)	07:01			08:03	08:09	08:49
	21:45	23	07:02 (E14)	20:37	19	06:58 (E14)	19:15			17:57	15:55	15:40
24	05:01		06:39 (E14)	06:01		06:42 (E14)	07:03			08:05	08:11	08:50
	21:43	25	07:04 (E14)	20:35	12	06:54 (E14)	19:12			17:55	15:53	15:41
25	05:03		06:38 (E14)	06:03			07:05			07:07	08:13	08:50
	21:41	27	07:05 (E14)	20:32			19:10			16:52	15:52	15:41
26	05:05		06:36 (E14)	06:05			07:07			07:10	08:15	08:51
	21:39	30	07:06 (E14)	20:30			19:07			16:50	15:51	15:42
27	05:06		06:36 (E14)	06:07			07:09			07:12	08:17	08:51
	21:37	31	07:07 (E14)	20:27			19:04			16:48	15:50	15:43
28	05:08		06:35 (E14)	06:09			07:11			07:14	08:19	08:51
	21:36	33	07:08 (E14)	20:24			19:02			16:45	15:48	15:44
29	05:10		06:34 (E14)	06:11			07:13			07:16	08:21	08:51
	21:34	34	07:08 (E14)	20:22			18:59			16:43	15:47	15:45
30	05:12		06:34 (E14)	06:13			07:15			07:18	08:22	08:51
	21:32	35	07:09 (E14)	20:19			18:56			16:41	15:46	15:46
31	05:14		06:33 (E14)	06:15						07:20		08:51
	21:30	37	07:10 (E14)	20:17						16:38		15:47
Potential sun hours	529			469			385			324	247	216
Total, worst case		590			858			256				
Sun reduction		0.49			0.50			0.43				
Oper. time red.		0.96			0.96			0.96				
Wind dir. red.		0.66			0.65			0.65				
Total reduction		0.31			0.31			0.27				
Total, real		184			267			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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January			February			March	April	May	June		
1	08:51		10:24 (E13)	08:15		10:47 (E13)	07:11	06:49	05:32	06:00 (E7)	04:36	
	15:48	41	11:05 (E13)	16:45	14	11:01 (E13)	17:48	19:53	20:55	3	06:03 (E7)	21:53
2	08:50		10:25 (E13)	08:13			07:08	06:46	05:30		05:58 (E7)	04:35
	15:49	41	11:06 (E13)	16:47			17:50	19:55	20:57	8	06:06 (E7)	21:54
3	08:50		10:25 (E13)	08:11			07:06	06:43	05:28		05:56 (E7)	04:34
	15:51	41	11:06 (E13)	16:50			17:52	19:57	21:00	11	06:07 (E7)	21:55
4	08:50		10:25 (E13)	08:09			07:03	06:41	05:26		05:54 (E7)	04:33
	15:52	41	11:06 (E13)	16:52			17:54	19:59	21:02	14	06:08 (E7)	21:57
5	08:49		10:26 (E13)	08:07			07:00	06:38	05:23		05:52 (E7)	04:32
	15:53	42	11:08 (E13)	16:54			17:56	20:01	21:04	17	06:09 (E7)	21:58
6	08:49		10:26 (E13)	08:05			06:58	06:35	05:21		05:50 (E7)	04:31
	15:55	42	11:08 (E13)	16:56			17:58	20:03	21:06	19	06:09 (E7)	21:59
7	08:48		10:27 (E13)	08:03			06:55	06:33	05:19		05:48 (E7)	04:30
	15:56	41	11:08 (E13)	16:59			18:00	20:05	21:08	21	06:09 (E7)	22:00
8	08:48		10:27 (E13)	08:01			06:53	06:30	05:17		05:48 (E7)	04:29
	15:58	42	11:09 (E13)	17:01			18:03	20:08	21:10	21	06:09 (E7)	22:01
9	08:47		10:27 (E13)	07:58			06:50	06:28	05:15		05:48 (E7)	04:28
	15:59	42	11:09 (E13)	17:03			18:05	20:10	21:12	21	06:09 (E7)	22:02
10	08:46		10:28 (E13)	07:56			06:47	06:25	05:13		05:48 (E7)	04:28
	16:01	42	11:10 (E13)	17:05			18:07	20:12	21:14	21	06:09 (E7)	22:03
11	08:45		10:28 (E13)	07:54			06:45	06:22	05:11		05:48 (E7)	04:27
	16:03	42	11:10 (E13)	17:08			18:09	20:14	21:16	21	06:09 (E7)	22:04
12	08:44		10:29 (E13)	07:52			06:42	06:20	05:08		05:48 (E7)	04:27
	16:04	42	11:11 (E13)	17:10			18:11	20:16	21:18	21	06:09 (E7)	22:05
13	08:43		10:28 (E13)	07:49			06:40	06:17	05:06		05:48 (E7)	04:26
	16:06	43	11:11 (E13)	17:12			18:13	20:18	21:20	20	06:08 (E7)	22:06
14	08:42		10:29 (E13)	07:47			06:37	06:14	05:04		05:49 (E7)	04:26
	16:08	42	11:11 (E13)	17:14			18:15	20:20	21:22	19	06:08 (E7)	22:07
15	08:41		10:29 (E13)	07:45			06:34	06:12	05:03		05:49 (E7)	04:26
	16:10	42	11:11 (E13)	17:17			18:18	20:22	21:24	18	06:07 (E7)	22:07
16	08:40		10:30 (E13)	07:43			06:32	06:09	05:01		05:50 (E7)	04:25
	16:12	42	11:12 (E13)	17:19			18:20	20:24	21:25	16	06:06 (E7)	22:08
17	08:39		10:31 (E13)	07:40			06:29	06:07	04:59		05:51 (E7)	04:25
	16:14	41	11:12 (E13)	17:21			18:22	20:26	21:27	15	06:06 (E7)	22:08
18	08:37		10:31 (E13)	07:38			06:26	06:04	04:57		05:52 (E7)	04:25
	16:16	41	11:12 (E13)	17:23			18:24	20:28	21:29	12	06:04 (E7)	22:09
19	08:36		10:31 (E13)	07:35			06:24	06:02	04:55		05:54 (E7)	04:25
	16:18	41	11:12 (E13)	17:26			18:26	20:30	21:31	8	06:02 (E7)	22:09
20	08:35		10:32 (E13)	07:33			06:21	05:59	04:53		05:58 (E7)	04:25
	16:20	40	11:12 (E13)	17:28			18:28	20:33	21:33	1	05:59 (E7)	22:10
21	08:33		10:33 (E13)	07:31			06:18	05:57	04:52			04:25
	16:22	39	11:12 (E13)	17:30			18:30	20:35	21:35			22:10
22	08:32		10:33 (E13)	07:28			06:16	05:54	04:50			04:25
	16:24	39	11:12 (E13)	17:32			18:32	20:37	21:37			22:10
23	08:30		10:34 (E13)	07:26			06:13	05:52	04:48			04:26
	16:26	37	11:11 (E13)	17:34			18:34	20:39	21:38			22:10
24	08:29		10:36 (E13)	07:23			06:10	05:49	04:47			04:26
	16:28	36	11:12 (E13)	17:37			18:36	20:41	21:40			22:10
25	08:27		10:36 (E13)	07:21			06:07	05:47	04:45			04:26
	16:30	35	11:11 (E13)	17:39			18:38	20:43	21:42			22:10
26	08:26		10:37 (E13)	07:18			06:05	05:44	04:44			04:27
	16:32	34	11:11 (E13)	17:41			18:41	20:45	21:43			22:10
27	08:24		10:38 (E13)	07:16			06:02	05:42	04:42			04:27
	16:34	32	11:10 (E13)	17:43			18:43	20:47	21:45			22:10
28	08:22		10:40 (E13)	07:13			05:59	05:40	04:41			04:28
	16:36	29	11:09 (E13)	17:45			18:45	20:49	21:47			22:10
29	08:20		10:41 (E13)				06:57	05:37	04:40			04:29
	16:39	27	11:08 (E13)				19:47	20:51	21:48			22:10
30	08:18		10:43 (E13)				06:54	05:35	04:38			04:29
	16:41	24	11:07 (E13)				19:49	20:53	21:50			22:09
31	08:17		10:45 (E13)				06:51		04:37			
	16:43	20	11:05 (E13)				19:51		21:51			
Potential sun hours	235			266			366	426	508		529	
Total, worst case		1183			14					307		
Sun reduction		0.13			0.20					0.57		
Oper. time red.		0.96			0.96					0.96		
Wind dir. red.		0.61			0.61					0.67		
Total reduction		0.08			0.12					0.36		
Total, real		92			2					112		

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July	August	September	October	November	December
1	04:30	05:16	05:58 (E7)	06:17	07:17	07:23
	22:09	21:28	21	06:19 (E7)	20:14	18:54
2	04:31	05:18	05:58 (E7)	06:19	07:19	07:25
	22:09	21:26	21	06:19 (E7)	20:11	18:51
3	04:32	05:19	05:58 (E7)	06:21	07:21	07:27
	22:08	21:24	22	06:20 (E7)	20:09	18:48
4	04:33	05:21	05:58 (E7)	06:23	07:23	07:29
	22:07	21:22	22	06:20 (E7)	20:06	18:46
5	04:34	05:23	05:57 (E7)	06:25	07:25	07:31
	22:07	21:20	22	06:19 (E7)	20:03	18:43
6	04:35	05:25	05:58 (E7)	06:27	07:27	07:33
	22:06	21:17	21	06:19 (E7)	20:01	18:40
7	04:36	05:27	06:00 (E7)	06:29	07:30	07:36
	22:05	21:15	18	06:18 (E7)	19:58	18:38
8	04:37	05:29	06:02 (E7)	06:31	07:32	07:38
	22:04	21:13	16	06:18 (E7)	19:55	18:35
9	04:38	05:31	06:04 (E7)	06:33	07:34	07:40
	22:03	21:11	13	06:17 (E7)	19:53	18:32
10	04:39	05:33	06:06 (E7)	06:35	07:36	07:42
	22:02	21:08	10	06:16 (E7)	19:50	18:30
11	04:41	05:35	06:07 (E7)	06:37	07:38	07:44
	22:01	21:06	6	06:13 (E7)	19:47	18:27
12	04:42	05:37	06:09 (E7)	06:39	07:40	07:46
	22:00	21:04	2	06:11 (E7)	19:45	18:25
13	04:43	05:39	06:11 (E7)	06:41	07:42	07:49
	21:59	21:02		19:42	18:22	16:11
14	04:45	05:41	06:13 (E7)	06:43	07:44	07:51
	21:58	20:59		19:39	18:19	16:09
15	04:46	05:43	06:15 (E7)	06:45	07:46	07:53
	21:57	20:57		19:37	18:17	16:08
16	04:48	05:45	06:17 (E7)	06:47	07:48	07:55
	21:55	20:54		19:34	18:14	16:06
17	04:49	05:47	06:19 (E7)	06:49	07:50	07:57
	21:54	20:52		19:31	18:12	16:04
18	04:51	05:49	06:21 (E7)	06:51	07:52	07:59
	21:52	20:50		19:29	18:09	16:02
19	04:52	05:51	06:23 (E7)	06:53	07:55	08:01
	21:51	20:47		19:26	18:07	16:01
20	04:54	05:53	06:25 (E7)	06:55	07:57	08:03
	21:49	20:45		19:23	18:04	15:59
21	04:56	05:55	06:27 (E7)	06:57	07:59	08:05
	21:48	20:42		19:20	18:02	15:58
22	04:57	05:57	06:29 (E7)	06:59	08:01	08:07
	21:46	20:40		19:18	17:59	15:56
23	04:59	05:59	06:31 (E7)	07:01	08:03	08:09
	21:45	20:37		19:15	17:57	15:55
24	05:01	06:06 (E7)	06:33 (E7)	07:03	08:05	08:11
	21:43	6	06:12 (E7)	20:35	19:12	17:55
25	05:03	06:14 (E7)	06:35 (E7)	07:05	08:07	08:13
	21:41	10	06:14 (E7)	20:32	19:10	17:52
26	05:04	06:16 (E7)	06:37 (E7)	07:07	08:09	08:15
	21:39	13	06:15 (E7)	20:30	19:07	16:50
27	05:06	06:18 (E7)	06:39 (E7)	07:09	08:11	08:17
	21:38	16	06:17 (E7)	20:27	19:04	16:47
28	05:08	06:20 (E7)	06:41 (E7)	07:11	08:13	08:19
	21:36	17	06:17 (E7)	20:24	19:02	16:45
29	05:10	06:22 (E7)	06:43 (E7)	07:13	08:15	08:21
	21:34	19	06:18 (E7)	20:22	18:59	16:43
30	05:12	06:24 (E7)	06:45 (E7)	07:15	08:17	08:23
	21:32	20	06:19 (E7)	20:19	18:56	16:40
31	05:14	06:26 (E7)	06:47 (E7)	07:17	08:19	08:25
	21:30	20	06:19 (E7)	20:17	18:54	16:38
Potential sun hours	529	469	385	324	247	216
Total, worst case	121	194			740	1258
Sun reduction	0.49	0.50			0.08	0.07
Oper. time red.	0.96	0.96			0.96	0.96
Wind dir. red.	0.67	0.67			0.61	0.61
Total reduction	0.32	0.32			0.05	0.04
Total, real	38	62			36	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

January		February		March		April		May		June	
1	08:51 15:48	12:35 (E7) 13:07 (E7)	08:15 16:45	09:11 (E6) 09:40 (E6)	07:11 17:47	06:49 19:53		05:32 20:55	07:22 (E5) 08:44 (E5)	04:36 21:53	07:36 (E5) 08:25 (E5)
2	08:50 15:49	12:36 (E7) 13:08 (E7)	08:13 16:47	09:12 (E6) 09:40 (E6)	07:08 17:50	06:46 19:55	08:00 (E5) 22	05:30 20:57	07:22 (E5) 08:44 (E5)	04:34 21:54	07:36 (E5) 08:24 (E5)
3	08:50 15:50	12:36 (E7) 13:08 (E7)	08:11 16:49	09:13 (E6) 09:40 (E6)	07:06 17:52	06:43 19:57	07:55 (E5) 31	05:28 20:59	07:22 (E5) 08:44 (E5)	04:33 21:55	07:37 (E5) 08:24 (E5)
4	08:49 15:52	12:37 (E7) 13:08 (E7)	08:09 16:52	09:14 (E6) 09:39 (E6)	07:03 17:54	06:41 19:59	07:52 (E5) 38	05:25 21:02	07:22 (E5) 08:44 (E5)	04:32 21:57	07:38 (E5) 08:23 (E5)
5	08:49 15:53	12:38 (E7) 13:08 (E7)	08:07 16:54	09:15 (E6) 09:39 (E6)	07:00 17:56	06:38 20:01	07:49 (E5) 43	05:23 21:04	07:23 (E5) 08:43 (E5)	04:31 21:58	07:39 (E5) 08:23 (E5)
6	08:49 15:55	12:39 (E7) 13:08 (E7)	08:05 16:56	09:15 (E6) 09:37 (E6)	06:58 17:58	06:35 20:03	07:47 (E5) 48	05:21 21:06	07:23 (E5) 08:43 (E5)	04:31 21:59	07:40 (E5) 08:22 (E5)
7	08:48 15:56	12:40 (E7) 13:08 (E7)	08:03 16:58	09:17 (E6) 09:36 (E6)	06:55 18:00	06:33 20:05	07:44 (E5) 52	05:19 21:08	07:23 (E5) 08:42 (E5)	04:30 22:00	07:40 (E5) 08:21 (E5)
8	08:48 15:58	12:41 (E7) 13:08 (E7)	08:00 17:01	09:19 (E6) 09:35 (E6)	06:53 18:02	06:30 20:07	07:41 (E5) 56	05:17 21:10	07:23 (E5) 08:42 (E5)	04:29 22:01	07:42 (E5) 08:21 (E5)
9	08:47 15:59	12:42 (E7) 13:08 (E7)	07:58 17:03	09:21 (E6) 09:32 (E6)	06:50 18:05	06:27 20:10	07:40 (E5) 59	05:14 21:12	07:23 (E5) 08:41 (E5)	04:28 22:02	07:42 (E5) 08:20 (E5)
10	08:46 16:01	12:43 (E7) 13:07 (E7)	07:56 17:10		06:47 18:07	06:25 20:12	07:38 (E5) 62	05:12 21:14	07:23 (E5) 08:40 (E5)	04:28 22:03	07:43 (E5) 08:20 (E5)
11	08:45 16:03	12:44 (E7) 13:07 (E7)	07:54 17:07		06:45 18:09	06:22 20:14	07:37 (E5) 64	05:10 21:16	07:23 (E5) 08:40 (E5)	04:27 22:04	07:43 (E5) 08:19 (E5)
12	08:44 16:04	12:46 (E7) 13:07 (E7)	07:52 17:10		06:42 18:11	06:20 20:16	07:35 (E5) 67	05:08 21:18	07:23 (E5) 08:39 (E5)	04:27 22:05	07:44 (E5) 08:19 (E5)
13	08:43 16:06	12:47 (E7) 13:05 (E7)	07:49 17:12		06:39 18:13	06:17 20:18	07:34 (E5) 69	05:06 21:20	07:24 (E5) 08:38 (E5)	04:26 22:06	07:45 (E5) 08:19 (E5)
14	08:42 16:08	09:19 (E6) 13:04 (E7)	07:47 17:14		06:37 18:15	06:14 20:20	07:32 (E5) 71	05:04 21:22	07:24 (E5) 08:37 (E5)	04:26 22:07	07:45 (E5) 08:18 (E5)
15	08:41 16:10	09:17 (E6) 13:03 (E7)	07:45 17:16		06:34 18:17	06:12 20:22	07:32 (E5) 72	05:02 21:24	07:25 (E5) 08:37 (E5)	04:25 22:07	07:46 (E5) 08:17 (E5)
16	08:40 16:12	09:15 (E6) 09:29 (E6)	07:43 17:19		06:31 18:19	06:09 20:24	07:30 (E5) 74	05:00 21:25	07:25 (E5) 08:36 (E5)	04:25 22:08	07:47 (E5) 08:17 (E5)
17	08:39 16:13	09:14 (E6) 09:31 (E6)	07:40 17:21		06:29 18:22	06:07 20:26	07:30 (E5) 75	04:59 21:27	07:25 (E5) 08:35 (E5)	04:25 22:08	07:47 (E5) 08:17 (E5)
18	08:37 16:15	09:13 (E6) 09:32 (E6)	07:38 17:23		06:26 18:24	06:04 20:28	07:28 (E5) 77	04:57 21:29	07:26 (E5) 08:35 (E5)	04:25 22:09	07:48 (E5) 08:17 (E5)
19	08:36 16:17	09:12 (E6) 09:33 (E6)	07:35 17:25		06:23 18:26	06:02 20:30	07:28 (E5) 78	04:55 21:31	07:26 (E5) 08:34 (E5)	04:25 22:09	07:48 (E5) 08:17 (E5)
20	08:35 16:19	09:12 (E6) 09:35 (E6)	07:33 17:28		06:21 18:28	05:59 20:32	07:26 (E5) 79	04:53 21:33	07:27 (E5) 08:34 (E5)	04:25 22:10	07:48 (E5) 08:17 (E5)
21	08:33 16:21	09:12 (E6) 09:35 (E6)	07:31 17:30		06:18 18:30	05:56 20:35	07:26 (E5) 80	04:51 21:35	07:28 (E5) 08:33 (E5)	04:25 22:10	07:48 (E5) 08:17 (E5)
22	08:32 16:23	09:11 (E6) 09:36 (E6)	07:28 17:32		06:15 18:32	05:54 20:37	07:25 (E5) 80	04:50 21:36	07:29 (E5) 08:33 (E5)	04:25 22:10	07:49 (E5) 08:18 (E5)
23	08:30 16:26	09:11 (E6) 09:37 (E6)	07:26 17:34		06:13 18:34	05:52 20:39	07:25 (E5) 81	04:48 21:38	07:29 (E5) 08:31 (E5)	04:25 22:10	07:49 (E5) 08:18 (E5)
24	08:29 16:28	09:11 (E6) 09:38 (E6)	07:23 17:36		06:10 18:36	05:49 20:41	07:25 (E5) 81	04:46 21:40	07:30 (E5) 08:31 (E5)	04:26 22:10	07:49 (E5) 08:18 (E5)
25	08:27 16:30	09:11 (E6) 09:39 (E6)	07:21 17:39		06:07 18:38	05:47 20:43	07:23 (E5) 82	04:45 21:42	07:31 (E5) 08:30 (E5)	04:26 22:10	07:50 (E5) 08:19 (E5)
26	08:25 16:32	09:11 (E6) 09:39 (E6)	07:18 17:41		06:05 18:40	05:44 20:45	07:23 (E5) 82	04:43 21:43	07:31 (E5) 08:29 (E5)	04:27 22:10	07:49 (E5) 08:19 (E5)
27	08:24 16:34	09:11 (E6) 09:40 (E6)	07:16 17:43		06:02 18:42	05:42 20:47	07:23 (E5) 82	04:42 21:45	07:32 (E5) 08:28 (E5)	04:27 22:10	07:49 (E5) 08:20 (E5)
28	08:22 16:36	09:11 (E6) 09:40 (E6)	07:13 17:45		05:59 18:45	05:39 20:49	07:23 (E5) 83	04:41 21:47	07:32 (E5) 08:28 (E5)	04:28 22:10	07:49 (E5) 08:21 (E5)
29	08:20 16:38	09:11 (E6) 09:40 (E6)			06:57 19:47	05:37 20:51	07:22 (E5) 83	04:39 21:48	07:33 (E5) 08:27 (E5)	04:28 22:10	07:49 (E5) 08:22 (E5)
30	08:18 16:41	09:12 (E6) 09:41 (E6)			06:54 19:49	05:35 20:53	07:22 (E5) 82	04:38 21:50	07:34 (E5) 08:27 (E5)	04:29 22:09	07:48 (E5) 08:22 (E5)
31	08:17 16:43	09:12 (E6) 09:41 (E6)			06:51 19:51			04:37 21:51	07:35 (E5) 08:26 (E5)		
Potential sun hours	235		266		366	426		508		529	
Total, worst case	789		201			1953		2157		1051	
Sun reduction	0.13		0.20			0.50		0.57		0.56	
Oper. time red.	0.96		0.96			0.96		0.96		0.96	
Wind dir. red.	0.61		0.59			0.65		0.65		0.65	
Total reduction	0.08		0.11			0.31		0.36		0.35	
Total, real	62		23			611		767		367	

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July			August			September			October	November			December			
1	04:30		07:48 (E5)	05:15		07:34 (E5)	06:17		07:36 (E5)	07:17		07:22			08:24	12:27 (E7)	
	22:09	35	08:23 (E5)	21:28	76	08:50 (E5)	20:14	64	08:40 (E5)	18:53		16:36			15:45	22	12:49 (E7)
2	04:31		07:48 (E5)	05:17		07:34 (E5)	06:19		07:37 (E5)	07:19		07:25		08:50 (E6)	08:26	12:26 (E7)	
	22:09	36	08:24 (E5)	21:26	76	08:50 (E5)	20:11	62	08:39 (E5)	18:51		16:34	12	09:02 (E6)	15:44	25	12:51 (E7)
3	04:31		07:47 (E5)	05:19		07:33 (E5)	06:21		07:38 (E5)	07:21		07:27		08:49 (E6)	08:28	12:25 (E7)	
	22:08	38	08:25 (E5)	21:24	78	08:51 (E5)	20:09	59	08:37 (E5)	18:48		16:31	16	09:05 (E6)	15:43	26	12:51 (E7)
4	04:32		07:47 (E5)	05:21		07:32 (E5)	06:23		07:38 (E5)	07:23		07:29		08:47 (E6)	08:29	12:25 (E7)	
	22:07	39	08:26 (E5)	21:22	79	08:51 (E5)	20:06	56	08:34 (E5)	18:45		16:29	19	09:06 (E6)	15:42	27	12:52 (E7)
5	04:33		07:47 (E5)	05:23		07:32 (E5)	06:25		07:40 (E5)	07:25		07:31		08:45 (E6)	08:31	12:25 (E7)	
	22:07	40	08:27 (E5)	21:19	79	08:51 (E5)	20:03	52	08:32 (E5)	18:43		16:27	22	09:07 (E6)	15:41	28	12:53 (E7)
6	04:34		07:46 (E5)	05:25		07:32 (E5)	06:27		07:42 (E5)	07:27		07:33		08:45 (E6)	08:32	12:25 (E7)	
	22:06	42	08:28 (E5)	21:17	80	08:52 (E5)	20:01	48	08:30 (E5)	18:40		16:25	24	09:09 (E6)	15:41	29	12:54 (E7)
7	04:35		07:46 (E5)	05:27		07:32 (E5)	06:29		07:44 (E5)	07:29		07:36		08:44 (E6)	08:34	12:24 (E7)	
	22:05	43	08:29 (E5)	21:15	80	08:52 (E5)	19:58	43	08:27 (E5)	18:38		16:23	25	09:09 (E6)	15:40	30	12:54 (E7)
8	04:37		07:45 (E5)	05:29		07:32 (E5)	06:31		07:46 (E5)	07:31		07:38		08:44 (E6)	08:35	12:25 (E7)	
	22:04	45	08:30 (E5)	21:13	81	08:53 (E5)	19:55	38	08:24 (E5)	18:35		16:21	27	09:11 (E6)	15:39	31	12:56 (E7)
9	04:38		07:45 (E5)	05:31		07:32 (E5)	06:33		07:49 (E5)	07:34		07:40		08:43 (E6)	08:37	12:25 (E7)	
	22:03	46	08:31 (E5)	21:11	81	08:53 (E5)	19:53	32	08:21 (E5)	18:32		16:19	28	09:11 (E6)	15:39	31	12:56 (E7)
10	04:39		07:44 (E5)	05:33		07:31 (E5)	06:35		07:53 (E5)	07:36		07:42		08:42 (E6)	08:38	12:25 (E7)	
	22:02	47	08:31 (E5)	21:08	81	08:52 (E5)	19:50	23	08:16 (E5)	18:30		16:17	29	09:11 (E6)	15:39	32	12:57 (E7)
11	04:40		07:44 (E5)	05:35		07:31 (E5)	06:37		08:01 (E5)	07:38		07:44		08:43 (E6)	08:39	12:25 (E7)	
	22:01	48	08:32 (E5)	21:06	82	08:53 (E5)	19:47	6	08:07 (E5)	18:27		16:15	29	09:12 (E6)	15:38	32	12:57 (E7)
12	04:42		07:43 (E5)	05:37		07:31 (E5)	06:39			07:40		07:46		08:42 (E6)	08:40	12:26 (E7)	
	22:00	50	08:33 (E5)	21:04	82	08:53 (E5)	19:45			18:24		16:13	30	09:12 (E6)	15:38	33	12:59 (E7)
13	04:43		07:43 (E5)	05:39		07:31 (E5)	06:41			07:42		07:49		08:43 (E6)	08:42	12:26 (E7)	
	21:59	52	08:35 (E5)	21:01	82	08:53 (E5)	19:42			18:22		16:11	29	09:12 (E6)	15:38	33	12:59 (E7)
14	04:45		07:42 (E5)	05:41		07:31 (E5)	06:43			07:44		07:51		08:43 (E6)	08:43	10:34 (E8)	
	21:58	53	08:35 (E5)	20:59	82	08:53 (E5)	19:39			18:19		16:09	29	09:12 (E6)	15:38	37	13:00 (E7)
15	04:46		07:41 (E5)	05:43		07:31 (E5)	06:45			07:46		07:53		08:43 (E6)	08:44	10:33 (E8)	
	21:57	55	08:36 (E5)	20:57	82	08:53 (E5)	19:37			18:17		16:07	29	09:12 (E6)	15:38	39	13:00 (E7)
16	04:47		07:42 (E5)	05:45		07:30 (E5)	06:47			07:48		07:55		08:44 (E6)	08:45	10:33 (E8)	
	21:55	56	08:38 (E5)	20:54	82	08:52 (E5)	19:34			18:14		16:06	28	09:12 (E6)	15:38	41	13:01 (E7)
17	04:49		07:41 (E5)	05:47		07:30 (E5)	06:49			07:50		07:57		08:44 (E6)	08:46	10:33 (E8)	
	21:54	57	08:38 (E5)	20:52	82	08:52 (E5)	19:31			18:12		16:04	28	09:12 (E6)	15:38	42	13:01 (E7)
18	04:51		07:40 (E5)	05:49		07:30 (E5)	06:51			07:52		07:59		08:45 (E6)	08:46	10:33 (E8)	
	21:52	59	08:39 (E5)	20:49	82	08:52 (E5)	19:28			18:09		16:02	27	09:12 (E6)	15:38	43	13:02 (E7)
19	04:52		07:40 (E5)	05:51		07:30 (E5)	06:53			07:54		08:01		08:46 (E6)	08:47	10:33 (E8)	
	21:51	60	08:40 (E5)	20:47	81	08:51 (E5)	19:26			18:07		16:01	26	09:12 (E6)	15:38	45	13:03 (E7)
20	04:54		07:39 (E5)	05:53		07:30 (E5)	06:55			07:57		08:03		08:46 (E6)	08:48	10:33 (E8)	
	21:49	62	08:41 (E5)	20:45	81	08:51 (E5)	19:23			18:04		15:59	25	09:11 (E6)	15:38	45	13:03 (E7)
21	04:56		07:39 (E5)	05:55		07:31 (E5)	06:57			07:59		08:05		08:47 (E6)	08:48	10:34 (E8)	
	21:48	63	08:42 (E5)	20:42	80	08:51 (E5)	19:20			18:02		15:57	23	09:10 (E6)	15:39	45	13:04 (E7)
22	04:57		07:39 (E5)	05:57		07:31 (E5)	06:59			08:01		08:07		08:48 (E6)	08:49	10:34 (E8)	
	21:46	64	08:43 (E5)	20:40	79	08:50 (E5)	19:18			17:59		15:56	23	09:11 (E6)	15:39	45	13:04 (E7)
23	04:59		07:38 (E5)	05:59		07:31 (E5)	07:01			08:03		08:09		08:49 (E6)	08:50	10:35 (E8)	
	21:45	65	08:43 (E5)	20:37	79	08:50 (E5)	19:15			17:57		15:54	21	09:10 (E6)	15:40	45	13:05 (E7)
24	05:01		07:38 (E5)	06:01		07:32 (E5)	07:03			08:05		08:11		08:50 (E6)	08:50	10:35 (E8)	
	21:43	67	08:45 (E5)	20:35	77	08:49 (E5)	19:12			17:54		15:53	19	09:09 (E6)	15:40	45	13:05 (E7)
25	05:02		07:36 (E5)	06:03		07:31 (E5)	07:05			07:07		08:13		08:51 (E6)	08:50	10:36 (E8)	
	21:41	69	08:45 (E5)	20:32	77	08:48 (E5)	19:10			16:52		15:52	17	09:08 (E6)	15:41	43	13:05 (E7)
26	05:04		07:36 (E5)	06:05		07:31 (E5)	07:07			07:09		08:15		08:53 (E6)	08:51	10:36 (E8)	
	21:39	70	08:46 (E5)	20:29	76	08:47 (E5)	19:07			16:50		15:50	14	09:07 (E6)	15:42	43	13:05 (E7)
27	05:06		07:36 (E5)	06:07		07:32 (E5)	07:09			07:12		08:17		08:56 (E6)	08:51	10:37 (E8)	
	21:38	71	08:47 (E5)	20:27	74	08:46 (E5)	19:04			16:47		15:49	20	12:42 (E7)	15:42	43	13:06 (E7)
28	05:08		07:35 (E5)	06:09		07:33 (E5)	07:11			07:14		08:19		08:59 (E6)	08:51	10:38 (E8)	
	21:36	72	08:47 (E5)	20:24	72	08:45 (E5)	19:01			16:45		15:48	19	12:44 (E7)	15:43	41	13:06 (E7)
29	05:10		07:35 (E5)	06:11		07:33 (E5)	07:13			07:16		08:21		12:28 (E7)	08:51	10:40 (E8)	
	21:34	73	08:48 (E5)	20:22	71	08:44 (E5)	18:59			16:43		15:47	18	12:46 (E7)	15:44	37	13:06 (E7)
30	05:12		07:35 (E5)	06:13		07:34 (E5)	07:15			07:18		08:22		12:27 (E7)	08:51	12:34 (E7)	
	21:32	74	08:49 (E5)	20:19	69	08:43 (E5)	18:56			16:40		15:46	21	12:48 (E7)	15:45	33	13:07 (E7)
31	05:14		07:34 (E5)	06:15		07:35 (E5)				07:20					08:51	12:35 (E7)	
	21:30	75	08:49 (E5)	20:17	66	08:41 (E5)				16:38					15:46	33	13:08 (E7)
Potential sun hours	529			469				385		324		247			216		
Total, worst case		1726			2429			483				677				1124	
Sun reduction		0.49			0.50			0.43				0.08				0.07	
Oper. time red.		0.96			0.96			0.96				0.96				0.96	
Wind dir. red.		0.65			0.65			0.65				0.60				0.64	
Total reduction		0.31			0.31			0.27				0.05				0.04	
Total, real		532			757			129				32				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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:15	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23	08:24
	15:48	16:45	17:48	19:53	20:55	21:52	22:09	21:28	20:14	18:54	16:36	15:45
2	08:50	08:13	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26
	15:50	16:48	17:50	19:55	20:57	21:54	22:08	21:26	20:11	18:51	16:34	15:44
3	08:50	08:11	07:06	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	21:24	20:09	18:48	16:32	15:43
4	08:50	08:09	07:03	06:41	05:26	04:33	04:33	05:22	06:23	07:23	07:29	08:29
	15:52	16:52	17:54	19:59	21:02	21:56	22:07	21:22	20:06	18:46	16:30	15:43
5	08:49	08:07	07:00	06:38	05:24	04:32	04:34	05:24	06:25	07:25	07:31	08:31
	15:54	16:54	17:56	20:01	21:04	21:58	22:07	21:19	20:03	18:43	16:27	15:42
6	08:49	08:05	06:58	06:36	05:21	04:31	04:35	05:26	06:27	07:27	07:33	08:32
	15:55	16:57	17:58	20:03	21:06	21:59	22:06	21:17	20:01	18:40	16:25	15:41
7	08:48	08:03	06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:30	07:36	08:34
	15:57	16:59	18:01	20:05	21:08	22:00	22:05	21:15	19:58	18:38	16:23	15:41
8	08:47	08:00	06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:32	07:38	08:35
	15:58	17:01	18:03	20:08	21:10	22:01	22:04	21:13	19:55	18:35	16:21	15:40
9	08:47	07:58	06:50	06:28	05:15	04:29	04:38	05:31	06:33	07:34	07:40	08:36
	16:00	17:03	18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:33	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	17:06	18:07	20:12	21:14	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	04:28	04:41	05:35	06:37	07:38	07:44	08:39
	16:03	17:08	18:09	20:14	21:16	22:04	22:01	21:06	19:47	18:27	16:15	15:39
12	08:44	07:52	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	21:18	22:05	22:00	21:04	19:45	18:25	16:13	15:38
13	08:43	07:49	06:40	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	21:20	22:06	21:59	21:01	19:42	18:22	16:11	15:38
14	08:42	07:47	06:37	06:15	05:05	04:26	04:45	05:41	06:43	07:44	07:51	08:42
	16:08	17:14	18:15	20:20	21:22	22:06	21:58	20:59	19:39	18:20	16:10	15:38
15	08:41	07:45	06:34	06:12	05:03	04:26	04:47	05:43	06:45	07:46	07:53	08:44
	16:10	17:17	18:18	20:22	21:23	22:07	21:56	20:57	19:37	18:17	16:08	15:38
16	08:40	07:43	06:32	06:09	05:01	04:26	04:48	05:45	06:47	07:48	07:55	08:44
	16:12	17:19	18:20	20:24	21:25	22:08	21:55	20:54	19:34	18:15	16:06	15:38
17	08:39	07:40	06:29	06:07	04:59	04:26	04:50	05:47	06:49	07:50	07:57	08:45
	16:14	17:21	18:22	20:26	21:27	22:08	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 (E15)	04:51	05:49	06:51	07:52	08:46
	16:16	17:23	18:24	20:28	21:29	22:09	1 05:03 (E15)	21:52	20:49	19:29	18:09	16:03
19	08:36	07:35	06:24	06:02	04:55	04:25	05:03 (E15)	04:53	05:51	06:53	07:55	08:47
	16:18	17:26	18:26	20:30	21:31	22:09	1 05:04 (E15)	21:51	20:47	19:26	18:07	16:01
20	08:35	07:33	06:21	05:59	04:54	04:25	05:03 (E15)	04:54	05:53	06:55	07:57	08:48
	16:20	17:28	18:28	20:33	21:33	22:10	1 05:04 (E15)	21:49	20:45	19:23	18:04	15:59
21	08:33	07:31	06:18	05:57	04:52	04:26	05:03 (E15)	04:56	05:55	06:57	07:59	08:48
	16:22	17:30	18:30	20:35	21:35	22:10	1 05:04 (E15)	21:48	20:42	19:21	18:02	15:58
22	08:32	07:28	06:16	05:54	04:50	04:26	05:03 (E15)	04:58	05:57	06:59	08:01	08:49
	16:24	17:32	18:32	20:37	21:36	22:10	1 05:04 (E15)	21:46	20:40	19:18	18:00	15:56
23	08:30	07:26	06:13	05:52	04:49	04:26	05:03 (E15)	04:59	05:59	07:01	08:03	08:49
	16:26	17:34	18:34	20:39	21:38	22:10	1 05:04 (E15)	21:44	20:37	19:15	17:57	15:55
24	08:29	07:23	06:10	05:49	04:47	04:26	05:04 (E15)	05:01	06:01	07:03	08:05	08:50
	16:28	17:37	18:36	20:41	21:40	22:10	1 05:05 (E15)	21:43	20:35	19:12	17:55	15:53
25	08:27	07:21	06:08	05:47	04:45	04:27	05:04 (E15)	05:03	06:03	07:05	08:07	08:50
	16:30	17:39	18:38	20:43	21:42	22:10	1 05:05 (E15)	21:41	20:32	19:10	16:52	15:52
26	08:25	07:18	06:05	05:45	04:44	04:27	05:05	06:05	07:07	08:09	09:11	08:50
	16:32	17:41	18:41	20:45	21:43	22:10	21:39	20:29	19:07	16:50	15:51	15:42
27	08:24	07:16	06:02	05:42	04:43	04:28	05:07	06:07	07:09	08:11	09:13	08:51
	16:34	17:43	18:43	20:47	21:45	22:10	21:37	20:27	19:04	16:48	15:50	15:43
28	08:22	07:13	06:00	05:40	04:41	04:28	05:08	06:09	07:11	08:13	09:15	08:51
	16:37	17:45	18:45	20:49	21:46	22:10	21:36	20:24	19:02	16:45	15:48	15:44
29	08:20		06:57	05:37	04:40	04:29	05:10	06:11	07:13	08:15	09:17	08:51
	16:39		19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	15:45
30	08:18		06:54	05:35	04:38	04:30	05:12	06:13	07:15	08:17	09:19	08:51
	16:41		19:49	20:53	21:49	22:09	21:32	20:19	18:56	16:41	15:46	15:46
31	08:17		06:51		04:37		05:14	06:15		07:20		08:51
	16:43		19:51		21:51		21:30	20:17		16:38		15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case							8					
Sun reduction							0.56					
Oper. time red.							0.96					
Wind dir. red.							0.66					
Total reduction							0.35					
Total, real							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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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 20:54	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 16:33	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	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	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	04:33 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	06:32 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	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	05:14 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	04:40 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	07:51 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	06:36 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 20:52	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	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 16:21	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	08:01 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 15:54	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	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	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	06:04 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	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 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 15:46
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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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		09:49 (E13)	08:15	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23	08:24	09:35 (E13)
	15:48	30	10:19 (E13)	16:45	17:48	19:53	20:55	21:53	22:09	21:28	20:14	18:54	16:36	15:45	32
2	08:51		09:50 (E13)	08:13	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26	09:35 (E13)
	15:49	30	10:20 (E13)	16:47	17:50	19:55	20:58	21:54	22:09	21:26	20:11	18:51	16:34	15:44	32
3	08:50		09:50 (E13)	08:11	07:06	06:43	05:28	04:34	04:32	05:19	06:21	07:21	07:27	08:28	09:36 (E13)
	15:51	30	10:20 (E13)	16:50	17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:32	15:43	32
4	08:50		09:50 (E13)	08:09	07:03	06:41	05:26	04:33	04:33	05:21	06:23	07:23	07:29	08:29	09:36 (E13)
	15:52	30	10:20 (E13)	16:52	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:46	16:29	15:42	31
5	08:49		09:51 (E13)	08:07	07:01	06:38	05:23	04:32	04:34	05:23	06:25	07:25	07:31	08:31	09:36 (E13)
	15:53	31	10:22 (E13)	16:54	17:56	20:01	21:04	21:58	22:07	21:20	20:03	18:43	16:27	15:42	31
6	08:49		09:51 (E13)	08:05	06:58	06:35	05:21	04:31	04:35	05:25	06:27	07:27	07:33	08:32	09:37 (E13)
	15:55	31	10:22 (E13)	16:56	17:58	20:03	21:06	21:59	22:06	21:17	20:01	18:40	16:25	15:41	31
7	08:48		09:51 (E13)	08:03	06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:30	07:36	08:34	09:37 (E13)
	15:56	31	10:22 (E13)	16:59	18:01	20:05	21:08	22:00	22:05	21:15	19:58	18:38	16:23	15:40	31
8	08:48		09:52 (E13)	08:01	06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:32	07:38	08:35	09:38 (E13)
	15:58	31	10:23 (E13)	17:01	18:03	20:08	21:10	22:01	22:04	21:13	19:55	18:35	16:21	15:40	30
9	08:47		09:52 (E13)	07:58	06:50	06:28	05:15	04:28	04:38	05:31	06:33	07:34	07:40	08:37	09:38 (E13)
	15:59	31	10:23 (E13)	17:03	18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:32	16:19	15:39	30
10	08:46		09:52 (E13)	07:56	06:47	06:25	05:13	04:28	04:39	05:33	06:35	07:36	07:42	08:38	09:39 (E13)
	16:01	32	10:24 (E13)	17:05	18:07	20:12	21:14	22:03	22:02	21:08	19:50	18:30	16:17	15:39	30
11	08:45		09:53 (E13)	07:54	06:45	06:22	05:11	04:27	04:41	05:35	06:37	07:38	07:44	08:39	09:40 (E13)
	16:03	32	10:25 (E13)	17:08	18:09	20:14	21:16	22:04	22:01	21:06	19:47	18:27	16:15	15:38	29
12	08:44		09:53 (E13)	07:52	06:42	06:20	05:08	04:27	04:42	05:37	06:39	07:40	07:46	08:40	09:41 (E13)
	16:04	32	10:25 (E13)	17:10	18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:25	16:13	15:38	29
13	08:43		09:53 (E13)	07:50	06:40	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:49	08:42	09:41 (E13)
	16:06	32	10:25 (E13)	17:12	18:13	20:18	21:20	22:06	21:59	21:02	19:42	18:22	16:11	15:38	29
14	08:42		09:54 (E13)	07:47	06:37	06:15	05:04	04:26	04:45	05:41	06:43	07:44	07:51	08:38	09:42 (E13)
	16:08	32	10:26 (E13)	17:14	18:15	20:20	21:22	22:07	21:58	20:59	19:39	18:20	16:09	15:38	28
15	08:41		09:55 (E13)	07:45	06:34	06:12	05:03	04:26	04:46	05:43	06:45	07:46	07:53	08:36	09:44 (E13)
	16:10	31	10:26 (E13)	17:17	18:18	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:08	15:38	28
16	08:40		09:54 (E13)	07:43	06:32	06:09	05:01	04:25	04:48	05:45	06:47	07:48	07:55	08:36	09:43 (E13)
	16:12	32	10:26 (E13)	17:19	18:20	20:24	21:26	22:08	21:55	20:54	19:34	18:14	16:06	15:38	28
17	08:39		09:55 (E13)	07:40	06:29	06:07	04:59	04:25	04:49	05:47	06:49	07:50	07:57	08:35	09:43 (E13)
	16:14	32	10:27 (E13)	17:21	18:22	20:26	21:27	22:09	21:54	20:52	19:31	18:12	16:04	15:38	28
18	08:38		09:56 (E13)	07:38	06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:52	07:59	08:34	09:44 (E13)
	16:16	30	10:26 (E13)	17:23	18:24	20:28	21:29	22:09	21:52	20:50	19:29	18:09	16:02	15:38	28
19	08:36		09:56 (E13)	07:36	06:24	06:02	04:55	04:25	04:52	05:51	06:53	07:55	08:01	08:34	09:45 (E13)
	16:18	30	10:26 (E13)	17:26	18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:01	15:38	27
20	08:35		09:57 (E13)	07:33	06:21	05:59	04:53	04:25	04:54	05:53	06:55	07:57	08:03	08:33	09:45 (E13)
	16:20	30	10:27 (E13)	17:28	18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:04	15:59	15:39	27
21	08:33		09:58 (E13)	07:31	06:18	05:57	04:52	04:25	04:56	05:55	06:57	07:59	08:05	08:33	09:46 (E13)
	16:22	28	10:26 (E13)	17:30	18:30	20:35	21:35	22:10	21:48	20:42	19:20	18:02	15:58	15:39	27
22	08:32		09:58 (E13)	07:28	06:16	05:54	04:50	04:25	04:57	05:57	06:59	08:01	08:07	08:33	09:46 (E13)
	16:24	28	10:26 (E13)	17:32	18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56	15:39	27
23	08:30		09:59 (E13)	07:26	06:13	05:52	04:48	04:26	04:59	05:59	07:01	08:03	08:09	08:33	09:47 (E13)
	16:26	26	10:25 (E13)	17:34	18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:55	15:39	27
24	08:29		10:01 (E13)	07:23	06:10	05:49	04:47	04:26	05:01	06:01	07:03	08:05	08:11	08:33	09:47 (E13)
	16:28	25	10:26 (E13)	17:37	18:36	20:41	21:40	22:10	21:43	20:35	19:12	17:55	15:53	15:39	27
25	08:27		10:02 (E13)	07:21	06:07	05:47	04:45	04:26	05:03	06:03	07:05	08:07	08:13	08:33	09:47 (E13)
	16:30	23	10:25 (E13)	17:39	18:38	20:43	21:42	22:10	21:41	20:32	19:10	17:52	15:52	15:39	27
26	08:26		10:03 (E13)	07:18	06:05	05:44	04:44	04:27	05:04	06:05	07:07	08:09	08:15	08:34	09:47 (E13)
	16:32	21	10:24 (E13)	17:41	18:41	20:45	21:43	22:10	21:39	20:30	19:07	17:50	15:51	15:39	27
27	08:24		10:04 (E13)	07:16	06:02	05:42	04:42	04:27	05:06	06:07	07:09	08:12	08:17	08:34	09:48 (E13)
	16:34	19	10:23 (E13)	17:43	18:43	20:47	21:45	22:10	21:38	20:27	19:04	17:47	15:49	15:39	27
28	08:22		10:07 (E13)	07:13	05:59	05:40	04:41	04:28	05:08	06:09	07:11	08:14	08:19	08:34	09:48 (E13)
	16:36	14	10:21 (E13)	17:45	18:45	20:49	21:47	22:10	21:36	20:24	19:02	17:45	15:48	15:39	27
29	08:20		10:10 (E13)		06:57	05:37	04:40	04:29	05:10	06:11	07:13	08:16	08:21	08:34	09:48 (E13)
	16:39	8	10:18 (E13)		19:47	20:51	21:48	22:10	21:34	20:22	18:59	17:43	15:47	15:39	29
30	08:19				06:54	05:35	04:38	04:29	05:12	06:13	07:15	08:18	08:22	08:34	09:49 (E13)
	16:41				19:49	20:53	21:50	22:09	21:32	20:19	18:56	17:41	15:46	15:39	29
31	08:17				06:51		04:37		05:14	06:15		07:20	08:24	08:51	09:50 (E13)
	16:43				19:51		21:51		21:30	20:17		16:38	15:47	15:47	28
Potential sun hours	235			266	366	426	508	529	529	469	385	324	247	216	
Total, worst case		812											473		895
Sun reduction		0.13											0.08		0.07
Oper. time red.		0.96											0.96		0.96
Wind dir. red.		0.61											0.61		0.61
Total reduction		0.08											0.05		0.04
Total, real		64											23		37

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	20	07:46 (E14) 08:06 (E14)	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	06:19 20:11		07:19 18:51	17	07:48 (E14) 08:05 (E14)	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	13	07:50 (E14) 08:03 (E14)	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	9	07:52 (E14) 08:01 (E14)	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	3	07:54 (E14) 07:57 (E14)	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	05:25 21:17	06:27 20:01		07:28 18:40		07:58 (E14)	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		07:59 (E14)	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		07:54 (E14)	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	6	07:16 (E14) 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		07:55 (E14)	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	11	07:13 (E14) 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		07:56 (E14)	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	15	07:10 (E14) 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		07:57 (E14)	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	19	07:08 (E14) 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		07:58 (E14)	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	22	07:05 (E14) 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		07:59 (E14)	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	25	07:02 (E14) 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		08:00 (E14)	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	26	07:02 (E14) 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		08:01 (E14)	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	26	07:01 (E14) 20:24	06:09 21:26	05:01 22:08	04:26 21:55	05:45 20:54	06:47 19:34		07:48 18:15		08:02 (E14)	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	27	07:00 (E14) 20:26	06:07 21:27	04:59 22:08	04:25 21:54	05:49 20:52	06:49 19:31		07:50 18:12		08:03 (E14)	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	26	07:00 (E14) 20:28	06:04 21:29	04:57 22:09	04:25 21:52	05:49 20:50	06:51 19:29		07:53 18:09		08:04 (E14)	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	25	07:01 (E14) 20:31	06:02 21:31	04:55 22:09	04:25 21:51	05:51 20:47	06:53 19:26	8	07:55 (E14) 08:03 (E14)		08:05 (E14)	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	23	07:01 (E14) 20:33	05:59 21:33	04:54 22:10	04:25 21:49	05:53 20:45	06:55 19:23	15	07:56 (E14) 08:06 (E14)		08:06 (E14)	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	22	07:01 (E14) 20:35	05:57 21:35	04:52 22:10	04:25 21:48	05:55 20:42	06:57 19:21	18	07:57 (E14) 08:07 (E14)		08:07 (E14)	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	19	07:03 (E14) 20:37	05:54 21:37	04:50 22:10	04:26 21:46	05:57 20:40	06:59 19:18	21	07:58 (E14) 08:08 (E14)		08:08 (E14)	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	16	07:04 (E14) 20:39	05:52 21:38	04:48 22:10	04:26 21:45	05:59 20:37	07:01 19:15	23	07:59 (E14) 08:09 (E14)		08:09 (E14)	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	10	07:06 (E14) 20:41	05:49 21:40	04:47 22:10	05:01 21:43	06:01 20:35	07:03 19:12	24	08:00 (E14) 07:44 (E14)		08:10 (E14)	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		07:16 (E14) 20:43	05:47 21:42	04:45 22:10	05:03 21:41	06:03 20:32	07:05 19:10	25	08:01 (E14) 07:44 (E14)		08:11 (E14)	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41		06:08 (E14) 20:45	05:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	26	08:02 (E14) 07:43 (E14)		08:12 (E14)	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43		06:09 (E14) 20:47	05:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	26	08:03 (E14) 07:43 (E14)		08:13 (E14)	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45		06:10 (E14) 20:49	05:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	26	08:04 (E14) 07:42 (E14)		08:14 (E14)	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47		06:11 (E14) 20:51	05:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	26	08:05 (E14) 07:44 (E14)		08:15 (E14)	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49		06:12 (E14) 20:53	05:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	23	08:06 (E14) 08:07 (E14)		08:16 (E14)	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		06:13 (E14) 21:51	04:37 21:51		05:14 21:30	06:15 20:17			07:20 16:38		08:17 (E14)	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				318							261		62			
Sun reduction				0.41							0.43		0.26			
Oper. time red.				0.96							0.96		0.96			
Wind dir. red.				0.63							0.63		0.63			
Total reduction				0.25							0.26		0.16			
Total, real				79							67		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)
	Minutes with flicker		

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	05:35 (E12) 20:30 (E16)	04:30 22:09	20:04 (E16) 21:28	05:16 20:52 (E15)	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	05:36 (E12) 20:31 (E16)	04:31 22:08	20:04 (E16) 21:26	05:18 20:51 (E15)	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	05:37 (E12) 20:32 (E16)	04:32 22:08	20:04 (E16) 21:23	05:19 20:49 (E15)	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	05:37 (E12) 20:33 (E16)	04:33 22:07	20:04 (E16) 21:21	05:21 20:48 (E15)	06:23 20:06 (E16)	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	04:32 21:58	05:39 (E12) 20:31 (E15)	04:34 22:06	05:48 (E12) 20:45 (E15)	05:23 20:51 (E15)	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	05:40 (E12) 20:29 (E16)	04:35 22:06	05:47 (E12) 20:35 (E16)	05:25 21:17	06:27 20:43 (E15)	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 21:57	05:41 (E12) 20:29 (E16)	04:36 22:05	05:46 (E12) 20:36 (E16)	05:27 21:15	06:29 20:41 (E15)	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	05:43 (E12) 20:29 (E16)	04:37 22:04	05:45 (E12) 20:36 (E16)	05:29 21:13	06:31 20:31 (E16)	07:31 18:35	07:38 16:21	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	04:29 22:02	05:45 (E12) 20:29 (E16)	04:38 22:03	05:45 (E12) 20:37 (E16)	05:31 21:10	06:33 20:29 (E16)	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	05:46 (E12) 20:29 (E16)	04:39 22:02	05:44 (E12) 20:37 (E16)	05:33 21:08	06:35 20:25 (E16)	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	05:10 21:15	04:27 22:04	05:47 (E12) 20:28 (E16)	04:41 22:01	05:43 (E12) 20:37 (E16)	05:35 21:06	06:37 20:47	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	05:08 21:17	04:27 22:05	05:38 (E12) 20:29 (E16)	04:42 22:00	05:44 (E12) 20:38 (E16)	05:37 21:04	06:39 20:45	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	05:06 21:19	04:26 22:06	05:36 (E12) 20:29 (E16)	04:43 21:59	05:43 (E12) 20:43 (E15)	05:39 21:01	06:41 20:43	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	05:35 (E12) 20:29 (E16)	04:45 21:58	05:42 (E12) 20:45 (E15)	05:41 20:59	06:43 20:39	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	05:33 (E12) 20:28 (E16)	04:46 21:56	05:42 (E12) 20:46 (E15)	05:43 20:57	06:45 20:37	07:46 18:17	07:53 16:08	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:01 21:25	04:25 22:08	05:31 (E12) 20:28 (E16)	04:48 21:55	05:42 (E12) 20:48 (E15)	05:45 20:54	06:47 20:34	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	05:32 (E12) 20:43 (E15)	04:49 21:54	05:41 (E12) 20:48 (E15)	05:47 20:52	06:49 20:31	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	05:31 (E12) 20:42 (E15)	04:51 21:52	05:42 (E12) 20:49 (E15)	05:49 20:49	06:51 20:28	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	05:31 (E12) 20:42 (E15)	04:52 21:51	05:41 (E12) 20:50 (E15)	05:51 20:47	06:53 20:26	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	05:31 (E12) 20:42 (E15)	04:54 21:49	05:42 (E12) 20:51 (E15)	05:53 20:44	06:55 20:23	07:56 18:04	08:03 15:59	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	04:25 22:10	05:31 (E12) 20:41 (E15)	04:56 21:48	05:41 (E12) 20:51 (E15)	05:55 20:42	06:57 20:20	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	05:31 (E12) 20:41 (E15)	04:57 21:46	05:41 (E12) 20:52 (E15)	05:57 20:39	06:59 20:18	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	04:26 22:10	05:32 (E12) 20:41 (E15)	04:59 21:44	05:41 (E12) 20:52 (E15)	05:59 20:37	07:01 20:15	08:03 17:57	08:09 15:55	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	04:26 22:10	05:31 (E12) 20:40 (E15)	05:01 21:43	05:41 (E12) 20:52 (E15)	06:01 20:34	07:03 20:12	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	04:26 22:10	05:32 (E12) 20:40 (E15)	05:03 21:41	05:41 (E12) 20:52 (E15)	06:03 20:32	07:05 20:07	08:07 17:52	08:13 15:52	08:51 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	05:33 (E12) 20:40 (E15)	05:04 21:39	05:42 (E12) 20:53 (E15)	06:05 20:29	07:07 20:07	08:09 17:51	08:15 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	04:27 22:10	05:32 (E12) 20:38 (E15)	05:06 21:37	05:42 (E12) 20:53 (E15)	06:07 20:27	07:09 20:04	08:11 17:47	08:17 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	04:28 22:10	05:33 (E12) 20:38 (E15)	05:08 21:35	05:42 (E12) 20:52 (E15)	06:09 20:24	07:11 20:01	08:14 17:45	08:19 15:44	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47	05:37 20:51	04:40 21:48	04:29 22:09	05:34 (E12) 20:37 (E15)	05:10 21:33	05:44 (E12) 20:53 (E15)	06:11 20:22	07:13 20:00	08:16 17:43	08:20 15:45	08:51 15:45
30	08:18 16:41	07:04 17:54	05:54 18:54	05:35 20:53	04:38 21:49	04:29 22:09	05:34 (E12) 20:36 (E15)	05:12 21:32	05:46 (E12) 20:53 (E15)	06:13 20:19	07:15 20:00	08:18 17:40	08:22 15:46	08:51 15:46
31	08:16 16:43	07:02 17:51	05:51 18:51	05:32 20:51	04:37 21:51	04:28 22:09	05:35 (E12) 20:34 (E15)	05:14 21:30	05:48 (E12) 20:53 (E15)	06:15 20:16	07:20 20:00	08:19 17:38	08:21 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216		
Total, worst case					1705		958	1809	361					
Sun reduction					0.57		0.56	0.49	0.50					
Oper. time red.					0.96		0.96	0.96	0.96					
Wind dir. red.					0.64		0.63	0.64	0.63					
Total reduction					0.35		0.34	0.30	0.30					
Total, real					592		324	546	109					

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:24 (E7)
	15:48	16:45	17:47	19:53	20:55	39 07:03 (E7)
2	08:50	08:13	07:08	06:46	05:30	06:24 (E7)
	15:49	16:47	17:50	19:55	20:57	39 07:03 (E7)
3	08:50	08:11	07:06	06:43	05:28	06:24 (E7)
	15:51	16:50	17:52	19:57	21:00	39 07:03 (E7)
4	08:50	08:09	07:03	06:41	05:26	06:24 (E7)
	15:52	16:52	17:54	19:59	21:02	38 07:02 (E7)
5	08:49	08:07	07:00	06:38	05:23	06:25 (E7)
	15:53	16:54	17:56	20:01	21:04	37 07:02 (E7)
6	08:49	08:05	06:58	06:35	05:21	06:25 (E7)
	15:55	16:56	17:58	20:03	21:06	37 07:02 (E7)
7	08:48	08:03	06:55	06:33	05:19	06:25 (E7)
	15:56	16:59	18:00	20:05	21:08	36 07:01 (E7)
8	08:48	08:00	06:53	06:30	05:17	06:25 (E7)
	15:58	17:01	18:03	20:08	21:10	36 07:01 (E7)
9	08:47	07:58	06:50	06:27	05:15	06:26 (E7)
	15:59	17:03	18:05	20:10	21:12	34 07:00 (E7)
10	08:46	07:56	06:47	06:25	05:13	06:26 (E7)
	16:01	17:05	18:07	20:12	21:14	33 06:59 (E7)
11	08:45	07:54	06:45	06:22	05:10	06:27 (E7)
	16:03	17:08	18:09	20:14	21:16	31 06:58 (E7)
12	08:44	07:52	06:42	06:20	05:08	06:27 (E7)
	16:04	17:10	18:11	20:16	21:18	30 06:57 (E7)
13	08:43	07:49	06:39	06:17	05:06	06:28 (E7)
	16:06	17:12	18:13	20:18	21:20	28 06:56 (E7)
14	08:42	07:47	06:37	07:02 (E8)	05:04	06:30 (E7)
	16:08	17:14	18:15	20:20	21:22	26 06:56 (E7)
15	08:41	07:45	06:34	06:59 (E8)	05:02	06:31 (E7)
	16:10	17:17	18:17	20:22	21:24	23 06:54 (E7)
16	08:40	07:43	06:32	06:57 (E8)	05:01	06:32 (E7)
	16:12	17:19	18:20	20:24	21:25	20 06:52 (E7)
17	08:39	07:40	06:29	06:54 (E8)	04:59	06:34 (E7)
	16:14	17:21	18:22	20:26	21:27	17 06:51 (E7)
18	08:37	07:38	06:26	06:52 (E8)	06:40 (E7)	04:57
	16:16	17:23	18:24	20:28	21:29	13 06:49 (E7)
19	08:36	07:35	06:23	06:52 (E8)	06:37 (E7)	04:55
	16:18	17:25	18:26	20:30	21:31	6 06:45 (E7)
20	08:35	07:33	06:21	06:51 (E8)	06:34 (E7)	04:53
	16:20	17:28	18:28	20:33	21:33	22:10
21	08:33	07:31	06:18	06:51 (E8)	06:32 (E7)	04:52
	16:22	17:30	18:30	20:35	21:35	22:10
22	08:32	07:28	06:15	06:51 (E8)	06:31 (E7)	04:50
	16:24	17:32	18:32	20:37	21:36	22:10
23	08:30	07:26	06:13	06:51 (E8)	06:29 (E7)	04:48
	16:26	17:34	18:34	20:39	21:38	22:10
24	08:29	07:23	06:10	06:52 (E8)	06:28 (E7)	04:47
	16:28	17:37	18:36	20:41	21:40	22:10
25	08:27	07:21	06:07	06:53 (E8)	06:28 (E7)	04:45
	16:30	17:39	18:38	20:43	21:42	22:10
26	08:26	07:18	06:05	06:56 (E8)	06:26 (E7)	04:44
	16:32	17:41	18:40	20:45	21:43	22:10
27	08:24	07:16	06:02	05:42	06:26 (E7)	04:42
	16:34	17:43	18:43	20:47	21:45	22:10
28	08:22	07:13	05:59	05:39	06:26 (E7)	04:41
	16:36	17:45	18:45	20:49	21:47	22:10
29	08:20		06:57	05:37	06:25 (E7)	04:39
	16:39		19:47	20:51	21:48	22:10
30	08:18		06:54	05:35	06:24 (E7)	04:38
	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			215	394	562	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.96	0.96	0.96	
Wind dir. red.			0.64	0.65	0.65	
Total reduction			0.25	0.31	0.36	
Total, real			54	123	200	

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	06:37 (E7) 07:08 (E7)	06:17 20:14	07:17 18:54	08:24 15:45
2	04:31 22:09	05:17 21:26	06:37 (E7) 07:09 (E7)	06:19 20:11	07:19 18:51	08:26 15:44
3	04:32 22:08	05:19 21:24	06:36 (E7) 07:10 (E7)	06:21 20:09	07:21 18:48	08:28 15:43
4	04:33 22:07	05:21 21:22	06:36 (E7) 07:11 (E7)	06:23 20:06	07:23 18:46	08:29 15:42
5	04:34 22:07	05:23 21:19	06:35 (E7) 07:10 (E7)	06:25 20:03	07:25 18:43	08:31 15:42
6	04:35 22:06	05:25 21:17	06:34 (E7) 07:11 (E7)	06:27 20:01	07:27 18:40	08:32 15:41
7	04:36 22:05	05:27 21:15	06:34 (E7) 07:11 (E7)	06:29 19:58	07:29 18:38	08:34 15:40
8	04:37 22:04	05:29 21:13	06:34 (E7) 07:12 (E7)	06:31 19:55	07:32 18:35	08:35 15:40
9	04:38 22:03	05:31 21:11	06:34 (E7) 07:12 (E7)	06:33 19:53	07:34 18:32	08:37 15:39
10	04:39 22:02	05:33 21:08	06:33 (E7) 07:11 (E7)	06:35 19:50	07:36 18:30	08:38 15:39
11	04:41 22:01	05:35 21:06	06:33 (E7) 07:11 (E7)	06:37 19:47	07:38 18:27	08:39 15:38
12	04:42 22:00	05:37 21:04	06:33 (E7) 07:11 (E7)	06:39 19:45	07:40 18:25	08:40 15:38
13	04:43 21:59	05:39 21:01	06:33 (E7) 07:11 (E7)	06:41 19:42	07:42 18:22	08:42 15:38
14	04:45 21:58	05:41 20:59	06:33 (E7) 07:11 (E7)	06:43 19:39	07:44 18:19	08:43 15:38
15	04:46 21:57	05:43 20:57	06:33 (E7) 07:10 (E7)	06:45 19:37	07:46 18:17	08:44 15:38
16	04:48 21:55	05:45 20:54	06:34 (E7) 07:10 (E7)	06:47 19:34	07:48 18:14	08:45 15:38
17	04:49 21:54	05:47 20:52	06:33 (E7) 07:08 (E7)	06:49 19:31	07:50 18:12	08:46 15:38
18	04:51 21:52	05:49 20:50	06:34 (E7) 07:08 (E7)	06:51 19:29	07:52 18:09	08:46 15:38
19	04:52 21:51	05:51 20:47	06:34 (E7) 07:07 (E7)	06:53 19:26	07:55 18:07	08:47 15:38
20	04:54 21:49	05:53 20:45	06:35 (E7) 07:06 (E7)	06:55 19:23	07:57 18:04	08:48 15:38
21	04:56 21:48	05:55 20:42	06:36 (E7) 07:05 (E7)	06:57 19:20	07:59 18:02	08:48 15:39
22	04:57 21:46	05:57 20:40	06:37 (E7) 07:03 (E7)	06:59 19:18	08:01 17:59	08:49 15:39
23	04:59 21:45	05:59 20:37	06:39 (E7) 07:01 (E7)	07:01 19:15	08:03 17:57	08:50 15:40
24	05:01 21:43	06:01 20:35	06:41 (E7) 06:59 (E7)	07:03 19:12	08:05 17:55	08:51 15:40
25	05:03 21:41	06:03 20:32	06:44 (E7) 06:55 (E7)	07:05 19:10	08:07 17:52	08:53 15:41
26	05:04 21:39	06:05 20:29	07:07 19:07	07:10 19:07	08:10 17:50	08:55 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	07:12 19:04	08:12 17:47	08:57 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:14 19:02	08:14 17:45	08:59 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 19:00	08:16 17:43	09:01 15:44
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 19:00	08:18 17:41	09:03 15:45
31	05:14 21:30	06:15 20:17			08:20 17:38	09:05 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case	144	819	222			238
Sun reduction	0.49	0.50	0.43			0.07
Oper. time red.	0.96	0.96	0.96			0.96
Wind dir. red.	0.65	0.65	0.64			0.63
Total reduction	0.31	0.31	0.26			0.04
Total, real	44	256	58			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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 22:07	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 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	07:58 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 17:05	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
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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	04:53 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	08:33 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 17:34	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 19:12	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
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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
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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			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												
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:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Arsmeniki (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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
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Total reduction												
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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:

25/06/2024 18:19/4.0.540

SHADOW - Calendar

Shadow receptor: Arsmeniek (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
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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	24	17:53 (E1)	07:22	08:24
	15:48	16:45	17:47		19:53	20:55	21:52	22:09	21:27	20:14		18:53		18:17 (E1)	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		17:53 (E1)	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	18:17 (E1)	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		17:53 (E1)	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	18:16 (E1)	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		17:55 (E1)	07:29	08:29
	15:51	16:51	17:54		19:59	21:01	21:56	22:07	21:21	20:06		18:45	20	18:15 (E1)	16:29	15:42
5	08:49	08:06	07:00		06:38	05:23	04:31	04:33	05:23	06:25		07:25		17:56 (E1)	07:31	08:30
	15:53	16:54	17:56		20:01	21:03	21:58	22:06	21:19	20:03		18:42	16	18:12 (E1)	16:27	15:41
6	08:48	08:04	06:57		06:35	05:21	04:30	04:34	05:25	06:27		07:27		17:57 (E1)	07:33	08:32
	15:54	16:56	17:58		20:03	21:05	21:59	22:06	21:17	20:00		18:40	12	18:09 (E1)	16:25	15:40
7	08:48	08:02	06:55		17:22 (E1)	06:32	05:18	04:29	04:35	05:27	06:29	07:29		18:00 (E1)	07:35	08:33
	15:56	16:58	18:00	10	17:32 (E1)	20:05	21:07	22:00	22:05	21:15	19:58	18:37	6	18:06 (E1)	16:23	15:40
8	08:47	08:00	06:52		17:19 (E1)	06:30	05:16	04:29	04:36	05:29	06:31	07:31			07:37	08:35
	15:57	17:00	18:02	15	17:34 (E1)	20:07	21:09	22:01	22:04	21:13	19:55	18:35			16:20	15:39
9	08:46	07:58	06:50		17:17 (E1)	06:27	05:14	04:28	04:37	05:31	06:33	07:33			07:40	08:36
	15:59	17:03	18:04	19	17:36 (E1)	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		17:17 (E1)	06:24	05:12	04:27	04:39	05:33	06:35	07:35			07:42	08:38
	16:00	17:05	18:06	21	17:38 (E1)	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		17:15 (E1)	06:22	05:10	04:27	04:40	05:35	06:37	07:37			07:44	08:39
	16:02	17:07	18:09	23	17:38 (E1)	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		17:14 (E1)	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	17:38 (E1)	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		17:13 (E1)	06:17	05:06	04:26	04:43	05:39	06:41	07:41			07:48	08:41
	16:06	17:12	18:13	25	17:38 (E1)	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		17:14 (E1)	06:14	05:04	04:25	04:44	05:41	06:43	07:44			07:50	08:42
	16:07	17:14	18:15	25	17:39 (E1)	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		17:13 (E1)	06:11	05:02	04:25	04:46	05:43	06:45	07:46			07:52	08:43
	16:09	17:16	18:17	25	17:38 (E1)	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		17:13 (E1)	06:09	05:00	04:25	04:47	05:45	06:47	07:48			07:55	08:44
	16:11	17:18	18:19	24	17:37 (E1)	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		17:14 (E1)	06:06	04:58	04:25	04:49	05:47	06:49	07:50			07:57	08:45
	16:13	17:21	18:21	23	17:37 (E1)	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		17:14 (E1)	06:04	04:56	04:25	04:50	05:49	06:51	07:52			07:59	08:46
	16:15	17:23	18:23	22	17:36 (E1)	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		17:14 (E1)	06:01	04:55	04:25	04:52	05:51	06:53	07:54			08:01	08:47
	16:17	17:25	18:25	20	17:34 (E1)	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		17:16 (E1)	05:59	04:53	04:25	04:54	05:53	06:55	07:56			08:03	08:48
	16:19	17:27	18:28	17	17:33 (E1)	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		17:18 (E1)	05:56	04:51	04:25	04:55	05:55	06:57	07:58			08:05	08:48
	16:21	17:29	18:30	12	17:30 (E1)	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		18:04 (E1)	08:01		08:07	08:49
	16:23	17:32	18:32		20:36	21:36	22:10	21:46	20:39	19:17	10	18:14 (E1)	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		18:01 (E1)	08:03		08:09	08:49
	16:25	17:34	18:34		20:38	21:38	22:10	21:44	20:37	19:15	15	18:16 (E1)	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		17:59 (E1)	08:05		08:11	08:50
	16:27	17:36	18:36		20:40	21:40	22:10	21:43	20:34	19:12	18	18:17 (E1)	17:54		15:53	15:40
25	08:27	07:20	06:07		05:46	04:45	04:26	05:02	06:03	07:05		17:57 (E1)	07:07		08:13	08:50
	16:29	17:38	18:38		20:43	21:41	22:10	21:41	20:32	19:09	21	18:18 (E1)	16:52		15:51	15:41
26	08:25	07:18	06:04		05:44	04:43	04:26	05:04	06:05	07:07		17:56 (E1)	07:09		08:15	08:50
	16:32	17:40	18:40		20:45	21:43	22:10	21:39	20:29	19:07	23	18:19 (E1)	16:49		15:50	15:41
27	08:23	07:15	06:02		05:41	04:42	04:27	05:06	06:07	07:09		17:55 (E1)	07:11		08:17	08:50
	16:34	17:43	18:42		20:47	21:45	22:10	21:37	20:27	19:04	24	18:19 (E1)	16:47		15:49	15:42
28	08:22	07:13	05:59		05:39	04:40	04:27	05:08	06:09	07:11		17:54 (E1)	07:13		08:18	08:51
	16:36	17:45	18:44		20:49	21:46	22:10	21:35	20:24	19:01	25	18:19 (E1)	16:45		15:48	15:43
29	08:20		06:56		05:37	04:39	04:28	05:09	06:11	07:13		17:53 (E1)	07:16		08:20	08:51
	16:38		19:46		20:51	21:48	22:09	21:33	20:21	18:58	25	18:18 (E1)	16:42		15:47	15:44
30	08:18		06:54		05:34	04:38	04:29	05:11	06:13	07:15		17:53 (E1)	07:18		08:22	08:51
	16:40		19:48		20:53	21:49	22:09	21:31	20:19	18:56	25	18:18 (E1)	16:40		15:45	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	186	324	125		247	216
Total, worst case				305							0.43		0.26			
Sun reduction				0.41							0.43		0.26			
Oper. time red.				0.96							0.96		0.96			
Wind dir. red.				0.65							0.65		0.65			
Total reduction				0.26							0.27		0.16			
Total, real				79							50		20			

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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)

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	January	February	March	April	May	June
1	08:51	08:15	07:11	07:41 (E14)	06:49	05:33
	15:48	16:45	17:48	28 08:09 (E14)	19:53	20:55
2	08:51	08:13	07:08	07:40 (E14)	06:46	05:30
	15:50	16:48	17:50	28 08:08 (E14)	19:55	20:58
3	08:50	08:11	07:06	07:41 (E14)	06:44	05:28
	15:51	16:50	17:52	28 08:09 (E14)	19:57	21:00
4	08:50	08:09	07:03	07:41 (E14)	06:41	05:26
	15:52	16:52	17:54	27 08:08 (E14)	19:59	21:02
5	08:49	08:07	07:01	07:41 (E14)	06:38	05:24
	15:54	16:54	17:56	26 08:07 (E14)	20:01	21:04
6	08:49	08:05	06:58	07:42 (E14)	06:36	05:21
	15:55	16:57	17:58	24 08:06 (E14)	20:03	21:06
7	08:48	08:03	06:55	07:42 (E14)	06:33	05:19
	15:56	16:59	18:01	23 08:05 (E14)	20:06	06:59 (E13)
8	08:48	08:01	06:53	07:43 (E14)	06:30	06:56 (E13)
	15:58	17:01	18:03	20 08:03 (E14)	20:08	07:01 (E13)
9	08:47	07:58	06:50	07:45 (E14)	06:28	06:53 (E13)
	16:00	17:03	18:05	17 08:02 (E14)	20:10	07:02 (E13)
10	08:46	07:56	06:48	07:47 (E14)	06:25	06:50 (E13)
	16:01	17:05	18:07	12 07:59 (E14)	20:12	07:02 (E13)
11	08:45	07:54	06:45	06:22	06:48 (E13)	05:11
	16:03	17:08	18:09	20:14	15 07:03 (E13)	21:16
12	08:44	07:52	06:42	06:20	06:45 (E13)	05:09
	16:05	17:10	18:11	20:16	17 07:02 (E13)	21:18
13	08:43	07:50	06:40	06:17	06:43 (E13)	05:07
	16:06	17:12	18:13	20:18	20 07:03 (E13)	21:20
14	08:42	07:47	06:37	06:15	06:41 (E13)	05:05
	16:08	17:14	18:15	20:20	21 07:02 (E13)	21:22
15	08:41	07:45	06:34	06:12	06:42 (E13)	05:03
	16:10	17:17	18:18	20:22	20 07:02 (E13)	21:24
16	08:40	07:43	06:32	06:09	06:42 (E13)	05:01
	16:12	17:19	18:20	20:24	18 07:00 (E13)	21:26
17	08:39	07:40	06:29	06:07	06:43 (E13)	04:59
	16:14	17:21	18:22	20:26	17 07:00 (E13)	21:27
18	08:38	07:38	06:26	06:04	06:43 (E13)	04:57
	16:16	17:23	18:24	20:28	15 06:58 (E13)	21:29
19	08:36	07:36	06:24	06:02	06:45 (E13)	04:55
	16:18	17:26	18:26	20:31	11 06:56 (E13)	21:31
20	08:35	07:33	06:21	05:59	06:49 (E13)	04:53
	16:20	17:28	18:28	20:33	4 06:53 (E13)	21:33
21	08:33	07:31	06:18	05:57	04:52	04:25
	16:22	17:30	18:30	20:35	21:35	22:10
22	08:32	07:28	07:55 (E14)	06:16	05:54	04:50
	16:24	17:32	7 08:02 (E14)	18:32	20:37	21:37
23	08:30	07:26	07:53 (E14)	06:13	05:52	04:48
	16:26	17:34	12 08:05 (E14)	18:34	20:39	21:38
24	08:29	07:23	07:50 (E14)	06:10	05:49	04:47
	16:28	17:37	16 08:06 (E14)	18:36	20:41	21:40
25	08:27	07:21	07:48 (E14)	06:08	05:47	04:45
	16:30	17:39	19 08:07 (E14)	18:39	20:43	21:42
26	08:26	07:18	07:45 (E14)	06:05	05:44	04:44
	16:32	17:41	23 08:08 (E14)	18:41	20:45	21:43
27	08:24	07:16	07:42 (E14)	06:02	05:42	04:42
	16:34	17:43	26 08:08 (E14)	18:43	20:47	21:45
28	08:22	07:13	07:42 (E14)	06:00	05:40	04:41
	16:37	17:45	27 08:09 (E14)	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			233		185	
Sun reduction			0.20		0.50	
Oper. time red.			0.96		0.96	
Wind dir. red.			0.63		0.66	
Total reduction			0.12		0.32	
Total, real			16	58		

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E13) 15 07:02 (E13)	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	06:19 20:11	06:49 (E13) 12 07:01 (E13)	07:19 18:51	07:25 16:34
3	04:32 22:08	05:20 21:24	06:21 20:09	06:51 (E13) 9 07:00 (E13)	07:21 18:48	07:27 16:32
4	04:33 22:07	05:22 21:22	06:23 20:06	06:53 (E13) 5 06:58 (E13)	07:23 18:46	07:29 16:30
5	04:34 22:07	05:24 21:20	06:25 20:04	06:55 (E13) 1 06:56 (E13)	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	19 08:40 (E14)	07:34 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	22 08:41 (E14)	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	24 08:41 (E14)	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	26 08:42 (E14)	07:40 16:19
10	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	27 08:43 (E14)	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	28 08:43 (E14)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	27 08:42 (E14)	07:46 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	28 08:42 (E14)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	27 08:41 (E14)	07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	27 08:41 (E14)	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	25 08:41 (E14)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	22 08:40 (E14)	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	18 08:38 (E14)	07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	14 08:36 (E14)	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	10 08:35 (E14)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	5 08:32 (E14)	08:05 15:58
22	04:58 21:46	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	06:52 (E13) 5 06:57 (E13)	07:01 17:57		08:09 15:55
24	05:01 21:43	06:01 20:35	06:49 (E13) 11 07:00 (E13)	07:03 17:55		08:11 15:53
25	05:03 21:41	06:03 20:32	06:47 (E13) 15 07:02 (E13)	07:05 17:52		08:13 15:52
26	05:05 21:39	06:05 20:30	06:45 (E13) 18 07:03 (E13)	07:07 17:50		08:15 15:51
27	05:06 21:38	06:07 20:27	06:44 (E13) 19 07:03 (E13)	07:09 17:48		08:17 15:50
28	05:08 21:36	06:09 20:24	06:43 (E13) 20 07:03 (E13)	07:11 17:45		08:19 15:48
29	05:10 21:34	06:11 20:22	06:42 (E13) 21 07:03 (E13)	07:13 17:43		08:21 15:47
30	05:12 21:32	06:13 20:19	06:43 (E13) 20 07:03 (E13)	07:15 17:41		08:22 15:46
31	05:14 21:30	06:15 20:17	06:45 (E13) 17 07:02 (E13)	07:20 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		146	42	373		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.66	0.66	0.63		
Total reduction		0.31	0.27	0.16		
Total, real		46	11	58		

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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 (E14)	06:49	05:33
	15:48	16:45	17:48	22 07:59 (E14)	19:53	20:55
2	08:50	08:13	07:08	07:34 (E14)	06:46	05:30
	15:50	16:48	17:50	25 07:59 (E14)	19:55	20:58
3	08:50	08:11	07:06	07:33 (E14)	06:44	05:28
	15:51	16:50	17:52	28 08:01 (E14)	19:57	21:00
4	08:50	08:09	07:03	07:32 (E14)	06:41	05:26
	15:52	16:52	17:54	29 08:01 (E14)	19:59	21:02
5	08:49	08:07	07:01	07:31 (E14)	06:38	05:24
	15:54	16:54	17:56	30 08:01 (E14)	20:01	21:04
6	08:49	08:05	06:58	07:31 (E14)	06:36	05:21
	15:55	16:57	17:58	30 08:01 (E14)	20:03	21:06
7	08:48	08:03	06:55	07:30 (E14)	06:33	05:19
	15:56	16:59	18:01	31 08:01 (E14)	20:06	21:08
8	08:48	08:01	06:53	07:30 (E14)	06:30	05:17
	15:58	17:01	18:03	30 08:00 (E14)	20:08	21:10
9	08:47	07:58	06:50	07:30 (E14)	06:28	05:15
	16:00	17:03	18:05	31 08:01 (E14)	20:10	21:12
10	08:46	07:56	06:48	07:30 (E14)	06:25	05:13
	16:01	17:05	18:07	30 08:00 (E14)	20:12	21:14
11	08:45	07:54	06:45	07:30 (E14)	06:22	05:11
	16:03	17:08	18:09	29 07:59 (E14)	20:14	21:16
12	08:44	07:52	06:42	07:31 (E14)	06:20	05:09
	16:05	17:10	18:11	27 07:58 (E14)	20:16	21:18
13	08:43	07:50	06:40	07:32 (E14)	06:17	05:07
	16:06	17:12	18:13	25 07:57 (E14)	20:18	21:20
14	08:42	07:47	06:37	07:32 (E14)	06:15	05:05
	16:08	17:14	18:15	23 07:55 (E14)	20:20	21:22
15	08:41	07:45	06:34	07:35 (E14)	06:12	05:03
	16:10	17:17	18:18	18 07:53 (E14)	20:22	21:24
16	08:40	07:43	06:32	07:36 (E14)	06:09	05:01
	16:12	17:19	18:20	14 07:50 (E14)	20:24	21:25
17	08:39	07:40	06:29	07:41 (E14)	06:07	05:00
	16:14	17:21	18:22	3 07:44 (E14)	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	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	07:45 (E14)	05:44	04:44
	16:32	17:41	18:41	8 07:53 (E14)	20:45	21:43
27	08:24	07:16	06:02	07:42 (E14)	05:42	04:42
	16:34	17:43	18:43	13 07:55 (E14)	20:47	21:45
28	08:22	07:13	06:00	07:40 (E14)	05:40	04:41
	16:37	17:45	18:45	18 07:58 (E14)	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		06:51			04:37
	16:43		19:51			21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case		39	425	228		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.62	0.62	0.65		
Total reduction		0.12	0.25	0.31		
Total, real		5	105	71		

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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	08:11 (E14)	07:23
	22:09	21:28	20:14	18:54	26 08:37 (E14)	16:36
2	04:31	05:18	06:19	07:19	08:09 (E14)	07:25
	22:09	21:26	20:11	18:51	28 08:37 (E14)	16:34
3	04:32	05:20	06:21	07:21	08:08 (E14)	07:27
	22:08	21:24	20:09	18:48	30 08:38 (E14)	16:32
4	04:33	05:22	06:23	07:23	08:08 (E14)	07:29
	22:07	21:22	20:06	18:46	30 08:38 (E14)	16:30
5	04:34	05:23	06:25	07:25	08:07 (E14)	07:31
	22:07	21:20	20:04	18:43	30 08:37 (E14)	16:27
6	04:35	05:25	06:27	07:28	08:06 (E14)	07:33
	22:06	21:17	20:01	18:40	31 08:37 (E14)	16:25
7	04:36	05:27	06:29	07:30	08:06 (E14)	07:36
	22:05	21:15	19:58	18:38	31 08:37 (E14)	16:23
8	04:37	05:29	06:31	07:32	08:06 (E14)	07:38
	22:04	21:13	19:56	18:35	30 08:36 (E14)	16:21
9	04:38	05:31	06:33	07:34	08:07 (E14)	07:40
	22:03	21:11	19:53	18:33	29 08:36 (E14)	16:19
10	04:40	05:33	06:35	07:36	08:07 (E14)	07:42
	22:02	21:08	19:50	18:30	28 08:35 (E14)	16:17
11	04:41	05:35	06:37	07:38	08:07 (E14)	07:44
	22:01	21:06	19:47	18:27	27 08:34 (E14)	16:15
12	04:42	05:37	06:39	07:40	08:09 (E14)	07:46
	22:00	21:04	19:45	18:25	24 08:33 (E14)	16:13
13	04:44	05:39	06:41	07:42	08:11 (E14)	07:49
	21:59	21:02	19:42	18:22	20 08:31 (E14)	16:11
14	04:45	05:41	06:43	07:44	08:13 (E14)	07:51
	21:58	20:59	19:39	18:20	16 08:29 (E14)	16:10
15	04:46	05:43	06:45	07:46	08:16 (E14)	07:53
	21:57	20:57	7 06:46 (E13)	18:17	11 08:27 (E14)	16:08
16	04:48	05:45	06:47	07:48	08:18 (E14)	07:55
	21:55	20:54	11 06:48 (E13)	18:15	5 08:23 (E14)	16:06
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	15 06:50 (E13)	18:12		16:04
18	04:51	05:49	06:51	07:52		07:59
	21:52	20:50	17 06:51 (E13)	18:09		16:03
19	04:53	05:51	06:53	07:55		08:01
	21:51	20:47	19 06:51 (E13)	18:07		16:01
20	04:54	05:53	06:55	07:57		08:03
	21:49	20:45	20 06:51 (E13)	18:04		15:59
21	04:56	05:55	06:57	07:59		08:05
	21:48	20:42	22 06:52 (E13)	18:02		15:58
22	04:58	05:57	06:59	08:01		08:07
	21:46	20:40	22 06:52 (E13)	18:00		15:56
23	04:59	05:59	07:01	08:03		08:09
	21:45	20:37	22 06:52 (E13)	17:57		15:55
24	05:01	06:01	07:03	08:05		08:11
	21:43	20:35	20 06:52 (E13)	17:55		15:53
25	05:03	06:03	07:05	07:07		08:13
	21:41	20:32	17 06:51 (E13)	16:52		15:52
26	05:05	06:05	07:07	07:10		08:15
	21:39	20:30	14 06:50 (E13)	16:50		15:51
27	05:06	06:07	07:09	07:12		08:17
	21:38	20:27	11 06:49 (E13)	12 08:31 (E14)		15:50
28	05:08	06:09	07:11	07:14		08:19
	21:36	20:24	8 06:47 (E13)	17 08:33 (E14)		15:48
29	05:10	06:11	07:13	07:16		08:21
	21:34	20:22	5 06:46 (E13)	18:59	21 08:35 (E14)	15:47
30	05:12	06:13	07:15	07:18		08:22
	21:32	20:19	18:56	24 08:36 (E14)		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		230	74	396		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.96	0.96	0.96		
Wind dir. red.		0.65	0.62	0.62		
Total reduction		0.31	0.26	0.16		
Total, real		72	19	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)
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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	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 15:50	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			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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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
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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
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
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Table layout: For each day in each month the following matrix apply

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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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) []

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1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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Idle start wind speed: Cut in wind speed from power curve

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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	08:50 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	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 17:59	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	07:34 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	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
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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
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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
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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	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 18:05	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 18:36	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	04:45 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 15:42
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
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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	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
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Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
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Total reduction												
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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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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
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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

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

	January	February	March	April	May	June
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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	06:43 19:57	05:28 20:59	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 21:56
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
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
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
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
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	06:47 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	04:27 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	07:49 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 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:06
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
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	07:35 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 20:32	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 21:36	04:26 22:10
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
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	06:07 18:38	05:47 20:43	04:45 21:42	04:27 22:10
26	08:25 16:32	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	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10
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
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	04:38 21:49	04:29 22:09
31	08:17 16:43		06:51 19:51		04:37 21:51	05:20 (E15) 05:51 (E15)
Potential sun hours	235	266	366	426	508	528
Total, worst case				434	207	1122
Sun reduction				0.50	0.57	0.56
Oper. time red.				0.96	0.96	0.96
Wind dir. red.				0.66	0.67	0.67
Total reduction				0.32	0.37	0.36
Total, real				137	76	405

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:

25/06/2024 18:19/4.0.540

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
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

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

	July			August			September			October			November			December		
1	04:30		05:23 (E15)	05:16			06:17		06:47 (E16)	07:17		07:22	08:24					
	22:09	38	06:01 (E15)	21:28			20:14	24	07:11 (E16)	18:54		16:36	15:45					
2	04:31		05:23 (E15)	05:18			06:19		06:49 (E16)	07:19		07:25	08:26					
	22:08	37	06:00 (E15)	21:26			20:11	20	07:09 (E16)	18:51		16:34	15:44					
3	04:32		05:23 (E15)	05:20			06:21		06:51 (E16)	07:21		07:27	08:27					
	22:08	38	06:01 (E15)	21:24			20:09	17	07:08 (E16)	18:48		16:32	15:43					
4	04:33		05:24 (E15)	05:22			06:23		06:53 (E16)	07:23		07:29	08:29					
	22:07	37	06:01 (E15)	21:22			20:06	12	07:05 (E16)	18:46		16:29	15:43					
5	04:34		05:25 (E15)	05:23			06:25		06:55 (E16)	07:25		07:31	08:31					
	22:07	36	06:01 (E15)	21:19			20:03	6	07:01 (E16)	18:43		16:27	15:42					
6	04:35		05:25 (E15)	05:25			06:27			07:27		07:33	08:32					
	22:06	36	06:01 (E15)	21:17			20:01			18:40		16:25	15:41					
7	04:36		05:25 (E15)	05:27			06:29			07:29		07:36	08:34					
	22:05	36	06:01 (E15)	21:15			19:58			18:38		16:23	15:40					
8	04:37		05:26 (E15)	05:29			06:31			07:32		07:38	08:35					
	22:04	34	06:00 (E15)	21:13			19:55			18:35		16:21	15:40					
9	04:38		05:26 (E15)	05:31			06:33			07:34		07:40	08:36					
	22:03	34	06:00 (E15)	21:11			19:53			18:32		16:19	15:39					
10	04:40		05:27 (E15)	05:33			06:35			07:36		07:42	08:38					
	22:02	33	06:00 (E15)	21:08			19:50			18:30		16:17	15:39					
11	04:41		05:28 (E15)	05:35			06:37			07:38		07:44	08:39					
	22:01	32	06:00 (E15)	21:06			19:47			18:27		16:15	15:39					
12	04:42		05:29 (E15)	05:37			06:39			07:40		07:46	08:40					
	22:00	31	06:00 (E15)	21:04			19:45			18:25		16:13	15:38					
13	04:44		05:29 (E15)	05:39			06:41			07:42		07:48	08:41					
	21:59	30	05:59 (E15)	21:01			19:42			18:22		16:11	15:38					
14	04:45		05:30 (E15)	05:41			06:43			07:44		07:51	08:43					
	21:58	28	05:58 (E15)	20:59			19:39			18:20		16:09	15:38					
15	04:46		05:31 (E15)	05:43			06:45			07:46		07:53	08:44					
	21:56	27	05:58 (E15)	20:57			19:37			18:17		16:08	15:38					
16	04:48		05:32 (E15)	05:45			06:47			07:48		07:55	08:44					
	21:55	25	05:57 (E15)	20:54			19:34			18:14		16:06	15:38					
17	04:49		05:32 (E15)	05:47		06:58 (E16)	06:49			07:50		07:57	08:45					
	21:54	24	05:56 (E15)	20:52	11	07:09 (E16)	19:31			18:12		16:04	15:38					
18	04:51		05:34 (E15)	05:49		06:54 (E16)	06:51			07:52		07:59	08:46					
	21:52	21	05:55 (E15)	20:49	16	07:10 (E16)	19:29			18:09		16:03	15:38					
19	04:53		05:36 (E15)	05:51		06:52 (E16)	06:53			07:55		08:01	08:47					
	21:51	17	05:53 (E15)	20:47	20	07:12 (E16)	19:26			18:07		16:01	15:38					
20	04:54		05:38 (E15)	05:53		06:51 (E16)	06:55			07:57		08:03	08:48					
	21:49	14	05:52 (E15)	20:45	22	07:13 (E16)	19:23			18:04		15:59	15:39					
21	04:56		05:41 (E15)	05:55		06:50 (E16)	06:57			07:59		08:05	08:48					
	21:48	7	05:48 (E15)	20:42	24	07:14 (E16)	19:20			18:02		15:58	15:39					
22	04:58			05:57		06:49 (E16)	06:59			08:01		08:07	08:49					
	21:46			20:40	25	07:14 (E16)	19:18			18:00		15:56	15:40					
23	04:59			05:59		06:48 (E16)	07:01			08:03		08:09	08:49					
	21:44			20:37	27	07:15 (E16)	19:15			17:57		15:55	15:40					
24	05:01			06:01		06:48 (E16)	07:03			08:05		08:11	08:50					
	21:43			20:35	27	07:15 (E16)	19:12			17:55		15:53	15:41					
25	05:03			06:03		06:47 (E16)	07:05			07:07		08:13	08:50					
	21:41			20:32	28	07:15 (E16)	19:10			16:52		15:52	15:41					
26	05:05			06:05		06:47 (E16)	07:07			07:09		08:15	08:50					
	21:39			20:29	28	07:15 (E16)	19:07			16:50		15:51	15:42					
27	05:06			06:07		06:46 (E16)	07:09			07:12		08:17	08:51					
	21:37			20:27	28	07:14 (E16)	19:04			16:48		15:50	15:43					
28	05:08			06:09		06:46 (E16)	07:11			07:14		08:19	08:51					
	21:36			20:24	28	07:14 (E16)	19:02			16:45		15:48	15:44					
29	05:10			06:11		06:46 (E16)	07:13			07:16		08:21	08:51					
	21:34			20:22	27	07:13 (E16)	18:59			16:43		15:47	15:45					
30	05:12			06:13		06:46 (E16)	07:15			07:18		08:22	08:51					
	21:32			20:19	27	07:13 (E16)	18:56			16:41		15:46	15:46					
31	05:14			06:15		06:47 (E16)				07:20			08:51					
	21:30			20:17	25	07:12 (E16)				16:38			15:47					
Potential sun hours	529			469			384			324		248	216					
Total, worst case		615		363			79											
Sun reduction		0.49		0.50			0.43											
Oper. time red.		0.96		0.96			0.96											
Wind dir. red.		0.67		0.66			0.66											
Total reduction		0.32		0.31			0.27											
Total, real		196		114			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)
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