

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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	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 18:40/4.0.540

## 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
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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

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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

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

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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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 15:55	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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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)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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 17:45	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	07:26 18:43	07:31 16:27	08:31 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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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
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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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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 15:39
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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	08:33 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 18:27	05:59 20:32	04:53 21:33	04:24 22:09	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:10	04:55 21:47	05:55 20:42	06:57 19:20	07:58 18:01	08:05 15:57	08:48 15:38
22	08:31 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:49 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:00 17:59	08:07 15:55	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	05:51 20:38	04:48 21:38	04:25 22:10	04:58 21:44	05:59 20:37	07:01 19:15	08:03 17:56	08:09 15:54	08:49 15:39
24	08:28 16:27	07:23 17:36	06:10 18:36	05:49 20:40	04:46 21:40	04:25 22:10	05:00 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:29	07:20 17:38	06:07 18:38	05:46 20:42	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:51	08:50 15:41
26	08:25 16:31	07:18 17:40	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:06	07:09 16:49	08:15 15:50	08:50 15:41
27	08:23 16:34	07:15 17:43	06:02 18:42	05:41 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:26	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:07 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:09 21:33	06:11 20:21	07:13 18:58	07:16 16:42	08:20 15:46	08:51 15:44
30	08:18 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09	05:11 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:50		04:36 21:51		05:13 21:29	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

		January	February	March		April	May	June	July	August	September		October		November	December	
1	08:50	08:14	07:10			06:48	05:32	04:35	04:29	05:15	06:17		07:17		17:43 (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	26	18:09 (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		17:43 (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	25	18:08 (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		17:42 (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	26	18:08 (E1)	16:31	15:43
4	08:49	08:08	07:03		17:14 (E1)	06:40	05:25	04:32	04:32	05:21	06:23		07:23		17:43 (E1)	07:29	08:29
	15:51	16:51	17:54	10	17:24 (E1)	19:59	21:01	21:56	22:07	21:21	20:06		18:45	25	18:08 (E1)	16:29	15:42
5	08:49	08:06	07:00		17:11 (E1)	06:38	05:23	04:31	04:33	05:23	06:25		07:25		17:43 (E1)	07:31	08:30
	15:53	16:54	17:56	15	17:26 (E1)	20:01	21:03	21:58	22:06	21:19	20:03		18:42	24	18:07 (E1)	16:27	15:41
6	08:48	08:04	06:57		17:09 (E1)	06:35	05:21	04:30	04:34	05:25	06:27		07:27		17:44 (E1)	07:33	08:32
	15:54	16:56	17:58	19	17:28 (E1)	20:03	21:05	21:59	22:06	21:17	20:00		18:40	22	18:06 (E1)	16:25	15:40
7	08:48	08:02	06:55		17:08 (E1)	06:32	05:18	04:29	04:35	05:27	06:29		07:29		17:44 (E1)	07:35	08:33
	15:56	16:58	18:00	21	17:29 (E1)	20:05	21:07	22:00	22:05	21:15	19:58		18:37	20	18:04 (E1)	16:23	15:40
8	08:47	08:00	06:52		17:07 (E1)	06:30	05:16	04:29	04:36	05:29	06:31		07:31		17:45 (E1)	07:37	08:35
	15:57	17:00	18:02	23	17:30 (E1)	20:07	21:09	22:01	22:04	21:13	19:55		18:35	18	18:03 (E1)	16:20	15:39
9	08:46	07:58	06:50		17:05 (E1)	06:27	05:14	04:28	04:37	05:31	06:33		07:33		17:47 (E1)	07:40	08:36
	15:59	17:03	18:04	25	17:30 (E1)	20:09	21:11	22:02	22:03	21:10	19:52		18:32	13	18:00 (E1)	16:18	15:39
10	08:46	07:56	06:47		17:05 (E1)	06:24	05:12	04:27	04:39	05:33	06:35		07:35		17:51 (E1)	07:42	08:38
	16:00	17:05	18:06	26	17:31 (E1)	20:11	21:13	22:03	22:02	21:08	19:50		18:29	5	17:56 (E1)	16:16	15:38
11	08:45	07:54	06:44		17:05 (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	25	17:30 (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		17:04 (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	26	17:30 (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		17:04 (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	17:29 (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		17:04 (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	17:29 (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		17:05 (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	23	17:28 (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		17:05 (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	21	17:26 (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		17:07 (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	19	17:26 (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		17:08 (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	15	17:23 (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		17:10 (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	10	17:20 (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		05:59	04:53	04:25	04:25	04:54	05:53	06:55		07:56		08:03	08:48	
	16:19	17:27	18:28		20:32	21:33	22:09	21:49	20:44	19:23			18:04		15:59	15:38	
21	08:33	07:30	06:18		05:56	04:51	04:25	04:55	05:55	06:57			07:58		08:05	08:48	
	16:21	17:29	18:30		20:34	21:34	22:10	21:48	20:42	19:20			18:01		15:57	15:38	
22	08:32	07:28	06:15		05:54	04:49	04:25	04:57	05:57	06:59			08:01		08:07	08:49	
	16:23	17:32	18:32		20:36	21:36	22:10	21:46	20:39	19:17			17:59		15:56	15:39	
23	08:30	07:25	06:12		05:51	04:48	04:25	04:59	05:59	07:01			08:03		08:09	08:49	
	16:25	17:34	18:34		20:38	21:38	22:10	21:44	20:37	19:15			17:56		15:54	15:39	
24	08:28	07:23	06:10		05:49	04:46	04:25	05:00	06:01	07:03		17:55 (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	8	18:03 (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		17:51 (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	14	18:05 (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		17:49 (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	18	18:07 (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		17:47 (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	21	18:08 (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		17:46 (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	22	18:08 (E1)	16:45		15:48	15:43	
29	08:20		06:56		05:37	04:39	04:28	05:09	06:11	07:13		17:45 (E1)	07:16		08:20	08:51	
	16:38		19:46		20:51	21:48	22:09	21:33	20:21	18:58	24	18:09 (E1)	16:42		15:47	15:44	
30	08:18		06:54		05:34	04:38	04:29	05:11	06:13	07:15		17:44 (E1)	07:18		08:22	08:51	
	16:40		19:48		20:53	21:49	22:09	21:31	20:19	18:56	25	18:09 (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		324		247	216		
Total, worst case				328							132		204				
Sun reduction				0.41							0.43		0.26				
Oper. time red.				0.98							0.98		0.98				
Wind dir. red.				0.65							0.65		0.65				
Total reduction				0.26							0.27		0.17				
Total, real				86							36		34				

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 20:54	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
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 20:24	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:51 (E14) 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 15:50	08:13 16:48	07:08 17:50	07:51 (E14) 19:55	06:46 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 18:51	07:19 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	07:52 (E14) 19:57	06:44 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	07:21 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	07:53 (E14) 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	06:23 18:46	07:23 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	07:54 (E14) 19:59	06:38 21:04	05:24 21:57	04:32 22:07	04:34 21:20	05:24 20:04	06:25 18:43	07:26 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	07:56 (E14) 20:03	06:36 21:06	05:21 21:59	04:31 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:28 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	07:59 (E14) 20:06	06:33 21:08	05:19 22:00	04:30 22:05	04:36 21:15	05:27 19:58	06:29 18:38	07:30 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	07:59 (E14) 20:08	06:30 21:10	05:17 22:01	04:37 22:04	04:37 21:13	05:29 19:56	06:31 18:35	07:32 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	07:59 (E14) 20:10	06:28 21:12	05:15 22:02	04:38 22:03	04:38 21:11	05:31 19:53	06:33 18:33	07:34 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	07:59 (E14) 20:12	06:25 21:14	05:13 22:03	04:40 22:02	04:40 21:09	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	06:45 18:09	07:59 (E14) 20:14	06:22 21:16	05:11 22:04	04:41 22:01	04:41 21:06	05:35 19:48	06:37 18:27	07:38 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	07:59 (E14) 20:16	06:20 21:18	05:09 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	06:40 18:13	07:59 (E14) 20:18	06:17 21:20	05:07 22:06	04:44 21:59	04:44 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	06:37 18:16	07:59 (E14) 20:20	06:15 21:22	05:05 22:07	04:45 21:58	04:45 20:59	05:41 19:39	06:43 18:20	07:44 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	07:59 (E14) 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	06:32 18:20	07:59 (E14) 20:24	06:09 21:26	05:01 22:08	04:48 21:55	04:48 20:54	05:45 19:34	06:47 18:15	07:48 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	07:59 (E14) 20:26	06:07 21:27	04:59 22:08	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	06:26 18:24	07:59 (E14) 20:28	06:04 21:29	04:57 22:09	04:51 21:52	04:51 20:50	05:49 19:29	06:51 18:09	07:53 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	07:59 (E14) 20:30	06:02 21:31	04:55 22:09	04:53 21:51	04:53 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	06:21 18:28	07:59 (E14) 20:33	06:00 21:33	04:53 22:10	04:53 21:49	04:53 20:45	05:51 19:23	06:55 18:04	07:57 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	07:59 (E14) 20:35	06:00 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	06:16 18:32	07:59 (E14) 20:37	06:00 21:37	04:52 22:10	04:56 21:46	04:56 20:40	05:57 19:18	06:59 18:00	07:59 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	07:59 (E14) 20:39	06:00 21:38	04:52 22:10	04:56 21:45	04:56 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	06:10 18:36	07:59 (E14) 20:41	06:00 21:40	04:52 22:10	04:56 21:43	04:56 20:35	05:59 19:12	07:03 17:55	08:05 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	07:59 (E14) 20:43	06:00 21:42	04:52 22:10	04:56 21:41	04:56 20:32	05:59 19:10	07:05 17:52	08:07 15:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	07:59 (E14) 20:45	06:00 21:43	04:52 22:10	04:56 21:39	04:56 20:30	05:59 19:07	07:07 17:50	08:09 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	07:59 (E14) 20:47	06:00 21:45	04:52 22:10	04:56 21:38	04:56 20:27	05:59 19:04	07:09 17:48	08:11 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	07:59 (E14) 20:49	06:00 21:47	04:52 22:10	04:56 21:36	04:56 20:24	05:59 19:02	07:11 17:45	08:13 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47	07:59 (E14) 20:51	06:00 21:48	04:52 22:10	04:56 21:34	04:56 20:22	05:59 18:59	07:13 17:43	08:15 15:47	08:51 15:45
30	08:19 16:41	07:11 17:49	05:54 18:49	07:59 (E14) 20:53	06:00 21:50	04:52 22:09	04:56 21:32	04:56 20:19	05:59 18:56	07:15 17:41	08:17 15:46	08:51 15:46
31	08:17 16:43	07:11 17:51	05:52 18:51	07:59 (E14) 20:55	06:00 21:51	04:52 22:10	04:56 21:30	04:56 20:17	05:59 18:48	07:17 17:38	08:19 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		204	117							333		
Sun reduction		0.20	0.41							0.26		
Oper. time red.		0.98	0.98							0.98		
Wind dir. red.		0.63	0.63							0.63		
Total reduction		0.12	0.25							0.16		
Total, real		25	29							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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:49 (E14) 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 15:50	08:13 16:48	07:08 17:50	07:48 (E14) 19:55	06:46 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 18:51	07:19 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	07:50 (E14) 19:57	06:44 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	07:21 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	07:50 (E14) 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	06:23 18:46	07:23 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	07:50 (E14) 19:59	06:38 21:04	05:24 21:58	04:34 22:07	04:34 21:20	05:24 20:04	06:25 18:43	07:25 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	07:52 (E14) 19:59	06:36 21:06	05:21 21:59	04:35 22:06	04:35 21:17	05:25 20:01	06:27 18:40	07:28 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	07:54 (E14) 19:59	06:33 21:06	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	06:53 18:03	08:06 (E14) 20:06	06:30 21:08	05:17 22:01	04:37 22:04	04:37 21:13	05:29 19:56	06:31 18:35	07:32 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	08:06 (E14) 20:06	06:28 21:12	05:15 22:02	04:38 22:03	04:38 21:11	05:31 19:53	06:33 18:33	07:34 16:21	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	08:06 (E14) 20:06	06:25 21:14	05:13 22:03	04:40 22:02	04:40 21:09	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	06:45 18:09	08:06 (E14) 20:06	06:22 21:16	05:11 22:04	04:41 22:01	04:41 21:06	05:35 19:48	06:37 18:27	07:38 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	08:06 (E14) 20:06	06:20 21:18	05:09 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	06:40 18:13	08:06 (E14) 20:06	06:17 21:20	05:07 22:06	04:44 21:59	04:44 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	06:37 18:16	08:06 (E14) 20:06	06:15 21:22	05:05 22:07	04:45 21:58	04:45 20:59	05:41 19:39	06:43 18:20	07:44 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	08:06 (E14) 20:06	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	06:32 18:20	08:06 (E14) 20:06	06:09 21:26	05:01 22:08	04:48 21:55	04:48 20:54	05:45 19:34	06:47 18:15	07:48 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	08:06 (E14) 20:06	06:07 21:27	04:59 22:08	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	06:26 18:24	08:06 (E14) 20:06	06:04 21:29	04:57 22:09	04:51 21:52	04:51 20:50	05:49 19:29	06:51 18:09	07:53 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	08:06 (E14) 20:06	06:02 21:31	04:55 22:09	04:53 21:51	04:53 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	06:21 18:28	08:06 (E14) 20:06	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	06:18 18:30	08:06 (E14) 20:06	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	06:16 18:32	08:06 (E14) 20:06	05:54 21:37	04:50 22:10	04:58 21:46	04:58 20:40	05:57 19:18	06:59 18:00	08:01 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	08:06 (E14) 20:06	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	06:10 18:36	08:06 (E14) 20:06	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	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	08:06 (E14) 20:06	05:47 21:42	04:45 22:10	05:03 21:41	05:03 20:32	06:03 19:10	07:05 17:52	08:07 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	08:06 (E14) 20:06	05:45 21:43	04:44 22:10	05:05 21:39	05:05 20:30	06:05 19:07	07:07 17:50	08:09 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	08:06 (E14) 20:06	05:42 21:45	04:42 22:10	05:06 21:38	05:06 20:27	06:07 19:04	07:09 17:48	08:12 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	08:06 (E14) 20:06	05:40 21:47	04:41 22:10	05:08 21:36	05:08 20:24	06:09 19:02	07:11 17:45	08:14 15:48	08:51 15:44
29	08:20 16:39	07:11 17:46	05:57 18:47	08:06 (E14) 20:06	05:37 21:48	04:40 22:10	05:10 21:34	05:10 20:22	06:11 18:59	07:13 17:43	08:16 15:47	08:51 15:45
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31	08:17 16:43	07:07 17:51	05:52 18:51	08:06 (E14) 20:06	05:33 21:51	04:37 22:10	05:14 21:30	05:14 20:17	06:15 18:38	07:20 17:38	08:21 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		190	145							342		
Sun reduction		0.20	0.41							0.26		
Oper. time red.		0.98	0.98							0.98		
Wind dir. red.		0.63	0.63							0.63		
Total reduction		0.12	0.25							0.16		
Total, real		23	37							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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

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

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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 15:39
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
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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
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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	04:26 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	08:03 (E7) 08:16 (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	08:06 (E7) 08:12 (E7)	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	06:34 18:17		06:12 20:22	05:02 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	08:10 (E7)	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	08:08 (E7)	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	08:05 (E7)	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 17:25	06:24 18:26	08:19 (E7)	06:02 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	08:00 (E7)	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 15:38
21	08:33 16:22	07:31 17:30	06:18 18:30	08:21 (E7)	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 16:00	08:49 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	08:22 (E7)	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 16:00	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	08:00 (E7)	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	08:22 (E7)	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 16:00	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	08:00 (E7)	05:47 20:43	06:07 21:42	04:26 22:11	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	08:22 (E7)	05:44 20:45	06:05 21:43	04:27 22:10	05:04 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 16:00	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	08:01 (E7)	05:42 20:47	06:02 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:47	08:17 16:00	08:51 15:43
28	08:22 16:36	07:13 17:45	05:59 18:45	08:02 (E7)	05:39 20:49	06:01 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:45	08:19 16:00	08:51 15:44
29	08:20 16:39		06:57 19:47	08:18 (E7)	05:37 20:51	06:02 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 16:00	08:51 15:44
30	08:19 16:41		06:54 19:49		05:35 20:53	06:03 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:40	08:23 16:00	08:51 15:45
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	08:24 17:38		08:51 15:47
Potential sun hours	235	266	366		426	508	529	529	469	385	324	247	216
Total, worst case		236	19								255		
Sun reduction		0.20	0.41								0.26		
Oper. time red.		0.98	0.98								0.98		
Wind dir. red.		0.62	0.62								0.62		
Total reduction		0.12	0.25								0.16		
Total, real		29	5								40		

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
25/06/2024 18:40/4.0.540

## 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  
442 466 539 464 488 781 784 938 1,215 1,079 833 556 8,584  
Idle 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	06:49 19:53 06:46	05:32 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	
2	15:49 08:50	16:47 08:11		17:50 07:06	19:55 06:43	20:58 05:28	21:54 04:33	22:09 04:32	21:26 05:19	20:11 06:21	18:51 07:21	
3	15:50 08:50	16:50 08:09	5	17:52 07:03	19:57 06:41	21:00 05:26	21:55 04:32	22:08 04:32	21:24 05:21	20:09 06:23	18:48 07:23	
4	15:52 08:49	16:52 08:07	9	17:54 07:00	19:59 06:38	21:02 05:23	21:57 04:32	22:07 04:33	21:22 05:23	20:06 06:25	18:46 07:25	
5	15:53 08:49	16:54 08:05	13	17:56 06:58	20:01 06:35	21:04 05:21	21:58 04:31	22:07 04:34	21:20 05:25	20:03 06:27	18:43 07:27	
6	15:55 08:48	16:56 08:03	17	17:58 06:55	20:03 06:33	21:06 05:19	21:59 04:30	22:06 04:36	21:17 05:27	20:01 06:29	18:40 07:30	
7	15:56 08:48	16:59 08:01	20	18:00 06:53	20:05 06:30	21:08 05:17	22:00 04:29	22:05 04:37	21:15 05:29	19:58 06:31	18:38 07:32	
8	15:58 08:47	17:01 07:58	22	18:03 07:00	20:08 06:27	21:10 05:15	22:01 04:28	22:04 04:38	21:13 05:31	19:55 06:33	18:35 07:34	
9	15:59 08:46	17:03 07:56	23	18:05 06:47	20:10 06:25	21:12 05:12	22:02 04:28	22:03 04:39	21:11 05:33	19:53 06:35	18:32 07:36	
10	16:01 08:45	17:05 07:54	24	18:07 06:45	20:12 06:22	21:14 05:10	22:03 04:27	22:02 04:40	21:08 05:35	19:50 06:37	18:30 07:38	
11	16:03 08:44	17:08 07:52	23	18:09 06:42	20:14 06:20	21:16 05:08	22:04 04:27	22:01 04:42	21:06 05:37	19:47 06:39	18:27 07:40	
12	16:04 08:43	17:10 07:50	23	18:11 06:40	20:16 06:17	21:18 05:06	22:05 04:26	22:00 04:43	21:04 05:39	19:45 06:41	18:25 07:42	
13	16:06 08:42	17:12 07:47	23	18:13 06:37	20:18 06:14	21:20 05:04	22:06 04:26	21:59 04:45	21:02 05:41	19:42 06:43	18:22 07:44	
14	16:08 08:41	17:14 07:45	22	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	
15	16:10 08:40	17:17 07:43	21	18:17 06:32	20:22 06:09	21:24 05:00	22:07 04:25	21:57 04:48	20:57 05:45	19:37 06:47	18:17 07:48	
16	16:12 08:39	17:19 07:40	19	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	
17	16:14 08:38	17:21 07:38	18	18:22 06:26	20:26 06:04	21:27 04:57	22:09 04:25	21:54 05:49	20:52 05:49	19:31 06:51	18:12 07:52	
18	16:16 08:36	17:23 07:36	13	18:24 06:24	20:28 06:02	21:29 04:55	22:09 04:25	21:53 05:51	20:50 06:53	19:29 07:55	18:09 07:57	
19	16:18 08:35	17:25 07:33	8	18:26 06:21	20:30 05:59	21:31 04:53	22:09 04:25	21:51 05:53	20:47 06:55	19:26 07:57	18:07 07:57	
20	16:20 08:33	17:28 07:31		18:28 06:18	20:33 05:57	21:33 04:51	22:10 04:25	21:50 05:55	20:45 06:57	19:23 07:59	18:04 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 05:57	20:42 06:59	19:20 08:01	18:02 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 05:59	20:40 07:01	19:18 08:03	17:59 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	
24	16:28 08:27	17:37 07:21		18:36 06:07	20:41 05:47	21:40 04:45	22:11 04:26	21:43 05:03	20:35 06:03	19:12 07:05	17:55 07:07	
25	16:30 08:26	17:39 07:18		18:38 06:05	20:43 05:44	21:42 04:44	22:11 04:27	21:41 05:04	20:32 06:05	19:10 07:07	16:52 07:10	
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 07:12	16:50 08:01	
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	16:47 07:14	
28	16:36 08:20	17:45 07:11		18:45 06:57	20:49 05:37	21:47 04:39	22:10 04:28	21:36 05:10	20:24 06:11	19:02 07:13	16:45 07:16	
29	16:39 08:19			19:47 06:54	20:51 05:35	21:48 04:38	22:10 04:29	21:34 05:12	20:22 06:13	18:59 07:15	16:43 07:18	
30	16:41 08:17			19:49 06:51	20:53 05:37	21:50 04:37	22:10 04:29	21:32 05:14	20:19 06:15	18:56 07:20	16:40 08:00	
31	16:43			19:51		21:51	21:30	20:17		16:38	24	
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		303								175	127	
Sun reduction		0.20								0.26	0.08	
Oper. time red.		0.98								0.98	0.98	
Wind dir. red.		0.61								0.61	0.61	
Total reduction		0.12								0.16	0.05	
Total, real		37								27	6	

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	22 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	21 16:32
4	08:50 15:52	08:09 16:52	4	08:39 (E13) 08:43 (E13)	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	05:21 21:22	06:23 20:06	07:23 18:46	19 16:29
5	08:49 15:53	08:07 16:54	8	08:37 (E13) 08:45 (E13)	07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	05:23 21:20	06:25 20:04	07:25 18:43	15 16:27
6	08:49 15:55	08:05 16:56	12	08:34 (E13) 08:46 (E13)	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	05:25 21:17	06:27 20:01	07:28 18:40	12 16:25
7	08:48 15:56	08:03 16:59	16	08:32 (E13) 08:48 (E13)	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	05:27 21:15	06:29 20:01	07:30 18:38	8 16:23
8	08:48 15:58	08:01 17:01	19	08:30 (E13) 08:49 (E13)	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	05:29 21:13	06:31 20:04	07:32 18:35	3 16:21
9	08:47 15:59	07:58 17:03	20	08:29 (E13) 08:49 (E13)	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	05:31 21:11	06:33 20:03	07:34 18:33	
10	08:46 16:01	07:56 17:05	21	08:29 (E13) 08:50 (E13)	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	05:33 21:09	06:35 20:01	07:36 18:30	
11	08:45 16:03	07:54 17:08	22	08:29 (E13) 08:51 (E13)	06:45 18:09	06:22 20:14	05:11 21:16	04:27 22:04	05:35 21:06	06:37 20:04	07:38 18:27	
12	08:44 16:05	07:52 17:10	22	08:28 (E13) 08:50 (E13)	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	05:37 21:04	06:39 20:04	07:40 18:25	
13	08:43 16:06	07:50 17:12	22	08:29 (E13) 08:51 (E13)	06:40 18:13	06:17 20:18	05:07 21:20	04:26 22:06	05:39 21:02	06:41 20:04	07:42 18:22	
14	08:42 16:08	07:47 17:14	22	08:28 (E13) 08:50 (E13)	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:07	05:41 20:59	06:43 20:04	07:44 18:20	
15	08:41 16:10	07:45 17:17	21	08:29 (E13) 08:50 (E13)	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	05:43 20:57	06:45 20:04	07:46 18:17	
16	08:40 16:12	07:43 17:19	19	08:29 (E13) 08:48 (E13)	06:32 18:20	06:09 20:24	05:01 21:26	04:25 22:08	05:45 20:54	06:47 20:04	07:48 18:14	
17	08:39 16:14	07:40 17:21	17	08:31 (E13) 08:48 (E13)	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	05:49 21:54	06:49 20:04	07:50 18:12	
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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 20:04	07:57 18:04	
21	08:33 16:22	07:31 17:30		06:18 18:30	05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 20:04	07:59 18:02	
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 20:04	08:01 18:00	09:07 (E13)
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 20:04	08:03 18:00	09:04 (E13)
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 20:04	08:05 18:00	09:11 (E13)
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 20:04	08:07 18:00	09:17 (E13)
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 20:04	08:09 18:00	09:19 (E13)
27	08:24 16:34	07:16 17:43		06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 20:04	08:11 18:00	09:21 (E13)
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 20:04	08:13 18:00	09:23 (E13)
29	08:20 16:39			06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 20:04	08:15 18:00	09:25 (E13)
30	08:19 16:41			06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 20:13	06:13 20:19	07:15 20:04	08:17 18:00	09:27 (E13)
31	08:17 16:43			06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:17	07:16 20:04	08:19 18:00	09:29 (E13)
Potential sun hours	235	266		366	426	508	529	529	469	385	324	247
Total, worst case		269									175	100
Sun reduction		0.20									0.26	0.08
Oper. time red.		0.98									0.98	0.98
Wind dir. red.		0.61									0.61	0.61
Total reduction		0.12									0.16	0.05
Total, real		33									27	5

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

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

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January		February		March		April		May		June	
1	08:51		08:15		08:47 (E15)	07:11	06:49		07:21 (E13)	05:33	04:36	
	15:48		16:45	62	10:19 (E14)	17:48	19:53	14	07:35 (E13)	20:55	21:53	
2	08:50		08:13		08:47 (E15)	07:08	06:46		07:17 (E13)	05:30	04:35	
	15:49		16:48	62	10:19 (E14)	17:50	19:55	20	07:37 (E13)	20:57	21:54	
3	08:50		08:11		08:47 (E15)	07:06	06:43		07:16 (E13)	05:28	04:34	
	15:51		16:50	62	10:19 (E14)	17:52	19:57	23	07:39 (E13)	21:00	21:55	
4	08:50		08:09		08:47 (E15)	07:03	06:41		07:14 (E13)	05:26	04:33	
	15:52	6	09:53 (E14)	16:52	10:19 (E14)	17:54	19:59	26	07:40 (E13)	21:02	21:57	
5	08:49		08:07		08:47 (E15)	07:01	06:38		07:12 (E13)	05:23	04:32	
	15:53	11	09:57 (E14)	16:54	10:19 (E14)	17:56	20:01	29	07:41 (E13)	21:04	21:58	
6	08:49		08:05		08:47 (E15)	06:58	06:35		07:11 (E13)	05:21	04:31	
	15:55	14	09:58 (E14)	16:56	10:18 (E14)	17:58	20:03	31	07:42 (E13)	21:06	21:59	
7	08:48		08:03		08:47 (E15)	06:55	06:33		07:10 (E13)	05:19	04:30	
	15:56	17	10:00 (E14)	16:59	10:17 (E14)	18:01	20:06	32	07:42 (E13)	21:08	22:00	
8	08:48		08:01		08:48 (E15)	06:53	06:30		07:09 (E13)	05:17	04:29	
	15:58	19	10:02 (E14)	17:01	10:17 (E14)	18:03	20:08	34	07:43 (E13)	21:10	22:01	
9	08:47		07:58		08:48 (E15)	06:50	06:28		07:08 (E13)	05:15	04:29	
	16:00	21	10:03 (E14)	17:03	10:15 (E14)	18:05	20:10	34	07:42 (E13)	21:12	22:02	
10	08:46		07:56		08:49 (E15)	06:47	06:25		07:07 (E13)	05:13	04:28	
	16:01	24	10:05 (E14)	17:05	10:14 (E14)	18:07	20:12	35	07:42 (E13)	21:14	22:03	
11	08:45		07:54		08:51 (E15)	06:45	06:22		07:07 (E13)	05:11	04:27	
	16:03	25	10:06 (E14)	17:08	10:13 (E14)	18:09	20:14	35	07:42 (E13)	21:16	22:04	
12	08:44		07:52		08:52 (E15)	06:42	06:20		07:07 (E13)	05:09	04:27	
	16:05	27	10:08 (E14)	17:10	10:10 (E14)	18:11	20:16	34	07:41 (E13)	21:18	22:05	
13	08:43		07:50		08:54 (E15)	06:40	06:17		07:07 (E13)	05:07	04:26	
	16:06	28	10:08 (E14)	17:12	10:08 (E14)	18:13	20:18	35	07:42 (E13)	21:20	22:06	
14	08:42		07:47			06:37	06:15		07:07 (E13)	05:05	04:26	
	16:08	29	10:09 (E14)	17:14		18:15	20:20	33	07:40 (E13)	21:22	22:07	
15	08:41		07:45			06:34	06:12		07:07 (E13)	05:03	04:26	
	16:10	31	10:10 (E14)	17:17		18:18	20:22	33	07:40 (E13)	21:24	22:07	
16	08:40		07:43			06:32	06:09		07:07 (E13)	05:01	04:26	
	16:12	32	10:11 (E14)	17:19		18:20	20:24	32	07:39 (E13)	21:25	22:08	
17	08:39		07:40			06:29	06:07		07:08 (E13)	04:59	04:25	
	16:14	34	10:13 (E14)	17:21		18:22	20:26	30	07:38 (E13)	21:27	22:08	
18	08:37		07:38			06:26	06:04		07:08 (E13)	04:57	04:25	
	16:16	35	10:13 (E14)	17:23		18:24	20:28	29	07:37 (E13)	21:29	22:09	
19	08:36		07:36			06:24	06:02		07:09 (E13)	04:55	04:25	
	16:18	36	10:14 (E14)	17:26		18:26	20:30	27	07:36 (E13)	21:31	22:09	
20	08:35		07:33			06:21	05:59		07:10 (E13)	04:53	04:25	
	16:20	37	10:15 (E14)	17:28		18:28	20:33	25	07:35 (E13)	21:33	22:10	
21	08:33		07:31			06:18	05:57		07:11 (E13)	04:52	04:25	
	16:22	38	10:16 (E14)	17:30		18:30	20:35	21	07:32 (E13)	21:35	22:10	
22	08:32		07:28			06:16	05:54		07:13 (E13)	04:50	04:26	
	16:24	39	10:16 (E14)	17:32		18:32	20:37	17	07:30 (E13)	21:37	22:10	
23	08:30		07:26			06:13	05:52		07:16 (E13)	04:48	04:26	
	16:26	40	10:17 (E14)	17:34		18:34	20:39	10	07:26 (E13)	21:38	22:10	
24	08:29		07:23			06:10	05:49			04:47	04:26	
	16:28	40	10:18 (E14)	17:37		18:36	20:41			21:40	22:10	
25	08:27		07:21			06:08	05:47			04:45	04:26	
	16:30	40	10:18 (E14)	17:39		18:38	20:43			21:42	22:10	
26	08:26		07:18			06:05	05:44			04:44	04:27	
	16:32	42	10:19 (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	48	10:19 (E14)	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	52	10:19 (E14)	17:45		18:45	20:49			21:47	22:10	
29	08:20					06:57	05:37			04:40	04:29	
	16:39	56	10:20 (E14)			19:47	20:51			21:48	22:10	
30	08:18					06:54	05:35			04:38	04:29	
	16:41	58	10:20 (E14)			19:49	20:53			21:50	22:09	
31	08:17					06:51				04:37		
	16:43	61	10:20 (E14)			19:51				21:51		
Potential sun hours	235		266			366	426			508	529	
Total, worst case	940		685				639					
Sun reduction	0.13		0.20				0.50					
Oper. time red.	0.98		0.98				0.98					
Wind dir. red.	0.61		0.60				0.66					
Total reduction	0.08		0.12				0.32					
Total, real	74		82				206					

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	07:06 (E13) 18:51	07:19 16:34	08:17 (E15) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:06 (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	07:06 (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	07:07 (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	07:07 (E13) 18:40	07:27 16:25	08:17 (E15) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:07 (E13) 18:38	07:30 16:23	08:17 (E15) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:08 (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	07:09 (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	07:10 (E13) 18:30	07:36 16:17	08:19 (E15) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:13 (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	07:18 (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	07:22 (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	07:44 18:20	07:51 16:09	08:26 (E15) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:28 (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	09:11 (E14) 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	09:12 (E14) 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	09:12 (E14) 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	09:12 (E14) 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	09:13 (E14) 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	09:14 (E14) 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	09:15 (E14) 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	09:15 (E14) 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	09:16 (E14) 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:10 17:50	08:15 15:51	09:17 (E14) 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:49	09:19 (E14) 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:46	08:19 15:48	09:20 (E14) 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	09:21 (E14) 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	09:22 (E14) 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:20 17:39	08:24 15:44	09:24 (E14) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		327	320	116	1392	139
Sun reduction		0.50	0.43	0.26	0.08	0.07
Oper. time red.		0.98	0.98	0.98	0.98	0.98
Wind dir. red.		0.66	0.66	0.60	0.61	0.61
Total reduction		0.32	0.28	0.15	0.05	0.04
Total, real		105	88	18	68	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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 10:09 (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 10:09 (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 10:09 (E14)	17:52	19:57		21:00	21:55			
4	08:50		08:09	08:40 (E15)	07:03	06:41		05:26	04:33			
	15:52		16:52	65 10:10 (E14)	17:54	19:59		21:02	21:57			
5	08:49		08:07	08:40 (E15)	07:01	06:38		05:23	04:32			
	15:53		16:54	65 10:10 (E14)	17:56	20:01		21:04	21:58			
6	08:49		08:05	08:39 (E15)	06:58	06:35	07:07 (E13)	05:21	04:31			
	15:55		16:56	66 10:09 (E14)	17:58	20:03	13 07:20 (E13)	21:06	21:59			
7	08:48		08:03	08:39 (E15)	06:55	06:33	07:04 (E13)	05:19	04:30			
	15:56		16:59	66 10:09 (E14)	18:01	20:06	18 07:22 (E13)	21:08	22:00			
8	08:48		08:01	08:39 (E15)	06:53	06:30	07:02 (E13)	05:17	04:29			
	15:58		17:01	65 10:09 (E14)	18:03	20:08	23 07:25 (E13)	21:10	22:01			
9	08:47		07:58	08:39 (E15)	06:50	06:28	07:00 (E13)	05:15	04:29			
	16:00		17:03	64 10:08 (E14)	18:05	20:10	25 07:25 (E13)	21:12	22:02			
10	08:46		07:56	08:39 (E15)	06:47	06:25	06:58 (E13)	05:13	04:28			
	16:01		17:05	64 10:08 (E14)	18:07	20:12	28 07:26 (E13)	21:14	22:03			
11	08:45		07:54	08:40 (E15)	06:45	06:22	06:57 (E13)	05:11	04:27			
	16:03		17:08	62 10:08 (E14)	18:09	20:14	30 07:27 (E13)	21:16	22:04			
12	08:44		07:52	08:40 (E15)	06:42	06:20	06:55 (E13)	05:09	04:27			
	16:05		17:10	59 10:07 (E14)	18:11	20:16	32 07:27 (E13)	21:18	22:05			
13	08:43	09:40 (E14)	07:50	08:41 (E15)	06:40	06:17	06:55 (E13)	05:07	04:26			
	16:06	4 09:44 (E14)	17:12	55 10:06 (E14)	18:13	20:18	33 07:28 (E13)	21:20	22:06			
14	08:42	09:37 (E14)	07:47	08:42 (E15)	06:37	06:15	06:54 (E13)	05:05	04:26			
	16:08	12 09:49 (E14)	17:14	51 10:04 (E14)	18:15	20:20	33 07:27 (E13)	21:22	22:07			
15	08:41	09:34 (E14)	07:45	08:43 (E15)	06:34	06:12	06:54 (E13)	05:03	04:26			
	16:10	17 09:51 (E14)	17:17	46 10:03 (E14)	18:18	20:22	34 07:28 (E13)	21:24	22:07			
16	08:40	09:33 (E14)	07:43	08:45 (E15)	06:32	06:09	06:53 (E13)	05:01	04:26			
	16:12	20 09:53 (E14)	17:19	38 10:01 (E14)	18:20	20:24	34 07:27 (E13)	21:25	22:08			
17	08:39	09:32 (E14)	07:40	09:37 (E14)	06:29	06:07	06:53 (E13)	04:59	04:25			
	16:14	23 09:55 (E14)	17:21	22 09:59 (E14)	18:22	20:26	35 07:28 (E13)	21:27	22:08			
18	08:37	09:31 (E14)	07:38	09:39 (E14)	06:26	06:04	06:52 (E13)	04:57	04:25			
	16:16	26 09:57 (E14)	17:23	17 09:56 (E14)	18:24	20:28	35 07:27 (E13)	21:29	22:09			
19	08:36	09:30 (E14)	07:36	09:44 (E14)	06:24	06:02	06:53 (E13)	04:55	04:25			
	16:18	28 09:58 (E14)	17:26	7 09:51 (E14)	18:26	20:30	34 07:27 (E13)	21:31	22:09			
20	08:35	09:30 (E14)	07:33		06:21	05:59	06:53 (E13)	04:53	04:25			
	16:20	30 10:00 (E14)	17:28		18:28	20:33	33 07:26 (E13)	21:33	22:10			
21	08:33	09:29 (E14)	07:31		06:18	05:57	06:53 (E13)	04:52	04:25			
	16:22	32 10:01 (E14)	17:30		18:30	20:35	32 07:25 (E13)	21:35	22:10			
22	08:32	09:28 (E14)	07:28		06:16	05:54	06:54 (E13)	04:50	04:26			
	16:24	34 10:02 (E14)	17:32		18:32	20:37	31 07:25 (E13)	21:37	22:10			
23	08:30	09:28 (E14)	07:26		06:13	05:52	06:53 (E13)	04:48	04:26			
	16:26	35 10:03 (E14)	17:34		18:34	20:39	30 07:23 (E13)	21:38	22:10			
24	08:29	09:28 (E14)	07:23		06:10	05:49	06:54 (E13)	04:47	04:26			
	16:28	36 10:04 (E14)	17:37		18:36	20:41	28 07:22 (E13)	21:40	22:10			
25	08:27	09:27 (E14)	07:21		06:08	05:47	06:56 (E13)	04:45	04:26			
	16:30	38 10:05 (E14)	17:39		18:38	20:43	25 07:21 (E13)	21:42	22:10			
26	08:26	09:27 (E14)	07:18		06:05	05:44	06:56 (E13)	04:44	04:27			
	16:32	39 10:06 (E14)	17:41		18:41	20:45	23 07:19 (E13)	21:43	22:10			
27	08:24	09:27 (E14)	07:16		06:02	05:42	06:58 (E13)	04:42	04:27			
	16:34	40 10:07 (E14)	17:43		18:43	20:47	19 07:17 (E13)	21:45	22:10			
28	08:22	09:27 (E14)	07:13		05:59	05:40	07:00 (E13)	04:41	04:28			
	16:37	40 10:07 (E14)	17:45		18:45	20:49	15 07:15 (E13)	21:47	22:10			
29	08:20	09:26 (E14)			06:57	05:37	07:03 (E13)	04:40	04:29			
	16:39	42 10:08 (E14)			19:47	20:51	9 07:12 (E13)	21:48	22:10			
30	08:18	08:50 (E15)			06:54	05:35		04:38	04:29			
	16:41	45 10:08 (E14)			19:49	20:53		21:50	22:09			
31	08:17	08:48 (E15)			06:51			04:37				
	16:43	51 10:09 (E14)			19:51			21:51				
Potential sun hours	235		266		366	426		508	529			
Total, worst case	592		989			652						
Sun reduction	0.13		0.20			0.50						
Oper. time red.	0.98		0.98			0.98						
Wind dir. red.	0.60		0.60			0.66						
Total reduction	0.08		0.12			0.32						
Total, real	46		118			210						

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	06:56 (E13) 18:54	07:17 16:36	08:09 (E15) 15:45
2	04:31 22:08	05:18 21:26	06:19 20:11	06:57 (E13) 18:51	07:19 16:34	08:08 (E15) 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	06:58 (E13) 18:48	07:21 16:32	08:09 (E15) 15:43
4	04:33 22:07	05:22 21:22	06:23 20:06	06:59 (E13) 18:46	07:23 16:29	08:08 (E15) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:01 (E13) 18:43	07:25 16:27	08:08 (E15) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:03 (E13) 18:40	07:27 16:25	08:09 (E15) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:10 (E15) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:12 (E15) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:14 (E15) 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:16 (E15) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:19 (E15) 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:21 (E15) 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:22 (E14) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:24 (E14) 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:26 (E14) 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:28 (E14) 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:30 (E14) 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:32 (E14) 15:38
19	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:34 (E14) 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:36 (E14) 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:38 (E14) 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:40 (E14) 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:42 (E14) 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:44 (E14) 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:46 (E14) 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:48 (E14) 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:48	08:17 15:49	08:50 (E14) 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:46	08:19 15:48	08:52 (E14) 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:21 15:47	08:54 (E14) 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:23 15:46	08:56 (E14) 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:20 17:39	08:25 15:45	08:58 (E14) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		519	137	374	1230	
Sun reduction		0.50	0.43	0.26	0.08	
Oper. time red.		0.98	0.98	0.98	0.98	
Wind dir. red.		0.66	0.66	0.60	0.60	
Total reduction		0.32	0.28	0.15	0.05	
Total, real		167	38	57	60	

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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	04:54 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 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:53	08:50 15:41
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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 16:34	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	23	06:50 (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	23	06:50 (E14) 07:13 (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	21	06:51 (E14) 07:12 (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	17	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	14	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	9	07:01 (E14) 21:06	05:21 21:59	04:31 22:06	05:26 21:17		06:27 20:01	9	06:57 (E14) 07:06 (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	14	06:58 (E14) 21:08	05:19 22:00	04:30 22:05	05:27 21:15		06:29 19:58	2	06:55 (E14) 07:00 (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	17	06:56 (E14) 21:10	05:17 22:01	04:29 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	21	06:53 (E14) 21:12	05:15 22:02	04:29 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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	12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	24	06:50 (E14) 21:18	05:09 22:05	04:27 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	24	06:50 (E14) 21:20	05:07 22:06	04:27 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	24	06:49 (E14) 21:22	05:05 22:07	04:26 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	23	06:50 (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	06:10 20:24	22	06:50 (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	22	06:50 (E14) 21:27	04:59 22:08	04:26 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	20	06:50 (E14) 21:29	04:57 22:09	04:25 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	17	06:52 (E14) 21:31	04:55 22:09	04:25 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	13	06:54 (E14) 21:33	04:54 22:10	04:25 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	9	06:55 (E14) 21:35	04:52 22:10	04:26 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		07:04 (E14) 21:37	04:50 22:10	04:26 21:46	05:57 20:40	07:00 (E14) 19:18	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	06:57 (E14) 19:15	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	06:55 (E14) 19:12	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) 19:10	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	06:05 20:30	06:53 (E14) 19:07	07:07 19:07		08:09 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	05:07 21:38	06:07 20:27	06:52 (E14) 19:04	07:09 19:04		08:11 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	06:51 (E14) 19:02	07:11 19:02		08:13 16:45	08:19 15:48	08:51 15:44	
	29	08:20 16:39	07:11 17:47	06:07 18:51	05:37 20:51		04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	06:50 (E14) 18:59	07:13 18:59		08:15 16:43	08:21 15:47	08:51 15:45	
	30	08:19 16:41	07:10 17:49	06:04 18:54	05:35 20:53		04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	06:50 (E14) 18:56	07:15 18:56		08:16 16:41	08:22 15:46	08:51 15:46	
	31	08:17 16:43	07:08 17:51	06:02 18:51	05:33 20:51		04:37 21:51	05:14 21:30	06:15 20:17	06:50 (E14) 20:17	07:14 (E14) 18:56	07:14 (E14) 18:56		08:17 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					305						201	109					
Sun reduction					0.50						0.50	0.43					
Oper. time red.					0.98						0.98	0.98					
Wind dir. red.					0.66						0.66	0.66					
Total reduction					0.32						0.32	0.28					
Total, real					98						65	30					

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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		07:11				06:49	05:33	04:36
	15:48	33	10:35 (E14)	16:45		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		10:03 (E14)	08:11		07:06				06:43	05:28	04:34
	15:51	33	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	34	10:38 (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	34	10:38 (E14)	16:56		17:58				20:03	21:06	21:59
7	08:48		10:05 (E14)	08:03		06:55				06:33	05:19	04:30
	15:56	33	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	34	10:39 (E14)	17:01		18:03				20:08	21:10	22:01
9	08:47		10:05 (E14)	07:58		06:50				06:28	05:15	04:29
	16:00	34	10:39 (E14)	17:03		18:05				20:10	21:12	22:02
10	08:46		10:06 (E14)	07:56		06:47			07:23 (E13)	06:25	05:13	04:28
	16:01	34	10:40 (E14)	17:05		18:07		4	07:27 (E13)	20:12	21:14	22:03
11	08:45		10:06 (E14)	07:54		06:45			07:17 (E13)	06:22	05:11	04:27
	16:03	34	10:40 (E14)	17:08		18:09		15	07:32 (E13)	20:14	21:16	22:04
12	08:44		10:07 (E14)	07:52		06:42			07:15 (E13)	06:20	05:09	04:27
	16:05	34	10:41 (E14)	17:10		18:11		20	07:35 (E13)	20:16	21:18	22:05
13	08:43		10:07 (E14)	07:50		06:40			07:13 (E13)	06:17	05:07	04:26
	16:06	33	10:40 (E14)	17:12		18:13		23	07:36 (E13)	20:18	21:20	22:06
14	08:42		10:08 (E14)	07:47		06:37			07:11 (E13)	06:15	05:05	04:26
	16:08	33	10:41 (E14)	17:14		18:15		26	07:37 (E13)	20:20	21:22	22:07
15	08:41		10:08 (E14)	07:45		06:34			07:10 (E13)	06:12	05:03	04:26
	16:10	32	10:40 (E14)	17:17		18:18		29	07:39 (E13)	20:22	21:24	22:07
16	08:40		10:09 (E14)	07:43		06:32			07:09 (E13)	06:09	05:01	04:26
	16:12	32	10:41 (E14)	17:19		18:20		30	07:39 (E13)	20:24	21:25	22:08
17	08:39		10:10 (E14)	07:40		06:29			07:07 (E13)	06:07	04:59	04:25
	16:14	31	10:41 (E14)	17:21		18:22		32	07:39 (E13)	20:26	21:27	22:08
18	08:38		10:10 (E14)	07:38		06:26			07:06 (E13)	06:04	04:57	04:25
	16:16	31	10:41 (E14)	17:23		18:24		33	07:39 (E13)	20:28	21:29	22:09
19	08:36		10:10 (E14)	07:36		06:24			07:07 (E13)	06:02	04:55	04:25
	16:18	31	10:41 (E14)	17:26		18:26		33	07:40 (E13)	20:30	21:31	22:09
20	08:35		10:12 (E14)	07:33		06:21			07:06 (E13)	05:59	04:53	04:25
	16:20	29	10:41 (E14)	17:28		18:28		33	07:39 (E13)	20:33	21:33	22:10
21	08:33		10:12 (E14)	07:31		06:18			07:05 (E13)	05:57	04:52	04:25
	16:22	28	10:40 (E14)	17:30		18:30		34	07:39 (E13)	20:35	21:35	22:10
22	08:32		10:13 (E14)	07:28		06:16			07:06 (E13)	05:54	04:50	04:26
	16:24	27	10:40 (E14)	17:32		18:32		33	07:39 (E13)	20:37	21:37	22:10
23	08:30		10:14 (E14)	07:26		06:13			07:05 (E13)	05:52	04:48	04:26
	16:26	25	10:39 (E14)	17:34		18:34		33	07:38 (E13)	20:39	21:38	22:10
24	08:29		10:16 (E14)	07:23		06:10			07:05 (E13)	05:49	04:47	04:26
	16:28	23	10:39 (E14)	17:37		18:36		32	07:37 (E13)	20:41	21:40	22:10
25	08:27		10:18 (E14)	07:21		06:08			07:06 (E13)	05:47	04:45	04:26
	16:30	20	10:38 (E14)	17:39		18:38		30	07:36 (E13)	20:43	21:42	22:10
26	08:26		10:19 (E14)	07:18		06:05			07:06 (E13)	05:44	04:44	04:27
	16:32	17	10:36 (E14)	17:41		18:41		29	07:35 (E13)	20:45	21:43	22:10
27	08:24		10:22 (E14)	07:16		06:02			07:07 (E13)	05:42	04:42	04:27
	16:34	12	10:34 (E14)	17:43		18:43		26	07:33 (E13)	20:47	21:45	22:10
28	08:22		10:26 (E14)	07:13		05:59			07:09 (E13)	05:40	04:41	04:28
	16:37	4	10:30 (E14)	17:45		18:45		23	07:32 (E13)	20:49	21:47	22:10
29	08:20					06:57			08:10 (E13)	05:37	04:40	04:29
	16:39					19:47		19	08:29 (E13)	20:51	21:48	22:10
30	08:19					06:54			08:12 (E13)	05:35	04:38	04:29
	16:41					19:49		14	08:26 (E13)	20:53	21:50	22:09
31	08:17					06:51			08:17 (E13)		04:37	
	16:43					19:51		4	08:21 (E13)		21:51	
Potential sun hours	235			266		366			426		508	529
Total, worst case		811				555						
Sun reduction		0.13				0.41						
Oper. time red.		0.98				0.98						
Wind dir. red.		0.61				0.62						
Total reduction		0.08				0.25						
Total, real		65				140						

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	07:53 (E13)	08:24
	22:09	21:28	20:14	18:54	16:36	15:45
2	04:31	05:18	06:19	07:19	07:55 (E13)	08:26
	22:09	21:26	20:11	18:51	16:34	15:44
3	04:32	05:20	06:21	07:21	07:58 (E13)	08:28
	22:08	21:24	20:09	18:48	16:32	15:43
4	04:33	05:21	06:23	07:23	07:29	08:29
	22:07	21:22	20:06	18:46	16:29	15:42
5	04:34	05:23	06:25	07:25	07:31	08:31
	22:07	21:20	20:03	18:43	16:27	15:42
6	04:35	05:25	06:27	07:27	07:33	08:32
	22:06	21:17	20:01	18:40	16:25	15:41
7	04:36	05:27	06:29	07:30	07:36	08:34
	22:05	21:15	19:58	18:38	16:23	15:40
8	04:37	05:29	06:31	07:32	07:38	08:35
	22:04	21:13	19:55	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	15:39
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	08:03 (E13)	07:49	08:42
	21:59	21:02	19:42	18:22	16:11	15:38
14	04:45	05:41	06:43	08:00 (E13)	07:51	08:43
	21:58	20:59	19:39	18:20	16:09	15:38
15	04:46	05:43	06:45	07:58 (E13)	07:53	09:54 (E14)
	21:57	20:57	19:37	18:17	16:08	15:38
16	04:48	05:45	06:47	07:57 (E13)	07:55	09:52 (E14)
	21:55	20:54	19:34	18:14	16:06	15:38
17	04:49	05:47	06:49	07:55 (E13)	07:50	09:51 (E14)
	21:54	20:52	19:31	18:12	16:04	15:38
18	04:51	05:49	06:51	07:54 (E13)	07:52	09:50 (E14)
	21:52	20:50	19:29	18:09	16:02	15:38
19	04:53	05:51	06:53	07:53 (E13)	07:55	09:49 (E14)
	21:51	20:47	19:26	18:07	16:01	15:38
20	04:54	05:53	06:55	07:52 (E13)	07:57	09:48 (E14)
	21:49	20:45	19:23	18:04	15:59	15:39
21	04:56	05:55	06:57	07:51 (E13)	07:59	09:47 (E14)
	21:48	20:42	19:21	18:02	15:58	15:39
22	04:58	05:57	06:59	07:51 (E13)	08:01	09:48 (E14)
	21:46	20:40	19:18	18:00	15:56	15:39
23	04:59	05:59	07:01	07:50 (E13)	08:03	09:47 (E14)
	21:45	20:37	19:15	17:57	15:55	15:40
24	05:01	06:01	07:03	07:50 (E13)	08:05	09:47 (E14)
	21:43	20:35	19:12	17:55	15:53	15:41
25	05:03	06:03	07:05	07:50 (E13)	07:07	09:47 (E14)
	21:41	20:32	19:10	16:52	15:52	15:41
26	05:05	06:05	07:07	07:50 (E13)	07:10	09:47 (E14)
	21:39	20:30	19:07	16:50	15:51	15:42
27	05:06	06:07	07:09	07:50 (E13)	07:12	09:48 (E14)
	21:38	20:27	19:04	16:48	15:49	15:43
28	05:08	06:09	07:11	07:51 (E13)	07:14	09:48 (E14)
	21:36	20:24	19:02	16:45	15:48	15:44
29	05:10	06:11	07:13	07:51 (E13)	07:16	09:48 (E14)
	21:34	20:22	18:59	16:43	15:47	15:45
30	05:12	06:13	07:15	07:52 (E13)	07:18	09:48 (E14)
	21:32	20:19	18:56	16:41	15:46	15:46
31	05:14	06:15		07:20		08:51
	21:30	20:17		16:38		15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			513	50	444	1006
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.62	0.62	0.61	0.61
Total reduction			0.26	0.16	0.05	0.04
Total, real			134	8	22	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	06:18	07:17	07:23	08:24
	15:48	16:46	17:48	19:53	20:55	21:53	22:09	21:28	20:14	18:54	16:36	15:45
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	15:52	16:52	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:46	16:30	15:43
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	15:54	16:54	17:56	20:01	21:04	21:58	22:07	21:20	20:04	18:43	16:28	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	18:41	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
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9	08:47	07:58	06:50	06:28	05:15	04:29	04:38	05:32	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
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	16:01	17:06	18:07	20:12	21:14	22:03	22:02	21:08	19:50	18:30	16:17	15:39
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	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
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	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	07:53	07:59	08:46
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	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
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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	05:00	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	06:08	07:09	07:12	08:17	08:51
	16:35	17:43	18:43	20:47	21:45	22:10	21:38	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	06:10	07:11	07:14	08:19	08:51
	16:37	17:46	18:45	20:49	21:47	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	06:12	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	04:39	04:30	05:12	06:14	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	06:16		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)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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			07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	07:14 (E7) 21:53
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
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
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:22 (E7) 21:02	04:33 21:57
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	07:18 (E7) 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	07:24 (E8) 20:03	07:15 (E7) 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:00	07:21 (E8) 20:05	07:13 (E7) 21:08	04:30 22:00
8	08:48 15:58	08:00 17:01	06:53 18:03	07:18 (E8) 20:08	07:11 (E7) 21:10	04:29 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	07:16 (E8) 20:10	07:10 (E7) 21:12	04:28 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	07:15 (E8) 20:12	07:08 (E7) 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	07:14 (E8) 20:14	07:07 (E7) 21:16	05:10 22:04
12	08:44 16:04	07:52 17:10	06:42 18:11	07:14 (E8) 20:16	07:06 (E7) 21:18	05:08 22:05
13	08:43 16:06	07:49 17:12	06:39 18:13	07:14 (E8) 20:18	07:06 (E7) 21:20	05:06 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	07:14 (E8) 20:20	07:05 (E7) 21:22	05:04 22:07
15	08:41 16:10	07:45 17:17	06:34 18:17	07:14 (E8) 20:22	07:05 (E7) 21:24	05:02 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	07:15 (E8) 20:24	07:04 (E7) 21:25	05:01 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	07:16 (E8) 20:26	07:04 (E7) 21:27	04:59 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	07:17 (E8) 20:28	07:03 (E7) 21:29	04:57 22:09
19	08:36 16:18	07:35 17:25	06:23 18:26	07:21 (E8) 20:30	07:03 (E7) 21:31	04:55 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	07:25 (E8) 20:33	07:03 (E7) 21:33	04:53 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	07:03 (E7) 21:35	04:52 22:10
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	07:04 (E7) 21:37	04:50 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	07:04 (E7) 21:38	04:48 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	07:05 (E7) 21:40	04:47 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	07:06 (E7) 21:42	04:45 22:10
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	07:06 (E7) 21:43	04:44 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	07:07 (E7) 21:45	04:42 22:10
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	07:08 (E7) 21:47	04:41 22:10
29	08:20 16:39		06:57 19:47	05:37 20:51	07:10 (E7) 21:48	04:39 22:10
30	08:18 16:41		06:54 19:49	05:35 20:53	07:11 (E7) 21:50	04:38 22:09
31	08:17 16:43		06:51 19:51		07:29 (E7) 21:51	
Potential sun hours	235	266	366	426	508	529
Total, worst case			228	869	12	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.62	0.66	0.66	
Total reduction			0.25	0.32	0.37	
Total, real			57	280	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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 (E7) 18:54	07:17 18:54	07:53 (E8) 16:36
2	04:31 22:09	05:17 21:26	06:19 20:11	07:07 (E7) 18:51	07:19 18:51	07:53 (E8) 16:34
3	04:32 22:08	05:19 21:24	06:21 20:09	07:08 (E7) 18:48	07:21 18:48	07:53 (E8) 16:31
4	04:33 22:07	05:21 21:22	06:23 20:06	07:09 (E7) 18:46	07:23 18:46	07:53 (E8) 16:29
5	04:33 22:07	05:23 21:19	06:25 20:03	07:09 (E7) 18:43	07:25 18:43	07:54 (E8) 16:27
6	04:35 22:06	05:25 21:17	06:27 20:01	07:10 (E7) 18:40	07:27 18:40	07:56 (E8) 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58	07:13 (E7) 18:38	07:29 18:38	07:58 (E8) 16:23
8	04:37 22:04	05:29 21:13	06:31 19:55	07:16 (E7) 18:35	07:32 18:35	08:00 (E8) 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53	07:28 (E7) 18:32	07:34 18:32	08:04 (E8) 16:19
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 (E7) 18:30	07:40 18:30	08:12 (E8) 16:17
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 (E7) 18:27	07:42 18:27	08:14 (E8) 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:43 (E7) 18:25	07:46 18:25	08:15 (E8) 16:13
13	04:43 21:59	05:39 21:01	06:41 19:42	07:44 (E7) 18:22	07:47 18:22	08:16 (E8) 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:46 (E7) 18:19	07:49 18:19	08:18 (E8) 16:09
15	04:46 21:57	05:43 20:57	06:45 19:37	07:48 (E7) 18:17	07:51 18:17	08:20 (E8) 16:07
16	04:48 21:55	05:45 20:54	06:47 19:34	07:50 (E7) 18:14	07:53 18:14	08:22 (E8) 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:52 (E7) 18:12	07:55 18:12	08:24 (E8) 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:54 (E7) 18:09	07:57 18:09	08:26 (E8) 16:02
19	04:52 21:51	05:51 20:47	06:53 19:26	07:56 (E7) 18:07	07:59 18:07	08:28 (E8) 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:58 (E7) 18:04	08:01 18:04	08:30 (E8) 15:59
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 (E7) 18:02	08:03 18:02	08:32 (E8) 15:58
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 (E7) 17:59	08:05 17:59	08:34 (E8) 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 (E7) 17:57	08:07 17:57	08:36 (E8) 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 (E7) 17:55	08:09 17:55	08:38 (E8) 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 (E7) 17:52	08:11 17:52	08:40 (E8) 15:52
26	05:04 21:39	06:05 20:29	07:07 19:07	08:09 (E7) 17:50	08:13 17:50	08:42 (E8) 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 (E7) 17:47	08:15 17:47	08:44 (E8) 15:49
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 (E7) 17:45	08:17 17:45	08:46 (E8) 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 (E7) 17:43	08:19 17:43	08:48 (E8) 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 (E7) 17:41	08:21 17:41	08:50 (E8) 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:19 (E7) 17:39	08:23 17:39	08:52 (E8) 15:45
Potential sun hours	529	469	385	324	247	216
Total, worst case		675	317	131		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.65	0.62		
Total reduction		0.32	0.27	0.16		
Total, real		217	86	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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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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			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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	08:51 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 15:45
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 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 26	10:00 (E13) 08:13 16:45	10:04 (E13) 07:11 17:48	06:49 05:33 19:53	05:33 04:36 20:55	04:36 04:30 21:53	04:30 05:16 22:09	05:16 06:17 21:28	06:17 07:17 20:14	07:17 07:23 18:54	07:23 08:24 16:36	08:24 09:42 (E13) 15:45
2	08:50 15:49 27	10:00 (E13) 08:13 16:47	10:05 (E13) 07:08 17:50	06:46 05:30 19:55	05:30 04:35 20:57	04:35 04:31 21:54	04:31 05:18 22:09	05:18 06:19 21:26	06:19 07:19 20:11	07:19 07:25 18:51	07:25 08:26 16:34	08:26 09:43 (E13) 15:44
3	08:50 15:51 28	10:00 (E13) 08:11 16:50	10:06 (E13) 07:06 17:52	06:43 05:28 19:57	05:28 04:34 21:00	04:34 04:32 21:55	04:32 05:19 22:08	05:19 06:21 21:24	06:21 07:21 20:09	07:21 07:27 18:48	07:27 08:28 16:32	08:28 09:43 (E13) 15:43
4	08:50 15:52 28	10:00 (E13) 08:09 16:52	10:08 (E13) 07:03 17:54	06:41 05:26 19:59	05:26 04:33 21:02	04:33 04:33 21:57	04:33 05:21 22:07	05:21 06:23 21:22	06:23 07:23 20:06	07:23 07:29 18:46	07:29 08:29 16:29	08:29 09:41 (E13) 15:42
5	08:49 15:53 30	10:00 (E13) 08:07 16:54	10:09 (E13) 07:00 17:56	06:38 05:23 20:01	05:23 04:32 21:04	04:32 04:34 21:58	04:34 05:23 22:07	05:23 06:25 21:20	06:25 07:25 20:03	07:25 07:31 18:43	07:31 08:31 16:27	08:31 09:45 (E13) 15:42
6	08:49 15:55 31	10:00 (E13) 08:05 16:56	10:10 (E13) 06:58 17:58	06:35 05:21 20:03	05:21 04:31 21:06	04:31 04:35 21:59	04:35 05:25 22:06	05:25 06:27 21:17	06:27 07:27 20:01	07:27 07:33 18:40	07:33 08:32 16:25	08:32 09:46 (E13) 15:41
7	08:48 15:56 31	10:00 (E13) 08:03 16:59	10:12 (E13) 06:55 18:00	06:33 05:19 21:08	05:19 04:30 22:00	04:30 04:36 22:05	04:36 05:27 22:15	05:27 06:29 21:15	06:29 07:30 20:06	07:30 07:36 18:48	07:36 08:34 16:23	08:34 09:46 (E13) 15:40
8	08:48 15:58 32	10:00 (E13) 08:01 17:01	10:15 (E13) 06:53 18:03	06:30 05:17 21:10	05:17 04:29 22:01	04:29 04:37 22:04	04:37 05:29 22:13	05:29 06:31 21:13	06:31 07:32 20:03	07:32 07:38 18:35	07:38 08:35 16:21	08:35 09:48 (E13) 15:40
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10	08:46 16:01 34	10:00 (E13) 07:56 17:05	10:29 (E13) 06:47 18:05	06:25 05:13 21:12	05:13 04:28 22:02	04:28 04:39 22:03	04:39 05:33 22:08	05:33 06:35 21:08	06:35 07:36 20:03	07:36 07:42 18:36	07:42 08:38 16:17	08:38 09:50 (E13) 15:39
11	08:45 16:03 35	10:00 (E13) 07:54 17:08	10:35 (E13) 06:45 18:09	06:22 05:11 21:16	05:11 04:27 22:04	04:27 04:41 22:01	04:41 05:35 22:06	05:35 06:37 21:06	06:37 07:38 20:03	07:38 07:44 18:36	07:44 08:39 16:15	08:39 09:50 (E13) 15:38
12	08:44 16:04 36	10:00 (E13) 07:52 17:10	10:40 (E13) 06:42 18:11	06:20 05:08 21:18	05:08 04:27 22:05	04:27 04:42 22:00	04:42 05:37 22:04	05:37 06:39 21:04	06:39 07:40 20:03	07:40 07:46 18:36	07:46 08:40 16:13	08:40 09:52 (E13) 15:38
13	08:43 16:06 37	09:59 (E13) 07:50 17:12	10:40 (E13) 06:40 18:13	06:17 05:06 21:20	05:06 04:26 22:06	04:26 04:43 21:59	04:43 05:39 21:02	05:39 06:41 20:03	06:41 07:42 19:42	07:42 07:49 18:22	07:49 08:42 16:11	08:42 09:52 (E13) 15:38
14	08:42 16:08 38	10:00 (E13) 07:47 17:14	10:40 (E13) 06:37 18:15	06:14 05:04 21:22	05:04 04:26 22:07	04:26 04:45 21:58	04:45 05:41 22:07	05:41 06:43 21:02	06:43 07:44 20:03	07:44 07:51 18:19	07:51 08:43 16:09	08:43 09:53 (E13) 15:38
15	08:41 16:10 38	09:59 (E13) 07:45 17:17	10:40 (E13) 06:34 18:18	06:12 05:03 21:24	05:03 04:26 22:07	04:26 04:46 21:57	04:46 05:43 22:07	05:43 06:45 21:02	06:45 07:46 20:03	07:46 07:53 18:17	07:53 08:44 16:08	08:44 09:54 (E13) 15:38
16	08:40 16:12 38	10:00 (E13) 07:43 17:19	10:40 (E13) 06:32 18:20	06:10 05:01 21:25	05:01 04:25 22:08	04:25 04:48 21:55	04:48 05:45 22:04	05:45 06:47 21:02	06:47 07:48 20:03	07:48 07:55 18:14	07:55 08:45 16:06	08:45 09:54 (E13) 15:38
17	08:39 16:14 40	10:00 (E13) 07:40 17:21	10:40 (E13) 06:29 18:22	06:07 05:09 21:27	05:09 04:25 22:08	04:25 04:49 21:54	04:49 05:47 22:02	05:47 06:49 21:02	06:49 07:50 20:03	07:50 07:57 18:12	07:57 08:46 16:04	08:46 09:55 (E13) 15:38
18	08:37 16:16 40	10:00 (E13) 07:38 17:23	10:40 (E13) 06:26 18:24	06:04 05:07 21:29	05:07 04:25 22:09	04:25 04:51 21:52	04:51 05:49 22:05	05:49 06:51 21:02	06:51 07:52 20:03	07:52 07:59 18:09	07:59 08:46 16:02	08:46 09:56 (E13) 15:38
19	08:36 16:18 40	10:00 (E13) 07:36 17:26	10:40 (E13) 06:24 18:26	06:02 05:05 21:31	05:05 04:25 22:09	04:25 04:52 21:51	04:52 05:51 22:04	05:51 06:53 21:02	06:53 07:55 20:03	07:55 08:01 18:07	08:01 08:47 16:01	08:47 09:56 (E13) 15:38
20	08:35 16:20 41	10:00 (E13) 07:33 17:28	10:40 (E13) 06:21 18:28	06:00 05:09 21:33	05:09 04:25 22:10	04:25 04:54 21:49	04:54 05:53 22:04	05:53 06:55 21:02	06:55 07:57 20:03	07:57 08:03 18:04	08:03 08:48 15:59	08:48 09:57 (E13) 15:39
21	08:33 16:22 41	10:00 (E13) 07:31 17:30	10:40 (E13) 06:18 18:30	05:57 05:04 21:35	05:04 04:25 22:10	04:25 04:56 21:48	04:56 05:55 22:04	05:55 06:57 21:02	06:57 07:59 20:03	07:59 08:05 18:02	08:05 08:48 15:58	08:48 09:58 (E13) 15:39
22	08:32 16:24 41	10:00 (E13) 07:28 17:32	10:40 (E13) 06:16 18:32	05:54 05:05 21:37	05:05 04:25 22:10	04:25 04:57 21:46	04:57 05:57 22:04	05:57 06:59 21:02	06:59 08:01 20:03	08:01 08:07 17:59	08:07 08:49 15:56	08:49 09:58 (E13) 15:39
23	08:30 16:26 42	10:00 (E13) 07:26 17:34	10:40 (E13) 06:13 18:34	05:52 05:09 21:38	05:09 04:25 22:10	04:25 04:59 21:45	04:59 05:59 22:03	05:59 07:01 21:02	07:01 08:03 20:03	08:03 08:09 17:57	08:09 08:50 15:55	08:50 09:59 (E13) 15:40
24	08:29 16:28 42	10:01 (E13) 07:23 17:37	10:40 (E13) 06:10 18:36	05:49 05:07 21:40	05:07 04:25 22:10	04:25 04:51 21:43	04:51 05:49 22:03	05:49 06:51 21:02	06:51 07:53 20:03	07:53 07:59 18:12	07:59 08:46 15:53	08:46 09:56 (E13) 15:41
25	08:27 16:30 41	10:02 (E13) 07:21 17:39	10:40 (E13) 06:07 18:38	05:47 05:04 21:42	05:04 04:25 22:10	04:25 04:51 21:41	04:51 05:49 22:03	05:49 06:51 21:02	06:51 07:53 20:03	07:53 07:59 18:12	07:59 08:46 15:53	08:46 09:56 (E13) 15:41
26	08:26 16:32 41	10:02 (E13) 07:18 17:41	10:40 (E13) 06:05 18:41	05:44 05:04 21:43	05:04 04:25 22:10	04:25 04:51 21:39	04:51 05:49 22:03	05:49 06:51 21:02	06:51 07:53 20:03	07:53 07:59 18:12	07:59 08:46 15:53	08:46 09:56 (E13) 15:41
27	08:24 16:34 41	10:02 (E13) 07:16 17:43	10:40 (E13) 06:02 18:43	05:42 05:04 21:45	05:04 04:25 22:10	04:25 04:51 21:38	04:51 05:49 22:03	05:49 06:51 21:02	06:51 07:53 20:03	07:53 07:59 18:12	07:59 08:46 15:53	08:46 09:56 (E13) 15:41
28	08:22 16:36 40	10:03 (E13) 07:13 17:45	10:40 (E13) 05:59 18:45	05:40 05:04 21:47	05:04 04:25 22:10	04:25 04:51 21:36	04:51 05:49 22:03	05:49 06:51 21:02	06:51 07:53 20:03	07:53 07:59 18:12	07:59 08:46 15:53	08:46 09:56 (E13) 15:41
29	08:20 16:39 40	10:03 (E13) 07:11 17:47	10:40 (E13) 05:57 18:47	05:37 05:01 21:48	05:01 04:25 22:10	04:25 04:51 21:34	04:51 05:49 22:03	05:49 06:51 21:02	06:51 07:53 20:03	07:53 07:59 18:12	07:59 08:46 15:53	08:46 09:56 (E13) 15:41
30	08:18 16:41 39	10:04 (E13) 07:09 17:50	10:40 (E13) 05:54 18:49	05:35 05:01 21:50	05:01 04:25 22:09	04:25 04:51 21:32	04:51 05:49 22:03	05:49 06:51 21:02	06:51 07:53 20:03	07:53 07:59 18:12	07:59 08:46 15:53	08:46 09:56 (E13) 15:41
31	08:17 16:43 37	10:05 (E13) 07:07 17:52	10:40 (E13) 05:51 18:51	05:29 05:01 21:51	05:01 04:25 22:09	04:25 04:51 21:30	04:51 05:49 22:03	05:49 06:51 21:02	06:51 07:53 20:03	07:53 07:59 18:12	07:59 08:46 15:53	08:46 09:56 (E13) 15:41
Potential sun hours	235		266	366	426	508	529	469	385	324	247	216
Total, worst case	1127		249								1049	782
Sun reduction	0.13		0.20								0.08	0.07
Oper. time red.	0.98		0.98								0.98	0.98
Wind dir. red.	0.61		0.61								0.61	0.61
Total reduction	0.08		0.12								0.05	0.04
Total, real	90		30								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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January			February			March			April	May	June
1	08:51		10:14 (E7)	08:15		07:11				06:49	05:32	04:36
	15:48	23	10:37 (E7)	16:45		17:47				19:53	20:55	21:53
2	08:51		10:16 (E7)	08:13		07:08				06:46	05:30	04:34
	15:49	22	10:38 (E7)	16:47		17:50				19:55	20:57	21:54
3	08:50		10:16 (E7)	08:11		07:06			07:35 (E5)	06:43	05:28	04:33
	15:50	22	10:38 (E7)	16:50		17:52	10		07:45 (E5)	19:57	21:00	21:55
4	08:50		10:16 (E7)	08:09		07:03			07:31 (E5)	06:41	05:25	04:32
	15:52	21	10:37 (E7)	16:52		17:54	17		07:48 (E5)	19:59	21:02	21:57
5	08:49		10:18 (E7)	08:07		07:00			07:29 (E5)	06:38	05:23	04:31
	15:53	20	10:38 (E7)	16:54		17:56	20		07:49 (E5)	20:01	21:04	21:58
6	08:49		10:19 (E7)	08:05		06:58			07:28 (E5)	06:35	05:21	04:31
	15:55	19	10:38 (E7)	16:56		17:58	23		07:51 (E5)	20:03	21:06	21:59
7	08:48		10:19 (E7)	08:03		06:55			07:26 (E5)	06:33	05:19	04:30
	15:56	19	10:38 (E7)	16:58		18:00	25		07:51 (E5)	20:05	21:08	22:00
8	08:48		10:20 (E7)	08:01		06:53			07:25 (E5)	06:30	05:17	04:29
	15:58	17	10:37 (E7)	17:01		18:03	27		07:52 (E5)	20:08	21:10	22:01
9	08:47		10:21 (E7)	07:58		06:50			07:25 (E5)	06:27	05:15	04:28
	15:59	16	10:37 (E7)	17:03		18:05	28		07:53 (E5)	20:10	21:12	22:02
10	08:46		10:23 (E7)	07:56		06:47			07:24 (E5)	06:25	05:12	04:28
	16:01	14	10:37 (E7)	17:05		18:07	28		07:52 (E5)	20:12	21:14	22:03
11	08:45		10:25 (E7)	07:54		06:45			07:23 (E5)	06:22	05:10	04:27
	16:03	11	10:36 (E7)	17:07		18:09	29		07:52 (E5)	20:14	21:16	22:04
12	08:44		10:27 (E7)	07:52		06:42			07:24 (E5)	06:20	05:08	04:27
	16:04	8	10:35 (E7)	17:10		18:11	28		07:52 (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	29		07:52 (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	28		07:51 (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	26		07:49 (E5)	20:22	21:24	22:07
16	08:40			07:43		06:31			07:24 (E5)	06:09	05:00	04:25
	16:12			17:19		18:20	25		07:49 (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	22		07:47 (E5)	20:26	21:27	22:09
18	08:38			07:38		06:26			07:26 (E5)	06:04	04:57	04:25
	16:15			17:23		18:24	19		07:45 (E5)	20:28	21:29	22:09
19	08:36			07:35		06:23			07:28 (E5)	06:02	04:55	04:25
	16:17			17:25		18:26	16		07:44 (E5)	20:30	21:31	22:09
20	08:35			07:33		06:21			07:30 (E5)	05:59	04:53	04:25
	16:19			17:28		18:28	10		07:40 (E5)	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		212				410						
Sun reduction		0.13				0.41						
Oper. time red.		0.98				0.98						
Wind dir. red.		0.61				0.62						
Total reduction		0.08				0.25						
Total, real		17				103						

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30	05:15	06:17	07:17	08:03 (E5)	07:23
	22:09	21:28	20:14	18:54	28 08:31 (E5)	16:36
2	04:31	05:17	06:19	07:19	08:02 (E5)	07:25
	22:09	21:26	20:11	18:51	29 08:31 (E5)	16:34
3	04:31	05:19	06:21	07:21	08:02 (E5)	07:27
	22:08	21:24	20:09	18:48	28 08:30 (E5)	16:31
4	04:32	05:25	06:23	07:23	08:02 (E5)	07:29
	22:07	21:22	20:06	18:46	28 08:30 (E5)	16:29
5	04:33	05:23	06:25	07:25	08:02 (E5)	07:31
	22:07	21:20	20:03	18:43	27 08:29 (E5)	16:27
6	04:34	05:25	06:27	07:27	08:02 (E5)	07:33
	22:06	21:17	20:01	18:40	26 08:28 (E5)	16:25
7	04:36	05:27	06:29	07:29	08:03 (E5)	07:36
	22:05	21:15	19:58	18:38	24 08:27 (E5)	16:23
8	04:37	05:29	06:31	07:32	08:04 (E5)	07:38
	22:04	21:13	19:55	18:35	21 08:25 (E5)	16:21
9	04:38	05:31	06:33	07:34	08:06 (E5)	07:40
	22:03	21:11	19:53	18:32	18 08:24 (E5)	16:19
10	04:39	05:33	06:35	07:36	08:08 (E5)	07:42
	22:02	21:08	19:50	18:30	13 08:21 (E5)	16:17
11	04:40	05:35	06:37	07:38	08:11 (E5)	07:44
	22:01	21:06	19:47	18:27	6 08:17 (E5)	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	18:19		16:09
15	04:46	05:43	06:45	07:46		07:53
	21:57	20:57	19:37	18:17		16:07
16	04:48	05:45	06:47	07:48		07:55
	21:55	20:54	19:34	18:14		16:06
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	19:31	18:12		16:04
18	04:51	05:49	06:51	07:52		07:59
	21:53	20:50	19:29	18:09		16:02
19	04:52	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	19:20	18:02		15:57
22	04:57	05:57	06:59	08:01		08:07
	21:46	20:40	19:18	17:59		15:56
23	04:59	05:59	07:01	08:03		08:09
	21:45	20:37	19:15	6 08:22 (E5)		15:54
24	05:01	06:01	07:03	08:11 (E5)		08:11
	21:43	20:35	19:12	15 08:26 (E5)		15:53
25	05:02	06:03	07:05	08:09 (E5)		08:13
	21:41	20:32	19:10	19 08:28 (E5)		15:52
26	05:04	06:05	07:07	08:07 (E5)		08:15
	21:39	20:30	19:07	22 08:29 (E5)		15:50
27	05:06	06:07	07:09	08:07 (E5)		08:17
	21:38	20:27	19:04	24 08:31 (E5)		15:49
28	05:08	06:09	07:11	08:05 (E5)		08:19
	21:36	20:24	19:02	26 08:31 (E5)		15:48
29	05:10	06:11	07:13	08:04 (E5)		08:21
	21:34	20:22	18:59	27 08:31 (E5)		15:47
30	05:12	06:13	07:15	08:03 (E5)		08:22
	21:32	20:19	18:56	28 08:31 (E5)		15:46
31	05:14	06:15		07:20		08:51
	21:30	20:17		16:38		15:46
Potential sun hours	529	469	385	324	247	216
Total, worst case			167	248	8	681
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.62	0.62	0.61	0.61
Total reduction			0.26	0.16	0.05	0.04
Total, real			43	39	0	29

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	07:37 (E7) 19:53	06:49 20:55	05:32 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	08:14 (E7) 16:36	07:23 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	07:34 (E7) 19:55	06:46 20:58	05:30 21:54	04:35 22:09	04:31 21:26	05:17 20:11	06:19 18:51	08:12 (E7) 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	07:34 (E7) 19:57	06:43 21:00	05:28 21:55	04:34 22:08	04:32 21:24	05:19 20:09	06:21 18:48	08:11 (E7) 16:31	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	07:33 (E7) 19:59	06:41 21:02	05:26 21:57	04:33 22:07	04:32 21:22	05:21 20:06	06:23 18:46	08:10 (E7) 16:29	07:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	07:32 (E7) 19:57	06:38 21:01	05:23 21:58	04:32 22:07	04:33 21:20	05:23 20:03	06:25 18:43	08:09 (E7) 16:27	07:31 15:41
6	08:49 15:55	08:05 16:56	06:58 17:58	07:32 (E7) 19:59	06:35 21:03	05:21 21:59	04:35 22:06	05:25 21:17	06:27 20:01	06:27 18:40	08:08 (E7) 16:25	07:33 15:41
7	08:48 15:56	08:03 16:59	06:55 18:00	07:32 (E7) 19:59	06:33 20:05	05:19 22:00	04:30 22:05	05:27 21:15	06:29 19:58	06:29 18:38	08:07 (E7) 16:23	07:36 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	07:31 (E7) 19:59	06:30 20:08	05:17 22:01	04:29 22:04	05:29 21:13	06:31 19:55	06:31 18:35	08:07 (E7) 16:21	07:38 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	07:32 (E7) 19:59	06:27 20:10	05:15 22:02	04:28 22:03	05:31 21:11	06:33 19:53	06:33 18:32	08:08 (E7) 16:19	07:40 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	07:32 (E7) 19:59	06:25 20:12	05:13 22:04	04:28 22:02	05:33 21:08	06:35 19:50	06:35 18:30	08:08 (E7) 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	07:33 (E7) 19:59	06:22 20:14	05:10 22:04	04:27 22:01	05:35 21:06	06:37 19:47	06:37 18:27	08:08 (E7) 16:15	07:44 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	07:35 (E7) 19:59	06:20 20:16	05:08 22:05	04:27 22:00	05:37 21:04	06:39 19:45	06:39 18:25	08:09 (E7) 16:13	07:46 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	07:36 (E7) 19:59	06:17 20:18	05:06 22:06	04:26 21:59	05:39 21:02	06:41 19:42	06:41 18:22	08:11 (E7) 16:11	07:49 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	07:40 (E7) 19:59	06:14 20:20	05:04 22:07	04:26 21:58	05:41 20:59	06:43 19:39	06:43 18:19	08:13 (E7) 16:09	07:51 15:38
15	08:41 16:10	07:45 17:17	06:34 18:17	07:44 (E7) 19:59	06:12 20:22	05:02 22:07	04:26 21:57	05:43 20:57	06:45 19:37	06:45 18:17	08:16 (E7) 16:07	07:53 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20		06:09 20:24	05:01 22:08	04:25 21:55	05:45 20:54	06:47 19:34	06:47 18:14	07:55 16:06	07:55 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22		06:07 20:26	04:59 21:27	04:25 22:09	05:47 20:52	06:49 19:31	06:49 18:12	07:57 16:04	07:57 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24		06:04 20:28	04:57 21:29	04:25 22:09	05:49 20:50	06:51 19:29	06:51 18:09	07:59 16:02	07:59 15:38
19	08:36 16:18	07:36 17:25	06:24 18:26		06:02 20:30	04:55 21:31	04:25 22:09	05:51 20:47	06:53 19:26	06:53 18:07	08:01 16:01	08:01 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28		05:59 20:33	04:53 21:33	04:25 22:10	05:53 20:45	06:55 19:23	06:55 18:04	08:03 15:59	08:03 15:38
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	05:55 20:42	06:57 19:20	06:57 18:02	08:05 15:58	08:05 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32		05:54 20:37	04:50 21:37	04:25 22:10	05:57 20:40	06:59 19:18	06:59 18:03	08:07 15:56	08:07 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	05:59 20:37	07:01 19:15	07:01 18:03	08:09 15:55	08:09 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	07:03 19:12	07:03 18:05	08:11 15:53	08:11 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 22:10	05:03 21:41	07:05 19:10	07:05 18:07	08:13 15:52	08:13 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	05:04 21:39	07:07 19:07	07:07 18:04	08:15 15:51	08:15 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	07:42 (E7)	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	07:09 19:04	07:09 18:01	08:17 15:49	08:17 15:43
28	08:22 16:36	07:13 17:45	05:59 18:45	07:40 (E7)	05:39 20:49	04:41 21:47	04:28 22:10	05:08 21:36	07:11 19:02	07:11 18:01	08:19 15:48	08:19 15:44
29	08:20 16:39		05:57 19:47	07:53 (E7)	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	07:13 18:59	07:13 18:01	08:21 15:47	08:21 15:44
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	08:17 (E7)	07:15 18:56	08:22 15:46	08:22 15:45
31	08:17 16:43		06:51 19:51		06:51 21:51	04:37 21:51	05:14 21:30	06:15 20:17	08:28 (E7)	07:20 16:38		08:51 15:47
Potential sun hours	235	266	366		426	508	529	529	469	385	324	247
Total, worst case		21	279						11	297		216
Sun reduction		0.20	0.41						0.43	0.26		
Oper. time red.		0.98	0.98						0.98	0.98		
Wind dir. red.		0.62	0.62						0.62	0.62		
Total reduction		0.12	0.25						0.26	0.16		
Total, real		3	70						3	47		

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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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31	08:17 16:43		06:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:49	08:15 16:46	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52	04:30 22:09	05:16 21:28	06:18 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:20 20:11	07:19 18:51	07:25 16:34	08:26 15:44
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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	08:49 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)	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	29 08:26 (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	28 08:25 (E14)	19:55	20:58
3	08:50	08:11	07:06	07:58 (E14)	06:43	05:28
	15:51	16:50	17:52	27 08:25 (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	24 08:23 (E14)	19:59	21:02
5	08:49	08:07	07:01	08:00 (E14)	06:38	05:24
	15:54	16:54	17:56	21 08:21 (E14)	20:01	21:04
6	08:49	08:05	06:58	08:02 (E14)	06:36	05:21
	15:55	16:56	17:58	18 08:20 (E14)	20:03	21:06
7	08:48	08:03	06:55	08:04 (E14)	06:33	05:19
	15:56	16:59	18:01	13 08:17 (E14)	20:06	21:08
8	08:48	08:01	06:53	08:09 (E14)	06:30	05:17
	15:58	17:01	18:03	1 08:10 (E14)	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	06:32		06:09	05:01
	16:12	17:19	18:20		20:24	21:26
17	08:39	07:40	08:08 (E14)	06:29	06:07	04:59
	16:14	17:21	11 08:19 (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	16 08:21 (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	20 08:23 (E14)	18:26	20:31	21:31
20	08:35	07:33	08:01 (E14)	06:21	05:59	04:53
	16:20	17:28	23 08:24 (E14)	18:28	20:33	21:33
21	08:33	07:31	08:00 (E14)	06:18	05:57	04:52
	16:22	17:30	26 08:26 (E14)	18:30	20:35	21:35
22	08:32	07:28	07:59 (E14)	06:16	05:54	04:50
	16:24	17:32	27 08:26 (E14)	18:32	20:37	21:37
23	08:30	07:26	07:59 (E14)	06:13	05:52	04:48
	16:26	17:34	28 08:27 (E14)	18:34	20:39	21:38
24	08:29	07:23	07:58 (E14)	06:10	05:49	04:47
	16:28	17:37	29 08:27 (E14)	18:36	20:41	21:40
25	08:27	07:21	07:58 (E14)	06:08	05:47	04:45
	16:30	17:39	30 08:28 (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	30 08:27 (E14)	18:41	20:45	21:43
27	08:24	07:16	07:57 (E14)	06:02	05:42	04:42
	16:34	17:43	30 08:27 (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	30 08:27 (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
Total, worst case						529
Sun reduction		300	161		250	
Oper. time red.		0.20	0.41		0.50	
Wind dir. red.		0.98	0.98		0.98	
Total reduction		0.62	0.62		0.66	
Total, real		0.12	0.25		0.32	
		37	41		80	

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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) 07:08 (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) 07:07 (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) 07:05 (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) 07:00 (E13)	07:28 18:40	07:33 16:25
7	04:36 22:05	05:27 21:15	06:29 19:58		08:42 (E14) 08:51 (E14)	07:36 16:25
8	04:37 22:04	05:29 21:13	06:31 19:56		16 08:54 (E14)	07:38 16:23
9	04:38 22:03	05:31 21:11	06:33 19:53		20 08:56 (E14)	07:40 16:21
10	04:40 22:02	05:33 21:08	06:35 19:50		23 08:58 (E14)	07:42 16:19
11	04:41 22:01	05:35 21:06	06:37 19:47		26 08:59 (E14)	07:44 16:17
12	04:42 22:00	05:37 21:04	06:39 19:45		27 08:59 (E14)	07:46 16:15
13	04:44 21:59	05:39 21:02	06:41 19:42		28 08:59 (E14)	07:49 16:13
14	04:45 21:58	05:41 20:59	06:43 19:39		29 08:59 (E14)	16:11 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37		30 08:59 (E14)	07:51 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34		30 08:59 (E14)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31		30 08:59 (E14)	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29		30 08:59 (E14)	07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26		29 08:58 (E14)	16:03 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23		28 08:58 (E14)	08:01 15:38
21	04:56 21:48	05:55 20:42	06:57 19:21		28 08:58 (E14)	16:01 15:38
22	04:58 21:46	05:57 20:40	06:59 19:18		25 08:56 (E14)	08:03 15:38
23	04:59 21:45	05:59 20:37	07:01 (E13) 06:54 (E13)		27 08:57 (E14)	08:07 15:39
24	05:01 21:43	06:01 20:35	07:03 (E13) 07:07 (E13)		23 08:54 (E14)	15:56 15:40
25	05:03 21:41	06:03 20:32	07:05 (E13) 07:08 (E13)		19 08:53 (E14)	08:09 15:55
26	05:05 21:39	06:05 20:30	07:07 (E13) 07:09 (E13)		15 08:51 (E14)	15:55 15:41
27	05:06 21:38	06:07 20:27	07:10 (E13) 07:09 (E13)		10 07:48 (E14)	15:52 15:41
28	05:08 21:36	06:09 20:24	07:11 (E13) 07:09 (E13)			08:15 15:42
29	05:10 21:34	06:11 20:22	07:13 (E13) 07:09 (E13)			08:17 15:47
30	05:12 21:32	06:13 20:19	07:15 (E13) 07:09 (E13)			08:19 15:48
31	05:14 21:30	06:15 20:17	07:17 (E13) 07:08 (E13)			15:46 15:41
Potential sun hours	529	469	385	324	247	216
Total, worst case		178	77	474		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.66	0.62		
Total reduction		0.32	0.28	0.16		
Total, real		57	21	75		

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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			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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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 17:05	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 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	06:17 (E14) 21:53	04:30 22:09	05:16 21:28	06:31 (E14) 20:14	06:17 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	06:17 (E14) 21:54	04:31 22:08	05:18 21:26	06:30 (E14) 20:11	06:19 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	06:17 (E14) 21:55	04:32 22:08	05:20 21:24	06:29 (E14) 20:09	06:21 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	06:17 (E14) 21:57	04:33 22:07	05:22 21:22	06:28 (E14) 20:06	06:23 18:46	07:23 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	06:17 (E14) 21:58	04:34 22:07	05:24 21:20	06:28 (E14) 20:03	06:25 18:43	07:25 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	06:17 (E14) 21:59	04:35 22:06	05:25 21:17	06:27 (E14) 20:01	06:27 18:40	07:28 16:25	07:33 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	06:17 (E14) 22:00	04:36 22:05	05:27 21:15	06:26 (E14) 19:58	06:29 18:38	07:30 16:23	07:36 15:40
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	06:18 (E14) 22:01	04:37 22:04	05:29 21:13	06:26 (E14) 19:56	06:31 18:35	07:32 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	06:18 (E14) 22:02	04:38 22:03	05:31 21:11	06:26 (E14) 19:53	06:33 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	05:13 21:14	06:19 (E14) 22:03	04:40 22:02	05:33 21:08	06:26 (E14) 19:50	06:35 18:30	07:36 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	06:20 (E14) 22:04	04:41 22:01	05:35 21:06	06:26 (E14) 19:47	06:37 18:27	07:38 16:15	07:44 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	06:20 (E14) 22:05	04:42 22:00	05:37 21:04	06:25 (E14) 19:45	06:39 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	05:07 21:20	06:22 (E14) 22:06	04:44 21:59	05:39 21:02	06:25 (E14) 19:42	06:41 18:22	07:42 16:11	07:49 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	06:23 (E14) 22:07	04:45 21:58	05:41 20:59	06:26 (E14) 19:39	06:43 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	05:03 21:24	06:25 (E14) 22:07	04:46 21:57	05:43 20:57	06:26 (E14) 19:37	06:45 18:17	07:46 16:03	07:53 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	06:27 (E14) 22:08	04:48 21:55	05:45 20:54	06:26 (E14) 19:34	06:47 18:15	07:48 16:05	07:55 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	06:39 (E14) 22:05	04:49 21:54	05:47 20:52	06:27 (E14) 19:31	06:49 18:12	07:50 16:04	07:57 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	06:45 (E14) 22:09	04:51 21:52	05:49 20:50	06:28 (E14) 19:29	06:51 18:09	07:52 16:03	07:59 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	06:46 (E14) 22:10	04:53 21:51	05:51 20:47	06:28 (E14) 19:26	06:53 18:07	07:55 16:01	08:01 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	06:47 (E14) 22:10	04:54 21:49	05:53 20:45	06:29 (E14) 19:23	06:55 18:04	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	04:52 21:35	06:48 (E14) 22:10	04:56 21:48	05:55 20:42	06:31 (E14) 19:21	06:57 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	04:50 21:36	06:49 (E14) 22:10	04:58 21:46	05:57 20:40	06:33 (E14) 19:18	06:59 18:00	08:01 15:56	08:07 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	06:50 (E14) 22:10	04:59 21:45	05:59 20:37	06:34 (E14) 19:15	07:01 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	04:47 21:40	06:51 (E14) 22:10	05:01 21:43	06:01 20:35	06:35 (E14) 19:12	07:03 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	04:45 21:42	06:52 (E14) 22:10	05:03 21:41	06:03 20:32	06:36 (E14) 19:10	07:05 16:52	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	04:44 21:43	06:53 (E14) 22:10	05:05 21:39	06:05 20:30	06:37 (E14) 19:07	07:07 16:50	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	04:42 21:45	06:54 (E14) 22:10	05:06 21:38	06:07 20:27	06:38 (E14) 19:04	07:09 16:48	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	04:41 21:47	06:55 (E14) 22:10	05:08 21:36	06:09 20:24	06:39 (E14) 19:02	07:11 16:45	08:14 15:48	08:19 15:44
29	08:20 16:39	07:11 17:47	05:57 18:50	05:37 20:51	04:40 21:48	06:56 (E14) 22:10	05:10 21:34	06:11 20:22	06:40 (E14) 18:59	07:13 16:43	08:16 15:47	08:21 15:45
30	08:18 16:41	07:04 17:54	05:54 18:55	05:35 20:53	04:38 21:50	06:57 (E14) 22:09	05:12 21:32	06:13 20:19	06:41 (E14) 18:56	07:15 16:41	08:18 15:46	08:22 15:46
31	08:17 16:43	07:03 17:51	05:52 18:51	05:32 20:51	04:37 21:51	06:58 (E14) 22:10	05:14 21:30	06:15 20:17	06:42 (E14) 18:53	07:20 16:38	08:19 15:47	08:24 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case				267	414		71	616				
Sun reduction				0.50	0.57		0.49	0.50				
Oper. time red.				0.98	0.98		0.98	0.98				
Wind dir. red.				0.65	0.65		0.65	0.65				
Total reduction				0.32	0.36		0.31	0.32				
Total, real				85	150		22	196				

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	05:28	04:34
	15:51	16:50	17:52	19:57	21:00	21:55
4	08:50	08:09	07:03	06:41	05:26	04:33
	15:52	16:52	17:54	19:59	21:02	21:57
5	08:49	08:07	07:00	06:38	07:16 (E7)	05:23
	15:53	16:54	17:56	20:01	07:31 (E7)	21:04
6	08:49	08:05	06:58	06:35	07:14 (E7)	05:21
	15:55	16:56	17:58	20:03	07:34 (E7)	21:06
7	08:48	08:03	06:55	07:21 (E8)	06:33	07:11 (E7)
	15:56	16:59	18:00	7 07:28 (E8)	20:05	25 07:36 (E7)
8	08:48	08:00	06:53	07:18 (E8)	06:30	07:09 (E7)
	15:58	17:01	18:03	11 07:29 (E8)	20:08	28 07:37 (E7)
9	08:47	07:58	06:50	07:16 (E8)	06:27	07:08 (E7)
	15:59	17:03	18:05	15 07:31 (E8)	20:10	30 07:38 (E7)
10	08:46	07:56	06:47	07:13 (E8)	06:25	07:06 (E7)
	16:01	17:05	18:07	19 07:32 (E8)	20:12	32 07:38 (E7)
11	08:45	07:54	06:45	07:12 (E8)	06:22	07:05 (E7)
	16:03	17:08	18:09	20 07:32 (E8)	20:14	34 07:39 (E7)
12	08:44	07:52	06:42	07:12 (E8)	06:20	07:04 (E7)
	16:04	17:10	18:11	21 07:33 (E8)	20:16	35 07:39 (E7)
13	08:43	07:49	06:39	07:11 (E8)	06:17	07:04 (E7)
	16:06	17:12	18:13	21 07:32 (E8)	20:18	36 07:40 (E7)
14	08:42	07:47	06:37	07:11 (E8)	06:14	07:02 (E7)
	16:08	17:14	18:15	21 07:32 (E8)	20:20	38 07:40 (E7)
15	08:41	07:45	06:34	07:10 (E8)	06:12	07:02 (E7)
	16:10	17:17	18:17	21 07:31 (E8)	20:22	38 07:40 (E7)
16	08:40	07:43	06:32	07:11 (E8)	06:09	07:01 (E7)
	16:12	17:19	18:20	19 07:30 (E8)	20:24	39 07:40 (E7)
17	08:39	07:40	06:29	07:12 (E8)	06:07	07:02 (E7)
	16:14	17:21	18:22	17 07:29 (E8)	20:26	38 07:40 (E7)
18	08:37	07:38	06:26	07:13 (E8)	06:04	07:01 (E7)
	16:16	17:23	18:24	14 07:27 (E8)	20:28	38 07:39 (E7)
19	08:36	07:35	06:23	07:15 (E8)	06:02	07:01 (E7)
	16:18	17:25	18:26	10 07:25 (E8)	20:30	38 07:39 (E7)
20	08:35	07:33	06:21		05:59	07:01 (E7)
	16:20	17:28	18:28		20:33	37 07:38 (E7)
21	08:33	07:31	06:18		05:57	07:01 (E7)
	16:22	17:30	18:30		20:35	37 07:38 (E7)
22	08:32	07:28	06:15		05:54	07:02 (E7)
	16:24	17:32	18:32		20:37	35 07:37 (E7)
23	08:30	07:26	06:13		05:52	07:02 (E7)
	16:26	17:34	18:34		20:39	34 07:36 (E7)
24	08:29	07:23	06:10		05:49	07:03 (E7)
	16:28	17:37	18:36		20:41	32 07:35 (E7)
25	08:27	07:21	06:07		05:47	07:04 (E7)
	16:30	17:39	18:38		20:43	30 07:34 (E7)
26	08:26	07:18	06:05		05:44	07:04 (E7)
	16:32	17:41	18:40		20:45	28 07:32 (E7)
27	08:24	07:16	06:02		05:42	07:05 (E7)
	16:34	17:43	18:43		20:47	26 07:31 (E7)
28	08:22	07:13	05:59		05:39	07:07 (E7)
	16:36	17:45	18:45		20:49	22 07:29 (E7)
29	08:20		06:57		05:37	07:09 (E7)
	16:39		19:47		20:51	18 07:27 (E7)
30	08:18		06:54		05:35	07:11 (E7)
	16:41		19:49		20:53	12 07:23 (E7)
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	795		
Sun reduction			0.41	0.50		
Oper. time red.			0.98	0.98		
Wind dir. red.			0.62	0.66		
Total reduction			0.25	0.32		
Total, real			54	256		

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:04 (E7)	07:17	07:51 (E8)
	22:09	21:28	20:14	18:54	18:12 (E8)	16:36
2	04:31	05:17	06:19	07:05 (E7)	07:19	07:51 (E8)
	22:09	21:26	20:11	18:51	18:11 (E8)	16:34
3	04:32	05:19	06:21	07:06 (E7)	07:21	07:51 (E8)
	22:08	21:24	20:09	18:48	18:10 (E8)	16:31
4	04:33	05:21	06:23	07:07 (E7)	07:23	07:52 (E8)
	22:07	21:22	20:06	18:46	18:09 (E8)	16:29
5	04:33	05:23	06:25	07:07 (E7)	07:25	07:54 (E8)
	22:07	21:19	20:03	18:43	18:07 (E8)	16:27
6	04:35	05:25	06:27	07:09 (E7)	07:27	07:56 (E8)
	22:06	21:17	20:01	18:40	18:05 (E8)	16:25
7	04:36	05:27	06:29	07:11 (E7)	07:29	07:58 (E8)
	22:05	21:15	19:58	18:38	18:01 (E8)	16:23
8	04:37	05:29	06:31	07:17 (E7)	07:32	07:38
	22:04	21:13	19:55	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	21:01	19:42		18:22	16:11
14	04:45	05:41	06:43		07:44	07:51
	21:58	20:59	19:39		18:19	16:09
15	04:46	05:43	06:45		07:46	07:53
	21:57	20:57	19:37		18:17	16:07
16	04:48	05:45	06:47		07:48	07:55
	21:55	20:54	19:34		18:14	16:06
17	04:49	05:47	06:49		07:50	07:57
	21:54	20:52	19:31		18:12	16:04
18	04:51	05:49	06:51		07:52	07:59
	21:52	20:50	19:29		18:09	16:02
19	04:52	05:51	06:53		07:55	08:01
	21:51	20:47	19:26		18:07	16:01
20	04:54	05:53	06:55		07:57	08:03
	21:49	20:45	19:23		18:04	15:59
21	04:56	05:55	06:57		07:59	08:05
	21:48	20:42	19:20		18:02	15:58
22	04:57	05:57	06:59		08:01	08:07
	21:46	20:40	19:18		17:59	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	07:59 (E8)	08:05	08:11
	21:43	20:35	19:12	08:07 (E8)	17:55	15:53
25	05:03	06:03	07:05	07:56 (E8)	07:07	08:13
	21:41	20:32	19:10	08:09 (E8)	16:52	15:52
26	05:04	06:05	07:07	07:55 (E8)	07:10	08:15
	21:39	20:29	19:07	08:11 (E8)	16:50	15:51
27	05:06	06:07	07:09	07:54 (E8)	07:12	08:17
	21:38	20:27	19:04	08:12 (E8)	16:47	15:49
28	05:08	06:09	07:11	07:52 (E8)	07:14	08:19
	21:36	20:24	19:02	08:12 (E8)	16:45	15:48
29	05:10	06:11	07:13	07:52 (E8)	07:16	08:21
	21:34	20:22	18:59	08:12 (E8)	16:43	15:47
30	05:12	06:13	07:15	07:51 (E8)	07:18	08:22
	21:32	20:19	18:56	08:12 (E8)	16:40	15:46
31	05:14	06:15	07:04 (E7)		07:20	08:51
	21:30	20:17	07:39 (E7)		16:38	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		627	303	102		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.64	0.62		
Total reduction		0.32	0.27	0.16		
Total, real		201	82	16		

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January		February		March	April		May		June	
1	08:51	13:23 (E13)	08:15	07:11		06:49		05:32	06:40 (E7)	04:36	
	15:48	2 13:25 (E13)	16:45	17:47		19:53		20:55	40 07:20 (E7)	21:53	
2	08:50		08:13	07:08		06:46		05:30	06:40 (E7)	04:35	
	15:49		16:47	17:50		19:55		20:57	40 07:20 (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	39 07:19 (E7)	21:55	
4	08:50		08:09	07:03		06:41		05:26	06:41 (E7)	04:33	
	15:52		16:52	17:54		19:59		21:02	38 07:19 (E7)	21:57	
5	08:49		08:07	07:00		06:38		05:23	06:41 (E7)	04:32	
	15:53		16:54	17:56		20:01		21:04	37 07:18 (E7)	21:58	
6	08:49		08:05	06:58		06:35		05:21	06:42 (E7)	04:31	
	15:55		16:56	17:58		20:03		21:06	35 07:17 (E7)	21:59	
7	08:48		08:03	06:55		06:33		05:19	06:42 (E7)	04:30	
	15:56		16:59	18:00		20:05		21:08	34 07:16 (E7)	22:00	
8	08:48		08:00	06:53		06:30		05:17	06:43 (E7)	04:29	
	15:58		17:01	18:03		20:08		21:10	32 07:15 (E7)	22:01	
9	08:47		07:58	06:50		06:27		05:15	06:44 (E7)	04:28	
	15:59		17:03	18:05		20:10		21:12	30 07:14 (E7)	22:02	
10	08:46		07:56	06:47	07:13 (E8)	06:25		05:13	06:45 (E7)	04:28	
	16:01		17:05	18:07	6 07:19 (E8)	20:12		21:14	28 07:13 (E7)	22:03	
11	08:45		07:54	06:45	07:10 (E8)	06:22		05:10	06:46 (E7)	04:27	
	16:03		17:08	18:09	12 07:22 (E8)	20:14		21:16	26 07:12 (E7)	22:04	
12	08:44		07:52	06:42	07:08 (E8)	06:20		05:08	06:47 (E7)	04:27	
	16:04		17:10	18:11	16 07:24 (E8)	20:16		21:18	23 07:10 (E7)	22:05	
13	08:43		07:49	06:39	07:05 (E8)	06:17	07:01 (E7)	05:06	06:49 (E7)	04:26	
	16:06		17:12	18:13	19 07:24 (E8)	20:18	6 07:07 (E7)	21:20	19 07:08 (E7)	22:06	
14	08:42		07:47	06:37	07:04 (E8)	06:14	06:55 (E7)	05:04	06:51 (E7)	04:26	
	16:08		17:14	18:15	21 07:25 (E8)	20:20	17 07:12 (E7)	21:22	15 07:06 (E7)	22:07	
15	08:41		07:45	06:34	07:03 (E8)	06:12	06:53 (E7)	05:02	06:55 (E7)	04:26	
	16:10		17:17	18:17	21 07:24 (E8)	20:22	22 07:15 (E7)	21:24	8 07:03 (E7)	22:07	
16	08:40		07:43	06:31	07:03 (E8)	06:09	06:50 (E7)	05:01		04:25	
	16:12		17:19	18:20	22 07:25 (E8)	20:24	26 07:16 (E7)	21:25		22:08	
17	08:39		07:40	06:29	07:02 (E8)	06:07	06:49 (E7)	04:59		04:25	
	16:14		17:21	18:22	23 07:25 (E8)	20:26	29 07:18 (E7)	21:27		22:08	
18	08:37		07:38	06:26	07:02 (E8)	06:04	06:47 (E7)	04:57		04:25	
	16:16		17:23	18:24	22 07:24 (E8)	20:28	31 07:18 (E7)	21:29		22:09	
19	08:36		07:35	06:23	07:03 (E8)	06:02	06:46 (E7)	04:55		04:25	
	16:18		17:25	18:26	21 07:24 (E8)	20:30	34 07:20 (E7)	21:31		22:09	
20	08:35		07:33	06:21	07:03 (E8)	05:59	06:44 (E7)	04:53		04:25	
	16:20		17:28	18:28	19 07:22 (E8)	20:33	36 07:20 (E7)	21:33		22:10	
21	08:33		07:31	06:18	07:03 (E8)	05:57	06:43 (E7)	04:52		04:25	
	16:22		17:30	18:30	18 07:21 (E8)	20:35	38 07:21 (E7)	21:35		22:10	
22	08:32		07:28	06:15	07:05 (E8)	05:54	06:43 (E7)	04:50		04:25	
	16:24		17:32	18:32	15 07:20 (E8)	20:37	38 07:21 (E7)	21:36		22:10	
23	08:30		07:26	06:13	07:07 (E8)	05:52	06:42 (E7)	04:48		04:26	
	16:26		17:34	18:34	10 07:17 (E8)	20:39	39 07:21 (E7)	21:38		22:10	
24	08:29		07:23	06:10		05:49	06:41 (E7)	04:47		04:26	
	16:28		17:37	18:36		20:41	41 07:22 (E7)	21:40		22:10	
25	08:27		07:21	06:07		05:47	06:41 (E7)	04:45		04:26	
	16:30		17:39	18:38		20:43	41 07:22 (E7)	21:42		22:10	
26	08:26		07:18	06:05		05:44	06:40 (E7)	04:44		04:27	
	16:32		17:41	18:40		20:45	41 07:21 (E7)	21:43		22:10	
27	08:24		07:16	06:02		05:42	06:40 (E7)	04:42		04:27	
	16:34		17:43	18:43		20:47	41 07:21 (E7)	21:45		22:10	
28	08:22		07:13	05:59		05:39	06:40 (E7)	04:41		04:28	
	16:36		17:45	18:45		20:49	41 07:21 (E7)	21:47		22:10	
29	08:20			06:57		05:37	06:40 (E7)	04:39		04:28	
	16:39			19:47		20:51	41 07:21 (E7)	21:48		22:10	
30	08:18			06:54		05:35	06:39 (E7)	04:38		04:29	
	16:41			19:49		20:53	41 07:20 (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		2		245		603		444			
Sun reduction		0.13		0.41		0.50		0.57			
Oper. time red.		0.98		0.98		0.98		0.98			
Wind dir. red.		0.63		0.63		0.66		0.66			
Total reduction		0.08		0.25		0.32		0.37			
Total, real		0		62		194		162			

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	06:57 (E7) 20:14	07:17 18:54	07:46 (E8) 16:36	08:24 15:45
2	04:31 22:09	05:17 21:26	06:56 (E7) 20:11	07:19 18:51	07:48 (E8) 16:34	08:26 15:44
3	04:32 22:08	05:19 21:24	06:55 (E7) 20:09	07:21 18:48	07:50 (E8) 16:31	08:28 15:43
4	04:33 22:07	05:21 21:22	06:54 (E7) 20:06	07:23 18:46	07:59 (E8) 16:29	08:29 15:42
5	04:33 22:07	05:23 21:19	06:52 (E7) 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	04:35 22:06	05:25 21:17	06:52 (E7) 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:51 (E7) 19:58	07:29 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:50 (E7) 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:50 (E7) 19:53	07:34 18:32	07:40 16:19	08:37 15:39
10	04:39 22:02	05:33 21:08	06:49 (E7) 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:48 (E7) 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:48 (E7) 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	04:43 21:59	05:39 21:01	06:48 (E7) 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:48 (E7) 19:39	07:44 18:19	07:51 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:48 (E7) 19:37	07:46 18:17	07:53 16:07	08:44 15:38
16	04:48 21:55	05:45 20:54	06:48 (E7) 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:47 (E7) 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:47 (E7) 19:29	07:52 18:09	07:59 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:47 (E7) 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:47 (E7) 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	04:56 21:48	05:55 20:42	06:48 (E7) 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	04:57 21:46	05:57 20:40	06:48 (E7) 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	04:59 21:45	05:59 20:37	06:49 (E7) 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	06:49 (E7) 19:12	08:05 17:55	08:11 15:53	08:50 15:40
25	05:03 21:41	06:03 20:32	06:50 (E7) 19:10	08:06 17:53	08:13 15:52	08:50 15:41
26	05:04 21:39	06:05 20:29	06:51 (E7) 19:07	08:06 17:51	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	06:52 (E7) 19:04	08:07 17:49	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	06:54 (E7) 19:02	08:08 17:46	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	06:56 (E7) 18:59	08:09 17:44	08:21 15:47	08:51 15:44
30	05:12 21:32	07:01 (E7) 20:19	07:02 (E7) 18:56	08:06 (E8) 17:41	08:22 15:46	08:51 15:45
31	05:14 21:30	06:59 (E7) 20:17	07:07 (E7)	08:05 (E8)	07:20 16:38	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case	50	1006	205	39		233
Sun reduction	0.49	0.50	0.43	0.26		0.07
Oper. time red.	0.98	0.98	0.98	0.98		0.98
Wind dir. red.	0.66	0.66	0.63	0.63		0.63
Total reduction	0.32	0.32	0.26	0.16		0.04
Total, real	16	322	54	6		10

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

Shadow receptor: Jaunjostī - 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	10	07:47 (E14) 07:57 (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			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		07:25 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 15:56	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	04:40 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	6	07:10 (E14) 07:16 (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	9	07:54 (E14) 08:03 (E14)			07:46 18:25	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	15	07:05 (E14) 07:20 (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	16	07:50 (E14) 08:06 (E14)			07:49 18:22	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	20	07:02 (E14) 07:22 (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	20	07:48 (E14) 08:08 (E14)			07:51 18:20	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	23	07:01 (E14) 07:24 (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	23	07:46 (E14) 08:09 (E14)			07:53 18:17	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	25	06:59 (E14) 07:24 (E14)	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	26	07:44 (E14) 08:10 (E14)			07:55 18:15	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	28	06:57 (E14) 07:25 (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	28	07:43 (E14) 08:11 (E14)			07:57 18:12	08:46 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	29	06:56 (E14) 07:25 (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	29	07:42 (E14) 08:11 (E14)			07:59 18:09	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	30	06:56 (E14) 07:26 (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	31	07:41 (E14) 08:12 (E14)			07:55 18:07	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	31	06:55 (E14) 07:26 (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	31	07:41 (E14) 08:12 (E14)			07:57 18:04	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	31	06:54 (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	31	07:40 (E14) 08:11 (E14)			07:59 18:02	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	31	06:55 (E14) 07:26 (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	31	07:40 (E14) 08:11 (E14)			08:01 18:00	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	31	06:54 (E14) 07:25 (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	31	07:01 (E14) 08:11 (E14)			08:03 17:57	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	30	06:54 (E14) 07:24 (E14)	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	30	07:03 (E14) 08:10 (E14)			08:05 17:55	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	29	06:55 (E14) 07:24 (E14)	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	29	07:05 (E14) 08:09 (E14)			08:13 17:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	28	06:55 (E14) 07:23 (E14)	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	28	07:07 (E14) 08:08 (E14)			08:15 17:50	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	26	06:55 (E14) 07:21 (E14)	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	07:09 (E14) 08:07 (E14)			08:17 17:48	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	24	06:56 (E14) 07:20 (E14)	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	24	07:11 (E14) 08:05 (E14)			08:19 17:45	08:51 15:44
29	08:20 16:39		06:57 19:47	21	07:57 (E14) 08:18 (E14)	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	21	07:13 (E14) 08:03 (E14)			08:21 17:42	08:51 15:45
30	08:19 16:41		06:54 19:49	17	07:58 (E14) 08:15 (E14)	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	17	07:15 (E14) 08:01 (E14)			08:22 17:18	08:51 15:46
31	08:17 16:43		06:52 19:51	11	08:02 (E14) 08:13 (E14)	20:53	04:37 21:51	05:14 21:30	06:15 20:17				07:20 16:38			08:51 15:47	08:51 15:47
Potential sun hours	235	266	366			426	508	528	529	469	385		324		247	216	
Total, worst case			486								481		10				
Sun reduction			0.41								0.43		0.26				
Oper. time red.			0.98								0.98		0.98				
Wind dir. red.			0.63								0.63		0.63				
Total reduction			0.26								0.27		0.16				
Total, real			124								128		2				

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 15:53	07:14 (E14) 20:55	05:33 21:53	04:36 22:09	04:30 21:28	06:17 20:14	07:04 (E14) 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:11 (E14) 20:58	05:30 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:03 (E14) 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	07:09 (E14) 21:00	05:28 21:55	04:34 22:08	05:20 21:24	06:21 20:09	07:02 (E14) 18:48	07:21 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:06 (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	08:29 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	04:34 22:07	05:24 21:20	06:25 20:04	07:00 (E14) 18:43	07:26 16:27	08:31 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	04:35 22:06	05:26 21:17	06:27 20:01	07:00 (E14) 18:40	07:28 16:25	08:32 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	07:22 (E14) 18:38	07:30 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:04 (E14) 21:10	05:17 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:00 (E14) 18:35	07:32 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:04 (E14) 21:12	05:15 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:02 (E14) 18:33	07:34 16:19	08:37 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	04:40 22:02	05:33 21:08	06:35 19:50	07:04 (E14) 18:30	07:36 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:05 (E14) 21:16	05:11 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:06 (E14) 18:27	07:38 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:06 (E14) 21:18	05:09 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:08 (E14) 18:25	07:40 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:08 (E14) 21:20	05:07 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:13 (E14) 18:22	07:42 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	07:17 (E14) 21:22	05:05 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:11 (E14) 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	07:19 (E14) 21:24	05:03 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:13 (E14) 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	07:21 (E14) 21:26	05:01 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:15 (E14) 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	07:22 (E14) 21:27	05:00 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:16 (E14) 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	07:23 (E14) 21:29	05:00 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:17 (E14) 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	07:24 (E14) 21:31	05:00 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:18 (E14) 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	07:25 (E14) 21:33	05:00 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:19 (E14) 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	07:26 (E14) 21:35	05:00 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:20 (E14) 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	07:27 (E14) 21:37	05:00 22:10	04:58 21:46	05:57 20:40	06:59 19:18	07:21 (E14) 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	07:28 (E14) 21:38	05:00 22:10	04:59 21:45	05:59 20:37	07:01 19:15	07:22 (E14) 18:00	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	07:29 (E14) 21:40	05:00 22:10	05:01 21:43	06:01 20:35	07:03 19:13	07:23 (E14) 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	07:30 (E14) 21:42	05:00 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:24 (E14) 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	07:31 (E14) 21:43	05:00 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:25 (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	07:32 (E14) 21:45	05:00 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:26 (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	07:33 (E14) 21:47	05:00 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:27 (E14) 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:57	06:00 18:51	05:37 20:51	07:34 (E14) 21:48	05:00 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:28 (E14) 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:04 18:04	06:00 19:04	05:35 20:53	07:35 (E14) 21:50	05:00 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:29 (E14) 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:02 19:01	06:00 19:01	05:33 20:51	07:36 (E14) 21:51	05:00 22:09	05:14 21:30	06:15 20:17	07:16 18:59	07:30 (E14) 17:38	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			5	219				23	206			
Sun reduction			0.41	0.50				0.50	0.43			
Oper. time red.			0.98	0.98				0.98	0.98			
Wind dir. red.			0.66	0.66				0.66	0.66			
Total reduction			0.27	0.32				0.32	0.28			
Total, real			1	71				7	57			

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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		11:00 (E7)	07:11		06:49				05:32		06:31 (E5)	04:36		
	15:48	57	11:18 (E7)	16:45	11	11:11 (E7)	17:47		19:53				20:55	43	07:14 (E5)	21:53		
2	08:50		09:30 (E8)	08:13			07:08		06:46				05:30		06:31 (E5)	04:34		
	15:49	59	11:19 (E7)	16:47			17:50		19:55				20:57	43	07:14 (E5)	21:54		
3	08:50		09:29 (E8)	08:11			07:06		06:43				05:28		06:31 (E5)	04:33		
	15:50	60	11:19 (E7)	16:49			17:52		19:57				21:00	43	07:14 (E5)	21:55		
4	08:50		09:28 (E8)	08:09			07:03		06:41				05:25		06:31 (E5)	04:32		
	15:52	61	11:19 (E7)	16:52			17:54		19:59				21:02	42	07:13 (E5)	21:57		
5	08:49		09:28 (E8)	08:07			07:00		06:38				05:23		06:31 (E5)	04:31		
	15:53	63	11:20 (E7)	16:54			17:56		20:01				21:04	42	07:13 (E5)	21:58		
6	08:49		09:27 (E8)	08:05			06:58		06:35				05:21		06:32 (E5)	04:31		
	15:55	64	11:20 (E7)	16:56			17:58		20:03				21:06	41	07:13 (E5)	21:59		
7	08:48		09:27 (E8)	08:03			06:55		06:33				05:19		06:32 (E5)	04:30		
	15:56	66	11:21 (E7)	16:58			18:00		20:05				21:08	40	07:12 (E5)	22:00		
8	08:48		09:27 (E8)	08:00			06:53		06:30				05:17		06:32 (E5)	04:29		
	15:58	66	11:21 (E7)	17:01			18:03		20:07				21:10	40	07:12 (E5)	22:01		
9	08:47		09:27 (E8)	07:58			06:50		06:27				05:15		06:33 (E5)	04:28		
	15:59	67	11:22 (E7)	17:03			18:05		20:10				21:12	38	07:11 (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	11:22 (E7)	17:05			18:07		20:12				21:14	37	07:10 (E5)	22:03		
11	08:45		09:28 (E8)	07:54			06:45		06:22				05:10		06:34 (E5)	04:27		
	16:03	68	11:23 (E7)	17:07			18:09		20:14				21:16	35	07:09 (E5)	22:04		
12	08:44		09:28 (E8)	07:52		08:20 (E6)	06:42		06:20				05:08		06:34 (E5)	04:27		
	16:04	67	11:23 (E7)	17:10	6	08:26 (E6)	18:11		20:16				21:18	34	07:08 (E5)	22:05		
13	08:43		09:28 (E8)	07:49		08:18 (E6)	06:39		06:17				05:06		06:35 (E5)	04:26		
	16:06	67	11:23 (E7)	17:12	11	08:29 (E6)	18:13		20:18				21:20	32	07:07 (E5)	22:06		
14	08:42		09:28 (E8)	07:47		08:15 (E6)	06:37		06:14				05:04		06:37 (E5)	04:26		
	16:08	68	11:23 (E7)	17:14	15	08:30 (E6)	18:15		20:20				21:22	30	07:07 (E5)	22:07		
15	08:41		09:29 (E8)	07:45		08:13 (E6)	06:34		06:12				05:02		06:37 (E5)	04:25		
	16:10	68	11:24 (E7)	17:16	19	08:32 (E6)	18:17		20:22				21:24	28	07:05 (E5)	22:07		
16	08:40		09:29 (E8)	07:43		08:10 (E6)	06:31		06:09			06:48 (E5)	05:00		06:38 (E5)	04:25		
	16:12	68	11:24 (E7)	17:19	22	08:32 (E6)	18:20		20:24	15		07:03 (E5)	21:25	26	07:04 (E5)	22:08		
17	08:39		09:30 (E8)	07:40		08:10 (E6)	06:29		06:07			06:45 (E5)	04:59		06:39 (E5)	04:25		
	16:14	66	11:24 (E7)	17:21	23	08:33 (E6)	18:22		20:26	21		07:06 (E5)	21:27	23	07:02 (E5)	22:09		
18	08:37		09:30 (E8)	07:38		08:09 (E6)	06:26		06:04			06:42 (E5)	04:57		06:41 (E5)	04:25		
	16:15	66	11:24 (E7)	17:23	24	08:33 (E6)	18:24		20:28	26		07:08 (E5)	21:29	20	07:01 (E5)	22:09		
19	08:36		09:30 (E8)	07:35		08:09 (E6)	06:23		06:02			06:41 (E5)	04:55		06:43 (E5)	04:25		
	16:17	65	11:24 (E7)	17:25	25	08:34 (E6)	18:26		20:30	29		07:10 (E5)	21:31	16	06:59 (E5)	22:09		
20	08:35		09:31 (E8)	07:33		08:09 (E6)	06:21		05:59			06:39 (E5)	04:53		06:46 (E5)	04:25		
	16:19	63	11:24 (E7)	17:28	24	08:33 (E6)	18:28		20:32	31		07:10 (E5)	21:33	10	06:56 (E5)	22:10		
21	08:33		09:32 (E8)	07:31		08:09 (E6)	06:18		05:57			06:37 (E5)	04:51			04:25		
	16:21	62	11:24 (E7)	17:30	25	08:34 (E6)	18:30		20:35	34		07:11 (E5)	21:35			22:10		
22	08:32		09:32 (E8)	07:28		08:09 (E6)	06:15		05:54			06:37 (E5)	04:50			04:25		
	16:24	60	11:23 (E7)	17:32	24	08:33 (E6)	18:32		20:37	36		07:13 (E5)	21:37			22:10		
23	08:30		09:33 (E8)	07:26		08:10 (E6)	06:13		05:52			06:35 (E5)	04:48			04:25		
	16:26	57	11:23 (E7)	17:34	23	08:33 (E6)	18:34		20:39	38		07:13 (E5)	21:38			22:10		
24	08:29		09:35 (E8)	07:23		08:10 (E6)	06:10		05:49			06:34 (E5)	04:47			04:26		
	16:28	54	11:23 (E7)	17:36	22	08:32 (E6)	18:36		20:41	39		07:13 (E5)	21:40			22:10		
25	08:27		09:36 (E8)	07:21		08:10 (E6)	06:07		05:47			06:34 (E5)	04:45			04:26		
	16:30	51	11:23 (E7)	17:39	20	08:30 (E6)	18:38		20:43	40		07:14 (E5)	21:42			22:10		
26	08:26		09:38 (E8)	07:18		08:12 (E6)	06:05		05:44			06:33 (E5)	04:44			04:27		
	16:32	46	11:22 (E7)	17:41	18	08:30 (E6)	18:40		20:45	41		07:14 (E5)	21:43			22:10		
27	08:24		09:41 (E8)	07:16		08:14 (E6)	06:02		05:42			06:32 (E5)	04:42			04:27		
	16:34	39	11:21 (E7)	17:43	13	08:27 (E6)	18:43		20:47	42		07:14 (E5)	21:45			22:10		
28	08:22		10:51 (E7)	07:13		08:17 (E6)	05:59		05:39			06:32 (E5)	04:41			04:28		
	16:36	29	11:20 (E7)	17:45	7	08:24 (E6)	18:45		20:49	42		07:14 (E5)	21:47			22:10		
29	08:20		10:52 (E7)				06:57		05:37			06:31 (E5)	04:39			04:28		
	16:38	27	11:19 (E7)				19:47		20:51	43		07:14 (E5)	21:48			22:10		
30	08:18		10:54 (E7)				06:54		05:35			06:31 (E5)	04:38			04:29		
	16:41	23	11:17 (E7)				19:49		20:53	43		07:14 (E5)	21:50			22:09		
31	08:17		10:57 (E7)				06:51						04:37					
	16:43	18	11:15 (E7)				19:51						21:51					
Potential sun hours	235			266			366			426			508			529		
Total, worst case	1762			332						520			663					
Sun reduction	0.13			0.20						0.50			0.57					
Oper. time red.	0.98			0.98						0.98			0.98					
Wind dir. red.	0.61			0.62						0.65			0.65					
Total reduction	0.08			0.12						0.32			0.36					
Total, real	139			41						167			241					

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

July		August		September		October		November		December	
1	04:30	05:15	06:44 (E5)	06:17	07:17			07:23		08:24	09:10 (E8)
	22:09	21:28	35 07:19 (E5)	20:14	18:53			16:36		15:45	68 11:05 (E7)
2	04:31	05:17	06:44 (E5)	06:19	07:19			07:25		08:26	09:10 (E8)
	22:09	21:26	36 07:20 (E5)	20:11	18:51			16:34		15:44	67 11:05 (E7)
3	04:31	05:19	06:43 (E5)	06:21	07:21			07:27		08:28	09:11 (E8)
	22:08	21:24	38 07:21 (E5)	20:09	18:48			16:31		15:43	67 11:06 (E7)
4	04:32	05:21	06:43 (E5)	06:23	07:23			07:29		08:29	09:11 (E8)
	22:07	21:22	38 07:21 (E5)	20:06	18:46			16:29		15:42	66 11:05 (E7)
5	04:33	05:23	06:42 (E5)	06:25	07:25			07:31		08:31	09:12 (E8)
	22:07	21:19	39 07:21 (E5)	20:03	18:43			16:27		15:41	66 11:06 (E7)
6	04:34	05:25	06:41 (E5)	06:27	07:27			07:33		08:32	09:13 (E8)
	22:06	21:17	41 07:22 (E5)	20:01	18:40			16:25		15:41	65 11:07 (E7)
7	04:36	05:27	06:41 (E5)	06:29	07:29			07:36		08:34	09:14 (E8)
	22:05	21:15	41 07:22 (E5)	19:58	18:38			16:23		15:40	63 11:06 (E7)
8	04:37	05:29	06:41 (E5)	06:31	07:31			07:38		08:35	09:16 (E8)
	22:04	21:13	42 07:23 (E5)	19:55	18:35			16:21		15:40	61 11:07 (E7)
9	04:38	05:31	06:41 (E5)	06:33	07:34			07:40		08:37	09:18 (E8)
	22:03	21:11	42 07:23 (E5)	19:53	18:32			16:19		15:39	60 11:08 (E7)
10	04:39	05:33	06:39 (E5)	06:35	07:36			07:42	10:30 (E7)	08:38	09:19 (E8)
	22:02	21:08	43 07:22 (E5)	19:50	18:30			16:17	12 10:42 (E7)	15:39	59 11:08 (E7)
11	04:40	05:35	06:39 (E5)	06:37	07:38			07:44	10:28 (E7)	08:39	09:20 (E8)
	22:01	21:06	43 07:22 (E5)	19:47	18:27			16:15	18 10:46 (E7)	15:38	57 11:08 (E7)
12	04:42	05:37	06:39 (E5)	06:39	07:40			07:46	10:25 (E7)	08:40	09:22 (E8)
	22:00	21:04	43 07:22 (E5)	19:45	18:25			16:13	23 10:48 (E7)	15:38	56 11:09 (E7)
13	04:43	05:39	06:39 (E5)	06:41	07:42			07:49	10:24 (E7)	08:42	09:23 (E8)
	21:59	21:01	43 07:22 (E5)	19:42	18:22			16:11	27 10:51 (E7)	15:38	55 11:09 (E7)
14	04:45	05:41	06:40 (E5)	06:43	07:44		08:48 (E6)	07:51	10:23 (E7)	08:43	09:24 (E8)
	21:58	20:59	42 07:22 (E5)	19:39	18:19	10	08:58 (E6)	16:09	10:52 (E7)	15:38	53 11:09 (E7)
15	04:46	05:43	06:40 (E5)	06:45	07:46		08:46 (E6)	07:53	09:12 (E8)	08:44	09:25 (E8)
	21:57	20:57	42 07:22 (E5)	19:37	18:17	15	09:01 (E6)	16:07	10:53 (E7)	15:38	53 11:10 (E7)
16	04:48	05:45	06:40 (E5)	06:47	07:48		08:44 (E6)	07:55	09:11 (E8)	08:45	09:26 (E8)
	21:55	20:54	42 07:22 (E5)	19:34	18:14	18	09:02 (E6)	16:06	10:55 (E7)	15:38	51 11:10 (E7)
17	04:49	05:47	06:39 (E5)	06:49	07:50		08:42 (E6)	07:57	09:09 (E8)	08:46	09:27 (E8)
	21:54	20:52	41 07:20 (E5)	19:31	18:12	21	09:03 (E6)	16:04	10:56 (E7)	15:38	52 11:11 (E7)
18	04:51	05:49	06:40 (E5)	06:51	07:52		08:41 (E6)	07:59	09:09 (E8)	08:46	09:28 (E8)
	21:52	20:49	40 07:20 (E5)	19:28	18:09	22	09:03 (E6)	16:02	10:57 (E7)	15:38	50 11:11 (E7)
19	04:52	05:51	06:40 (E5)	06:53	07:54		08:41 (E6)	08:01	09:08 (E8)	08:47	09:29 (E8)
	21:51	20:47	39 07:19 (E5)	19:26	18:07	23	09:04 (E6)	16:01	10:58 (E7)	15:38	50 11:12 (E7)
20	04:54	05:53	06:41 (E5)	06:55	07:57		08:40 (E6)	08:03	09:07 (E8)	08:48	09:29 (E8)
	21:49	20:45	37 07:18 (E5)	19:23	18:04	24	09:04 (E6)	15:59	10:58 (E7)	15:38	49 11:12 (E7)
21	04:56	05:55	06:41 (E5)	06:57	07:59		08:40 (E6)	08:05	09:07 (E8)	08:49	09:30 (E8)
	21:48	20:42	36 07:17 (E5)	19:20	18:02	24	09:04 (E6)	15:57	10:59 (E7)	15:39	48 11:12 (E7)
22	04:57	05:57	06:42 (E5)	06:59	08:01		08:39 (E6)	08:07	09:07 (E8)	08:49	09:30 (E8)
	21:46	20:40	34 07:16 (E5)	19:18	17:59	25	09:04 (E6)	15:56	11:00 (E7)	15:39	48 11:12 (E7)
23	04:59	05:59	06:43 (E5)	07:01	08:03		08:40 (E6)	08:09	09:07 (E8)	08:50	09:31 (E8)
	21:45	4 07:03 (E5)	20:37	19:15	17:57	24	09:04 (E6)	15:54	11:01 (E7)	15:40	49 11:14 (E7)
24	05:01	06:55 (E5)	20:31	07:03	08:05		08:40 (E6)	08:11	09:07 (E8)	08:50	09:31 (E8)
	21:43	13 07:08 (E5)	20:35	19:12	17:54	23	09:03 (E6)	15:53	11:01 (E7)	15:40	49 11:14 (E7)
25	05:02	06:52 (E5)	20:33	07:05	08:07		08:40 (E6)	08:13	09:07 (E8)	08:50	09:31 (E8)
	21:41	18 07:10 (E5)	20:32	19:10	16:52	22	08:02 (E6)	15:52	11:01 (E7)	15:41	50 11:14 (E7)
26	05:04	06:51 (E5)	20:29	07:07	08:09		07:41 (E6)	08:15	09:08 (E8)	08:51	09:31 (E8)
	21:39	21 07:12 (E5)	20:29	19:07	16:50	21	08:02 (E6)	15:50	11:03 (E7)	15:42	50 11:14 (E7)
27	05:06	06:50 (E5)	20:27	07:09	08:11		07:43 (E6)	08:17	09:08 (E8)	08:51	09:31 (E8)
	21:38	24 07:14 (E5)	20:27	19:04	16:47	18	08:01 (E6)	15:49	11:03 (E7)	15:43	51 11:15 (E7)
28	05:08	06:48 (E5)	20:24	07:11	08:13		07:45 (E6)	08:19	09:08 (E8)	08:51	09:31 (E8)
	21:36	27 07:15 (E5)	20:24	19:02	16:45	14	07:59 (E6)	15:48	11:04 (E7)	15:43	52 11:15 (E7)
29	05:10	06:47 (E5)	20:22	07:13	08:15		07:48 (E6)	08:21	09:09 (E8)	08:51	09:31 (E8)
	21:34	29 07:16 (E5)	20:22	18:59	16:43	10	07:58 (E6)	15:47	11:04 (E7)	15:44	53 11:16 (E7)
30	05:12	06:46 (E5)	20:19	07:15	08:17		07:50 (E6)	08:22	09:09 (E8)	08:51	09:31 (E8)
	21:32	31 07:17 (E5)	20:19	18:56	16:40	4	07:54 (E6)	15:46	11:04 (E7)	15:45	55 11:17 (E7)
31	05:14	06:45 (E5)	20:17		07:20					08:51	09:31 (E8)
	21:30	33 07:18 (E5)	20:17		16:38					15:46	56 11:18 (E7)
Potential sun hours	529		469		385		324		247		216
Total, worst case	200		996				318		1080		1729
Sun reduction	0.49		0.50				0.26		0.08		0.07
Oper. time red.	0.98		0.98				0.98		0.98		0.98
Wind dir. red.	0.65		0.65				0.62		0.61		0.61
Total reduction	0.32		0.32				0.16		0.05		0.04
Total, real	63		318				50		53		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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

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

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	08:13 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	05:19 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 18:45	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 21:57	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 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 20:12	05:13 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:15	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:08 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	05:06 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 15:38
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 21:58	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 18:19	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
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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	04:57 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	08:29 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 17:55	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	05:03 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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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:40	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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	04:53 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
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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 16:37	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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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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
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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
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
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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 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
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31	08:17 16:43		06:51 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	08:12 (E7) 19:53	05:32 20:55	04:36 21:53
2	08:51 15:49	08:13 16:47	07:08 17:50	08:14 (E7) 19:55	05:30 20:58	04:35 21:54
3	08:50 15:50	08:11 16:50	07:06 17:52	08:17 (E7) 19:57	05:28 21:00	04:33 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	08:29 (E7) 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	06:42 18:11	06:20 20:16	06:45 (E5) 21:18	05:08 22:05
13	08:43 16:06	07:50 17:12	06:39 18:13	06:17 20:18	06:43 (E5) 21:20	05:06 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	06:40 (E5) 21:22	05:04 22:07
15	08:41 16:10	07:45 17:17	06:34 18:17	06:12 20:22	06:38 (E5) 21:24	05:02 22:07
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	06:35 (E5) 21:26	05:00 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	06:33 (E5) 21:27	04:59 22:09
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	06:32 (E5) 21:29	04:57 22:09
19	08:36 16:18	07:35 17:25	06:24 18:26	06:02 20:30	06:32 (E5) 21:31	04:55 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	06:31 (E5) 21:33	04:53 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:32 (E5) 21:35	04:52 22:10
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	06:32 (E5) 21:37	04:50 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:32 (E5) 21:38	04:48 22:10
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:33 (E5) 21:40	04:47 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	06:34 (E5) 21:42	04:45 22:10
26	08:26 16:32	07:18 17:41	06:05 18:40	05:44 20:45	06:35 (E5) 21:43	04:44 22:10
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:38 (E5) 21:45	04:42 22:10
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	06:43 (E5) 21:47	04:41 22:10
29	08:20 16:39		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09
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		392	50	247		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.62	0.62	0.65		
Total reduction		0.12	0.25	0.32		
Total, real		48	13	79		

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	08:53 (E7) 09:01 (E7)	07:42 16:17
11	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:49 (E7) 09:04 (E7)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:47 (E7) 09:06 (E7)	07:46 16:13
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:45 (E7) 09:07 (E7)	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	08:43 (E7) 09:08 (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) 09:09 (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) 09:09 (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) 09:09 (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) 09:09 (E7)	07:59 16:02
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:41 (E7) 09:10 (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) 09:09 (E7)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:40 (E7) 09:09 (E7)	08:05 15:58
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:40 (E7) 09:08 (E7)	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:41 (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	08:41 (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	07:42 (E7) 08:06 (E7)	08:13 15:52
26	05:04 21:39	06:05 20:30	07:07 19:07	08:09 16:50	07:44 (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	07:45 (E7) 08:03 (E7)	08:17 15:49
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 16:45	07:46 (E7) 08:01 (E7)	08:19 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 16:43	07:50 (E7) 07:58 (E7)	08:21 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:40	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 20:17	07:17 16:38	08:19 16:38	08:51 15:47	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		250		453		
Sun reduction		0.50		0.26		
Oper. time red.		0.98		0.98		
Wind dir. red.		0.65		0.62		
Total reduction		0.32		0.16		
Total, real		80		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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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) 08:06 (E11)	05:32 20:55	04:36 21:52	05:48 (E10) 06:21 (E10)
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	07:30 (E11) 08:06 (E11)	05:30 20:57	04:35 21:54	05:49 (E10) 06:21 (E10)
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	07:29 (E11) 08:06 (E11)	05:28 20:59	04:34 21:55	05:49 (E10) 06:21 (E10)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:29 (E11) 08:06 (E11)	05:26 21:01	04:33 21:56	05:49 (E10) 06:20 (E10)
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	07:28 (E11) 08:06 (E11)	05:23 21:03	04:32 21:58	05:50 (E10) 06:21 (E10)
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	07:29 (E11) 08:06 (E11)	05:21 21:05	04:31 21:59	05:50 (E10) 06:21 (E10)
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	07:28 (E11) 08:05 (E11)	05:19 21:08	04:30 22:00	05:51 (E10) 06:20 (E10)
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	07:28 (E11) 08:04 (E11)	05:17 21:10	04:29 22:01	05:52 (E10) 06:21 (E10)
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	07:28 (E11) 08:04 (E11)	05:15 21:12	04:28 22:02	05:52 (E10) 06:20 (E10)
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	07:28 (E11) 08:02 (E11)	05:13 21:14	04:28 22:03	05:52 (E10) 06:21 (E10)
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:29 (E11) 08:02 (E11)	05:10 21:16	04:27 22:04	05:52 (E10) 06:20 (E10)
12	08:44 16:04	07:52 17:10	06:42 18:11	06:20 20:16	07:29 (E11) 08:00 (E11)	05:08 21:18	04:27 22:05	05:53 (E10) 06:20 (E10)
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	07:30 (E11) 07:59 (E11)	05:06 21:19	04:26 22:06	05:54 (E10) 06:20 (E10)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	07:31 (E11) 07:57 (E11)	05:04 21:21	04:26 22:06	05:53 (E10) 06:20 (E10)
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	07:33 (E11) 07:56 (E11)	05:02 21:23	04:26 22:07	05:54 (E10) 06:20 (E10)
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	07:34 (E11) 07:53 (E11)	05:01 21:25	04:25 22:08	05:54 (E10) 06:20 (E10)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	07:37 (E11) 07:50 (E11)	04:59 21:27	04:25 22:08	05:55 (E10) 06:20 (E10)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	05:47 (E10) 06:21 (E10)	04:25 22:09	05:55 (E10) 06:20 (E10)
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	05:46 (E10) 06:21 (E10)	04:25 22:09	05:55 (E10) 06:20 (E10)
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	05:46 (E10) 06:21 (E10)	04:25 22:09	05:56 (E10) 06:20 (E10)
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:35	05:46 (E10) 06:21 (E10)	04:25 22:10	05:57 (E10) 06:21 (E10)
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	05:46 (E10) 06:22 (E10)	04:25 22:10	05:57 (E10) 06:21 (E10)
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	05:46 (E10) 06:21 (E10)	04:26 22:10	05:56 (E10) 06:21 (E10)
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	05:46 (E10) 06:21 (E10)	04:26 22:10	05:56 (E10) 06:21 (E10)
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	05:47 (E10) 06:22 (E10)	04:26 22:10	05:57 (E10) 06:22 (E10)
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	05:47 (E10) 06:22 (E10)	04:27 22:10	05:57 (E10) 06:22 (E10)
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	05:47 (E10) 06:21 (E10)	04:27 22:10	05:57 (E10) 06:23 (E10)
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:41 21:46	05:47 (E10) 06:21 (E10)	04:28 22:10	05:57 (E10) 06:23 (E10)
29	08:20 16:39		06:57 19:47	05:37 20:51	04:39 21:48	05:47 (E10) 06:21 (E10)	04:28 22:09	05:57 (E10) 06:24 (E10)
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	05:48 (E10) 06:21 (E10)	04:29 22:09	05:57 (E10) 06:24 (E10)
31	08:16 16:43		06:51 19:51	05:33 20:53	04:37 21:51	05:48 (E10) 06:21 (E10)	04:29 22:09	05:57 (E10) 06:24 (E10)
Potential sun hours	235	266	366	426	508	528		
Total, worst case		516	810	537	791	818		
Sun reduction		0.20	0.41	0.50	0.57	0.56		
Oper. time red.		0.98	0.98	0.98	0.98	0.98		
Wind dir. red.		0.67	0.64	0.65	0.67	0.67		
Total reduction		0.13	0.26	0.32	0.37	0.37		
Total, real		68	208	171	294	299		

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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		06:00 (E10)	06:17		07:28 (E11)	07:17		07:56 (E12)	07:22		15:20 (E16)	08:24	
	22:09	27	06:24 (E10)	21:28	28	06:28 (E10)	20:14	33	08:01 (E11)	18:53	49	18:08 (E15)	16:36	28	15:48 (E16)	15:45	
2	04:31		05:57 (E10)	05:17		06:01 (E10)	06:19		07:27 (E11)	07:19		07:56 (E12)	07:25		15:20 (E16)	08:26	
	22:08	28	06:25 (E10)	21:26	26	06:27 (E10)	20:11	34	08:01 (E11)	18:51	49	18:07 (E15)	16:34	27	15:47 (E16)	15:44	
3	04:32		05:57 (E10)	05:19		06:02 (E10)	06:21		07:26 (E11)	07:21		07:56 (E12)	07:27		15:20 (E16)	08:27	
	22:08	28	06:25 (E10)	21:24	24	06:26 (E10)	20:09	36	08:02 (E11)	18:48	49	18:07 (E15)	16:31	26	15:46 (E16)	15:43	
4	04:33		05:57 (E10)	05:21		06:04 (E10)	06:23		07:25 (E11)	07:23		07:57 (E12)	07:29		15:22 (E16)	08:29	
	22:07	29	06:26 (E10)	21:21	21	06:25 (E10)	20:06	36	08:01 (E11)	18:45	46	18:07 (E15)	16:29	24	15:46 (E16)	15:42	
5	04:34		05:57 (E10)	05:23		06:04 (E10)	06:25		07:24 (E11)	07:25		07:57 (E12)	07:31		15:23 (E16)	08:31	
	22:06	29	06:26 (E10)	21:19	18	06:22 (E10)	20:03	37	08:01 (E11)	18:43	44	18:06 (E15)	16:27	22	15:45 (E16)	15:42	
6	04:35		05:57 (E10)	05:25		06:07 (E10)	06:27		07:24 (E11)	07:27		07:58 (E12)	07:33		15:25 (E16)	08:32	
	22:06	30	06:27 (E10)	21:17	13	06:20 (E10)	20:01	37	08:01 (E11)	18:40	40	18:05 (E15)	16:25	19	15:44 (E16)	15:41	
7	04:36		05:57 (E10)	05:27		06:11 (E10)	06:29		07:24 (E11)	07:29		08:00 (E12)	07:35		15:26 (E16)	08:34	
	22:05	30	06:27 (E10)	21:15	5	06:16 (E10)	19:58	37	08:01 (E11)	18:38	34	18:04 (E15)	16:23	16	15:42 (E16)	15:40	
8	04:37		05:57 (E10)	05:29			06:31		07:23 (E11)	07:31		08:04 (E12)	07:38		15:28 (E16)	08:35	
	22:04	31	06:28 (E10)	21:13			19:55	37	08:00 (E11)	18:35	24	18:03 (E15)	16:21	11	15:39 (E16)	15:40	
9	04:38		05:57 (E10)	05:31			06:33		07:23 (E11)	07:33		17:45 (E15)	07:40			08:36	
	22:03	31	06:28 (E10)	21:11			19:53	37	08:00 (E11)	18:32	16	18:01 (E15)	16:19			15:39	
10	04:39		05:56 (E10)	05:33			06:35		07:23 (E11)	07:36		17:47 (E15)	07:42			08:38	
	22:02	32	06:28 (E10)	21:08			19:50	36	07:59 (E11)	18:30	12	17:59 (E15)	16:17			15:39	
11	04:41		05:56 (E10)	05:35			06:37		07:24 (E11)	07:38		17:51 (E15)	07:44			08:39	
	22:01	33	06:29 (E10)	21:06			19:47	34	07:58 (E11)	18:27	4	17:55 (E15)	16:15			15:38	
12	04:42		05:57 (E10)	05:37			06:39		07:24 (E11)	07:40			07:46			08:40	
	22:00	33	06:30 (E10)	21:04			19:45	33	07:57 (E11)	18:25			16:13			15:38	
13	04:43		05:56 (E10)	05:39			06:41		07:25 (E11)	07:42			07:48			08:41	
	21:59	34	06:30 (E10)	21:01			19:42	31	07:56 (E11)	18:22			16:11			15:38	
14	04:45		05:56 (E10)	05:41			06:43		07:25 (E11)	07:44			07:50			08:42	
	21:58	34	06:30 (E10)	20:59			19:39	30	07:55 (E11)	18:19			16:09			15:38	
15	04:46		05:56 (E10)	05:43			06:45		07:26 (E11)	07:46			07:53			08:43	
	21:56	34	06:30 (E10)	20:57			19:37	27	07:53 (E11)	18:17			16:07			15:38	
16	04:48		05:56 (E10)	05:45			06:47		07:28 (E11)	07:48			07:55			08:44	
	21:55	35	06:31 (E10)	20:54			19:34	23	07:51 (E11)	18:14			16:06			15:38	
17	04:49		05:56 (E10)	05:47			06:49		07:30 (E11)	07:50			07:57			08:45	
	21:54	35	06:31 (E10)	20:52			19:31	19	07:49 (E11)	18:12			16:04			15:38	
18	04:51		05:56 (E10)	05:49			06:51		07:32 (E11)	07:52		16:32 (E16)	07:59			08:46	
	21:52	35	06:31 (E10)	20:49			19:28	13	07:45 (E11)	18:09	7	16:39 (E16)	16:02			15:38	
19	04:52		05:56 (E10)	05:51			06:53			07:54		16:27 (E16)	08:01			08:47	
	21:51	35	06:31 (E10)	20:47			19:26			18:07	15	16:42 (E16)	16:01			15:38	
20	04:54		05:57 (E10)	05:53			06:55			07:56		16:26 (E16)	08:03			08:48	
	21:49	35	06:32 (E10)	20:44			19:23			18:04	19	16:45 (E16)	15:59			15:39	
21	04:56		05:56 (E10)	05:55			06:57			07:59		16:24 (E16)	08:05			08:48	
	21:48	35	06:31 (E10)	20:42			19:20			18:02	22	16:46 (E16)	15:58			15:39	
22	04:57		05:57 (E10)	05:57			06:59		08:05 (E12)	08:01		16:22 (E16)	08:07			08:49	
	21:46	35	06:32 (E10)	20:39			19:18	12	08:17 (E12)	17:59	25	16:47 (E16)	15:56			15:39	
23	04:59		05:56 (E10)	05:59			07:01		08:03 (E12)	08:03		16:22 (E16)	08:09			08:49	
	21:44	35	06:31 (E10)	20:37			19:15	16	08:19 (E12)	17:57	26	16:48 (E16)	15:55			15:40	
24	05:01		05:57 (E10)	06:01			07:03		08:01 (E12)	08:05		16:21 (E16)	08:11			08:50	
	21:43	35	06:32 (E10)	20:34			19:12	20	08:21 (E12)	17:54	28	16:49 (E16)	15:53			15:40	
25	05:03		05:56 (E10)	06:03			07:05		07:59 (E12)	07:07		15:20 (E16)	08:13			08:50	
	21:41	35	06:31 (E10)	20:32			19:10	23	08:22 (E12)	16:52	29	15:49 (E16)	15:52			15:41	
26	05:04		05:57 (E10)	06:05		07:38 (E11)	07:07		07:58 (E12)	07:09		15:19 (E16)	08:15			08:50	
	21:39	34	06:31 (E10)	20:29	14	07:52 (E11)	19:07	30	18:00 (E15)	16:50	30	15:49 (E16)	15:51			15:42	
27	05:06		05:58 (E10)	06:07		07:36 (E11)	07:09		07:57 (E12)	07:12		15:19 (E16)	08:17			08:51	
	21:37	33	06:31 (E10)	20:27	19	07:55 (E11)	19:04	38	18:03 (E15)	16:47	30	15:49 (E16)	15:49			15:43	
28	05:08		05:57 (E10)	06:09		07:33 (E11)	07:11		07:56 (E12)	07:14		15:19 (E16)	08:19			08:51	
	21:35	33	06:30 (E10)	20:24	24	07:57 (E11)	19:01	43	18:05 (E15)	16:45	30	15:49 (E16)	15:48			15:44	
29	05:10		05:58 (E10)	06:11		07:32 (E11)	07:13		07:56 (E12)	07:16		15:19 (E16)	08:20			08:51	
	21:34	32	06:30 (E10)	20:22	26	07:58 (E11)	18:59	46	18:06 (E15)	16:43	31	15:50 (E16)	15:47			15:45	
30	05:12		05:59 (E10)	06:13		07:30 (E11)	07:15		07:56 (E12)	07:18		15:19 (E16)	08:22			08:51	
	21:32	31	06:30 (E10)	20:19	29	07:59 (E11)	18:56	48	18:07 (E15)	16:40	30	15:49 (E16)	15:46			15:46	
31	05:14		06:00 (E10)	06:15		07:29 (E11)				07:20		15:19 (E16)				08:51	
	21:30	29	06:29 (E10)	20:16	31	08:00 (E11)				16:38	29	15:48 (E16)				15:47	
Potential sun hours	529			469				385			324			247		216	
Total, worst case		1005			278				846		718			173			
Sun reduction		0.49			0.50				0.43		0.26			0.08			
Oper. time red.		0.98			0.98				0.98		0.98			0.98			
Wind dir. red.		0.67			0.66				0.64		0.65			0.67			
Total reduction		0.32			0.32				0.27		0.17			0.05			
Total, real		325			89				228		119			9			

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	07:32 (E11) 08:08 (E11)	05:32 20:55	04:36 21:52	05:48 (E10) 06:22 (E10)
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	07:31 (E11) 08:08 (E11)	05:30 20:57	04:35 21:54	05:48 (E10) 06:21 (E10)
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	07:30 (E11) 08:07 (E11)	05:28 20:59	04:34 21:55	05:48 (E10) 06:21 (E10)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:30 (E11) 08:08 (E11)	05:26 21:01	04:33 21:56	05:48 (E10) 06:21 (E10)
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	07:30 (E11) 08:07 (E11)	05:23 21:03	04:32 21:58	05:50 (E10) 06:22 (E10)
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	07:30 (E11) 08:07 (E11)	05:21 21:05	04:31 21:59	05:50 (E10) 06:21 (E10)
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	07:29 (E11) 08:07 (E11)	05:19 21:08	04:30 22:00	05:50 (E10) 06:21 (E10)
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	07:29 (E11) 08:05 (E11)	05:17 21:10	04:29 22:01	05:51 (E10) 06:21 (E10)
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	07:30 (E11) 08:05 (E11)	05:15 21:12	04:28 22:02	05:51 (E10) 06:21 (E10)
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	07:29 (E11) 08:04 (E11)	05:13 21:14	04:28 22:03	05:52 (E10) 06:21 (E10)
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:30 (E11) 08:03 (E11)	05:10 21:16	04:27 22:04	05:51 (E10) 06:21 (E10)
12	08:44 16:04	07:52 17:10	06:42 18:11	06:20 20:16	07:30 (E11) 08:02 (E11)	05:08 21:18	04:27 22:05	05:52 (E10) 06:21 (E10)
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	07:32 (E11) 08:01 (E11)	05:06 21:19	04:26 22:06	05:53 (E10) 06:21 (E10)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	07:32 (E11) 07:59 (E11)	05:04 21:21	04:26 22:06	05:52 (E10) 06:20 (E10)
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	07:34 (E11) 07:57 (E11)	05:02 21:23	04:26 22:07	05:53 (E10) 06:21 (E10)
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	07:35 (E11) 07:54 (E11)	05:01 21:25	04:25 22:08	05:53 (E10) 06:21 (E10)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	07:38 (E11) 07:51 (E11)	04:59 21:27	04:25 22:08	05:54 (E10) 06:21 (E10)
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	05:54 (E10) 06:21 (E10)
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	05:54 (E10) 06:21 (E10)
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	05:55 (E10) 06:21 (E10)
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34		04:52 21:35	04:25 22:10	05:56 (E10) 06:22 (E10)
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37		04:50 21:36	04:25 22:10	05:56 (E10) 06:22 (E10)
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	05:55 (E10) 06:22 (E10)
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	05:55 (E10) 06:22 (E10)
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	05:56 (E10) 06:23 (E10)
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	05:56 (E10) 06:23 (E10)
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	05:56 (E10) 06:24 (E10)
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49		04:41 21:46	04:28 22:10	05:56 (E10) 06:24 (E10)
29	08:20 16:39		06:57 19:47	05:37 20:51		04:39 21:48	04:28 22:09	05:56 (E10) 06:24 (E10)
30	08:18 16:41		06:54 19:49	05:35 20:53		04:38 21:49	04:29 22:09	05:56 (E10) 06:25 (E10)
31	08:16 16:43		06:51 19:51	05:33 20:51		04:37 21:51	04:29 22:09	05:56 (E10) 06:25 (E10)
Potential sun hours	235	266	366	426	508	528		
Total, worst case		504	818	542	795	867		
Sun reduction		0.20	0.41	0.50	0.57	0.56		
Oper. time red.		0.98	0.98	0.98	0.98	0.98		
Wind dir. red.		0.67	0.64	0.65	0.67	0.67		
Total reduction		0.13	0.26	0.32	0.37	0.37		
Total, real		66	210	173	296	317		

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	06:00 (E10)	06:17	07:29 (E11)	07:17	07:57 (E12)	07:22	15:21 (E16)	08:24						
2	22:09	29 06:25 (E10)	21:28	27 06:27 (E10)	20:14	33 08:02 (E11)	18:53	49 18:07 (E15)	16:36	28 15:49 (E16)	15:45						
3	04:31	05:56 (E10)	05:17	06:01 (E10)	06:19	07:28 (E11)	07:19	07:57 (E12)	07:25	15:21 (E16)	08:26						
4	22:08	29 06:25 (E10)	21:26	26 06:27 (E10)	20:11	35 08:03 (E11)	18:51	49 18:07 (E15)	16:34	27 15:48 (E16)	15:44						
5	04:32	05:56 (E10)	05:19	06:02 (E10)	06:21	07:28 (E11)	07:21	07:57 (E12)	07:27	15:22 (E16)	08:27						
6	22:08	30 06:26 (E10)	21:24	24 06:26 (E10)	20:09	35 08:03 (E11)	18:48	48 18:07 (E15)	16:31	25 15:47 (E16)	15:43						
7	04:33	05:56 (E10)	05:21	06:04 (E10)	06:23	07:26 (E11)	07:23	07:57 (E12)	07:29	15:23 (E16)	08:29						
8	22:07	31 06:27 (E10)	21:21	21 06:25 (E10)	20:06	37 08:03 (E11)	18:45	48 18:07 (E15)	16:29	24 15:47 (E16)	15:42						
9	04:34	05:56 (E10)	05:23	06:05 (E10)	06:25	07:25 (E11)	07:25	07:58 (E12)	07:31	15:24 (E16)	08:31						
10	22:06	31 06:27 (E10)	21:19	17 06:22 (E10)	20:03	38 08:03 (E11)	18:43	45 18:06 (E15)	16:27	21 15:45 (E16)	15:42						
11	04:35	05:56 (E10)	05:25	06:08 (E10)	06:27	07:25 (E11)	07:27	07:59 (E12)	07:33	15:26 (E16)	08:32						
12	22:06	32 06:28 (E10)	21:17	11 06:19 (E10)	20:01	38 08:03 (E11)	18:40	41 18:05 (E15)	16:25	19 15:45 (E16)	15:41						
13	04:36	05:56 (E10)	05:27	06:29	06:29	07:25 (E11)	07:29	08:00 (E12)	07:35	15:27 (E16)	08:34						
14	22:05	32 06:28 (E10)	21:15	19:58	37 08:02 (E11)	18:38	37 18:04 (E15)	16:23	15 15:42 (E16)	15:40							
15	04:37	05:56 (E10)	05:29	06:31	06:31	07:24 (E11)	07:31	08:03 (E12)	07:38	15:30 (E16)	08:35						
16	22:04	32 06:28 (E10)	21:13	19:55	38 08:02 (E11)	18:35	28 18:03 (E15)	16:21	9 15:39 (E16)	15:40							
17	04:38	05:56 (E10)	05:31	06:33	06:33	07:24 (E11)	07:33	17:45 (E15)	07:40	08:36							
18	22:03	33 06:29 (E10)	21:11	19:53	38 08:02 (E11)	18:32	16 18:01 (E15)	16:19	15:39								
19	04:39	05:56 (E10)	05:33	06:35	06:35	07:24 (E11)	07:36	17:47 (E15)	07:42	08:38							
20	22:02	33 06:29 (E10)	21:08	19:50	37 08:01 (E11)	18:30	12 17:59 (E15)	16:17	15:39								
21	04:41	05:55 (E10)	05:35	06:37	06:37	07:25 (E11)	07:38	17:50 (E15)	07:44	08:39							
22	22:01	34 06:29 (E10)	21:06	19:47	35 08:00 (E11)	18:27	6 17:56 (E15)	16:15	15:38								
23	04:42	05:56 (E10)	05:37	06:39	06:39	07:25 (E11)	07:40	07:46	08:40								
24	22:00	34 06:30 (E10)	21:04	19:45	34 07:59 (E11)	18:25	16:13	15:38									
25	04:43	05:56 (E10)	05:39	06:41	06:41	07:25 (E11)	07:42	07:48	08:41								
26	21:59	34 06:30 (E10)	21:01	19:42	33 07:58 (E11)	18:22	16:11	15:38									
27	04:45	05:55 (E10)	05:41	06:43	06:43	07:26 (E11)	07:44	07:50	08:42								
28	21:58	35 06:30 (E10)	20:59	19:39	31 07:57 (E11)	18:19	16:09	15:38									
29	04:46	05:55 (E10)	05:43	06:45	06:45	07:27 (E11)	07:46	07:53	08:43								
30	21:56	35 06:30 (E10)	20:57	19:37	28 07:55 (E11)	18:17	16:07	15:38									
31	04:48	05:56 (E10)	05:45	06:47	06:47	07:28 (E11)	07:48	07:55	08:44								
32	21:55	35 06:31 (E10)	20:54	19:34	25 07:53 (E11)	18:14	16:06	15:38									
33	04:49	05:55 (E10)	05:47	06:49	06:49	07:30 (E11)	07:50	07:57	08:45								
34	21:54	36 06:31 (E10)	20:52	19:31	21 07:51 (E11)	18:12	16:04	15:38									
35	04:51	05:56 (E10)	05:49	06:51	06:51	07:32 (E11)	07:52	16:33 (E16)	07:59	08:46							
36	21:52	36 06:32 (E10)	20:49	19:28	16 07:48 (E11)	18:09	7 16:40 (E16)	16:02	15:38								
37	04:52	05:56 (E10)	05:51	06:53	06:53	07:36 (E11)	07:54	16:29 (E16)	08:01	08:47							
38	21:51	35 06:31 (E10)	20:47	19:26	6 07:42 (E11)	18:07	14 16:43 (E16)	16:01	15:38								
39	04:54	05:56 (E10)	05:53	06:55	06:55	07:37 (E11)	07:56	16:27 (E16)	08:03	08:48							
40	21:49	36 06:32 (E10)	20:44	19:23	18:04	19 16:46 (E16)	15:59	15:39									
41	04:56	05:56 (E10)	05:55	06:57	06:57	07:39 (E11)	07:59	16:25 (E16)	08:05	08:48							
42	21:48	36 06:32 (E10)	20:42	19:20	18:02	22 16:47 (E16)	15:58	15:39									
43	04:57	05:56 (E10)	05:57	06:59	06:59	08:08 (E12)	08:01	16:23 (E16)	08:07	08:49							
44	21:46	36 06:32 (E10)	20:39	19:18	10 08:18 (E12)	17:59	25 16:48 (E16)	15:56	15:39								
45	04:59	05:56 (E10)	05:59	07:01	07:01	08:04 (E12)	08:03	16:23 (E16)	08:09	08:49							
46	21:44	35 06:31 (E10)	20:37	19:15	16 08:20 (E12)	17:57	26 16:49 (E16)	15:55	15:40								
47	05:01	05:57 (E10)	06:01	07:03	07:03	08:02 (E12)	08:05	16:22 (E16)	08:11	08:50							
48	21:43	35 06:32 (E10)	20:34	19:12	20 08:22 (E12)	17:54	27 16:49 (E16)	15:53	15:40								
49	05:03	05:56 (E10)	06:03	07:05	07:05	08:01 (E12)	07:07	15:21 (E16)	08:13	08:50							
50	21:41	35 06:31 (E10)	20:32	19:10	22 08:23 (E12)	16:52	28 15:49 (E16)	15:52	15:41								
51	05:04	05:57 (E10)	06:05	07:07	07:07	07:59 (E12)	07:09	15:20 (E16)	08:15	08:50							
52	21:39	34 06:31 (E10)	20:29	14 07:54 (E11)	19:07	25 17:58 (E15)	16:50	29 15:49 (E16)	15:51	15:42							
53	05:06	05:58 (E10)	06:07	07:09	07:09	07:58 (E12)	07:12	15:20 (E16)	08:17	08:51							
54	21:37	33 06:31 (E10)	20:27	19 07:56 (E11)	19:04	38 18:03 (E15)	16:47	30 15:50 (E16)	15:49	15:43							
55	05:08	05:57 (E10)	06:09	07:11	07:11	07:58 (E12)	07:14	15:20 (E16)	08:19	08:51							
56	21:35	33 06:30 (E10)	20:24	23 07:58 (E11)	19:01	41 18:04 (E15)	16:45	30 15:50 (E16)	15:48	15:44							
57	05:10	05:58 (E10)	06:11	07:13	07:13	07:57 (E12)	07:16	15:20 (E16)	08:20	08:51							
58	21:34	32 06:30 (E10)	20:22	27 08:00 (E11)	18:59	45 18:05 (E15)	16:43	30 15:50 (E16)	15:47	15:45							
59	05:12	05:59 (E10)	06:13	07:15	07:15	07:57 (E12)	07:18	15:20 (E16)	08:22	08:51							
60	21:32	30 06:29 (E10)	20:19	29 08:01 (E11)	18:56	48 18:07 (E15)	16:40	30 15:50 (E16)	15:46	15:46							
61	05:14	06:00 (E10)	06:15	07:30 (E11)			07:20	15:20 (E16)		08:51							
62	21:30	29 06:29 (E10)	20:16	32 08:02 (E11)			16:38	29 15:49 (E16)		15:47							
Potential sun hours	529		469		385		324		247		216						
Total, worst case	1030		270		860		725		168								
Sun reduction	0.49		0.50		0.43		0.26		0.08								
Oper. time red.	0.98		0.98		0.98		0.98		0.98								
Wind dir. red.	0.67		0.66		0.64		0.65		0.67								
Total reduction	0.32		0.32		0.27		0.17		0.05								
Total, real	333		87		232		120		9								

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January		February		March	April	May		June	
1	08:51	12:52 (E13)	08:15	07:11	06:49		05:32	06:29 (E7)	04:36	
	15:48	4 12:56 (E13)	16:45	17:47	19:53		20:55	34 07:03 (E7)	21:53	
2	08:50		08:13	07:08	06:46		05:30	06:30 (E7)	04:35	
	15:49		16:47	17:50	19:55		20:57	32 07:02 (E7)	21:54	
3	08:50		08:11	07:06	06:43		05:28	06:30 (E7)	04:34	
	15:51		16:50	17:52	19:57		21:00	32 07:02 (E7)	21:55	
4	08:50		08:09	07:03	06:41		05:26	06:31 (E7)	04:33	
	15:52		16:52	17:54	19:59		21:02	30 07:01 (E7)	21:57	
5	08:49		08:07	07:00	06:38		05:23	06:31 (E7)	04:32	
	15:53		16:54	17:56	20:01		21:04	29 07:00 (E7)	21:58	
6	08:49		08:05	06:58	06:35		05:21	06:32 (E7)	04:31	
	15:55		16:56	17:58	20:03		21:06	28 07:00 (E7)	21:59	
7	08:48		08:03	06:55	06:33		05:19	06:33 (E7)	04:30	
	15:56		16:59	18:00	20:05		21:08	25 06:58 (E7)	22:00	
8	08:48		08:00	06:53	06:30		05:17	06:34 (E7)	04:29	
	15:58		17:01	18:03	20:08		21:10	23 06:57 (E7)	22:01	
9	08:47		07:58	06:50	06:27		05:15	06:35 (E7)	04:28	
	15:59		17:03	18:05	20:10		21:12	21 06:56 (E7)	22:02	
10	08:46		07:56	06:47	06:25		05:13	06:37 (E7)	04:28	
	16:01		17:05	18:07	20:12		21:14	17 06:54 (E7)	22:03	
11	08:45		07:54	06:45	06:22		05:10	06:38 (E7)	04:27	
	16:03		17:08	18:09	20:14		21:16	14 06:52 (E7)	22:04	
12	08:44		07:52	06:42	06:20		05:08	06:42 (E7)	04:27	
	16:04		17:10	18:11	20:16		21:18	6 06:48 (E7)	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	20:22		21:24		22:07	
16	08:40		07:43	06:32	06:09	06:45 (E7)	05:01		04:25	
	16:12		17:19	18:20	20:24	9 06:54 (E7)	21:25		22:08	
17	08:39		07:40	06:29	06:07	06:41 (E7)	04:59		04:25	
	16:14		17:21	18:22	20:26	17 06:58 (E7)	21:27		22:08	
18	08:37		07:38	06:26	06:04	06:38 (E7)	04:57		04:25	
	16:16		17:23	18:24	20:28	21 06:59 (E7)	21:29		22:09	
19	08:36		07:35	06:24	06:02	06:37 (E7)	04:55		04:25	
	16:18		17:25	18:26	20:30	24 07:01 (E7)	21:31		22:09	
20	08:35		07:33	06:21	05:59	06:35 (E7)	04:53		04:25	
	16:20		17:28	18:28	20:33	26 07:01 (E7)	21:33		22:10	
21	08:33		07:31	06:18	05:57	06:34 (E7)	04:52		04:25	
	16:22		17:30	18:30	20:35	28 07:02 (E7)	21:35		22:10	
22	08:32		07:28	06:15	05:54	06:33 (E7)	04:50		04:25	
	16:24		17:32	18:32	20:37	30 07:03 (E7)	21:37		22:10	
23	08:30		07:26	06:13	05:52	06:32 (E7)	04:48		04:26	
	16:26		17:34	18:34	20:39	31 07:03 (E7)	21:38		22:10	
24	08:29		07:23	06:10	05:49	06:31 (E7)	04:47		04:26	
	16:28		17:37	18:36	20:41	33 07:04 (E7)	21:40		22:10	
25	08:27		07:21	06:07	05:47	06:31 (E7)	04:45		04:26	
	16:30		17:39	18:38	20:43	33 07:04 (E7)	21:42		22:10	
26	08:26		07:18	06:05	05:44	06:30 (E7)	04:44		04:27	
	16:32		17:41	18:40	20:45	34 07:04 (E7)	21:43		22:10	
27	08:24		07:16	06:02	05:42	06:30 (E7)	04:42		04:27	
	16:34		17:43	18:43	20:47	34 07:04 (E7)	21:45		22:10	
28	08:22		07:13	05:59	05:40	06:30 (E7)	04:41		04:28	
	16:36		17:45	18:45	20:49	34 07:04 (E7)	21:47		22:10	
29	08:20			06:57	05:37	06:30 (E7)	04:39		04:28	
	16:39			19:47	20:51	34 07:04 (E7)	21:48		22:10	
30	08:18			06:54	05:35	06:29 (E7)	04:38		04:29	
	16:41			19:49	20:53	34 07:03 (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	4				422		291			
Sun reduction	0.13				0.50		0.57			
Oper. time red.	0.98				0.98		0.98			
Wind dir. red.	0.64				0.65		0.65			
Total reduction	0.08				0.32		0.36			
Total, real	0				135		106			

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	06:50 (E7) 07:00 (E7)	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	06:48 (E7) 07:03 (E7)	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	06:46 (E7) 07:05 (E7)	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	06:45 (E7) 07:07 (E7)	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	06:43 (E7) 07:07 (E7)	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	06:42 (E7) 07:08 (E7)	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	06:41 (E7) 07:09 (E7)	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	06:41 (E7) 07:10 (E7)	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	06:40 (E7) 07:11 (E7)	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	06:39 (E7) 07:10 (E7)	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	06:38 (E7) 07:11 (E7)	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	06:38 (E7) 07:11 (E7)	06:39 19:45	07:40 18:25	07:46 16:13	3 12:43 (E13) 12:46 (E13) 12:42 (E13)
13	04:43 21:59	05:39 21:01	06:38 (E7) 07:11 (E7)	06:41 19:42	07:42 18:22	07:49 16:11	7 12:49 (E13) 12:41 (E13) 9 12:50 (E13)
14	04:45 21:58	05:41 20:59	06:37 (E7) 07:11 (E7)	06:43 19:39	07:44 18:19	07:51 16:09	12:40 (E13) 11 12:51 (E13)
15	04:46 21:57	05:43 20:57	06:37 (E7) 07:11 (E7)	06:45 19:37	07:46 18:17	07:53 16:07	12:40 (E13) 12 12:52 (E13)
16	04:48 21:55	05:45 20:54	06:37 (E7) 07:11 (E7)	06:47 19:34	07:48 18:14	07:55 16:06	12:40 (E13) 13 12:53 (E13)
17	04:49 21:54	05:47 20:52	06:36 (E7) 07:10 (E7)	06:49 19:31	07:50 18:12	07:57 16:04	12:40 (E13) 14 12:54 (E13)
18	04:51 21:52	05:49 20:50	06:37 (E7) 07:10 (E7)	06:51 19:29	07:52 18:09	07:59 16:02	12:41 (E13) 14 12:55 (E13)
19	04:52 21:51	05:51 20:47	06:37 (E7) 07:09 (E7)	06:53 19:26	07:55 18:07	08:01 16:01	12:40 (E13) 15 12:55 (E13)
20	04:54 21:49	05:53 20:45	06:37 (E7) 07:09 (E7)	06:55 19:23	07:57 18:04	08:03 15:59	12:41 (E13) 15 12:56 (E13)
21	04:56 21:48	05:55 20:42	06:38 (E7) 07:08 (E7)	06:57 19:20	07:59 18:02	08:05 15:58	12:42 (E13) 15 12:57 (E13)
22	04:57 21:46	05:57 20:40	06:39 (E7) 07:07 (E7)	06:59 19:18	08:01 17:59	08:07 15:56	12:41 (E13) 16 12:57 (E13)
23	04:59 21:45	05:59 20:37	06:40 (E7) 07:06 (E7)	07:01 19:15	08:03 17:57	08:09 15:55	12:43 (E13) 15 12:58 (E13)
24	05:01 21:43	06:01 20:35	06:41 (E7) 07:04 (E7)	07:03 19:12	08:05 17:55	08:11 15:53	12:43 (E13) 15 12:58 (E13)
25	05:03 21:41	06:03 20:32	06:42 (E7) 07:02 (E7)	07:05 19:10	08:13 16:52	08:13 15:52	12:43 (E13) 15 12:58 (E13)
26	05:04 21:39	06:05 20:29	06:43 (E7) 06:59 (E7)	07:07 19:07	08:15 16:50	08:15 15:51	12:44 (E13) 14 12:58 (E13)
27	05:06 21:38	06:07 20:27	06:47 (E7) 06:55 (E7)	07:09 19:04	08:17 16:47	08:17 15:49	12:45 (E13) 13 12:58 (E13)
28	05:08 21:36	06:09 20:24		07:11 19:02	08:19 16:45	08:19 15:48	12:46 (E13) 12 12:58 (E13)
29	05:10 21:34	06:11 20:22		07:13 18:59	08:21 16:43	08:21 15:47	12:47 (E13) 11 12:58 (E13)
30	05:12 21:32	06:13 20:19		07:15 18:56	08:22 16:40	08:22 15:46	12:48 (E13) 10 12:58 (E13)
31	05:14 21:30	06:15 20:17			08:24 16:38	08:24 15:47	12:50 (E13) 8 12:58 (E13)
Potential sun hours	529	469	385	324	247	216	
Total, worst case		718					257
Sun reduction		0.50					0.07
Oper. time red.		0.98					0.98
Wind dir. red.		0.65					0.64
Total reduction		0.32					0.04
Total, real		229					11

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January			February			March	April		May	June
1	08:51		14:20 (E13)	08:15		14:20 (E13)	07:11	06:49		05:32	04:36
	15:48	20	14:40 (E13)	16:45	39	14:59 (E13)	17:47	19:53		20:55	21:52
2	08:50		14:20 (E13)	08:13		14:21 (E13)	07:08	06:46		05:30	04:35
	15:49	21	14:41 (E13)	16:47	38	14:59 (E13)	17:50	19:55		20:57	21:54
3	08:50		14:19 (E13)	08:11		14:22 (E13)	07:06	06:43		05:28	04:34
	15:51	23	14:42 (E13)	16:50	37	14:59 (E13)	17:52	19:57		20:59	21:55
4	08:50		14:19 (E13)	08:09		14:23 (E13)	07:03	06:41		05:26	04:33
	15:52	24	14:43 (E13)	16:52	35	14:58 (E13)	17:54	19:59		21:02	21:57
5	08:49		14:19 (E13)	08:07		14:24 (E13)	07:00	06:38		05:23	04:32
	15:53	25	14:44 (E13)	16:54	34	14:58 (E13)	17:56	20:01		21:04	21:58
6	08:49		14:19 (E13)	08:05		14:25 (E13)	06:58	06:35		05:21	04:31
	15:55	26	14:45 (E13)	16:56	31	14:56 (E13)	17:58	20:03		21:06	21:59
7	08:48		14:19 (E13)	08:03		14:27 (E13)	06:55	06:33		05:19	04:30
	15:56	27	14:46 (E13)	16:59	29	14:56 (E13)	18:00	20:05		21:08	22:00
8	08:47		14:18 (E13)	08:00		14:28 (E13)	06:53	06:30		05:17	04:29
	15:58	29	14:47 (E13)	17:01	26	14:54 (E13)	18:03	20:07		21:10	22:01
9	08:47		14:18 (E13)	07:58		14:30 (E13)	06:50	06:27		05:15	04:28
	15:59	30	14:48 (E13)	17:03	22	14:52 (E13)	18:05	20:10		21:12	22:02
10	08:46		14:18 (E13)	07:56		14:33 (E13)	06:47	06:25		05:13	04:28
	16:01	31	14:49 (E13)	17:05	17	14:50 (E13)	18:07	20:12		21:14	22:03
11	08:45		14:18 (E13)	07:54		14:38 (E13)	06:45	06:22		05:10	04:27
	16:03	32	14:50 (E13)	17:08	8	14:46 (E13)	18:09	20:14		21:16	22:04
12	08:44		14:17 (E13)	07:52			06:42	06:20		05:08	04:27
	16:04	33	14:50 (E13)	17:10			18:11	20:16	9	06:54 (E8)	21:18
13	08:43		14:17 (E13)	07:49			06:39	06:17		05:06	04:26
	16:06	35	14:52 (E13)	17:12			18:13	20:18	14	06:57 (E8)	21:20
14	08:42		14:18 (E13)	07:47			06:37	06:14		05:04	04:26
	16:08	35	14:53 (E13)	17:14			18:15	20:20	18	06:58 (E8)	21:22
15	08:41		14:17 (E13)	07:45			06:34	06:12		05:02	04:26
	16:10	36	14:53 (E13)	17:17			18:17	20:22	20	06:59 (E8)	21:24
16	08:40		14:17 (E13)	07:43			06:31	06:09		05:01	04:25
	16:12	37	14:54 (E13)	17:19			18:20	20:24	21	06:59 (E8)	21:25
17	08:39		14:17 (E13)	07:40			06:29	06:07		04:59	04:25
	16:14	38	14:55 (E13)	17:21			18:22	20:26	23	07:00 (E8)	21:27
18	08:37		14:17 (E13)	07:38			06:26	06:04		04:57	04:25
	16:16	39	14:56 (E13)	17:23			18:24	20:28	24	07:00 (E8)	21:29
19	08:36		14:17 (E13)	07:35			06:23	06:02		04:55	04:25
	16:18	39	14:56 (E13)	17:25			18:26	20:30	24	07:00 (E8)	21:31
20	08:35		14:18 (E13)	07:33			06:21	05:59		04:53	04:25
	16:20	39	14:57 (E13)	17:28			18:28	20:32	24	06:59 (E8)	21:33
21	08:33		14:17 (E13)	07:31			06:18	05:57		04:52	04:25
	16:22	41	14:58 (E13)	17:30			18:30	20:35	24	06:59 (E8)	21:35
22	08:32		14:17 (E13)	07:28			06:15	05:54		04:50	04:25
	16:24	41	14:58 (E13)	17:32			18:32	20:37	23	06:59 (E8)	21:36
23	08:30		14:17 (E13)	07:26			06:13	05:52		04:48	04:26
	16:26	41	14:58 (E13)	17:34			18:34	20:39	23	06:58 (E8)	21:38
24	08:29		14:17 (E13)	07:23			06:10	05:49		04:47	04:26
	16:28	41	14:58 (E13)	17:37			18:36	20:41	22	06:58 (E8)	21:40
25	08:27		14:18 (E13)	07:21			06:07	05:47		04:45	04:26
	16:30	42	15:00 (E13)	17:39			18:38	20:43	20	06:57 (E8)	21:42
26	08:25		14:18 (E13)	07:18			06:05	05:44		04:44	04:27
	16:32	42	15:00 (E13)	17:41			18:40	20:45	18	06:55 (E8)	21:43
27	08:24		14:19 (E13)	07:16			06:02	05:42		04:42	04:27
	16:34	41	15:00 (E13)	17:43			18:43	20:47	14	06:53 (E8)	21:45
28	08:22		14:19 (E13)	07:13			05:59	05:40		04:41	04:28
	16:36	41	15:00 (E13)	17:45			18:45	20:49	10	06:51 (E8)	21:47
29	08:20		14:19 (E13)				06:57	05:37		04:39	04:28
	16:39	41	15:00 (E13)				19:47	20:51		21:48	22:10
30	08:18		14:20 (E13)				06:54	05:35		04:38	04:29
	16:41	40	15:00 (E13)				19:49	20:53		21:50	22:09
31	08:17		14:19 (E13)				06:51			04:37	
	16:43	40	14:59 (E13)				19:51			21:51	
Potential sun hours	235			266			366	426		508	529
Total, worst case		1070		316				331			
Sun reduction		0.13		0.20				0.50			
Oper. time red.		0.98		0.98				0.98			
Wind dir. red.		0.66		0.66				0.66			
Total reduction		0.09		0.13				0.32			
Total, real		93		41				106			

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	14:02 (E13) 15:45 (E13)
2	04:31 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	13:59 (E13) 15:44 (E13)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	13:58 (E13) 15:43 (E13)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	13:56 (E13) 15:42 (E13)
5	04:34 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	13:54 (E13) 15:42 (E13)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	13:54 (E13) 15:41 (E13)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	13:53 (E13) 15:40 (E13)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	13:53 (E13) 15:40 (E13)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	13:52 (E13) 15:39 (E13)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	13:51 (E13) 15:39 (E13)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	13:51 (E13) 15:38 (E13)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	13:51 (E13) 15:38 (E13)
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	13:51 (E13) 15:38 (E13)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	13:51 (E13) 15:38 (E13)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	13:50 (E13) 15:38 (E13)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	13:51 (E13) 15:38 (E13)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	13:51 (E13) 15:38 (E13)
18	04:51 21:52	05:49 20:49	06:51 19:29	07:52 18:09	07:59 16:02	13:51 (E13) 15:38 (E13)
19	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	13:52 (E13) 15:38 (E13)
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	13:52 (E13) 15:39 (E13)
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	13:52 (E13) 15:39 (E13)
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	13:54 (E13) 15:39 (E13)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	13:54 (E13) 15:40 (E13)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	13:54 (E13) 15:40 (E13)
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	13:55 (E13) 15:41 (E13)
26	05:04 21:39	06:05 20:29	07:07 19:07	08:09 16:50	08:15 15:51	13:55 (E13) 15:42 (E13)
27	05:06 21:37	06:07 20:27	07:09 19:04	08:12 16:47	08:17 15:49	13:57 (E13) 15:43 (E13)
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	13:58 (E13) 15:44 (E13)
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	13:58 (E13) 15:45 (E13)
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:40	08:22 15:46	13:59 (E13) 15:46 (E13)
31	05:14 21:30	06:15 20:17	07:17 18:54	08:20 16:38	14:05 (E13) 14:16 (E13)	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		338		11	1095	564
Sun reduction		0.50		0.26	0.08	0.07
Oper. time red.		0.98		0.98	0.98	0.98
Wind dir. red.		0.66		0.66	0.66	0.66
Total reduction		0.32		0.17	0.05	0.05
Total, real		108		2	59	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	07:53 (E10)	06:49		05:32		06:25 (E9)	04:36				
	15:48			16:45	37 09:43 (E11)	17:47	21 08:14 (E10)	19:53		20:55	41	07:06 (E9)	21:52				
2	08:50			08:13	09:07 (E12)	07:08		07:50 (E10)	06:46	05:30		06:24 (E9)	04:35				
	15:49			16:47	36 09:43 (E11)	17:50	26 08:16 (E10)	19:55		20:57	42	07:06 (E9)	21:54				
3	08:50			08:11	09:08 (E12)	07:05		07:49 (E10)	06:43	05:28		06:24 (E9)	04:34				
	15:51			16:50	36 09:44 (E11)	17:52	29 08:18 (E10)	19:57		20:59	42	07:06 (E9)	21:55				
4	08:50			08:09	09:09 (E12)	07:03		07:47 (E10)	06:41	05:26		06:24 (E9)	04:33				
	15:52			16:52	35 09:44 (E11)	17:54	32 08:19 (E10)	19:59		21:01	42	07:06 (E9)	21:56				
5	08:49			08:07	09:09 (E12)	07:00		07:45 (E10)	06:38	05:23		06:24 (E9)	04:32				
	15:53			16:54	34 09:43 (E11)	17:56	35 08:20 (E10)	20:01		21:03	42	07:06 (E9)	21:58				
6	08:49			08:05	09:11 (E11)	06:58		07:45 (E10)	06:35	05:21		06:24 (E9)	04:31				
	15:55			16:56	32 09:43 (E11)	17:58	36 08:21 (E10)	20:03		21:05	42	07:06 (E9)	21:59				
7	08:48			08:02	09:12 (E11)	06:55		07:43 (E10)	06:33	05:19		06:23 (E9)	04:30				
	15:56			16:58	31 09:43 (E11)	18:00	38 08:21 (E10)	20:05		21:08	43	07:06 (E9)	22:00				
8	08:47			08:00	09:13 (E11)	06:53		07:42 (E10)	06:30	05:17		06:23 (E9)	04:29				
	15:58			17:01	30 09:43 (E11)	18:02	39 08:21 (E10)	20:07		21:10	43	07:06 (E9)	22:01				
9	08:47			07:58	09:13 (E11)	06:50		07:42 (E10)	06:27	05:15		06:23 (E9)	04:28				
	15:59			17:03	29 09:42 (E11)	18:05	40 08:22 (E10)	20:09		21:12	43	07:06 (E9)	22:02				
10	08:46			07:56	09:14 (E11)	06:47		07:41 (E10)	06:25	05:12		06:23 (E9)	04:28				
	16:01			17:05	28 09:42 (E11)	18:07	41 08:22 (E10)	20:12		21:14	43	07:06 (E9)	22:03				
11	08:45			07:54	09:15 (E11)	06:45		07:40 (E10)	06:22	05:10		06:23 (E9)	04:27				
	16:03			17:07	25 09:40 (E11)	18:09	42 08:22 (E10)	20:14		21:16	42	07:05 (E9)	22:04				
12	08:44			07:52	09:16 (E11)	06:42		07:40 (E10)	06:20	05:08		06:24 (E9)	04:27				
	16:04			17:10	23 09:39 (E11)	18:11	41 08:21 (E10)	20:16		21:18	41	07:05 (E9)	22:05				
13	08:43			07:49	09:18 (E11)	06:39		07:40 (E10)	06:17	05:06		06:24 (E9)	04:26				
	16:06			17:12	20 09:38 (E11)	18:13	42 08:22 (E10)	20:18		21:19	40	07:04 (E9)	22:06				
14	08:42			07:47	09:20 (E11)	06:37		07:40 (E10)	06:14	05:04		06:25 (E9)	04:26				
	16:08			17:14	15 09:35 (E11)	18:15	41 08:21 (E10)	20:20		21:21	39	07:04 (E9)	22:06				
15	08:41			07:45	09:24 (E11)	06:34		07:39 (E10)	06:12	05:02		06:25 (E9)	04:26				
	16:10			17:16	7 09:31 (E11)	18:17	41 08:20 (E10)	20:22		21:23	38	07:03 (E9)	22:07				
16	08:40			07:42		06:31		07:40 (E10)	06:09	05:00		06:25 (E9)	04:25				
	16:12			17:19		18:19	40 08:20 (E10)	20:24		21:25	38	07:03 (E9)	22:08				
17	08:39		09:13 (E12)	07:40		06:29		07:40 (E10)	06:07	04:59		06:25 (E9)	04:25				
	16:14	2	09:15 (E12)	17:21		18:22	39 08:19 (E10)	20:26		21:27	37	07:02 (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	7	09:19 (E12)	17:23		18:24	37 08:17 (E10)	20:28		21:29	35	07:02 (E9)	22:09				
19	08:36		09:10 (E12)	07:35		06:23		07:42 (E10)	06:02	04:55		06:27 (E9)	04:25				
	16:18	17	09:27 (E11)	17:25		18:26	35 08:17 (E10)	20:30		21:31	34	07:01 (E9)	22:09				
20	08:35		09:08 (E12)	07:33		06:21		07:42 (E10)	05:59	06:45 (E9)		06:28 (E9)	04:25				
	16:20	22	09:30 (E11)	17:28		18:28	33 08:15 (E10)	20:32	4	06:49 (E9)	21:33	32	07:00 (E9)	22:10			
21	08:33		09:07 (E12)	07:31		06:18		07:43 (E10)	05:57	06:39 (E9)		06:28 (E9)	04:25				
	16:22	26	09:33 (E11)	17:30		18:30	30 08:13 (E10)	20:34	16	06:55 (E9)	21:35	31	06:59 (E9)	22:10			
22	08:32		09:06 (E12)	07:28		06:15		07:43 (E10)	05:54	06:37 (E9)		06:30 (E9)	04:25				
	16:24	28	09:34 (E11)	17:32		18:32	28 08:11 (E10)	20:37	21	06:58 (E9)	21:36	29	06:59 (E9)	22:10			
23	08:30		09:05 (E12)	07:26		06:13		07:46 (E10)	05:52	06:34 (E9)		06:30 (E9)	04:26				
	16:26	30	09:35 (E11)	17:34		18:34	23 08:09 (E10)	20:39	25	06:59 (E9)	21:38	27	06:57 (E9)	22:10			
24	08:29		09:05 (E12)	07:23		06:10		07:48 (E10)	05:49	06:32 (E9)		06:32 (E9)	04:26				
	16:28	32	09:37 (E11)	17:36		18:36	18 08:06 (E10)	20:41	29	07:01 (E9)	21:40	24	06:56 (E9)	22:10			
25	08:27		09:05 (E12)	07:21		06:07		07:52 (E10)	05:47	06:31 (E9)		06:33 (E9)	04:26				
	16:30	33	09:38 (E11)	17:39		18:38	8 08:00 (E10)	20:43	32	07:03 (E9)	21:41	23	06:56 (E9)	22:10			
26	08:25		09:05 (E12)	07:18		06:05		05:44		06:29 (E9)		06:34 (E9)	04:27				
	16:32	35	09:40 (E11)	17:41		18:40		20:45	34	07:03 (E9)	21:43	20	06:54 (E9)	22:10			
27	08:24		09:05 (E12)	07:16		06:02		05:42		06:28 (E9)		06:36 (E9)	04:27				
	16:34	35	09:40 (E11)	17:43		18:42		20:47	36	07:04 (E9)	21:45	16	06:52 (E9)	22:10			
28	08:22		09:05 (E12)	07:13		07:56 (E10)		05:59		06:27 (E9)		06:38 (E9)	04:28				
	16:36	36	09:41 (E11)	17:45	15	08:11 (E10)	18:45	20:49	38	07:05 (E9)	21:46	13	06:51 (E9)	22:10			
29	08:20		09:06 (E12)			06:57		05:37		06:26 (E9)		06:41 (E9)	04:28				
	16:38	36	09:42 (E11)			19:47		20:51	38	07:04 (E9)	21:48	7	06:48 (E9)	22:10			
30	08:18		09:05 (E12)			06:54		05:35		06:25 (E9)		04:38	04:29				
	16:41	37	09:42 (E11)			19:49		20:53	40	07:05 (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	413			433		835		313		989							
Sun reduction	0.13			0.20		0.41		0.50		0.57							
Oper. time red.	0.98			0.98		0.98		0.98		0.98							
Wind dir. red.	0.59			0.59		0.63		0.65		0.65							
Total reduction	0.08			0.12		0.25		0.32		0.36							
Total, real	32			50		210		100		358							

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

July		August		September		October		November		December	
1	04:30	05:16	06:34 (E9)	06:17		07:17	08:20 (E10)	07:22		08:44 (E11)	08:24
	22:09	21:28	41 07:15 (E9)	20:14		18:53	41 09:01 (E10)	16:36	27	09:11 (E11)	15:45
2	04:31	05:17	06:34 (E9)	06:19		07:19	08:19 (E10)	07:25		08:42 (E11)	08:26
	22:08	21:26	41 07:15 (E9)	20:11		18:51	42 09:01 (E10)	16:34	30	09:12 (E11)	15:44
3	04:32	05:19	06:34 (E9)	06:21		07:21	08:19 (E10)	07:27		08:41 (E11)	08:27
	22:08	21:24	42 07:16 (E9)	20:09		18:48	41 09:00 (E10)	16:31	31	09:12 (E11)	15:43
4	04:32	05:21	06:34 (E9)	06:23		07:23	08:19 (E10)	07:29		08:42 (E11)	08:29
	22:07	21:21	42 07:16 (E9)	20:06		18:45	41 09:00 (E10)	16:29	31	09:13 (E11)	15:42
5	04:33	05:23	06:33 (E9)	06:25		07:25	08:19 (E10)	07:31		08:41 (E11)	08:31
	22:06	21:19	43 07:16 (E9)	20:03		18:43	40 08:59 (E10)	16:27	32	09:13 (E11)	15:41
6	04:35	05:25	06:33 (E9)	06:27		07:27	08:19 (E10)	07:33		08:40 (E12)	08:32
	22:06	21:17	43 07:16 (E9)	20:01		18:40	39 08:58 (E10)	16:25	34	09:14 (E11)	15:41
7	04:36	05:27	06:33 (E9)	06:29		07:29	08:20 (E10)	07:35		08:39 (E12)	08:34
	22:05	21:15	43 07:16 (E9)	19:58		18:38	37 08:57 (E10)	16:23	35	09:14 (E11)	15:40
8	04:37	05:29	06:33 (E9)	06:31		07:31	08:20 (E10)	07:38		08:37 (E12)	08:35
	22:04	21:13	43 07:16 (E9)	19:55		18:35	35 08:55 (E10)	16:21	36	09:13 (E11)	15:40
9	04:38	05:31	06:33 (E9)	06:33		07:33	08:21 (E10)	07:40		08:38 (E12)	08:36
	22:03	21:11	43 07:16 (E9)	19:53		18:32	33 08:54 (E10)	16:19	36	09:14 (E11)	15:39
10	04:39	05:33	06:33 (E9)	06:35		07:36	08:22 (E10)	07:42		08:37 (E12)	08:38
	22:02	21:08	42 07:15 (E9)	19:50		18:30	31 08:53 (E10)	16:17	37	09:14 (E11)	15:39
11	04:41	05:35	06:33 (E9)	06:37		07:38	08:24 (E10)	07:44		08:37 (E12)	08:39
	22:01	21:06	41 07:14 (E9)	19:47		18:27	27 08:51 (E10)	16:15	37	09:14 (E11)	15:38
12	04:42	05:37	06:33 (E9)	06:39		07:40	08:25 (E10)	07:46		08:37 (E12)	08:40
	22:00	21:04	41 07:14 (E9)	19:45		18:24	24 08:49 (E10)	16:13	36	09:13 (E11)	15:38
13	04:43	05:39	06:34 (E9)	06:41		07:42	08:27 (E10)	07:48		08:38 (E12)	08:41
	21:59	21:01	39 07:13 (E9)	19:42		18:22	19 08:46 (E10)	16:11	36	09:14 (E11)	15:38
14	04:45	06:52 (E9)	05:41	06:43		07:44	08:31 (E10)	07:51		08:37 (E12)	08:42
	21:58	2 06:54 (E9)	20:59	39 07:13 (E9)	19:39	18:19	11 08:42 (E10)	16:09	36	09:13 (E11)	15:38
15	04:46	06:48 (E9)	05:43	06:45		07:46		07:53		08:37 (E12)	08:43
	21:56	10 06:58 (E9)	20:57	37 07:12 (E9)	19:37	18:17		16:07	35	09:12 (E11)	15:38
16	04:48	06:46 (E9)	05:45	06:47		07:48		07:55		08:38 (E12)	08:44
	21:55	15 07:01 (E9)	20:54	35 07:11 (E9)	19:34	18:14		16:06	35	09:13 (E11)	15:38
17	04:49	06:44 (E9)	05:47	06:49		07:50		07:57		08:39 (E12)	08:45
	21:54	18 07:02 (E9)	20:52	33 07:09 (E9)	19:31	18:12		16:04	33	09:12 (E11)	15:38
18	04:51	06:43 (E9)	05:49	06:51	08:42 (E10)	07:52		07:59		08:39 (E12)	08:46
	21:52	22 07:05 (E9)	20:49	31 07:08 (E9)	19:28	4 08:46 (E10)	18:09	16:02	32	09:11 (E11)	15:38
19	04:52	06:42 (E9)	05:51	06:53		07:54		08:01		08:40 (E12)	08:47
	21:51	24 07:06 (E9)	20:47	28 07:06 (E9)	19:26	16 08:51 (E10)	18:07	16:01	30	09:10 (E11)	15:38
20	04:54	06:41 (E9)	05:53	06:55		07:56		08:03		08:41 (E12)	08:48
	21:49	26 07:07 (E9)	20:44	25 07:05 (E9)	19:23	22 08:54 (E10)	18:04	15:59	28	09:09 (E11)	15:38
21	04:56	06:40 (E9)	05:55	06:57		07:59		08:05		08:42 (E12)	08:48
	21:48	28 07:08 (E9)	20:42	20 07:02 (E9)	19:20	26 08:56 (E10)	18:02	15:57	26	09:08 (E11)	15:39
22	04:57	06:40 (E9)	05:57	06:59		08:01		08:07		08:44 (E12)	08:49
	21:46	29 07:09 (E9)	20:39	14 06:59 (E9)	19:18	29 08:57 (E10)	17:59	15:56	22	09:06 (E11)	15:39
23	04:59	06:38 (E9)	05:59	07:01		08:03		08:09		08:47 (E12)	08:49
	21:44	32 07:10 (E9)	20:37	19:15	32 08:58 (E10)	17:57		15:55	17	09:04 (E11)	15:40
24	05:01	06:38 (E9)	06:01	07:03		08:05		08:11		08:49 (E12)	08:50
	21:43	33 07:11 (E9)	20:34	19:12	34 08:59 (E10)	17:54		15:53	7	08:56 (E12)	15:40
25	05:03	06:37 (E9)	06:03	07:05		08:07		08:13		08:51 (E12)	08:50
	21:41	34 07:11 (E9)	20:32	19:10	37 09:00 (E10)	16:52		15:52	2	08:53 (E12)	15:41
26	05:04	06:37 (E9)	06:05	07:07		07:09		08:15			08:50
	21:39	35 07:12 (E9)	20:29	19:07	38 09:00 (E10)	16:50		15:51			15:42
27	05:06	06:36 (E9)	06:07	07:09		07:12	08:52 (E11)	08:17			08:51
	21:37	37 07:13 (E9)	20:27	19:04	40 09:01 (E10)	16:47	10 09:02 (E11)	15:49			15:43
28	05:08	06:35 (E9)	06:09	07:11		07:14		08:19			08:51
	21:35	38 07:13 (E9)	20:24	19:01	41 09:01 (E10)	16:45	16 09:05 (E11)	15:48			15:44
29	05:10	06:35 (E9)	06:11	07:13		07:16		08:20			08:51
	21:34	39 07:14 (E9)	20:22	18:59	41 09:01 (E10)	16:43	21 09:08 (E11)	15:47			15:44
30	05:12	06:35 (E9)	06:13	07:15		07:18		08:22			08:51
	21:32	40 07:15 (E9)	20:19	18:56	41 09:01 (E10)	16:40	24 09:09 (E11)	15:46			15:45
31	05:14	06:34 (E9)	06:15			07:20		08:44 (E11)			08:51
	21:30	40 07:14 (E9)	20:16			16:38	26 09:10 (E11)				15:47
Potential sun hours	529		469		385	324		247			216
Total, worst case	502		806		401	558		741			
Sun reduction	0.49		0.50		0.43	0.26		0.08			
Oper. time red.	0.98		0.98		0.98	0.98		0.98			
Wind dir. red.	0.65		0.65		0.63	0.62		0.59			
Total reduction	0.31		0.32		0.26	0.16		0.05			
Total, real	158		256		105	88		35			

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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			07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

January			February			March			April			May			June		
1	08:51	09:53 (E14)	08:15	08:53 (E15)	07:11				06:49	07:23 (E13)	05:33	04:36					
	15:48	24	10:17 (E14)	16:45	64	10:35 (E14)	17:48		19:53	16	07:39 (E13)	20:55	21:53				
2	08:50	09:54 (E14)	08:13	08:53 (E15)	07:08				06:46		07:20 (E13)	05:30	04:35				
	15:49	25	10:19 (E14)	16:48	63	10:35 (E14)	17:50		19:55	21	07:41 (E13)	20:57	21:54				
3	08:50	09:53 (E14)	08:11	08:54 (E15)	07:06				06:43		07:18 (E13)	05:28	04:34				
	15:51	26	10:19 (E14)	16:50	62	10:35 (E14)	17:52		19:57	25	07:43 (E13)	21:00	21:55				
4	08:50	09:53 (E14)	08:09	08:54 (E15)	07:03				06:41		07:16 (E13)	05:26	04:33				
	15:52	27	10:20 (E14)	16:52	60	10:34 (E14)	17:54		19:59	28	07:44 (E13)	21:02	21:57				
5	08:49	09:53 (E14)	08:07	08:55 (E15)	07:01				06:38		07:14 (E13)	05:23	04:32				
	15:53	28	10:21 (E14)	16:54	58	10:34 (E14)	17:56		20:01	31	07:45 (E13)	21:04	21:58				
6	08:49	09:53 (E14)	08:05	08:54 (E15)	06:58				06:35		07:14 (E13)	05:21	04:31				
	15:55	29	10:22 (E14)	16:56	56	10:32 (E14)	17:58		20:03	32	07:46 (E13)	21:06	21:59				
7	08:48	09:53 (E14)	08:03	08:55 (E15)	06:55				06:33		07:12 (E13)	05:19	04:30				
	15:56	30	10:23 (E14)	16:59	52	10:31 (E14)	18:01		20:05	34	07:46 (E13)	21:08	22:00				
8	08:48	09:52 (E14)	08:01	08:57 (E15)	06:53				06:30		07:12 (E13)	05:17	04:29				
	15:58	32	10:24 (E14)	17:01	48	10:30 (E14)	18:03		20:08	35	07:47 (E13)	21:10	22:01				
9	08:47	09:52 (E14)	07:58	08:57 (E15)	06:50				06:28		07:11 (E13)	05:15	04:29				
	16:00	33	10:25 (E14)	17:03	41	10:27 (E14)	18:05		20:10	36	07:47 (E13)	21:12	22:02				
10	08:46	09:52 (E14)	07:56	08:59 (E15)	06:47				06:25		07:10 (E13)	05:13	04:28				
	16:01	34	10:26 (E14)	17:05	34	10:25 (E14)	18:07		20:12	36	07:46 (E13)	21:14	22:03				
11	08:45	09:52 (E14)	07:54	09:01 (E15)	06:45				06:22		07:10 (E13)	05:11	04:27				
	16:03	35	10:27 (E14)	17:08	23	10:22 (E14)	18:09		20:14	37	07:47 (E13)	21:16	22:04				
12	08:44	09:51 (E14)	07:52		06:42				06:20		07:09 (E13)	05:09	04:27				
	16:05	36	10:27 (E14)	17:10		18:11			20:16	37	07:46 (E13)	21:18	22:05				
13	08:43	09:52 (E14)	07:50		06:40				06:17		07:09 (E13)	05:07	04:26				
	16:06	36	10:28 (E14)	17:12		18:13			20:18	37	07:46 (E13)	21:20	22:06				
14	08:42	09:52 (E14)	07:47		06:37				06:15		07:09 (E13)	05:05	04:26				
	16:08	37	10:29 (E14)	17:14		18:15			20:20	36	07:45 (E13)	21:22	22:07				
15	08:41	09:51 (E14)	07:45		06:34				06:12		07:09 (E13)	05:03	04:26				
	16:10	39	10:30 (E14)	17:17		18:18			20:22	36	07:45 (E13)	21:24	22:07				
16	08:40	09:52 (E14)	07:43		06:32				06:09		07:09 (E13)	05:01	04:26				
	16:12	39	10:31 (E14)	17:19		18:20			20:24	35	07:44 (E13)	21:25	22:08				
17	08:39	09:51 (E14)	07:40		06:29				06:07		07:09 (E13)	04:59	04:25				
	16:14	40	10:31 (E14)	17:21		18:22			20:26	34	07:43 (E13)	21:27	22:08				
18	08:37	09:52 (E14)	07:38		06:26				06:04		07:09 (E13)	04:57	04:25				
	16:16	40	10:32 (E14)	17:23		18:24			20:28	33	07:42 (E13)	21:29	22:09				
19	08:36	09:51 (E14)	07:36		06:24				06:02		07:10 (E13)	04:55	04:25				
	16:18	41	10:32 (E14)	17:26		18:26			20:30	31	07:41 (E13)	21:31	22:09				
20	08:35	09:52 (E14)	07:33		06:21				05:59		07:11 (E13)	04:53	04:25				
	16:20	42	10:34 (E14)	17:28		18:28			20:33	28	07:39 (E13)	21:33	22:10				
21	08:33	09:52 (E14)	07:31		06:18				05:57		07:12 (E13)	04:52	04:25				
	16:22	42	10:34 (E14)	17:30		18:30			20:35	26	07:38 (E13)	21:35	22:10				
22	08:32	09:52 (E14)	07:28		06:16				05:54		07:14 (E13)	04:50	04:26				
	16:24	42	10:34 (E14)	17:32		18:32			20:37	23	07:37 (E13)	21:37	22:10				
23	08:30	09:03 (E15)	07:26		06:13				05:52		07:15 (E13)	04:48	04:26				
	16:26	44	10:34 (E14)	17:34		18:34			20:39	19	07:34 (E13)	21:38	22:10				
24	08:29	09:02 (E15)	07:23		06:10				05:49		07:17 (E13)	04:47	04:26				
	16:28	51	10:36 (E14)	17:37		18:36			20:41	14	07:31 (E13)	21:40	22:10				
25	08:27	09:00 (E15)	07:21		06:08				05:47		07:23 (E13)	04:45	04:26				
	16:30	54	10:36 (E14)	17:39		18:38			20:43	3	07:26 (E13)	21:42	22:10				
26	08:26	08:58 (E15)	07:18		06:05				05:44			04:44	04:27				
	16:32	58	10:36 (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	61	10:36 (E14)	17:43		18:43			20:47			21:45	22:10				
28	08:22	08:55 (E15)	07:13		05:59				05:40			04:41	04:28				
	16:37	62	10:36 (E14)	17:45		18:45			20:49			21:47	22:10				
29	08:20	08:54 (E15)			06:57				05:37			04:40	04:29				
	16:39	64	10:36 (E14)		19:47				20:51			21:48	22:10				
30	08:18	08:54 (E15)			06:54				05:35			04:38	04:29				
	16:41	64	10:36 (E14)		19:49				20:53			21:50	22:09				
31	08:17	08:54 (E15)			06:51							04:37					
	16:43	64	10:36 (E14)		19:51				6	07:35 (E13)		21:51					
Potential sun hours	235		266		366				426			508		529			
Total, worst case	1279		561		6				723								
Sun reduction	0.13		0.20		0.41				0.50								
Oper. time red.	0.98		0.98		0.98				0.98								
Wind dir. red.	0.61		0.60		0.66				0.66								
Total reduction	0.08		0.12		0.26				0.32								
Total, real	102		67		2				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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	07:09 (E13) 18:54	07:17 16:36	08:28 (E15) 15:45	09:34 (E14) 10:09 (E14)
2	04:31 22:08	05:18 21:26	06:19 20:11	07:09 (E13) 18:51	07:19 16:34	08:26 (E15) 15:44	09:35 (E14) 10:09 (E14)
3	04:32 22:08	05:20 21:24	06:21 20:09	07:09 (E13) 18:48	07:21 16:32	08:26 (E15) 15:43	09:35 (E14) 10:08 (E14)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:09 (E13) 18:46	07:23 16:29	08:25 (E15) 15:42	09:36 (E14) 10:08 (E14)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:09 (E13) 18:43	07:25 16:27	08:24 (E15) 15:42	09:38 (E14) 10:08 (E14)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:09 (E13) 18:40	07:27 16:25	08:24 (E15) 15:41	09:39 (E14) 10:08 (E14)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:09 (E13) 18:38	07:30 16:23	08:24 (E15) 15:40	09:39 (E14) 10:08 (E14)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:10 (E13) 18:35	07:32 16:21	08:24 (E15) 15:40	09:41 (E14) 10:08 (E14)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:11 (E13) 18:32	07:34 16:19	08:24 (E15) 15:39	09:41 (E14) 10:07 (E14)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:13 (E13) 18:30	07:36 16:17	08:24 (E15) 15:39	09:43 (E14) 10:08 (E14)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:15 (E13) 18:27	07:44 16:15	08:25 (E15) 15:39	09:43 (E14) 10:07 (E14)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:19 (E13) 18:25	07:46 16:13	08:25 (E15) 15:38	09:45 (E14) 10:08 (E14)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:27 (E13) 18:22	07:49 16:11	08:26 (E15) 15:38	09:46 (E14) 10:08 (E14)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:27 (E15) 15:38	09:46 (E14) 10:07 (E14)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:28 (E15) 15:38	09:47 (E14) 10:07 (E14)
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	09:48 (E14) 10:07 (E14)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:33 (E15) 15:38	09:49 (E14) 10:08 (E14)
18	04:51 21:52	05:49 20:50	07:26 (E13) 19:29	06:51 18:09	07:59 16:02	08:36 (E15) 15:38	09:50 (E14) 10:08 (E14)
19	04:53 21:51	05:51 20:47	07:22 (E13) 19:26	06:53 18:07	08:01 16:01	08:38 (E15) 15:38	09:50 (E14) 10:07 (E14)
20	04:54 21:49	05:53 20:45	07:20 (E13) 19:23	06:55 18:04	08:03 15:59	09:27 (E14) 15:39	09:51 (E14) 10:08 (E14)
21	04:56 21:48	05:55 20:42	07:18 (E13) 19:21	06:57 18:02	08:05 15:58	09:27 (E14) 15:39	09:52 (E14) 10:09 (E14)
22	04:58 21:46	05:57 20:40	07:16 (E13) 19:18	06:59 18:00	08:07 15:56	09:28 (E14) 15:40	09:52 (E14) 10:09 (E14)
23	04:59 21:45	05:59 20:37	07:15 (E13) 19:15	07:01 17:57	08:09 15:55	09:28 (E14) 15:40	09:53 (E14) 10:10 (E14)
24	05:01 21:43	06:01 20:35	07:14 (E13) 19:12	07:03 17:55	08:11 15:53	09:29 (E14) 15:41	09:53 (E14) 10:10 (E14)
25	05:03 21:41	06:03 20:32	07:13 (E13) 19:10	07:05 17:52	08:13 15:52	09:29 (E14) 15:41	09:53 (E14) 10:11 (E14)
26	05:05 21:39	06:05 20:30	07:12 (E13) 19:07	07:07 17:50	08:15 15:51	09:30 (E14) 15:42	09:53 (E14) 10:11 (E14)
27	05:06 21:38	06:07 20:27	07:10 (E13) 19:04	07:09 17:48	08:17 15:49	09:31 (E14) 15:43	09:53 (E14) 10:12 (E14)
28	05:08 21:36	06:09 20:24	07:10 (E13) 19:02	07:11 17:46	08:19 15:48	09:32 (E14) 15:44	09:53 (E14) 10:13 (E14)
29	05:10 21:34	06:11 20:22	07:09 (E13) 18:59	07:13 17:43	08:21 15:47	09:33 (E14) 15:45	09:53 (E14) 10:14 (E14)
30	05:12 21:32	06:13 20:19	07:09 (E13) 18:56	07:15 17:41	08:22 15:46	09:34 (E14) 15:46	09:54 (E14) 10:15 (E14)
31	05:14 21:30	06:15 20:17	07:09 (E13) 18:54	07:17 17:38	08:29 (E15) 15:46	08:51 15:47	09:54 (E14) 10:16 (E14)
Potential sun hours	529	469	385	324	247	216	
Total, worst case		405	343	31	1504		707
Sun reduction		0.50	0.43	0.26	0.08		0.07
Oper. time red.		0.98	0.98	0.98	0.98		0.98
Wind dir. red.		0.66	0.66	0.60	0.61		0.61
Total reduction		0.32	0.27	0.15	0.05		0.04
Total, real		130	94	5	74		30

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

		January	February	March		April		May		June
1	08:51	08:15	07:11		07:38 (E14)	06:49		05:33	06:22 (E13)	04:36
	15:48	16:45	17:48	14	07:52 (E14)	19:53		20:55	14 06:36 (E13)	21:53
2	08:50	08:13	07:08		07:35 (E14)	06:46		05:30	06:23 (E13)	04:35
	15:50	16:48	17:50	19	07:54 (E14)	19:55		20:58	11 06:34 (E13)	21:54
3	08:50	08:11	07:06		07:34 (E14)	06:43		05:28	06:27 (E13)	04:34
	15:51	16:50	17:52	22	07:56 (E14)	19:57		21:00	3 06:30 (E13)	21:55
4	08:50	08:09	07:03		07:32 (E14)	06:41		05:26		04:33
	15:52	16:52	17:54	25	07:57 (E14)	19:59		21:02		21:57
5	08:49	08:07	07:01		07:30 (E14)	06:38		05:24		04:32
	15:54	16:54	17:56	28	07:58 (E14)	20:01		21:04		21:58
6	08:49	08:05	06:58		07:30 (E14)	06:36		05:21		04:31
	15:55	16:56	17:58	29	07:59 (E14)	20:03		21:06		21:59
7	08:48	08:03	06:55		07:28 (E14)	06:33		05:19		04:30
	15:56	16:59	18:01	31	07:59 (E14)	20:06		21:08		22:00
8	08:48	08:01	06:53		07:27 (E14)	06:30		05:17		04:29
	15:58	17:01	18:03	32	07:59 (E14)	20:08		21:10		22:01
9	08:47	07:58	06:50		07:28 (E14)	06:28		05:15		04:29
	16:00	17:03	18:05	32	08:00 (E14)	20:10		21:12		22:02
10	08:46	07:56	06:48		07:27 (E14)	06:25		05:13		04:28
	16:01	17:05	18:07	33	08:00 (E14)	20:12		21:14		22:03
11	08:45	07:54	06:45		07:26 (E14)	06:22		05:11		04:27
	16:03	17:08	18:09	33	07:59 (E14)	20:14		21:16		22:04
12	08:44	07:52	06:42		07:27 (E14)	06:20		05:09		04:27
	16:05	17:10	18:11	32	07:59 (E14)	20:16		21:18		22:05
13	08:43	07:50	06:40		07:27 (E14)	06:17		05:07		04:27
	16:06	17:12	18:13	31	07:58 (E14)	20:18		21:20		22:06
14	08:42	07:47	06:37		07:26 (E14)	06:15		05:05		04:26
	16:08	17:14	18:15	31	07:57 (E14)	20:20		21:22		22:07
15	08:41	07:45	06:34		07:27 (E14)	06:12		05:03		04:26
	16:10	17:17	18:18	30	07:57 (E14)	20:22		21:24		22:07
16	08:40	07:43	06:32		07:28 (E14)	06:09		05:01		04:26
	16:12	17:19	18:20	28	07:56 (E14)	20:24		21:25		22:08
17	08:39	07:40	06:29		07:28 (E14)	06:07	06:33 (E13)	04:59		04:25
	16:14	17:21	18:22	26	07:54 (E14)	20:26	5 06:38 (E13)	21:27		22:08
18	08:38	07:38	06:26		07:29 (E14)	06:04	06:30 (E13)	04:57		04:25
	16:16	17:23	18:24	23	07:52 (E14)	20:28	9 06:39 (E13)	21:29		22:09
19	08:36	07:36	06:24		07:31 (E14)	06:02	06:28 (E13)	04:55		04:25
	16:18	17:26	18:26	19	07:50 (E14)	20:31	13 06:41 (E13)	21:31		22:09
20	08:35	07:33	06:21		07:33 (E14)	05:59	06:26 (E13)	04:53		04:25
	16:20	17:28	18:28	14	07:47 (E14)	20:33	16 06:42 (E13)	21:33		22:10
21	08:33	07:31	06:18			05:57	06:23 (E13)	04:52		04:25
	16:22	17:30	18:30			20:35	19 06:42 (E13)	21:35		22:10
22	08:32	07:28	06:16			05:54	06:21 (E13)	04:50		04:26
	16:24	17:32	18:32			20:37	21 06:42 (E13)	21:37		22:10
23	08:30	07:26	06:13			05:52	06:19 (E13)	04:48		04:26
	16:26	17:34	18:34			20:39	23 06:42 (E13)	21:38		22:10
24	08:29	07:23	06:10			05:49	06:19 (E13)	04:47		04:26
	16:28	17:37	18:36			20:41	23 06:42 (E13)	21:40		22:10
25	08:27	07:21	06:08			05:47	06:19 (E13)	04:45		04:27
	16:30	17:39	18:39			20:43	23 06:42 (E13)	21:42		22:10
26	08:26	07:18	06:05			05:44	06:18 (E13)	04:44		04:27
	16:32	17:41	18:41			20:45	23 06:41 (E13)	21:43		22:10
27	08:24	07:16	06:02			05:42	06:19 (E13)	04:42		04:27
	16:34	17:43	18:43			20:47	21 06:40 (E13)	21:45		22:10
28	08:22	07:13	06:00			05:40	06:19 (E13)	04:41		04:28
	16:37	17:45	18:45			20:49	21 06:40 (E13)	21:47		22:10
29	08:20		06:57			05:37	06:20 (E13)	04:40		04:29
	16:39		19:47			20:51	19 06:39 (E13)	21:48		22:10
30	08:19		06:54			05:35	06:21 (E13)	04:38		04:29
	16:41		19:49			20:53	17 06:38 (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		529
Total, worst case				532	253			28		
Sun reduction				0.41	0.50			0.57		
Oper. time red.				0.98	0.98			0.98		
Wind dir. red.				0.62	0.65			0.65		
Total reduction				0.25	0.32			0.36		
Total, real				134	80			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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	08:06 (E14)	07:23
	22:09	21:28	20:14	18:54	32 08:38 (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	33 08:38 (E14)	16:34
3	04:32	05:20	06:21	07:21	08:05 (E14)	07:27
	22:08	21:24	20:09	18:48	33 08:38 (E14)	16:32
4	04:33	05:22	06:23	07:23	08:05 (E14)	07:29
	22:07	21:22	20:06	18:46	32 08:37 (E14)	16:30
5	04:34	05:23	06:25	07:25	08:04 (E14)	07:31
	22:07	21:20	20:03	18:43	33 08:37 (E14)	16:27
6	04:35	05:25	06:27	07:28	08:04 (E14)	07:33
	22:06	21:17	20:01	18:40	32 08:36 (E14)	16:25
7	04:36	05:27	06:29	07:30	08:05 (E14)	07:36
	22:05	21:15	19:58	18:38	30 08:35 (E14)	16:23
8	04:37	05:29	06:31	07:32	08:05 (E14)	07:38
	22:04	21:13	19:56	18:35	29 08:34 (E14)	16:21
9	04:38	05:31	06:33	07:34	08:06 (E14)	07:40
	22:03	21:11	19:53	18:33	27 08:33 (E14)	16:19
10	04:40	05:33	06:35 (E13)	07:36	08:07 (E14)	07:42
	22:02	21:08	6 06:41 (E13)	18:30	25 08:32 (E14)	16:17
11	04:41	05:35	06:32 (E13)	07:38	08:08 (E14)	07:44
	22:01	21:06	12 06:44 (E13)	18:27	22 08:30 (E14)	16:15
12	04:42	05:37	06:30 (E13)	07:40	08:10 (E14)	07:46
	22:00	21:04	15 06:45 (E13)	18:25	17 08:27 (E14)	16:13
13	04:44	05:39	06:28 (E13)	07:42	08:13 (E14)	07:49
	21:59	21:02	18 06:46 (E13)	18:22	10 08:23 (E14)	16:11
14	04:45	05:41	06:28 (E13)	07:44		07:51
	21:58	20:59	19 06:47 (E13)	18:20		16:10
15	04:46	05:43	06:27 (E13)	07:46		07:53
	21:57	20:57	21 06:48 (E13)	18:17		16:08
16	04:48	05:45	06:26 (E13)	07:48		07:55
	21:55	20:54	22 06:48 (E13)	18:15		16:06
17	04:49	05:47	06:26 (E13)	07:50		07:57
	21:54	20:52	22 06:48 (E13)	18:12		16:04
18	04:51	05:49	06:26 (E13)	07:52		07:59
	21:52	20:50	22 06:48 (E13)	18:09		16:03
19	04:53	05:51	06:24 (E13)	07:55		08:01
	21:51	20:47	23 06:47 (E13)	18:07		16:01
20	04:54	05:53	06:24 (E13)	07:57		08:03
	21:49	20:45	23 06:47 (E13)	18:04		15:59
21	04:56	05:55	06:26 (E13)	07:59		08:05
	21:48	20:42	21 06:47 (E13)	18:02		15:58
22	04:58	05:57	06:28 (E13)	08:01		08:07
	21:46	20:40	18 06:46 (E13)	18:00		15:56
23	04:59	05:59	06:30 (E13)	08:03		08:09
	21:45	20:37	15 06:45 (E13)	17:57		15:55
24	05:01	06:01	06:32 (E13)	08:05		08:11
	21:43	20:35	12 06:44 (E13)	17:55		15:53
25	05:03	06:03	06:34 (E13)	08:13 (E14)		08:13
	21:41	20:32	9 06:43 (E13)	17:52		15:52
26	05:05	06:05	06:36 (E13)	08:11 (E14)		08:15
	21:39	20:30	4 06:40 (E13)	16:50		15:51
27	05:06	06:07	07:09	08:10 (E14)		08:17
	21:38	20:27	19:04	16:48		15:50
28	05:08	06:09	07:11	08:09 (E14)		08:19
	21:36	20:24	19:02	16:45		15:48
29	05:10	06:11	07:13	08:08 (E14)		08:21
	21:34	20:22	18:59	16:43		15:47
30	05:12	06:13	07:15	08:07 (E14)		08:22
	21:32	20:19	18:56	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		282	192	355		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.65	0.62	0.62		
Total reduction		0.32	0.26	0.16		
Total, real		89	50	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:37 (E14) 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	08:17 (E14) 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	07:36 (E14) 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	08:15 (E14) 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	07:36 (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	08:14 (E14) 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	07:35 (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	08:12 (E14) 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	07:34 (E14) 19:59	06:38 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:25 18:43	08:11 (E14) 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	07:35 (E14) 19:59	06:36 21:06	04:31 21:59	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	08:11 (E14) 16:25	07:33 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	07:34 (E14) 19:59	06:33 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:10 (E14) 16:23	07:36 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	07:34 (E14) 19:59	06:30 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:09 (E14) 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	07:35 (E14) 19:59	06:28 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:10 (E14) 16:19	07:40 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	07:35 (E14) 19:59	06:25 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	08:10 (E14) 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	07:36 (E14) 19:59	06:22 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:10 (E14) 16:15	07:44 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	07:37 (E14) 19:59	06:20 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:10 (E14) 16:13	07:46 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	07:39 (E14) 19:59	06:17 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:11 (E14) 16:11	07:49 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	07:41 (E14) 19:59	06:15 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:13 (E14) 16:10	07:51 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	07:52 (E14) 19:59	06:12 21:22	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:16 (E14) 16:08	07:53 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20		06:09 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:18 (E14) 16:06	07:55 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22		06:07 21:27	04:25 22:08	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	08:38 16:16	07:38 17:23	06:26 18:24		06:04 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	08:21 (E14) 16:03	07:59 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	08:22 (E14) 16:01	08:01 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28		05:59 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:23 (E14) 15:59	08:03 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30		05:57 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:24 (E14) 15:58	08:05 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32		05:54 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:25 (E14) 15:56	08:07 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34		05:52 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:26 (E14) 15:55	08:09 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:27 (E14) 15:53	08:11 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	07:48 (E14)	05:47 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:28 (E14) 15:52	08:13 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	07:45 (E14)	05:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:29 (E14) 15:51	08:15 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	07:58 (E14)	05:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:30 (E14) 15:50	08:17 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	07:40 (E14)	05:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:31 (E14) 15:48	08:19 15:44
29	08:20 16:39	07:11 17:47	05:57 19:47	08:01 (E14)	05:37 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:32 (E14) 15:47	08:21 15:45
30	08:19 16:41	07:03 17:54	05:54 19:49		05:35 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:19 17:41	08:33 (E14) 15:46	08:22 15:46
31	08:17 16:43	07:01 17:51	05:52 19:51		05:33 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:18 18:58	08:21 17:40	08:34 (E14) 15:45	08:23 15:47
Potential sun hours	235	266	366		426	508	529	469	385	324	247	216
Total, worst case												
Sun reduction		59		338					23	386		
Oper. time red.		0.20		0.41					0.43	0.26		
Wind dir. red.		0.98		0.98					0.98	0.98		
Total reduction		0.62		0.62					0.62	0.62		
Total, real		0.12		0.25					0.26	0.16		
		7		85					6	61		

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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) 08:23 (E14)	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	25	07:57 (E14) 08:23 (E14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	7	07:32 (E14) 07:39 (E14)	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	26	07:57 (E14) 08:22 (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) 07:41 (E14)	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	25	07:57 (E14) 08:22 (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) 07:42 (E14)	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	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	20	07:24 (E14) 07:44 (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	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	23	07:21 (E14) 07:44 (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	21	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	25	07:19 (E14) 07:44 (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	18	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	07:20 (E14) 07:45 (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	14	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	07:19 (E14) 07:44 (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	10	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	26	07:18 (E14) 07:44 (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	10	08:07 (E14) 08:11 (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) 07:44 (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	24	07:19 (E14) 07:43 (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	23	07:19 (E14) 07:42 (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	21	07:20 (E14) 07:41 (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	18	07:21 (E14) 07:39 (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	14	07:22 (E14) 07:36 (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	8	07:26 (E14) 07:34 (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		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	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 21:49	05:53 20:45	06:55 19:23	07:57 18:04	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	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	07:59 18:00	07:59 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	07:59 18:03	07:59 18:03			08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	07:59 18:05	07:59 18:05			08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:59 18:07	07:59 18:07		08:11 (E14) 08:14 (E14)	15:53 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	07:59 18:08	07:59 18:08		08:06 (E14) 08:18 (E14)	15:51 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	07:59 18:03	07:59 18:03		08:03 (E14) 08:20 (E14)	15:51 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	07:59 18:02	07:59 18:02		08:02 (E14) 08:21 (E14)	15:51 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	07:59 18:00	07:59 18:00		08:00 (E14) 08:22 (E14)	15:51 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	07:59 18:23	07:59 18:23		07:59 (E14) 08:23 (E14)	15:51 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		05:33 21:51	04:37 21:51	04:37 21:51	05:14 21:30	06:15 20:17			07:20 16:38			15:51 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	529	529	469	385		324			247	216
Total, worst case				312							97					
Sun reduction				0.41							0.43					
Oper. time red.				0.98							0.98					
Wind dir. red.				0.62							0.62					
Total reduction				0.25							0.26					
Total, real				78							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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:44 (E14) 08:11 (E14)	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 15:50	08:13 16:48	07:08 17:50	07:43 (E14) 08:10 (E14)	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	07:44 (E14) 08:11 (E14)	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
4	08:50 15:52	08:09 16:52	07:03 17:54	07:43 (E14) 08:10 (E14)	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
5	08:49 15:54	08:07 16:54	07:01 17:56	07:43 (E14) 08:09 (E14)	06:38 19:59	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
6	08:49 15:55	08:05 16:57	06:58 17:58	07:44 (E14) 08:09 (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	07:34 16:25
7	08:48 15:56	08:03 16:59	06:55 18:01	07:45 (E14) 08:07 (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
8	08:48 15:58	08:01 17:01	06:53 18:03	07:45 (E14) 08:05 (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
9	08:47 16:00	07:58 17:03	06:50 18:05	07:47 (E14) 08:04 (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
10	08:46 16:01	07:56 17:05	06:48 18:07	07:49 (E14) 08:01 (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
11	08:45 16:03	07:54 17:08	06:45 18:09	07:49 (E14) 08:11 (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
12	08:44 16:05	07:52 17:10	06:42 18:11	07:49 (E14) 08:11 (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
13	08:43 16:06	07:50 17:12	06:40 18:13	07:49 (E14) 08:11 (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
14	08:42 16:08	07:47 17:14	06:37 18:15	07:49 (E14) 08:11 (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
15	08:41 16:10	07:45 17:17	06:34 18:18	07:49 (E14) 08:11 (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
16	08:40 16:12	07:43 17:19	06:32 18:20	07:49 (E14) 08:11 (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
17	08:39 16:14	07:40 17:21	06:29 18:22	07:49 (E14) 08:11 (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
18	08:38 16:16	07:38 17:23	06:26 18:24	07:49 (E14) 08:11 (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
19	08:36 16:18	07:36 17:26	06:24 18:26	07:49 (E14) 08:11 (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
20	08:35 16:20	07:33 17:28	06:21 18:28	07:49 (E14) 08:11 (E14)	06:01 20:33	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
21	08:33 16:22	07:31 17:30	06:18 18:30	07:58 (E14) 08:00 (E14)	06:00 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	07:58 (E14) 08:04 (E14)	06:00 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
23	08:30 16:26	07:26 17:34	06:13 18:34	07:58 (E14) 08:07 (E14)	06:00 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55
24	08:29 16:28	07:23 17:37	06:10 18:36	07:58 (E14) 08:08 (E14)	06:00 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	07:58 (E14) 08:10 (E14)	06:00 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
26	08:26 16:32	07:18 17:41	06:05 18:41	07:58 (E14) 08:10 (E14)	06:00 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:07 17:50	08:15 15:51
27	08:24 16:34	07:16 17:43	06:02 18:43	07:58 (E14) 08:10 (E14)	06:00 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:09 17:48	08:17 15:50
28	08:22 16:37	07:13 17:45	06:00 18:45	07:58 (E14) 08:11 (E14)	06:00 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:11 17:45	08:19 15:48
29	08:20 16:39	07:11 17:47	05:57 19:47	07:58 (E14) 08:11 (E14)	06:00 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:12 17:43	08:21 15:47
30	08:19 16:41	07:09 17:49	05:54 19:49	07:58 (E14) 08:11 (E14)	06:00 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:13 17:41	08:22 15:46
31	08:17 16:43	07:07 17:49	05:52 19:51	07:58 (E14) 08:11 (E14)	06:00 20:53	04:37 21:51	04:29 22:09	05:14 21:30	06:15 20:17	07:20 18:58	08:14 17:41	08:23 15:47
Potential sun hours	235	266	366		426	508	529	529	469	385	324	247
Total, worst case					230							216
Sun reduction		0.20			0.41							
Oper. time red.		0.98			0.98							
Wind dir. red.		0.63			0.63							
Total reduction		0.12			0.25							
Total, real		17			58							

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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			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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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	08:40 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	04:46 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
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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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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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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

Shadow receptor: Leiš upi - 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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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
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	08:30 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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)	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	09:16 (E12) 38 09:54 (E11)	07:11 17:47	07:58 (E10) 37 08:35 (E10)	06:49 19:53		05:32 20:55	06:31 (E9) 45 07:16 (E9)	04:36 21:52	
2	08:50 15:49	08:13 16:47	09:17 (E12) 37 09:54 (E11)	07:08 17:50	07:57 (E10) 38 08:35 (E10)	06:46 19:55		05:30 20:57	06:31 (E9) 45 07:16 (E9)	04:35 21:54	
3	08:50 15:51	08:11 16:50	09:19 (E12) 35 09:54 (E11)	07:05 17:52	07:57 (E10) 39 08:36 (E10)	06:43 19:57		05:28 20:59	06:31 (E9) 45 07:16 (E9)	04:34 21:55	
4	08:50 15:52	08:09 16:52	09:21 (E12) 33 09:54 (E11)	07:03 17:54	07:56 (E10) 40 08:36 (E10)	06:41 19:59		05:26 21:01	06:31 (E9) 45 07:16 (E9)	04:33 21:56	
5	08:49 15:53	08:07 16:54	09:23 (E11) 30 09:53 (E11)	07:00 17:56	07:55 (E10) 41 08:36 (E10)	06:38 20:01		05:23 21:03	06:31 (E9) 45 07:16 (E9)	04:32 21:58	
6	08:49 15:55	08:05 16:56	09:24 (E11) 28 09:52 (E11)	06:58 17:58	07:55 (E10) 42 08:37 (E10)	06:35 20:03		05:21 21:05	06:31 (E9) 45 07:16 (E9)	04:31 21:59	
7	08:48 15:56	08:02 16:58	09:26 (E11) 26 09:52 (E11)	06:55 18:00	07:54 (E10) 42 08:36 (E10)	06:33 20:05		05:19 21:08	06:31 (E9) 45 07:16 (E9)	04:30 22:00	
8	08:47 15:58	08:00 17:01	09:27 (E11) 24 09:51 (E11)	06:53 18:02	07:53 (E10) 43 08:36 (E10)	06:30 20:07		05:17 21:10	06:31 (E9) 44 07:15 (E9)	04:29 22:01	
9	08:47 15:59	07:58 17:03	09:28 (E11) 21 09:49 (E11)	06:50 18:05	07:54 (E10) 42 08:36 (E10)	06:27 20:09		05:15 21:12	06:31 (E9) 44 07:15 (E9)	04:28 22:02	
10	08:46 16:01	07:56 17:05	09:30 (E11) 18 09:48 (E11)	06:47 18:07	07:53 (E10) 43 08:36 (E10)	06:25 20:12		05:12 21:14	06:31 (E9) 43 07:14 (E9)	04:28 22:03	
11	08:45 16:03	07:54 17:07	09:32 (E11) 12 09:44 (E11)	06:45 18:09	07:53 (E10) 42 08:35 (E10)	06:22 20:14		05:10 21:16	06:31 (E9) 43 07:14 (E9)	04:27 22:04	
12	08:44 16:04	07:52 17:10		06:42 18:11	07:53 (E10) 41 08:34 (E10)	06:20 20:16		05:08 21:18	06:31 (E9) 42 07:13 (E9)	04:27 22:05	
13	08:43 16:06	09:19 (E12) 12 09:36 (E11)	07:49 17:12	06:39 18:13	07:54 (E10) 39 08:33 (E10)	06:17 20:18		05:06 21:19	06:32 (E9) 40 07:12 (E9)	04:26 22:06	
14	08:42 16:08	09:18 (E11) 19 09:39 (E11)	07:47 17:14	06:37 18:15	07:54 (E10) 38 08:32 (E10)	06:14 20:20		05:04 21:21	06:33 (E9) 39 07:12 (E9)	04:26 22:06	
15	08:41 16:10	09:16 (E12) 25 09:41 (E11)	07:45 17:16	06:34 18:17	07:54 (E10) 37 08:31 (E10)	06:12 20:22		05:02 21:23	06:33 (E9) 39 07:12 (E9)	04:26 22:07	
16	08:40 16:12	09:15 (E12) 28 09:43 (E11)	07:42 17:19	06:31 18:19	07:56 (E10) 34 08:30 (E10)	06:09 20:24		05:00 21:25	06:34 (E9) 36 07:10 (E9)	04:25 22:08	
17	08:39 16:14	09:13 (E12) 31 09:44 (E11)	07:40 17:21	06:29 18:22	07:56 (E10) 32 08:28 (E10)	06:07 20:26		04:59 21:27	06:34 (E9) 35 07:09 (E9)	04:25 22:08	
18	08:37 16:16	09:13 (E12) 33 09:46 (E11)	07:38 17:23	06:26 18:24	07:57 (E10) 29 08:26 (E10)	06:04 20:28	06:49 (E9) 14 07:03 (E9)	04:57 21:29	06:35 (E9) 34 07:09 (E9)	04:25 22:09	
19	08:36 16:18	09:12 (E12) 35 09:47 (E11)	07:35 17:25	06:23 18:26	07:59 (E10) 25 08:24 (E10)	06:02 20:30	06:46 (E9) 21 07:07 (E9)	04:55 21:31	06:36 (E9) 32 07:08 (E9)	04:25 22:09	
20	08:35 16:20	09:12 (E12) 35 09:47 (E11)	07:33 17:28	06:21 18:28	08:01 (E10) 20 08:21 (E10)	05:59 20:32	06:43 (E9) 25 07:08 (E9)	04:53 21:33	06:37 (E9) 30 07:07 (E9)	04:25 22:10	
21	08:33 16:22	09:12 (E12) 37 09:49 (E11)	07:31 17:30	06:18 18:30	08:05 (E10) 11 08:16 (E10)	05:57 20:34	06:41 (E9) 29 07:10 (E9)	04:51 21:35	06:38 (E9) 28 07:06 (E9)	04:25 22:10	
22	08:32 16:24	09:12 (E12) 38 09:50 (E11)	07:28 17:32	06:15 18:32		05:54 20:37	06:40 (E9) 32 07:12 (E9)	04:50 21:36	06:39 (E9) 26 07:05 (E9)	04:25 22:10	
23	08:30 16:26	09:12 (E12) 38 09:50 (E11)	07:26 17:34	06:13 18:34	08:10 (E10) 13 08:23 (E10)	05:52 20:39	06:37 (E9) 35 07:12 (E9)	04:48 21:38	06:40 (E9) 23 07:03 (E9)	04:26 22:10	
24	08:29 16:28	09:12 (E12) 39 09:51 (E11)	07:23 17:36	06:10 18:36	08:07 (E10) 20 08:27 (E10)	05:49 20:41	06:36 (E9) 37 07:13 (E9)	04:47 21:40	06:42 (E9) 20 07:02 (E9)	04:26 22:10	
25	08:27 16:30	09:12 (E12) 40 09:52 (E11)	07:21 17:39	06:07 18:38	08:04 (E10) 25 08:29 (E10)	05:47 20:43	06:36 (E9) 38 07:14 (E9)	04:45 21:41	06:44 (E9) 17 07:01 (E9)	04:26 22:10	
26	08:25 16:32	09:13 (E12) 40 09:53 (E11)	07:18 17:41	06:05 18:40	08:03 (E10) 28 08:31 (E10)	05:44 20:45	06:34 (E9) 40 07:14 (E9)	04:44 21:43	06:45 (E9) 13 06:58 (E9)	04:27 22:10	
27	08:24 16:34	09:13 (E12) 40 09:53 (E11)	07:16 17:43	06:02 18:42	08:01 (E10) 31 08:32 (E10)	05:42 20:47	06:33 (E9) 42 07:15 (E9)	04:42 21:45	06:49 (E9) 6 06:55 (E9)	04:27 22:10	
28	08:22 16:36	09:14 (E12) 40 09:54 (E11)	07:13 17:45	05:59 18:45	07:59 (E10) 34 08:33 (E10)	05:39 20:49	06:33 (E9) 43 07:16 (E9)	04:41 21:46		04:28 22:10	
29	08:20 16:38	09:14 (E12) 40 09:54 (E11)		06:57 19:47		05:37 20:51	06:32 (E9) 43 07:15 (E9)	04:39 21:48		04:28 22:10	
30	08:18 16:41	09:14 (E12) 40 09:54 (E11)		06:54 19:49		05:35 20:53	06:31 (E9) 44 07:15 (E9)	04:38 21:49		04:29 22:09	
31	08:16 16:43	09:15 (E12) 39 09:54 (E11)		06:51 19:51				04:37 21:51			
Potential sun hours	235		266	366		426		508		529	
Total, worst case	649		453	755		443		949			
Sun reduction	0.13		0.20	0.41		0.50		0.57			
Oper. time red.	0.98		0.98	0.98		0.98		0.98			
Wind dir. red.	0.60		0.61	0.63		0.65		0.65			
Total reduction	0.08		0.12	0.25		0.32		0.36			
Total, real	50		54	190		142		345			

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

July		August		September		October		November		December	
1	04:30	05:16	06:42 (E9)	06:17		07:17	08:33 (E10)	07:22		08:59 (E11)	08:24
	22:09	21:28	41 07:23 (E9)	20:14		18:53	40 09:13 (E10)	16:36	19	09:18 (E11)	15:45
2	04:31	05:17	06:41 (E9)	06:19		07:19	08:32 (E10)	07:25		08:57 (E11)	08:26
	22:08	21:26	43 07:24 (E9)	20:11		18:51	41 09:13 (E10)	16:34	22	09:19 (E11)	15:44
3	04:32	05:19	06:41 (E9)	06:21		07:21	08:32 (E10)	07:27		08:55 (E11)	08:27
	22:08	21:24	44 07:25 (E9)	20:09		18:48	41 09:13 (E10)	16:31	25	09:20 (E11)	15:43
4	04:32	05:21	06:41 (E9)	06:23		07:23	08:31 (E10)	07:29		08:55 (E11)	08:29
	22:07	21:21	44 07:25 (E9)	20:06		18:45	42 09:13 (E10)	16:29	27	09:22 (E11)	15:42
5	04:33	05:23	06:40 (E9)	06:25		07:25	08:31 (E10)	07:31		08:54 (E11)	08:31
	22:06	21:19	45 07:25 (E9)	20:03		18:43	42 09:13 (E10)	16:27	28	09:22 (E11)	15:41
6	04:35	05:25	06:40 (E9)	06:27		07:27	08:30 (E10)	07:33		08:54 (E11)	08:32
	22:06	21:17	45 07:25 (E9)	20:01		18:40	43 09:13 (E10)	16:25	30	09:24 (E11)	15:41
7	04:36	05:27	06:40 (E9)	06:29		07:29	08:30 (E10)	07:35		08:51 (E12)	08:34
	22:05	21:15	45 07:25 (E9)	19:58		18:38	42 09:12 (E10)	16:23	33	09:24 (E11)	15:40
8	04:37	05:29	06:40 (E9)	06:31		07:31	08:30 (E10)	07:38		08:49 (E12)	08:35
	22:04	21:13	45 07:25 (E9)	19:55		18:35	41 09:11 (E10)	16:21	35	09:24 (E11)	15:40
9	04:38	05:31	06:40 (E9)	06:33		07:33	08:30 (E10)	07:40		08:48 (E12)	08:36
	22:03	21:11	45 07:25 (E9)	19:53		18:32	41 09:11 (E10)	16:19	37	09:25 (E11)	15:39
10	04:39	05:33	06:39 (E9)	06:35		07:36	08:31 (E10)	07:42		08:47 (E12)	08:38
	22:02	21:08	45 07:24 (E9)	19:50		18:30	40 09:11 (E10)	16:17	38	09:25 (E11)	15:39
11	04:41	05:35	06:39 (E9)	06:37		07:38	08:31 (E10)	07:44		08:47 (E12)	08:39
	22:01	21:06	45 07:24 (E9)	19:47		18:27	39 09:10 (E10)	16:15	39	09:26 (E11)	15:38
12	04:42	05:37	06:40 (E9)	06:39		07:40	08:31 (E10)	07:46		08:46 (E12)	08:40
	22:00	21:04	44 07:24 (E9)	19:45		18:24	37 09:08 (E10)	16:13	39	09:25 (E11)	15:38
13	04:43	05:39	06:40 (E9)	06:41		07:42	08:32 (E10)	07:48		08:46 (E12)	08:41
	21:59	21:01	44 07:24 (E9)	19:42		18:22	35 09:07 (E10)	16:11	40	09:26 (E11)	15:38
14	04:45	05:41	06:40 (E9)	06:43		07:44	08:33 (E10)	07:51		08:46 (E12)	08:42
	21:58	20:59	43 07:23 (E9)	19:39		18:19	33 09:06 (E10)	16:09	40	09:26 (E11)	15:38
15	04:46	05:43	06:41 (E9)	06:45		07:46	08:33 (E10)	07:53		08:45 (E12)	08:43
	21:56	20:57	42 07:23 (E9)	19:36		18:17	31 09:04 (E10)	16:07	40	09:25 (E11)	15:38
16	04:48	05:45	06:41 (E9)	06:47		07:48	08:36 (E10)	07:55		08:46 (E12)	08:44
	21:55	20:54	41 07:22 (E9)	19:34		18:14	27 09:03 (E10)	16:06	40	09:26 (E11)	15:38
17	04:49	05:47	06:41 (E9)	06:49		07:50	08:37 (E10)	07:57		08:46 (E12)	08:45
	21:54	20:52	40 07:21 (E9)	19:31		18:12	23 09:00 (E10)	16:04	39	09:25 (E11)	15:38
18	04:51	05:49	06:41 (E9)	06:51		07:52	08:40 (E10)	07:59		08:46 (E12)	08:46
	21:52	20:49	39 07:20 (E9)	19:28		18:09	17 08:57 (E10)	16:02	39	09:25 (E11)	15:38
19	04:52	05:51	06:42 (E9)	06:53		07:54	08:44 (E10)	08:01		08:47 (E12)	08:47
	21:51	20:47	37 07:19 (E9)	19:26		18:07	8 08:52 (E10)	16:01	38	09:25 (E11)	15:38
20	04:54	05:53	06:43 (E9)	06:55		07:56		08:03		08:47 (E12)	08:48
	21:49	20:44	35 07:18 (E9)	19:23		18:04		15:59	38	09:25 (E11)	15:38
21	04:56	05:55	06:44 (E9)	06:57		07:59		08:05		08:47 (E12)	08:48
	21:48	20:42	32 07:16 (E9)	19:20		18:02		15:57	37	09:24 (E11)	15:39
22	04:57	05:57	06:46 (E9)	06:59	08:51 (E10)	08:01		08:07		08:48 (E12)	08:49
	21:46	20:39	29 07:15 (E9)	19:18	8 08:59 (E10)	17:59		15:56	35	09:23 (E11)	15:39
23	04:59	05:59	06:48 (E9)	07:01	08:46 (E10)	08:03		08:09		08:49 (E12)	08:49
	21:44	20:37	25 07:13 (E9)	19:15	17 09:03 (E10)	17:57		15:55	35	09:24 (E11)	15:40
24	05:01	06:01	06:50 (E9)	07:03	08:43 (E10)	08:05		08:11		08:50 (E12)	08:50
	21:43	20:34	20 07:10 (E9)	19:12	23 09:06 (E10)	17:54		15:53	33	09:23 (E11)	15:40
25	05:03	06:03	06:52 (E9)	07:05	08:41 (E10)	07:07		08:13		08:51 (E12)	08:50
	21:41	20:32	13 07:05 (E9)	19:10	27 09:08 (E10)	16:52		15:52	31	09:22 (E11)	15:41
26	05:04	06:05		07:07	08:39 (E10)	07:09		08:15		08:53 (E12)	08:50
	21:39	20:29		19:07	30 09:09 (E10)	16:50		15:51	28	09:21 (E11)	15:42
27	05:06	06:07		07:09	08:37 (E10)	07:12		08:17		08:55 (E12)	08:51
	21:37	20:27		19:04	33 09:10 (E10)	16:47		15:49	25	09:20 (E11)	15:43
28	05:08	06:09		07:11	08:35 (E10)	07:14		08:19		08:57 (E12)	08:51
	21:35	20:24		19:01	36 09:11 (E10)	16:45		15:48	21	09:18 (E11)	15:44
29	05:10	06:11		07:13	08:34 (E10)	07:16		08:20		09:00 (E12)	08:51
	21:34	20:22		18:59	38 09:12 (E10)	16:43		15:47	12	09:17 (E11)	15:44
30	05:12	06:13		07:15	08:34 (E10)	07:18		08:22			08:51
	21:32	20:19		18:56	39 09:13 (E10)	16:40	2 09:09 (E11)	15:46			15:45
31	05:14	06:15				07:20	09:01 (E11)				08:51
	21:30	20:16				16:38	13 09:14 (E11)				15:47
Potential sun hours	529	469		385		324		247			216
Total, worst case	439	971		251		678		943			
Sun reduction	0.49	0.50		0.43		0.26		0.08			
Oper. time red.	0.98	0.98		0.98		0.98		0.98			
Wind dir. red.	0.65	0.65		0.63		0.62		0.60			
Total reduction	0.32	0.32		0.26		0.16		0.05			
Total, real	139	310		66		107		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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	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	09:13 (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	09:14 (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	09:15 (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	09:16 (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	09:17 (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	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	09:18 (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 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	09:21 (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	08:35 15:40
9	08:47 15:59	07:58 17:03	09:23 (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	08:37 15:39
10	08:46 16:01	07:56 17:05	09:32 (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	08:38 15:39
11	08:45 16:03	07:54 17:08	09:33 (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 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	09:34 (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 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	09:35 (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 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	09:36 (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	08:43 15:38
15	08:41 16:10	07:45 17:17	09:37 (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	08:44 15:38
16	08:40 16:12	07:43 17:19	09:38 (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 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	09:39 (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 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	09:40 (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 19:29	07:52 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	09:41 (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 19:26	07:55 18:07	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	09:42 (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 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	09:43 (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 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	09:44 (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 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	09:45 (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 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	09:46 (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 19:12	08:05 17:55	08:11 15:53	08:51 15:41
25	08:27 16:30	07:21 17:39	09:47 (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 19:10	08:07 17:52	08:13 15:52	08:52 15:41
26	08:26 16:32	07:18 17:41	09:48 (E13) 18:41	06:05 20:44	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 15:51	08:53 15:42
27	08:24 16:34	07:16 17:43	09:49 (E13) 18:43	06:02 20:42	05:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:12 17:47	08:17 15:49	08:54 15:43
28	08:22 16:36	07:13 17:45	09:50 (E13) 18:45	05:59 20:40	05:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:45	08:19 15:48	08:55 15:44
29	08:20 16:39	07:13 17:48	09:51 (E13) 18:47	05:57 20:40	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 15:47	08:56 15:45
30	08:19 16:41	07:13 17:49	09:52 (E13) 18:49	05:54 20:53	05:35 21:50	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:57 15:46
31	08:17 16:43	07:13 17:51	09:53 (E13) 18:51	05:51 20:51	05:37 21:51	04:31 22:10	05:14 21:30	06:15 20:17	07:16 18:48	08:19 17:38	08:23 15:47	08:58 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	362	191									557	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.98	0.98									0.98	
Wind dir. red.	0.59	0.59									0.59	
Total reduction	0.08	0.12									0.05	
Total, real	28	22									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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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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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
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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
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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			07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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	04:53 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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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
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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
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:15 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:48 19:53	05:32 20:55	04:35 21:53	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
4	08:50 15:51	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:02	04:32 21:57	04:32 22:08	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:36 16:23	08:34 15:40
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:16 21:10	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:03	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:41 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:41 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:25 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:45 15:37
17	08:39 16:13	07:40 17:21	06:29 18:22	06:06 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:37
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:56 21:29	04:25 22:09	04:50 21:53	05:49 20:50	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:10	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:39
24	08:29 16:27	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:25 22:11	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:01 (E14) 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:11 (E14) 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:00 (E14) 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	07:09 (E14) 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	06:59 (E14) 18:48	07:21 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:06 (E14) 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	06:59 (E14) 18:46	07:23 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:03 (E14) 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	06:58 (E14) 18:43	07:26 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:02 (E14) 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	06:58 (E14) 18:40	07:28 16:25	08:32 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	07:01 (E14) 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	06:59 (E14) 18:38	07:30 16:23	08:34 15:41
8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:01 (E14) 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:00 (E14) 18:35	07:32 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:01 (E14) 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:02 (E14) 18:33	07:34 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	07:01 (E14) 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:04 (E14) 18:30	07:36 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:02 (E14) 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:06 (E14) 18:27	07:38 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:02 (E14) 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:12 (E14) 18:25	07:40 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:04 (E14) 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:14 (E14) 18:22	07:42 16:11	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	07:06 (E14) 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:16 (E14) 18:20	07:44 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	07:13 (E14) 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:17 (E14) 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	07:14 (E14) 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:18 (E14) 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	07:15 (E14) 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:19 (E14) 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	07:16 (E14) 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:20 (E14) 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	07:17 (E14) 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:21 (E14) 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	07:18 (E14) 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:22 (E14) 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	07:19 (E14) 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:23 (E14) 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	07:20 (E14) 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	07:24 (E14) 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	07:21 (E14) 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	07:25 (E14) 18:03	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	07:22 (E14) 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	07:26 (E14) 18:05	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	07:23 (E14) 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:27 (E14) 18:02	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	07:24 (E14) 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:28 (E14) 18:00	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	07:25 (E14) 21:44	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04	07:29 (E14) 18:00	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	07:26 (E14) 21:45	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:30 (E14) 18:00	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	06:57 18:47	05:37 20:51	07:27 (E14) 21:46	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:31 (E14) 18:00	08:21 15:47	08:51 15:45
30	08:19 16:41	07:09 17:54	06:54 18:54	05:35 20:53	07:28 (E14) 21:47	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:32 (E14) 18:00	08:22 15:46	08:51 15:46
31	08:17 16:43	07:07 17:59	06:52 18:59	05:33 20:57	07:29 (E14) 21:48	04:30 22:10	05:14 21:30	06:15 20:17	07:17 (E14) 18:00	07:33 (E14) 18:00	08:23 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case				223				36	189			
Sun reduction				0.50				0.50	0.43			
Oper. time red.				0.98				0.98	0.98			
Wind dir. red.				0.66				0.66	0.66			
Total reduction				0.32				0.32	0.28			
Total, real				72				12	52			

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January			February			March	April	May	June
1	08:51		13:45 (E13)	08:15		13:56 (E13)	07:11		05:32	04:36
	15:48	36	14:21 (E13)	16:45	34	14:30 (E13)	17:47		20:55	21:53
2	08:50		13:45 (E13)	08:13		13:58 (E13)	07:08		05:30	04:35
	15:49	37	14:22 (E13)	16:47	31	14:29 (E13)	17:50		20:57	21:54
3	08:50		13:45 (E13)	08:11		13:59 (E13)	07:06		05:28	04:34
	15:51	37	14:22 (E13)	16:50	29	14:28 (E13)	17:52		20:59	21:55
4	08:50		13:45 (E13)	08:09		14:01 (E13)	07:03		05:26	04:33
	15:52	38	14:23 (E13)	16:52	26	14:27 (E13)	17:54		21:02	21:57
5	08:49		13:46 (E13)	08:07		14:04 (E13)	07:00		05:23	04:32
	15:53	38	14:24 (E13)	16:54	21	14:25 (E13)	17:56		21:04	21:58
6	08:49		13:46 (E13)	08:05		14:06 (E13)	06:58		05:21	04:31
	15:55	39	14:25 (E13)	16:56	16	14:22 (E13)	17:58		21:06	21:59
7	08:48		13:46 (E13)	08:03		14:12 (E13)	06:55		05:19	04:30
	15:56	39	14:25 (E13)	16:59	5	14:17 (E13)	18:00		21:08	22:00
8	08:47		13:46 (E13)	08:00			06:53		05:17	04:29
	15:58	40	14:26 (E13)	17:01			18:03		21:10	22:01
9	08:47		13:46 (E13)	07:58			06:50		05:15	04:28
	15:59	41	14:27 (E13)	17:03			18:05		21:12	22:02
10	08:46		13:46 (E13)	07:56			06:47		05:13	04:28
	16:01	41	14:27 (E13)	17:05			18:07		21:14	22:03
11	08:45		13:47 (E13)	07:54			06:45		05:10	04:27
	16:03	41	14:28 (E13)	17:08			18:09		21:16	22:04
12	08:44		13:46 (E13)	07:52			06:42		05:08	04:27
	16:04	42	14:28 (E13)	17:10			18:11		21:18	22:05
13	08:43		13:47 (E13)	07:49			06:39		05:06	04:26
	16:06	42	14:29 (E13)	17:12			18:13		21:20	22:06
14	08:42		13:47 (E13)	07:47			06:37		05:04	04:26
	16:08	43	14:30 (E13)	17:14			18:15		21:22	22:07
15	08:41		13:47 (E13)	07:45			06:34		05:02	04:26
	16:10	43	14:30 (E13)	17:17			18:17		21:24	22:07
16	08:40		13:47 (E13)	07:43			06:31		05:01	04:25
	16:12	43	14:30 (E13)	17:19			18:20		21:25	22:08
17	08:39		13:47 (E13)	07:40			06:29		04:59	04:25
	16:14	43	14:30 (E13)	17:21			18:22		21:27	22:08
18	08:37		13:48 (E13)	07:38			06:26		04:57	04:25
	16:16	43	14:31 (E13)	17:23			18:24		21:29	22:09
19	08:36		13:48 (E13)	07:35			06:23		04:55	04:25
	16:18	43	14:31 (E13)	17:25			18:26		21:31	22:09
20	08:35		13:49 (E13)	07:33			06:21		04:53	04:25
	16:20	43	14:32 (E13)	17:28			18:28		21:33	22:10
21	08:33		13:49 (E13)	07:31			06:18		04:52	04:25
	16:22	43	14:32 (E13)	17:30			18:30		21:35	22:10
22	08:32		13:49 (E13)	07:28			06:15		04:50	04:25
	16:24	43	14:32 (E13)	17:32			18:32		21:36	22:10
23	08:30		13:49 (E13)	07:26			06:13		04:48	04:26
	16:26	43	14:32 (E13)	17:34			18:34		21:38	22:10
24	08:29		13:50 (E13)	07:23			06:10		04:47	04:26
	16:28	42	14:32 (E13)	17:37			18:36		21:40	22:10
25	08:27		13:51 (E13)	07:21			06:07		04:45	04:26
	16:30	42	14:33 (E13)	17:39			18:38		21:42	22:10
26	08:25		13:52 (E13)	07:18			06:05		04:44	04:27
	16:32	41	14:33 (E13)	17:41			18:40		21:43	22:10
27	08:24		13:52 (E13)	07:16			06:02		04:42	04:27
	16:34	41	14:33 (E13)	17:43			18:43		21:45	22:10
28	08:22		13:53 (E13)	07:13			05:59		04:41	04:28
	16:36	39	14:32 (E13)	17:45			18:45		21:47	22:10
29	08:20		13:54 (E13)				06:57		04:39	04:28
	16:39	38	14:32 (E13)				19:47		21:48	22:10
30	08:18		13:55 (E13)				06:54		04:38	04:29
	16:41	37	14:32 (E13)				19:49		21:50	22:09
31	08:17		13:55 (E13)				06:51		04:37	
	16:43	35	14:30 (E13)				19:51		21:51	
Potential sun hours	235			266			366	426	508	529
Total, worst case	1256			162				278		
Sun reduction	0.13			0.20				0.50		
Oper. time red.	0.98			0.98				0.98		
Wind dir. red.	0.66			0.66				0.66		
Total reduction	0.09			0.13				0.32		
Total, real	108			21				89		

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	10 06:59 (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	4 06:55 (E8)	18:48	16:31
4	04:33	05:21	06:23	07:23	07:29	13:40 (E13)
	22:07	21:22	20:06	18:46	16:29	8 13:48 (E13)
5	04:34	05:23	06:25	07:25	07:31	13:35 (E13)
	22:07	21:19	20:03	18:43	16:27	17 13:52 (E13)
6	04:35	05:25	06:27	07:27	07:33	13:33 (E13)
	22:06	21:17	20:01	18:40	16:25	22 13:55 (E13)
7	04:36	05:27	06:29	07:29	07:36	13:31 (E13)
	22:05	21:15	19:58	18:38	16:23	26 13:57 (E13)
8	04:37	05:29	06:31	07:32	07:38	13:30 (E13)
	22:04	21:13	19:55	18:35	16:21	29 13:59 (E13)
9	04:38	05:31	06:33	07:34	07:40	13:28 (E13)
	22:03	21:11	19:53	18:32	16:19	32 14:00 (E13)
10	04:39	05:33	06:35	07:36	07:42	13:27 (E13)
	22:02	21:08	19:50	18:30	16:17	34 14:01 (E13)
11	04:41	05:35	06:37	07:38	07:44	13:27 (E13)
	22:01	21:06	19:47	18:27	16:15	35 14:02 (E13)
12	04:42	05:37	06:39	07:40	07:46	13:26 (E13)
	22:00	21:04	19:45	18:25	16:13	37 14:03 (E13)
13	04:43	05:39	06:41	07:42	07:49	13:26 (E13)
	21:59	21:01	19:42	18:22	16:11	38 14:04 (E13)
14	04:45	05:41	06:43	07:44	07:51	13:25 (E13)
	21:58	20:59	19:39	18:19	16:09	39 14:04 (E13)
15	04:46	05:43	06:45	07:46	07:53	13:24 (E13)
	21:57	20:57	19:37	18:17	16:08	41 14:05 (E13)
16	04:48	05:45	06:47	07:48	07:55	13:25 (E13)
	21:55	20:54	19:34	18:14	16:06	41 14:06 (E13)
17	04:49	05:47	06:49	07:50	07:57	13:24 (E13)
	21:54	20:52	19:31	18:12	16:04	42 14:06 (E13)
18	04:51	05:49	06:51	07:52	07:59	13:24 (E13)
	21:52	20:49	19:29	18:09	16:02	42 14:06 (E13)
19	04:52	05:51	06:53	07:54	08:01	13:24 (E13)
	21:51	20:47	19:26	18:07	16:01	43 14:07 (E13)
20	04:54	05:53	06:55	07:57	08:03	13:24 (E13)
	21:49	20:45	19:23	18:04	15:59	43 14:07 (E13)
21	04:56	05:55	06:57	07:59	08:05	13:24 (E13)
	21:48	20:42	19:20	18:02	15:58	43 14:07 (E13)
22	04:57	05:57	06:59	08:01	08:07	13:25 (E13)
	21:46	20:40	19:18	17:59	15:56	43 14:08 (E13)
23	04:59	05:59	07:01	08:03	08:09	13:25 (E13)
	21:45	20:37	19:15	17:57	15:55	43 14:08 (E13)
24	05:01	06:01	07:03	08:05	08:11	13:25 (E13)
	21:43	20:35	19:12	17:55	15:53	43 14:08 (E13)
25	05:03	06:03	07:05	07:07	08:13	13:25 (E13)
	21:41	20:32	19:10	16:52	15:52	43 14:08 (E13)
26	05:04	06:05	07:07	07:09	08:15	13:26 (E13)
	21:39	20:29	19:07	16:50	15:51	43 14:09 (E13)
27	05:06	06:07	07:09	07:12	08:17	13:27 (E13)
	21:37	20:27	19:04	16:47	15:49	43 14:10 (E13)
28	05:08	06:09	07:11	07:14	08:19	13:27 (E13)
	21:36	20:24	19:02	16:45	15:48	43 14:10 (E13)
29	05:10	06:11	07:13	07:16	08:21	13:28 (E13)
	21:34	20:22	18:59	16:43	15:47	42 14:10 (E13)
30	05:12	06:13	07:15	07:18	08:22	13:28 (E13)
	21:32	20:19	18:56	16:40	15:46	42 14:10 (E13)
31	05:14	06:15		07:20		08:51
	21:30	20:17	18 07:03 (E8)	16:38		15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		254	28		997	1121
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.32	0.27		0.05	0.05
Total, real		81	8		53	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)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January			February			March			April			May			June		
1	08:51		14:09 (E13)	08:15		14:11 (E13)	07:11		06:49				05:32		04:36			
	15:48	25	14:34 (E13)	16:45	41	14:52 (E13)	17:47		19:53				20:55		21:52			
2	08:50		14:09 (E13)	08:13		14:12 (E13)	07:08		06:46				05:30		04:35			
	15:49	26	14:35 (E13)	16:47	40	14:52 (E13)	17:50		19:55				20:57		21:54			
3	08:50		14:09 (E13)	08:11		14:13 (E13)	07:06		06:43				05:28		04:34			
	15:51	27	14:36 (E13)	16:50	39	14:52 (E13)	17:52		19:57				20:59		21:55			
4	08:50		14:08 (E13)	08:09		14:14 (E13)	07:03		06:41				05:26		04:33			
	15:52	28	14:36 (E13)	16:52	37	14:51 (E13)	17:54		19:59				21:02		21:57			
5	08:49		14:09 (E13)	08:07		14:15 (E13)	07:00		06:38				05:23		04:32			
	15:53	29	14:38 (E13)	16:54	36	14:51 (E13)	17:56		20:01				21:04		21:58			
6	08:49		14:09 (E13)	08:05		14:15 (E13)	06:58		06:35				05:21		04:31			
	15:55	30	14:39 (E13)	16:56	34	14:49 (E13)	17:58		20:03				21:06		21:59			
7	08:48		14:08 (E13)	08:03		14:17 (E13)	06:55		06:33				05:19		04:30			
	15:56	32	14:40 (E13)	16:59	32	14:49 (E13)	18:00		20:05				21:08		22:00			
8	08:47		14:08 (E13)	08:00		14:19 (E13)	06:53		06:30				05:17		04:29			
	15:58	33	14:41 (E13)	17:01	29	14:48 (E13)	18:03		20:07				21:10		22:01			
9	08:47		14:08 (E13)	07:58		14:20 (E13)	06:50		06:27				05:15		04:28			
	15:59	34	14:42 (E13)	17:03	25	14:45 (E13)	18:05		20:10				21:12		22:02			
10	08:46		14:08 (E13)	07:56		14:23 (E13)	06:47		06:25				05:13		04:28			
	16:01	35	14:43 (E13)	17:05	21	14:44 (E13)	18:07		20:12				21:14		22:03			
11	08:45		14:08 (E13)	07:54		14:26 (E13)	06:45		06:22				05:10		04:27			
	16:03	36	14:44 (E13)	17:08	15	14:41 (E13)	18:09		20:14				21:16		22:04			
12	08:44		14:07 (E13)	07:52			06:42		06:20				05:08		04:27			
	16:04	37	14:44 (E13)	17:10			18:11		20:16				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	38	14:45 (E13)	17:12			18:13		20:18	10		06:53 (E8)	21:20		22:06			
14	08:42		14:08 (E13)	07:47			06:37		06:14			06:40 (E8)	05:04		04:26			
	16:08	38	14:46 (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	39	14:46 (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			06:36 (E8)	05:01		04:25			
	16:12	40	14:47 (E13)	17:19			18:20		20:24	20		06:56 (E8)	21:25		22:08			
17	08:39		14:07 (E13)	07:40			06:29		06:07			06:35 (E8)	04:59		04:25			
	16:14	41	14:48 (E13)	17:21			18:22		20:26	22		06:57 (E8)	21:27		22:08			
18	08:37		14:08 (E13)	07:38			06:26		06:04			06:34 (E8)	04:57		04:25			
	16:16	41	14:49 (E13)	17:23			18:24		20:28	23		06:57 (E8)	21:29		22:09			
19	08:36		14:07 (E13)	07:35			06:23		06:02			06:34 (E8)	04:55		04:25			
	16:18	42	14:49 (E13)	17:25			18:26		20:30	23		06:57 (E8)	21:31		22:09			
20	08:35		14:08 (E13)	07:33			06:21		05:59			06:33 (E8)	04:53		04:25			
	16:20	42	14:50 (E13)	17:28			18:28		20:32	24		06:57 (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	42	14:50 (E13)	17:30			18:30		20:35	24		06:57 (E8)	21:35		22:10			
22	08:32		14:08 (E13)	07:28			06:15		05:54			06:34 (E8)	04:50		04:25			
	16:24	43	14:51 (E13)	17:32			18:32		20:37	23		06:57 (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	43	14:51 (E13)	17:34			18:34		20:39	22		06:55 (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	43	14:51 (E13)	17:37			18:36		20:41	21		06:55 (E8)	21:40		22:10			
25	08:27		14:09 (E13)	07:21			06:07		05:47			06:35 (E8)	04:45		04:26			
	16:30	43	14:52 (E13)	17:39			18:38		20:43	19		06:54 (E8)	21:42		22:10			
26	08:25		14:09 (E13)	07:18			06:05		05:44			06:35 (E8)	04:44		04:27			
	16:32	44	14:53 (E13)	17:41			18:40		20:45	17		06:52 (E8)	21:43		22:10			
27	08:24		14:09 (E13)	07:16			06:02		05:42			06:36 (E8)	04:42		04:27			
	16:34	44	14:53 (E13)	17:43			18:43		20:47	15		06:51 (E8)	21:45		22:10			
28	08:22		14:09 (E13)	07:13			05:59		05:40			06:39 (E8)	04:41		04:28			
	16:36	44	14:53 (E13)	17:45			18:45		20:49	10		06:49 (E8)	21:47		22:10			
29	08:20		14:10 (E13)				06:57		05:37				04:39		04:28			
	16:39	43	14:53 (E13)				19:47		20:51				21:48		22:10			
30	08:18		14:10 (E13)				06:54		05:35				04:38		04:29			
	16:41	43	14:53 (E13)				19:49		20:53				21:50		22:09			
31	08:17		14:10 (E13)				06:51						04:37					
	16:43	42	14:52 (E13)				19:51						21:51					
Potential sun hours	235			266			366			426			508			529		
Total, worst case	1167			349						305								
Sun reduction	0.13			0.20						0.50								
Oper. time red.	0.98			0.98						0.98								
Wind dir. red.	0.66			0.66						0.65								
Total reduction	0.09			0.13						0.32								
Total, real	101			46						98								

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	13:52 (E13) 15:45
2	04:31 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	14:14 (E13) 15:44
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	14:15 (E13) 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	14:17 (E13) 15:42
5	04:34 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	14:18 (E13) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	14:19 (E13) 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	14:21 (E13) 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	14:21 (E13) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	14:22 (E13) 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	14:23 (E13) 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	14:23 (E13) 15:38
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	14:24 (E13) 15:38
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	14:24 (E13) 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	14:25 (E13) 15:38
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) 15:38
16	04:48 21:55	05:45 20:54	06:47 (E8) 19:34	07:48 18:14	07:55 16:06	14:25 (E13) 15:38
17	04:49 21:54	05:47 20:52	06:49 (E8) 19:31	07:50 18:12	07:57 16:04	14:26 (E13) 15:38
18	04:51 21:52	05:49 20:49	06:51 (E8) 19:29	07:52 18:09	07:59 16:02	14:26 (E13) 15:38
19	04:52 21:51	05:51 20:47	06:53 (E8) 19:26	07:54 18:07	08:01 16:01	14:26 (E13) 15:38
20	04:54 21:49	05:53 20:45	06:55 (E8) 19:23	07:57 18:04	08:03 15:59	14:26 (E13) 15:39
21	04:56 21:48	05:55 20:42	06:57 (E8) 19:20	07:59 18:02	08:05 15:58	14:26 (E13) 15:39
22	04:57 21:46	05:57 20:40	06:59 (E8) 19:18	08:01 17:59	08:07 15:56	14:26 (E13) 15:39
23	04:59 21:45	05:59 20:37	07:01 (E8) 19:15	08:03 17:57	08:09 15:55	14:26 (E13) 15:40
24	05:01 21:43	06:01 20:35	07:03 (E8) 19:12	08:05 17:55	08:11 15:53	14:26 (E13) 15:40
25	05:03 21:41	06:03 20:32	07:05 (E8) 19:10	08:07 16:52	08:13 15:52	14:26 (E13) 15:41
26	05:04 21:39	06:05 20:29	07:07 (E8) 19:07	08:09 16:50	08:15 15:51	14:26 (E13) 15:42
27	05:06 21:37	06:07 20:27	07:09 (E8) 19:04	08:12 16:47	08:17 15:49	14:26 (E13) 15:43
28	05:08 21:36	06:09 20:24	07:11 (E8) 19:02	08:14 16:45	08:19 15:48	14:26 (E13) 15:44
29	05:10 21:34	06:11 20:22	07:13 (E8) 18:59	08:16 16:43	08:21 15:47	14:26 (E13) 15:45
30	05:12 21:32	06:13 20:19	07:15 (E8) 18:56	08:18 16:40	08:22 15:46	14:26 (E13) 15:46
31	05:14 21:30	06:15 20:17		08:20 16:38	08:24 15:47	14:26 (E13) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		313		21	1169	751
Sun reduction		0.50		0.26	0.08	0.07
Oper. time red.		0.98		0.98	0.98	0.98
Wind dir. red.		0.65		0.66	0.66	0.66
Total reduction		0.32		0.17	0.05	0.05
Total, real		100		4	63	34

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	06:43	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	05:21	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	05:23	04:32	04:34	05:23	06:25	07:25	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	20:03	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
	15:56	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
	15:59	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	22:02	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	18:15	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	04:25	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	20:54	19:34	18:14	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	08:46
	16:16	17:23	18:24	20:28	21:29	22:09	21:53	20:50	19:29	18:09	16:02	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	15:39
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		06:51		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	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

January			February			March			April			May			June		
1	08:51		12:39 (E16)	08:15		15:41 (E15)	07:11		15:34 (E15)	06:49		05:32			04:36		20:27 (E13)
	15:48	44	13:23 (E16)	16:45	7	15:48 (E15)	17:47	22	15:56 (E15)	19:53		20:55			21:52	31	20:58 (E13)
2	08:50		12:39 (E16)	08:13		15:37 (E15)	07:08		15:37 (E15)	06:46		05:30			04:35		20:26 (E13)
	15:49	44	13:23 (E16)	16:47	15	15:52 (E15)	17:50	15	15:52 (E15)	19:55		20:57			21:54	33	20:59 (E13)
3	08:50		12:40 (E16)	08:11		15:34 (E15)	07:06			06:43		05:28			04:34		20:26 (E13)
	15:51	44	13:24 (E16)	16:50	21	15:55 (E15)	17:52			19:57		20:59			21:55	33	20:59 (E13)
4	08:50		12:40 (E16)	08:09		15:33 (E15)	07:03			06:41		05:26			04:33		20:26 (E13)
	15:52	44	13:24 (E16)	16:52	25	15:58 (E15)	17:54			19:59		21:01			21:56	33	20:59 (E13)
5	08:49		12:40 (E16)	08:07		15:31 (E15)	07:00			06:38		05:23			04:32		20:26 (E13)
	15:53	44	13:24 (E16)	16:54	28	15:59 (E15)	17:56			20:01		21:04			21:58	35	21:01 (E13)
6	08:49		12:42 (E16)	08:05		15:30 (E15)	06:58			06:35		05:21			04:31		20:26 (E13)
	15:55	43	13:25 (E16)	16:56	30	16:00 (E15)	17:58			20:03		21:06			21:59	35	21:01 (E13)
7	08:48		12:42 (E16)	08:03		15:29 (E15)	06:55			06:33		05:19			04:30		20:25 (E13)
	15:56	43	13:25 (E16)	16:59	33	16:02 (E15)	18:00			20:05		21:08			22:00	36	21:01 (E13)
8	08:47		12:42 (E16)	08:00		15:28 (E15)	06:53			06:30		05:17			04:29		20:26 (E13)
	15:58	44	13:26 (E16)	17:01	35	16:03 (E15)	18:03			20:07		21:10			22:01	36	21:02 (E13)
9	08:47		12:43 (E16)	07:58		15:27 (E15)	06:50			06:27		05:15			04:29		20:26 (E13)
	15:59	43	13:26 (E16)	17:03	37	16:04 (E15)	18:05			20:10		21:12			22:02	36	21:02 (E13)
10	08:46		12:44 (E16)	07:56		15:27 (E15)	06:47		17:30 (E14)	06:25		05:13			04:28		20:26 (E13)
	16:01	42	13:26 (E16)	17:05	38	16:05 (E15)	18:07	5	17:35 (E14)	20:12		21:14			22:03	37	21:03 (E13)
11	08:45		12:44 (E16)	07:54		15:25 (E15)	06:45		17:26 (E14)	06:22		05:10			04:27		20:25 (E13)
	16:03	43	13:27 (E16)	17:08	40	16:05 (E15)	18:09	13	17:39 (E14)	20:14		21:16			22:04	37	21:02 (E13)
12	08:44		12:44 (E16)	07:52		15:25 (E15)	06:42		17:24 (E14)	06:20		05:08			04:27		20:26 (E13)
	16:04	42	13:26 (E16)	17:10	41	16:06 (E15)	18:11	18	17:42 (E14)	20:16		21:18			22:05	37	21:03 (E13)
13	08:43		12:45 (E16)	07:49		15:25 (E15)	06:39		17:22 (E14)	06:17		05:06			04:26		20:26 (E13)
	16:06	42	13:27 (E16)	17:12	42	16:07 (E15)	18:13	21	17:43 (E14)	20:18		21:20			22:06	38	21:04 (E13)
14	08:42		12:46 (E16)	07:47		15:24 (E15)	06:37		17:20 (E14)	06:14		05:04			04:26		20:27 (E13)
	16:08	41	13:27 (E16)	17:14	42	16:06 (E15)	18:15	23	17:43 (E14)	20:20		21:21			22:06	37	21:04 (E13)
15	08:41		12:46 (E16)	07:45		15:25 (E15)	06:34		17:19 (E14)	06:12		05:03			04:26		20:26 (E13)
	16:10	41	13:27 (E16)	17:17	42	16:07 (E15)	18:17	24	17:43 (E14)	20:22		21:23			22:07	38	21:04 (E13)
16	08:40		12:47 (E16)	07:42		15:24 (E15)	06:31		17:19 (E14)	06:09		05:01			04:25		20:26 (E13)
	16:12	40	13:27 (E16)	17:19	43	16:07 (E15)	18:20	25	17:44 (E14)	20:24		21:25			22:08	38	21:04 (E13)
17	08:39		12:47 (E16)	07:40		15:24 (E15)	06:29		17:18 (E14)	06:07		04:59			04:25		20:26 (E13)
	16:14	39	13:26 (E16)	17:21	43	16:07 (E15)	18:22	26	17:44 (E14)	20:26		21:27			22:08	38	21:04 (E13)
18	08:37		12:49 (E16)	07:38		15:24 (E15)	06:26		17:17 (E14)	06:04		04:57			04:25		20:27 (E13)
	16:16	38	13:27 (E16)	17:23	43	16:07 (E15)	18:24	27	17:44 (E14)	20:28		21:29			22:09	38	21:05 (E13)
19	08:36		12:49 (E16)	07:35		15:25 (E15)	06:23		17:18 (E14)	06:02		04:55			04:25		20:27 (E13)
	16:18	37	13:26 (E16)	17:25	42	16:07 (E15)	18:26	26	17:44 (E14)	20:30		21:31			22:09	38	21:05 (E13)
20	08:35		12:50 (E16)	07:33		15:24 (E15)	06:21		17:17 (E14)	05:59		04:53			04:25		20:27 (E13)
	16:20	36	13:26 (E16)	17:28	42	16:06 (E15)	18:28	26	17:43 (E14)	20:32		21:33			22:10	38	21:05 (E13)
21	08:33		12:52 (E16)	07:31		15:25 (E15)	06:18		17:17 (E14)	05:57		04:52			04:25		20:28 (E13)
	16:22	34	13:26 (E16)	17:30	41	16:06 (E15)	18:30	25	17:42 (E14)	20:35		21:35			22:10	38	21:06 (E13)
22	08:32		12:53 (E16)	07:28		15:25 (E15)	06:15		17:18 (E14)	05:54		04:50		20:39 (E13)	04:25		20:28 (E13)
	16:24	32	13:25 (E16)	17:32	40	16:05 (E15)	18:32	24	17:42 (E14)	20:37		21:36	5	20:44 (E13)	22:10	38	21:06 (E13)
23	08:30		12:54 (E16)	07:26		15:27 (E15)	06:13		17:19 (E14)	05:52		04:48		20:36 (E13)	04:26		20:28 (E13)
	16:26	30	13:24 (E16)	17:34	38	16:05 (E15)	18:34	21	17:40 (E14)	20:39		21:38	12	20:48 (E13)	22:10	38	21:06 (E13)
24	08:29		12:55 (E16)	07:23		15:27 (E15)	06:10		17:19 (E14)	05:49		04:47		20:33 (E13)	04:26		20:28 (E13)
	16:28	28	13:23 (E16)	17:37	37	16:04 (E15)	18:36	19	17:38 (E14)	20:41		21:40	17	20:50 (E13)	22:10	38	21:06 (E13)
25	08:27		12:57 (E16)	07:21		15:27 (E15)	06:07		17:21 (E14)	05:47		04:45		20:32 (E13)	04:26		20:28 (E13)
	16:30	25	13:22 (E16)	17:39	35	16:02 (E15)	18:38	15	17:36 (E14)	20:43		21:42	20	20:52 (E13)	22:10	39	21:07 (E13)
26	08:25		13:00 (E16)	07:18		15:29 (E15)	06:05		17:24 (E14)	05:44		04:44		20:31 (E13)	04:27		20:28 (E13)
	16:32	21	13:21 (E16)	17:41	33	16:02 (E15)	18:40	9	17:33 (E14)	20:45		21:43	22	20:53 (E13)	22:10	38	21:06 (E13)
27	08:24		13:02 (E16)	07:16		15:30 (E15)	06:02			05:42		04:42		20:29 (E13)	04:27		20:29 (E13)
	16:34	17	13:19 (E16)	17:43	30	16:00 (E15)	18:43			20:47		21:45	25	20:54 (E13)	22:10	38	21:07 (E13)
28	08:22		13:06 (E16)	07:13		15:32 (E15)	05:59			05:40		04:41		20:29 (E13)	04:28		20:29 (E13)
	16:36	10	13:16 (E16)	17:45	27	15:59 (E15)	18:45			20:49		21:46	26	20:55 (E13)	22:10	37	21:06 (E13)
29	08:20						06:57			05:37		04:40		20:28 (E13)	04:29		20:29 (E13)
	16:39						19:47			20:51		21:48	28	20:56 (E13)	22:10	38	21:07 (E13)
30	08:18						06:54			05:35		04:38		20:28 (E13)	04:29		20:30 (E13)
	16:41						19:49			20:53		21:49	29	20:57 (E13)	22:09	37	21:07 (E13)
31	08:16						06:51					04:37		20:27 (E13)			
	16:43						19:51					21:51	31	20:58 (E13)			
Potential sun hours	235			266			366			426		508			528		
Total, worst case		1031			970			384				215				1101	
Sun reduction		0.13			0.20			0.41				0.57				0.56	
Oper. time red.		0.98			0.98			0.98				0.98				0.98	
Wind dir. red.		0.64			0.66			0.66				0.62				0.62	
Total reduction		0.08			0.13			0.26				0.34				0.34	
Total, real		86			126			101				74				372	

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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		07:17	18:02 (E14)	07:22		14:56 (E15)	08:24	12:26 (E16)		
	22:09	37	21:07 (E13)	21:28		20:14		18:54	19	18:21 (E14)	16:36	38	15:34 (E15)	15:45	43	13:09 (E16)
2	04:31		20:30 (E13)	05:18		06:19		07:19		18:04 (E14)	07:25		14:57 (E15)	08:26		12:26 (E16)
	22:08	37	21:07 (E13)	21:26		20:11		18:51	15	18:19 (E14)	16:34	36	15:33 (E15)	15:44	43	13:09 (E16)
3	04:32		20:31 (E13)	05:19		06:21		07:21		18:06 (E14)	07:27		14:58 (E15)	08:27		12:26 (E16)
	22:08	36	21:07 (E13)	21:24		20:09		18:48	10	18:16 (E14)	16:32	35	15:33 (E15)	15:43	43	13:09 (E16)
4	04:33		20:31 (E13)	05:21		06:23		07:23			07:29		14:59 (E15)	08:29		12:27 (E16)
	22:07	36	21:07 (E13)	21:21		20:06		18:46			16:29	32	15:31 (E15)	15:42	43	13:10 (E16)
5	04:34		20:32 (E13)	05:23		06:25		07:25			07:31		15:00 (E15)	08:31		12:27 (E16)
	22:07	35	21:07 (E13)	21:19		20:03		18:43			16:27	30	15:30 (E15)	15:42	44	13:11 (E16)
6	04:35		20:32 (E13)	05:25		06:27		07:27			07:33		15:02 (E15)	08:32		12:28 (E16)
	22:06	35	21:07 (E13)	21:17		20:01		18:40			16:25	27	15:29 (E15)	15:41	43	13:11 (E16)
7	04:36		20:33 (E13)	05:27		06:29		07:29			07:35		15:03 (E15)	08:34		12:27 (E16)
	22:05	34	21:07 (E13)	21:15		19:58		18:38			16:23	24	15:27 (E15)	15:40	44	13:11 (E16)
8	04:37		20:33 (E13)	05:29		06:31		07:31			07:38		15:05 (E15)	08:35		12:28 (E16)
	22:04	34	21:07 (E13)	21:13		19:55		18:35			16:21	21	15:26 (E15)	15:40	44	13:12 (E16)
9	04:38		20:33 (E13)	05:31		06:33		07:34			07:40		15:08 (E15)	08:36		12:28 (E16)
	22:03	34	21:07 (E13)	21:11		19:53		18:32			16:19	15	15:23 (E15)	15:39	44	13:12 (E16)
10	04:39		20:34 (E13)	05:33		06:35		07:36			07:42		15:12 (E15)	08:38		12:29 (E16)
	22:02	32	21:06 (E13)	21:08		19:50		18:30			16:17	6	15:18 (E15)	15:39	44	13:13 (E16)
11	04:41		20:34 (E13)	05:35		06:37		07:38		16:14 (E15)	07:44			08:39		12:29 (E16)
	22:01	32	21:06 (E13)	21:06		19:47		18:27	10	16:24 (E15)	16:15			15:38	44	13:13 (E16)
12	04:42		20:36 (E13)	05:37		06:39		07:40		16:09 (E15)	07:46			08:40		12:29 (E16)
	22:00	30	21:06 (E13)	21:04		19:45		18:25	19	16:28 (E15)	16:13			15:38	44	13:13 (E16)
13	04:43		20:36 (E13)	05:39		06:41		07:42		16:06 (E15)	07:48			08:41		12:30 (E16)
	21:59	30	21:06 (E13)	21:01		19:42		18:22	24	16:30 (E15)	16:11			15:38	44	13:14 (E16)
14	04:45		20:36 (E13)	05:41		06:43		07:44		16:04 (E15)	07:51		12:38 (E16)	08:42		12:31 (E16)
	21:58	29	21:05 (E13)	20:59		19:39		18:19	27	16:31 (E15)	16:09	10	12:48 (E16)	15:38	44	13:15 (E16)
15	04:46		20:37 (E13)	05:43		06:45		07:46		16:02 (E15)	07:53		12:34 (E16)	08:44		12:31 (E16)
	21:56	27	21:04 (E13)	20:57		19:37		18:17	31	16:33 (E15)	16:08	17	12:51 (E16)	15:38	44	13:15 (E16)
16	04:48		20:38 (E13)	05:45		06:47		07:48		16:01 (E15)	07:55		12:33 (E16)	08:44		12:32 (E16)
	21:55	26	21:04 (E13)	20:54		19:34		18:14	33	16:34 (E15)	16:06	21	12:54 (E16)	15:38	43	13:15 (E16)
17	04:49		20:39 (E13)	05:47		06:49	18:14 (E14)	07:50		15:59 (E15)	07:57		12:31 (E16)	08:45		12:32 (E16)
	21:54	24	21:03 (E13)	20:52		19:31	7	18:21 (E14)	18:12	16:35 (E15)	16:04	25	12:56 (E16)	15:38	44	13:16 (E16)
18	04:51		20:41 (E13)	05:49		06:51		07:52		15:58 (E15)	07:59		12:29 (E16)	08:46		12:33 (E16)
	21:52	21	21:02 (E13)	20:49		19:28	14	18:24 (E14)	18:09	16:35 (E15)	16:02	28	12:57 (E16)	15:38	44	13:17 (E16)
19	04:52		20:42 (E13)	05:51		06:53		07:54		15:56 (E15)	08:01		12:29 (E16)	08:47		12:33 (E16)
	21:51	18	21:00 (E13)	20:47		19:26	18	18:25 (E14)	18:07	16:35 (E15)	16:01	30	12:59 (E16)	15:38	43	13:16 (E16)
20	04:54		20:44 (E13)	05:53		06:55		07:57		15:56 (E15)	08:03		12:28 (E16)	08:48		12:33 (E16)
	21:49	15	20:59 (E13)	20:44		19:23	20	18:25 (E14)	18:04	16:37 (E15)	15:59	32	13:00 (E16)	15:39	44	13:17 (E16)
21	04:56		20:46 (E13)	05:55		06:57		07:59		15:55 (E15)	08:05		12:27 (E16)	08:48		12:33 (E16)
	21:48	10	20:56 (E13)	20:42		19:20	23	18:26 (E14)	18:02	16:37 (E15)	15:58	34	13:01 (E16)	15:39	44	13:17 (E16)
22	04:57			05:57		06:59		08:01		15:55 (E15)	08:07		12:27 (E16)	08:49		12:34 (E16)
	21:46			20:40		19:18	24	18:26 (E14)	17:59	16:36 (E15)	15:56	36	13:03 (E16)	15:39	44	13:18 (E16)
23	04:59			05:59		07:01		08:03		15:55 (E15)	08:09		12:26 (E16)	08:49		12:34 (E16)
	21:44			20:37		19:15	26	18:27 (E14)	17:57	16:37 (E15)	15:55	37	13:03 (E16)	15:40	44	13:18 (E16)
24	05:01			06:01		07:03		08:05		15:54 (E15)	08:11		12:26 (E16)	08:50		12:35 (E16)
	21:43			20:34		19:12	27	18:27 (E14)	17:55	16:37 (E15)	15:53	38	13:04 (E16)	15:41	44	13:19 (E16)
25	05:03			06:03		07:05		08:07		14:54 (E15)	08:13		12:26 (E16)	08:50		12:36 (E16)
	21:41			20:32		19:10	26	18:26 (E14)	16:52	15:37 (E15)	15:52	39	13:05 (E16)	15:41	44	13:20 (E16)
26	05:04			06:05		07:07		08:09		14:54 (E15)	08:15		12:25 (E16)	08:50		12:36 (E16)
	21:39			20:29		19:07	26	18:26 (E14)	16:50	15:37 (E15)	15:51	40	13:05 (E16)	15:42	44	13:20 (E16)
27	05:06			06:07		07:09		08:11		14:54 (E15)	08:17		12:25 (E16)	08:51		12:36 (E16)
	21:37			20:27		19:04	26	18:25 (E14)	16:47	15:36 (E15)	15:49	41	13:06 (E16)	15:43	44	13:20 (E16)
28	05:08			06:09		07:11		08:13		14:54 (E15)	08:19		12:26 (E16)	08:51		12:37 (E16)
	21:36			20:24		19:02	24	18:24 (E14)	16:45	15:36 (E15)	15:48	41	13:07 (E16)	15:44	44	13:21 (E16)
29	05:10			06:11		07:13		08:15		14:55 (E15)	08:20		12:26 (E16)	08:51		12:38 (E16)
	21:34			20:22		18:59	23	18:24 (E14)	16:43	15:36 (E15)	15:47	42	13:08 (E16)	15:45	43	13:21 (E16)
30	05:12			06:13		07:15		08:17		14:55 (E15)	08:22		12:26 (E16)	08:51		12:38 (E16)
	21:32			20:19		18:56	22	18:23 (E14)	16:40	15:35 (E15)	15:46	42	13:08 (E16)	15:46	44	13:22 (E16)
31	05:14			06:15				07:20		14:55 (E15)				08:51		12:38 (E16)
	21:30			20:16				16:38	39	15:34 (E15)				15:47	44	13:22 (E16)
Potential sun hours	529			469		385		324			247		216			
Total, worst case		612				306		799			817				1356	
Sun reduction		0.49				0.43		0.26			0.08				0.07	
Oper. time red.		0.98				0.98		0.98			0.98				0.98	
Wind dir. red.		0.62				0.66		0.66			0.65				0.64	
Total reduction		0.30				0.27		0.17			0.05				0.04	
Total, real		183				84		134			43				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 18:40/4.0.540

## 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  
442 466 539 464 488 781 784 938 1,215 1,079 833 556 8,584  
Idle 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) 17:11	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	08:27 (E13) 15:45
2	08:50 15:49	08:13 16:47	09:02 (E13) 17:08	06:46 19:55	05:30 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	08:27 (E13) 15:44
3	08:50 15:51	08:11 16:50	09:01 (E13) 17:06	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 (E13) 15:43
4	08:50 15:52	08:09 16:52	09:00 (E13) 17:03	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	08:28 (E13) 15:42
5	08:49 15:53	08:07 16:54	09:00 (E13) 17:01	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:28 (E13) 15:42
6	08:49 15:55	08:05 16:56	08:58 (E13) 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	08:29 (E13) 15:41
7	08:48 15:56	08:03 16:59	08:58 (E13) 18:01	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	08:30 (E13) 15:40
8	08:48 15:58	08:01 17:01	08:58 (E13) 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	08:32 (E13) 15:40
9	08:47 15:59	07:58 17:03	08:57 (E13) 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	08:32 (E13) 15:39
10	08:46 16:01	07:56 17:05	08:57 (E13) 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	08:35 (E13) 15:39
11	08:45 16:03	07:54 17:08	08:57 (E13) 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	08:36 (E13) 15:38
12	08:44 16:05	07:52 17:10	08:56 (E13) 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	08:38 (E13) 15:38
13	08:43 16:06	07:50 17:12	08:57 (E13) 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	08:41 (E13) 15:38
14	08:42 16:08	07:47 17:14	08:56 (E13) 18:15	06:15 20:20	05:04 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 (E13) 15:38
15	08:41 16:10	07:45 17:17	08:57 (E13) 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 (E13) 15:38
16	08:40 16:12	07:43 17:19	08:57 (E13) 18:20	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	08:45 (E13) 15:38
17	08:39 16:14	07:40 17:21	08:58 (E13) 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	08:46 (E13) 15:38
18	08:37 16:16	07:38 17:23	08:58 (E13) 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	07:52 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	06:02 20:30	04:55 21:31	04:25 22:09	04:51 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	06:01 20:33	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 16:00	08:48 (E13) 15:39
21	08:33 16:22	07:31 17:30	09:00 (E13) 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 16:03	08:48 (E13) 15:39
22	08:32 16:24	07:28 17:32	09:01 (E13) 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 16:03	08:49 (E13) 15:39
23	08:30 16:26	07:26 17:34	09:03 (E13) 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 16:04	08:50 (E13) 15:40
24	08:29 16:28	07:23 17:37	09:04 (E13) 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 16:05	08:51 (E13) 15:41
25	08:27 16:30	07:21 17:39	09:07 (E13) 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 16:06	08:50 (E13) 15:41
26	08:26 16:32	07:18 17:41	09:11 (E13) 18:41	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 16:07	08:51 (E13) 15:42
27	08:24 16:34	07:16 17:43	09:19 (E13) 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:47	08:17 16:08	08:51 (E13) 15:43
28	08:22 16:36	07:13 17:45	09:21 (E13) 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:19 16:09	08:51 (E13) 15:44
29	08:20 16:39	09:09 (E13) 17:49	09:21 (E13) 18:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 16:10	08:51 (E13) 15:45
30	08:18 16:41	09:07 (E13) 17:54	09:24 (E13) 18:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:22 16:11	08:51 (E13) 15:46
31	08:17 16:43	09:05 (E13) 17:56	09:25 (E13) 18:51	05:31 20:57	04:37 21:51	05:14 21:30	06:15 20:17	07:16 18:58	08:18 17:40	08:23 16:12	08:27 (E13) 16:13	08:51 (E13) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	50	842								525	381	
Sun reduction	0.13	0.20								0.26	0.08	
Oper. time red.	0.98	0.98								0.98	0.98	
Wind dir. red.	0.59	0.59								0.59	0.59	
Total reduction	0.08	0.12								0.15	0.05	
Total, real	4	98								79	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)

## SHADOW - Calendar

Shadow receptor: Muižnieki (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 June July Aug. Sep. Oct. Nov. Dec.

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

		January	February	March	April	May	June	July	August	September	October	November	December										
1	08:50		08:14	15:31 (E1)	07:10	06:48	05:32	04:35	04:29	05:15	06:17	07:17	07:22	08:24									
	15:48		16:45	21	15:52 (E1)	17:47	19:53	20:55	21:52	22:09	21:28	20:14	18:53	16:35	15:44								
2	08:50		08:12		15:32 (E1)	07:08	06:46	05:30	04:34	04:30	05:17	06:19	07:19	07:24	08:26								
	15:49		16:47	19	15:51 (E1)	17:49	19:55	20:57	21:54	22:08	21:25	20:11	18:50	16:33	15:43								
3	08:50		08:10		15:33 (E1)	07:05	06:43	05:27	04:33	04:31	05:19	06:21	07:21	07:27	08:27								
	15:50		16:49	18	15:51 (E1)	17:51	19:57	20:59	21:55	22:08	21:23	20:08	18:48	16:31	15:43								
4	08:49		08:08		15:34 (E1)	07:03	06:40	05:25	04:32	04:32	05:21	06:23	07:23	07:29		15:11 (E1)	08:29						
	15:51		16:51	17	15:51 (E1)	17:54	19:59	21:01	21:56	22:07	21:21	20:06	18:45	16:29	2	15:13 (E1)	15:42						
5	08:49		08:06		15:35 (E1)	07:00	06:38	05:23	04:31	04:33	05:23	06:25	07:25	07:31		15:06 (E1)	08:30						
	15:53		16:54	14	15:49 (E1)	17:56	20:01	21:03	21:58	22:06	21:19	20:03	18:42	16:27	11	15:17 (E1)	15:41						
6	08:49		08:04		15:37 (E1)	06:57	06:35	05:21	04:30	04:34	05:25	06:27	07:27	07:33		15:05 (E1)	08:32						
	15:54		16:56	10	15:47 (E1)	17:58	20:03	21:05	21:59	22:06	21:17	20:00	18:40	16:25	14	15:19 (E1)	15:40						
7	08:48		08:02			06:55	06:32	05:18	04:29	04:35	05:27	06:29	07:29	07:35		15:04 (E1)	08:33						
	15:56		16:58			18:00	20:05	21:07	22:00	22:05	21:15	19:58	18:37	16:22	16	15:20 (E1)	15:40						
8	08:47		08:00			06:52	06:30	05:16	04:29	04:36	05:29	06:31	07:31	07:37		15:02 (E1)	08:35						
	15:57		17:00			18:02	20:07	21:09	22:01	22:04	21:13	19:55	18:35	16:20	19	15:21 (E1)	15:39						
9	08:47		07:58			06:50	06:27	05:14	04:28	04:37	05:31	06:33	07:33	07:40		15:02 (E1)	08:36						
	15:59		17:03			18:04	20:09	21:11	22:02	22:03	21:10	19:52	18:32	16:18	20	15:22 (E1)	15:39						
10	08:46		07:56			06:47	06:24	05:12	04:27	04:39	05:33	06:35	07:35	07:42		15:01 (E1)	08:38						
	16:00		17:05			18:06	20:11	21:13	22:03	22:02	21:08	19:50	18:29	16:16	21	15:22 (E1)	15:38						
11	08:45		07:54			06:44	06:22	05:10	04:27	04:40	05:35	06:37	07:37	07:44		15:02 (E1)	08:39						
	16:02		17:07			18:09	20:13	21:15	22:04	22:01	21:06	19:47	18:27	16:14	22	15:24 (E1)	15:38						
12	08:44		07:51			06:42	06:19	05:08	04:26	04:41	05:37	06:39	07:39	07:46		15:01 (E1)	08:40						
	16:04		17:09			18:11	20:15	21:17	22:05	22:00	21:03	19:44	18:24	16:13	22	15:23 (E1)	15:38						
13	08:43		07:49			06:39	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:48		15:01 (E1)	08:41						
	16:06		17:12			18:13	20:18	21:19	22:06	21:59	21:01	19:42	18:22	16:11	22	15:23 (E1)	15:37						
14	08:42		07:47			06:36	06:14	05:04	04:25	04:44	05:41	06:43	07:44	07:50		15:02 (E1)	08:42						
	16:07		17:14			18:15	20:20	21:21	22:06	21:58	20:59	19:39	18:19	16:09	22	15:24 (E1)	15:37						
15	08:41		07:45			06:34	06:11	05:02	04:25	04:46	05:43	06:45	07:46	07:52		15:02 (E1)	08:43						
	16:09		17:16			18:17	20:22	21:23	22:07	21:56	20:56	19:36	18:16	16:07	22	15:24 (E1)	15:37						
16	08:40		07:42			06:31	06:09	05:00	04:25	04:47	05:45	06:47	07:48	07:55		15:03 (E1)	08:44						
	16:11		17:18			18:19	20:24	21:25	22:08	21:55	20:54	19:34	18:14	16:05	21	15:24 (E1)	15:37						
17	08:38		07:40			06:28	06:06	04:58	04:25	04:49	05:47	06:49	07:50	07:57		15:03 (E1)	08:45						
	16:13		17:21			18:21	20:26	21:27	22:08	21:54	20:52	19:31	18:11	16:03	21	15:24 (E1)	15:37						
18	08:37		07:38			06:26	06:04	04:56	04:24	04:50	05:49	06:51	07:52	07:59		15:03 (E1)	08:46						
	16:15	2	15:35 (E1)	17:23		18:23	20:28	21:29	22:09	21:52	20:49	19:28	18:09	16:02	20	15:23 (E1)	15:37						
19	08:36		15:33 (E1)	07:35		06:23	06:01	04:54	04:24	04:52	05:51	06:53	07:54	08:01		15:05 (E1)	08:47						
	16:17	5	15:38 (E1)	17:25		18:25	20:30	21:31	22:09	21:51	20:47	19:25	18:06	16:00	18	15:23 (E1)	15:38						
20	08:34		15:31 (E1)	07:33		06:20	05:59	04:53	04:25	04:53	05:53	06:55	07:56	08:03		15:06 (E1)	08:48						
	16:19	9	15:40 (E1)	17:27		18:28	20:32	21:33	22:09	21:49	20:44	19:23	18:04	15:59	15	15:21 (E1)	15:38						
21	08:33		15:31 (E1)	07:30		06:18	05:56	04:51	04:25	04:55	05:55	06:57	07:58	08:05		15:06 (E1)	08:48						
	16:21	12	15:43 (E1)	17:29		18:30	20:34	21:34	22:10	21:48	20:42	19:20	18:01	15:57	13	15:19 (E1)	15:38						
22	08:32		15:30 (E1)	07:28		06:15	05:54	04:49	04:25	04:57	05:57	06:59	08:01	08:07		15:07 (E1)	08:49						
	16:23	16	15:46 (E1)	17:32		18:32	20:36	21:36	22:10	21:46	20:39	19:17	17:59	15:56	10	15:17 (E1)	15:39						
23	08:30		15:30 (E1)	07:25		06:12	05:51	04:48	04:25	04:59	05:59	07:01	08:03	08:09		15:10 (E1)	08:49						
	16:25	18	15:48 (E1)	17:34		18:34	20:38	21:38	22:10	21:44	20:37	19:15	17:56	15:54	6	15:16 (E1)	15:39						
24	08:28		15:29 (E1)	07:23		06:10	05:49	04:46	04:25	05:00	06:01	07:03	08:05	08:11		15:12 (E1)	08:50						
	16:27	20	15:49 (E1)	17:36		18:36	20:41	21:40	22:10	21:43	20:34	19:12	17:54	15:53	2	15:14 (E1)	15:40						
25	08:27		15:29 (E1)	07:20		06:07	05:46	04:45	04:26	05:02	06:03	07:05	07:07	08:13			08:50						
	16:29	21	15:50 (E1)	17:38		18:38	20:43	21:41	22:10	21:41	20:32	19:09	16:52	15:51			15:41						
26	08:25		15:29 (E1)	07:18		06:04	05:44	04:43	04:26	05:04	06:05	07:07	07:09	08:15			08:50						
	16:32	21	15:50 (E1)	17:40		18:40	20:45	21:43	22:10	21:39	20:29	19:07	16:49	15:50			15:41						
27	08:24		15:29 (E1)	07:15		06:02	05:41	04:42	04:27	05:06	06:07	07:09	07:11	08:17			08:51						
	16:34	22	15:51 (E1)	17:43		18:42	20:47	21:45	22:10	21:37	20:27	19:04	16:47	15:49			15:42						
28	08:22		15:29 (E1)	07:13		05:59	05:39	04:40	04:27	05:08	06:09	07:11	07:13	08:19			08:51						
	16:36	22	15:51 (E1)	17:45		18:44	20:49	21:46	22:10	21:35	20:24	19:01	16:45	15:48			15:43						
29	08:20		15:29 (E1)			06:56	05:37	04:39	04:28	05:09	06:11	07:13	07:16	08:20			08:51						
	16:38	22	15:51 (E1)			19:46	20:51	21:48	22:09	21:33	20:21	18:58	16:42	15:46			15:44						
30	08:18		15:29 (E1)			06:54	05:34	04:38	04:29	05:11	06:13	07:15	07:18	08:22			08:51						
	16:40	23	15:52 (E1)			19:48	20:53	21:49	22:09	21:32	20:19	18:56	16:40	15:45			15:45						
31	08:16		15:30 (E1)			06:51		04:36		05:13	06:15	07:20					08:51						
	16:42	22	15:52 (E1)			19:50		21:51		21:30	20:16	16:38					15:46						
Potential sun hours		235		266		366		426		508		529		469		385	324	247				216	
Total, worst case		235																					
Sun reduction		0.13		0.20		0.99																339	0.08
Oper. time red.		0.98		0.98																			0.98
Wind dir. red.		0.65		0.65																			0.65
Total reduction		0.09		0.13																			0.05
Total, real		20		13																			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)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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 20:25	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 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
17	08:38 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08	04:49 21:53	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:08	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	04:56 21:47	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	08:22 16:37	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:02	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		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	08:40 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 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 22:10	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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	20:03	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
	15:56	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	22:02	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	20:54	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	08:46
	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	15:50	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	17:45	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)	First time (hh:mm) with flicker	(WTG causing flicker first 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 18:40/4.0.540

## SHADOW - Calendar

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

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	08:40 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 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
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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 22:10	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 22:10	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 15:49	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 22:09	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

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

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 22:09	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
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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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9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:40
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:52	08:08 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:33 21:56	04:33 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:32 21:57	04:34 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	04:35 22:05	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:21	08:35 15:40
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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
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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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
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	04:40 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 20:29	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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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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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 21:50	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
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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 20:25	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	16:33 (E13) 19:53	06:49 20:55	04:36 21:52
2	08:50 15:49	08:13 16:47	07:08 17:50	16:34 (E13) 19:55	06:46 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	16:36 (E13) 19:57	06:43 20:59	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	16:39 (E13) 19:59	06:41 21:01	04:33 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	16:45 (E13) 20:01	06:38 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	20:03	05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:58	06:55 18:00	20:05	05:19 21:08	04:30 22:00
8	08:47 15:58	08:00 17:01	06:53 18:03	20:07	05:17 21:10	04:29 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	20:10	05:15 21:12	04:28 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	20:12	05:12 21:14	04:28 22:03
11	08:45 16:03	07:54 17:07	06:45 18:09	20:14	05:10 21:16	04:27 22:04
12	08:44 16:04	07:52 17:10	06:42 18:11	20:16	05:08 21:18	04:27 22:05
13	08:43 16:06	07:49 17:12	06:39 18:13	20:18	05:06 21:20	04:26 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	20:20	05:04 21:22	04:26 22:07
15	08:41 16:10	07:45 17:16	06:34 18:17	20:22	05:02 21:23	04:26 22:07
16	08:40 16:12	07:42 17:19	06:31 18:19	20:24	05:00 21:25	04:25 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	20:26	04:59 21:27	04:25 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	07:35 17:25	06:23 18:26	20:30	04:55 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	06:21 18:28	20:32	04:53 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	06:18 18:30	20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	06:15 18:32	20:37	04:50 21:36	04:25 22:10
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24	08:29 16:28	07:23 17:36	06:10 18:36	20:41	04:47 21:40	04:26 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	20:43	04:45 21:42	04:26 22:10
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28	08:22 16:36	07:13 17:45	05:59 18:45	20:49	04:41 21:46	04:28 22:10
29	08:20 16:38		06:57 19:47	20:51	04:39 21:48	04:28 22:10
30	08:18 16:41		06:54 19:49	20:53	04:38 21:50	04:29 22:09
31	08:16 16:43		06:51 19:51		04:37 21:51	04:29 22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case		574	398		13	974
Sun reduction		0.20	0.41		0.57	0.56
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.64	0.63		0.67	0.67
Total reduction		0.13	0.25		0.37	0.37
Total, real		72	101		5	358

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July		August		September		October		November		December	
1	04:30	05:35 (E8)	05:16	06:17			07:17	07:53 (E9)	07:22	07:57 (E10)	08:24	
	22:09	33 06:08 (E8)	21:28	20:14			18:53	25 08:18 (E9)	16:36	20 08:17 (E10)	15:45	
2	04:31	05:36 (E8)	05:17	06:19			07:19	07:53 (E9)	07:25	07:58 (E10)	08:26	
	22:08	32 06:08 (E8)	21:26	20:11			18:51	23 08:16 (E9)	16:34	18 08:16 (E10)	15:44	
3	04:32	05:36 (E8)	05:19	06:21			07:21	07:54 (E9)	07:27	08:00 (E10)	08:27	
	22:08	32 06:08 (E8)	21:24	20:09			18:48	21 08:15 (E9)	16:31	15 08:15 (E10)	15:43	
4	04:32	05:37 (E8)	05:21	06:23			07:23	07:55 (E9)	07:29	08:02 (E10)	08:29	
	22:07	31 06:08 (E8)	21:22	20:06			18:45	18 08:13 (E9)	16:29	11 08:13 (E10)	15:42	
5	04:33	05:38 (E8)	05:23	06:25			07:25	07:57 (E9)	07:31	08:04 (E10)	08:31	
	22:07	30 06:08 (E8)	21:19	20:03			18:43	14 08:11 (E9)	16:27	5 08:09 (E10)	15:41	
6	04:35	05:39 (E8)	05:25	06:27			07:27	07:59 (E9)	07:33		08:32	
	22:06	28 06:07 (E8)	21:17	20:01			18:40	8 08:07 (E9)	16:25		15:41	
7	04:36	05:40 (E8)	05:27	06:29			07:29		07:35		08:34	
	22:05	27 06:07 (E8)	21:15	19:58			18:38		16:23		15:40	
8	04:37	05:41 (E8)	05:29	06:31			07:31		07:38		08:35	
	22:04	25 06:06 (E8)	21:13	19:55			18:35		16:21		15:40	
9	04:38	05:42 (E8)	05:31	06:33			07:34		07:40		08:36	
	22:03	23 06:05 (E8)	21:11	19:53			18:32		16:19		15:39	
10	04:39	05:43 (E8)	05:33	06:35			07:36	17:12 (E13)	07:42		08:38	
	22:02	21 06:04 (E8)	21:08	19:50			18:30	10 17:22 (E13)	16:17		15:39	
11	04:41	05:45 (E8)	05:35	06:37			07:38	17:09 (E13)	07:44		08:39	
	22:01	17 06:02 (E8)	21:06	19:47			18:27	15 17:24 (E13)	16:15		15:38	
12	04:42	05:46 (E8)	05:37	06:39			07:40	17:07 (E13)	07:46		08:40	
	22:00	14 06:00 (E8)	21:04	19:45			18:25	18 17:25 (E13)	16:13		15:38	
13	04:43	05:50 (E8)	05:39	06:41			07:42	17:05 (E13)	07:48		08:41	
	21:59	8 05:58 (E8)	21:01	19:42			18:22	21 17:26 (E13)	16:11		15:38	
14	04:45		05:41	06:43			07:44	17:04 (E13)	07:51		08:43	
	21:58		20:59	19:39			18:19	22 17:26 (E13)	16:09		15:38	
15	04:46		05:43	06:45			07:46	17:03 (E13)	07:53		08:44	
	21:56		20:57	19:37			18:17	24 17:27 (E13)	16:07		15:38	
16	04:48		05:45	06:47			07:48	17:03 (E13)	07:55		08:45	
	21:55		20:54	19:34			18:14	24 17:27 (E13)	16:06		15:38	
17	04:49		05:47	06:49			07:50	17:03 (E13)	07:57		08:45	
	21:54		20:52	19:31			18:12	24 17:27 (E13)	16:04		15:38	
18	04:51		05:49	06:51			07:52	17:02 (E13)	07:59		08:46	
	21:52		20:49	19:28			18:09	25 17:27 (E13)	16:02		15:38	
19	04:52		05:51	06:53			07:54	09:06 (E10)	08:01		08:47	
	21:51		20:47	19:26			18:07	27 17:26 (E13)	16:01		15:38	
20	04:54		05:53	06:55		08:03 (E9)	07:57	09:02 (E10)	08:03		08:48	
	21:49		20:44	19:23	10	08:13 (E9)	18:04	35 17:26 (E13)	15:59		15:38	
21	04:56		05:55	06:57		08:00 (E9)	07:59	09:00 (E10)	08:05		08:48	
	21:48		20:42	19:20	15	08:15 (E9)	18:02	38 17:25 (E13)	15:57		15:39	
22	04:57		05:57	06:59		07:58 (E9)	08:01	08:58 (E10)	08:07		08:49	
	21:46		20:40	19:18	19	08:17 (E9)	17:59	39 17:24 (E13)	15:56		15:39	
23	04:59		05:59	07:01		07:56 (E9)	08:03	08:58 (E10)	08:09		08:49	
	21:44		20:37	19:15	22	08:18 (E9)	17:57	38 17:23 (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	24	08:19 (E9)	17:54	37 17:21 (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	25	08:19 (E9)	16:52	33 16:18 (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	26	08:19 (E9)	16:50	24 08:20 (E10)	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	26	08:19 (E9)	16:47	24 08:19 (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	27	08:19 (E9)	16:45	24 08:19 (E10)	15:48		15:44	
29	05:10		06:11	07:13		07:53 (E9)	07:16	07:56 (E10)	08:21		08:51	
	21:34		20:22	18:59	26	08:19 (E9)	16:43	23 08:19 (E10)	15:47		15:44	
30	05:12		06:13	07:15		07:53 (E9)	07:18	07:56 (E10)	08:22		08:51	
	21:32		20:19	18:56	25	08:18 (E9)	16:40	22 08:18 (E10)	15:46		15:45	
31	05:14		06:15				07:20	07:56 (E10)			08:51	
	21:30		20:16				16:38	21 08:17 (E10)			15:47	
Potential sun hours	529		469		385		324		247		216	
Total, worst case		321			245		677		69			
Sun reduction		0.49			0.43		0.26		0.08			
Oper. time red.		0.98			0.98		0.98		0.98			
Wind dir. red.		0.67			0.62		0.64		0.62			
Total reduction		0.32			0.26		0.16		0.05			
Total, real		104			64		110		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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	16:32 (E13) 19:53	06:49 20:55	04:36 21:52
2	08:50 15:49	08:13 16:47	07:08 17:50	16:33 (E13) 19:55	06:46 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	16:36 (E13) 19:57	06:43 20:59	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	16:47 (E13) 19:59	06:41 21:01	04:33 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56		06:38 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	08:34 (E10) 17:58		06:35 21:06	04:31 21:59
7	08:48 15:56	08:03 16:58	08:32 (E10) 18:00	07:25 (E9) 18:05	06:33 21:08	04:30 22:00
8	08:47 15:58	08:00 17:01	08:30 (E10) 18:03	07:20 (E9) 18:07	06:30 21:10	04:29 22:01
9	08:47 15:59	07:58 17:03	08:28 (E10) 18:05	07:19 (E9) 18:10	06:27 21:12	04:28 22:02
10	08:46 16:01	07:56 17:05	08:27 (E10) 18:07	07:36 (E9) 18:12	06:25 21:14	04:28 22:03
11	08:45 16:03	07:54 17:07	08:26 (E10) 18:09	07:37 (E9) 18:14	06:22 21:16	04:27 22:04
12	08:44 16:04	07:52 17:10	08:26 (E10) 18:11	07:14 (E9) 18:16	06:20 21:18	04:27 22:05
13	08:43 16:06	07:49 17:12	08:26 (E10) 18:13	07:13 (E9) 18:18	06:17 21:20	04:26 22:06
14	08:42 16:08	07:47 17:14	08:25 (E10) 18:15	07:39 (E9) 18:20	06:14 21:22	04:26 22:07
15	08:41 16:10	07:45 17:16	08:26 (E10) 18:17	07:38 (E9) 18:22	06:12 21:23	04:26 22:07
16	08:40 16:12	07:42 17:19	08:26 (E10) 18:19	07:12 (E9) 18:24	06:09 21:25	04:25 22:08
17	08:39 16:14	07:40 17:21	08:26 (E10) 18:22	07:38 (E9) 18:26	06:07 21:27	04:25 22:08
18	08:37 16:16	07:38 17:23	08:26 (E10) 18:24	07:12 (E9) 18:28	06:04 21:29	04:25 22:09
19	08:36 16:18	07:35 17:25	08:28 (E10) 18:26	07:13 (E9) 18:30	06:02 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	08:28 (E10) 18:28	07:36 (E9) 18:32	05:59 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	08:30 (E10) 18:30	07:34 (E9) 18:34	05:57 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	08:32 (E10) 18:32	07:14 (E9) 18:36	05:54 21:37	04:25 22:10
23	08:30 16:26	07:26 17:34	16:54 (E13) 18:34	07:30 (E9) 18:38	05:52 21:39	04:26 22:10
24	08:29 16:28	07:23 17:36	16:54 (E13) 18:36	07:19 (E9) 18:40	05:49 21:41	04:26 22:10
25	08:27 16:30	07:21 17:39	16:54 (E13) 18:38	07:15 (E9) 18:42	05:47 21:43	04:26 22:10
26	08:25 16:32	07:18 17:41	16:54 (E13) 18:40	07:32 (E9) 18:44	05:44 21:45	04:27 22:10
27	08:24 16:34	07:16 17:43	16:30 (E13) 18:42	07:27 (E9) 18:46	05:42 21:47	04:27 22:10
28	08:22 16:36	07:13 17:45	16:31 (E13) 18:45	05:39 18:48	05:38 (E8) 21:49	04:28 22:10
29	08:20 16:38		16:52 (E13) 18:47	05:37 18:50	05:36 (E8) 21:51	04:28 22:10
30	08:18 16:41		16:52 (E13) 18:49	05:35 18:52	05:34 (E8) 21:53	04:29 22:10
31	08:16 16:43		16:51 (E13) 18:51	05:33 18:54	05:32 (E8) 21:55	04:29 22:10
Potential sun hours	235	266	366	426	508	529
Total, worst case		587	384		85	1127
Sun reduction		0.20	0.41		0.57	0.56
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.64	0.63		0.67	0.67
Total reduction		0.13	0.25		0.37	0.37
Total, real		74	97		32	414

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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) []

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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July		August		September		October		November		December	
1	04:30	05:36 (E8)	05:16	06:17			07:17	07:53 (E9)	07:22	07:57 (E10)	08:24	
	22:09	38 06:14 (E8)	21:28	20:14			18:53	25 08:18 (E9)	16:36	20 08:17 (E10)	15:45	
2	04:31	05:36 (E8)	05:17	06:19			07:19		07:25		07:58 (E10)	08:26
	22:08	38 06:14 (E8)	21:26	20:11			18:51	23 08:17 (E9)	16:34	18 08:16 (E10)	15:44	
3	04:32	05:37 (E8)	05:19	06:21			07:21		07:27		08:00 (E10)	08:27
	22:08	37 06:14 (E8)	21:24	20:09			18:48	22 08:16 (E9)	16:31	15 08:15 (E10)	15:43	
4	04:32	05:38 (E8)	05:21	06:23			07:23		07:29		08:02 (E10)	08:29
	22:07	36 06:14 (E8)	21:22	20:06			18:45	19 08:14 (E9)	16:29	11 08:13 (E10)	15:42	
5	04:33	05:39 (E8)	05:23	06:25			07:25		07:31		08:04 (E10)	08:31
	22:07	35 06:14 (E8)	21:19	20:03			18:43	16 08:12 (E9)	16:27	5 08:09 (E10)	15:41	
6	04:35	05:39 (E8)	05:25	06:27			07:27		07:33			08:32
	22:06	35 06:14 (E8)	21:17	20:01			18:40	10 08:09 (E9)	16:25			15:41
7	04:36	05:40 (E8)	05:27	06:29			07:29		07:35			08:34
	22:05	33 06:13 (E8)	21:15	19:58			18:38		16:23			15:40
8	04:37	05:41 (E8)	05:29	06:31			07:31		07:38			08:35
	22:04	32 06:13 (E8)	21:13	19:55			18:35		16:21			15:40
9	04:38	05:41 (E8)	05:31	06:33			07:34		07:40			08:36
	22:03	31 06:12 (E8)	21:11	19:53			18:32		16:19			15:39
10	04:39	05:42 (E8)	05:33	06:35			07:36		17:12 (E13)	07:42		08:38
	22:02	29 06:11 (E8)	21:08	19:50			18:30	7 17:19 (E13)	16:17			15:39
11	04:41	05:43 (E8)	05:35	06:37			07:38		17:08 (E13)	07:44		08:39
	22:01	27 06:10 (E8)	21:06	19:47			18:27	14 17:22 (E13)	16:15			15:38
12	04:42	05:44 (E8)	05:37	06:39			07:40		17:06 (E13)	07:46		08:40
	22:00	25 06:09 (E8)	21:04	19:45			18:25	17 17:23 (E13)	16:13			15:38
13	04:43	05:46 (E8)	05:39	06:41			07:42		17:04 (E13)	07:48		08:41
	21:59	23 06:09 (E8)	21:01	19:42			18:22	20 17:24 (E13)	16:11			15:38
14	04:45	05:47 (E8)	05:41	06:43			07:44		17:03 (E13)	07:51		08:43
	21:58	20 06:07 (E8)	20:59	19:39			18:19	21 17:24 (E13)	16:09			15:38
15	04:46	05:49 (E8)	05:43	06:45			07:46		17:03 (E13)	07:53		08:44
	21:56	16 06:05 (E8)	20:57	19:37			18:17	23 17:26 (E13)	16:07			15:38
16	04:48	05:52 (E8)	05:45	06:47			07:48		17:02 (E13)	07:55		08:45
	21:55	11 06:03 (E8)	20:54	19:34			18:14	24 17:26 (E13)	16:06			15:38
17	04:49		05:47	06:49			07:50		17:01 (E13)	07:57		08:45
	21:54		20:52	19:31			18:12	25 17:26 (E13)	16:04			15:38
18	04:51		05:49	06:51			07:52		17:01 (E13)	07:59		08:46
	21:52		20:49	19:28			18:09	24 17:25 (E13)	16:02			15:38
19	04:52		05:51	06:53			07:54		17:00 (E13)	08:01		08:47
	21:51		20:47	19:26			18:07	25 17:25 (E13)	16:01			15:38
20	04:54		05:53	06:55		08:06 (E9)	07:57		09:03 (E10)	08:03		08:48
	21:49		20:45	19:23	5	08:11 (E9)	18:04	35	17:25 (E13)	15:59		15:38
21	04:56		05:55	06:57		08:02 (E9)	07:59		09:00 (E10)	08:05		08:48
	21:48		20:42	19:20	13	08:15 (E9)	18:02	38	17:24 (E13)	15:57		15:39
22	04:57		05:57	06:59		07:59 (E9)	08:01		08:58 (E10)	08:07		08:49
	21:46		20:40	19:18	18	08:17 (E9)	17:59	40	17:23 (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	21	08:18 (E9)	17:57	39	17:22 (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	22	08:18 (E9)	17:54	38	17:21 (E13)	15:53		15:40
25	05:03		06:03	07:05		07:55 (E9)	07:07		07:56 (E10)	08:13		08:50
	21:41		20:32	19:10	24	08:19 (E9)	16:52	35	16:18 (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	25	08:19 (E9)	16:50	30	16:16 (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	26	08:19 (E9)	16:47	24	08:19 (E10)	15:49		15:43
28	05:08		06:09	07:11		07:53 (E9)	07:14		07:55 (E10)	08:19		08:51
	21:36		20:24	19:02	26	08:19 (E9)	16:45	23	08:18 (E10)	15:48		15:44
29	05:10		06:11	07:13		07:53 (E9)	07:16		07:56 (E10)	08:21		08:51
	21:34		20:22	18:59	26	08:19 (E9)	16:43	23	08:19 (E10)	15:47		15:44
30	05:12		06:13	07:15		07:53 (E9)	07:18		07:56 (E10)	08:22		08:51
	21:32		20:19	18:56	26	08:19 (E9)	16:40	22	08:18 (E10)	15:46		15:45
31	05:14		06:15				07:20		07:56 (E10)			08:51
	21:30		20:16				16:38	21	08:17 (E10)			15:47
Potential sun hours	529		469		385		324		247			216
Total, worst case		466			232		683		69			
Sun reduction		0.49			0.43		0.26		0.08			
Oper. time red.		0.98			0.98		0.98		0.98			
Wind dir. red.		0.67			0.62		0.64		0.62			
Total reduction		0.32			0.26		0.16		0.05			
Total, real		151			60		111		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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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 22:03	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
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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.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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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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	08:30 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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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 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:51 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 22:10	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 22:11	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 20:24	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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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
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20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:51 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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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
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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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19	08:36 16:18	07:35 17:26	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:20	07:33 17:28	06:21 18:28	05:59 20:32	04:54 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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) 07:25 (E14)	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:03 (E14) 07:25 (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	07:11 (E14) 07:26 (E14)	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:02 (E14) 07:26 (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	07:09 (E14) 07:28 (E14)	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:01 (E14) 07:26 (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	07:06 (E14) 07:28 (E14)	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	07:01 (E14) 07:26 (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	07:05 (E14) 07:28 (E14)	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:01 (E14) 07:25 (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	07:05 (E14) 07:29 (E14)	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	07:01 (E14) 07:25 (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	07:04 (E14) 07:28 (E14)	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:00 (E14) 07:23 (E14)	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	07:04 (E14) 07:29 (E14)	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:00 (E14) 07:22 (E14)	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:03 (E14) 07:28 (E14)	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:02 (E14) 07:21 (E14)	07:34 18:33	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	07:03 (E14) 07:27 (E14)	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:04 (E14) 07:20 (E14)	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:04 (E14) 07:26 (E14)	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:06 (E14) 07:18 (E14)	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:04 (E14) 07:25 (E14)	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:08 (E14) 07:14 (E14)	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:05 (E14) 07:24 (E14)	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:14 (E14) 07:22 (E14)	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	07:06 (E14) 07:22 (E14)	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:14 (E14) 07:25 (E14)	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	07:08 (E14) 07:20 (E14)	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:14 (E14) 07:23 (E14)	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	07:12 (E14) 07:15 (E14)	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:14 (E14) 07:25 (E14)	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	07:15 (E14) 07:27 (E14)	05:01 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:14 (E14) 07:26 (E14)	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	07:27 (E14) 07:28 (E14)	05:14 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:14 (E14) 07:28 (E14)	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	07:28 (E14) 07:26 (E14)	05:16 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:14 (E14) 07:30 (E14)	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	07:29 (E14) 07:28 (E14)	05:19 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:14 (E14) 07:31 (E14)	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	07:29 (E14) 07:28 (E14)	05:22 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:14 (E14) 07:32 (E14)	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	07:30 (E14) 07:28 (E14)	05:25 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	07:14 (E14) 07:33 (E14)	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	07:31 (E14) 07:29 (E14)	05:28 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	07:14 (E14) 07:34 (E14)	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	07:32 (E14) 07:30 (E14)	05:31 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	07:14 (E14) 07:35 (E14)	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	07:33 (E14) 07:31 (E14)	05:34 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:14 (E14) 07:36 (E14)	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	07:34 (E14) 07:32 (E14)	05:37 21:44	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:14 (E14) 07:37 (E14)	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	07:35 (E14) 07:33 (E14)	05:40 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:14 (E14) 07:38 (E14)	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	07:36 (E14) 07:34 (E14)	05:43 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 (E14) 07:39 (E14)	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	06:57 18:47	05:37 20:51	07:37 (E14) 07:35 (E14)	05:46 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:14 (E14) 07:40 (E14)	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:10 17:49	06:54 18:49	05:35 20:53	07:38 (E14) 07:36 (E14)	05:49 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:14 (E14) 07:41 (E14)	08:18 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:08 17:51	06:52 18:51	05:33 19:51	07:39 (E14) 07:37 (E14)	05:52 21:51	04:30 22:10	05:14 21:30	06:15 20:17	07:16 18:57	07:14 (E14) 07:42 (E14)	08:19 17:38	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			5	305				72	242					
Sun reduction			0.41	0.50				0.50	0.43					
Oper. time red.			0.98	0.98				0.98	0.98					
Wind dir. red.			0.66	0.66				0.66	0.66					
Total reduction			0.27	0.32				0.32	0.28					
Total, real			1	98				23	67					

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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		14:13 (E13)	07:11		06:49		05:32		04:36	
	15:48	32	14:33 (E13)	16:45	29	14:42 (E13)	17:47		19:53		20:55		21:53	
2	08:50		14:02 (E13)	08:13		14:15 (E13)	07:08		06:46		05:30		04:35	
	15:49	32	14:34 (E13)	16:47	26	14:41 (E13)	17:50		19:55		20:57		21:54	
3	08:50		14:02 (E13)	08:11		14:16 (E13)	07:06		06:43		05:28		04:34	
	15:51	32	14:34 (E13)	16:50	24	14:40 (E13)	17:52		19:57		20:59		21:55	
4	08:50		14:01 (E13)	08:09		14:19 (E13)	07:03		06:41		05:26		04:33	
	15:52	34	14:35 (E13)	16:52	19	14:38 (E13)	17:54		19:59		21:02		21:57	
5	08:49		14:02 (E13)	08:07		14:22 (E13)	07:00		06:38		05:23		04:32	
	15:53	34	14:36 (E13)	16:54	14	14:36 (E13)	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	35	14:37 (E13)	16:56			17:58		20:03		21:06		21:59	
7	08:48		14:02 (E13)	08:03			06:55		06:33		05:19		04:30	
	15:56	35	14:37 (E13)	16:59			18:00		20:05		21:08		22:00	
8	08:47		14:02 (E13)	08:00			06:53		06:30		05:17		04:29	
	15:58	36	14:38 (E13)	17:01			18:03		20:07	10	07:05 (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	36	14:39 (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	37	14:40 (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		06:49 (E8)	05:10	04:27	
	16:03	37	14:40 (E13)	17:08			18:09		20:14	21	07:10 (E8)	21:16	22:04	
12	08:44		14:02 (E13)	07:52			06:42		06:20		06:48 (E8)	05:08	04:27	
	16:04	38	14:40 (E13)	17:10			18:11		20:16	22	07:10 (E8)	21:18	22:05	
13	08:43		14:03 (E13)	07:49			06:39		06:17		06:48 (E8)	05:06	04:26	
	16:06	38	14:41 (E13)	17:12			18:13		20:18	23	07:11 (E8)	21:20	22:06	
14	08:42		14:03 (E13)	07:47			06:37		06:14		06:47 (E8)	05:04	04:26	
	16:08	39	14:42 (E13)	17:14			18:15		20:20	23	07:10 (E8)	21:22	22:07	
15	08:41		14:03 (E13)	07:45			06:34		06:12		06:47 (E8)	05:02	04:26	
	16:10	39	14:42 (E13)	17:17			18:17		20:22	24	07:11 (E8)	21:24	22:07	
16	08:40		14:04 (E13)	07:43			06:31		06:09		06:46 (E8)	05:01	04:25	
	16:12	39	14:43 (E13)	17:19			18:20		20:24	24	07:10 (E8)	21:25	22:08	
17	08:39		14:03 (E13)	07:40			06:29		06:07		06:46 (E8)	04:59	04:25	
	16:14	40	14:43 (E13)	17:21			18:22		20:26	24	07:10 (E8)	21:27	22:08	
18	08:37		14:04 (E13)	07:38			06:26		06:04		06:46 (E8)	04:57	04:25	
	16:16	40	14:44 (E13)	17:23			18:24		20:28	23	07:09 (E8)	21:29	22:09	
19	08:36		14:04 (E13)	07:35			06:23		06:02		06:47 (E8)	04:55	04:25	
	16:18	40	14:44 (E13)	17:25			18:26		20:30	21	07:08 (E8)	21:31	22:09	
20	08:35		14:05 (E13)	07:33			06:21		05:59		06:47 (E8)	04:53	04:25	
	16:20	40	14:45 (E13)	17:28			18:28		20:32	20	07:07 (E8)	21:33	22:10	
21	08:33		14:05 (E13)	07:31			06:18		05:57		06:48 (E8)	04:52	04:25	
	16:22	40	14:45 (E13)	17:30			18:30		20:35	18	07:06 (E8)	21:35	22:10	
22	08:32		14:05 (E13)	07:28			06:15		05:54		06:50 (E8)	04:50	04:25	
	16:24	40	14:45 (E13)	17:32			18:32		20:37	14	07:04 (E8)	21:36	22:10	
23	08:30		14:06 (E13)	07:26			06:13		05:52		06:51 (E8)	04:48	04:26	
	16:26	39	14:45 (E13)	17:34			18:34		20:39	10	07:01 (E8)	21:38	22:10	
24	08:29		14:06 (E13)	07:23			06:10		05:49			04:47	04:26	
	16:28	39	14:45 (E13)	17:37			18:36		20:41			21:40	22:10	
25	08:27		14:07 (E13)	07:21			06:07		05:47			04:45	04:26	
	16:30	38	14:45 (E13)	17:39			18:38		20:43			21:42	22:10	
26	08:25		14:08 (E13)	07:18			06:05		05:44			04:44	04:27	
	16:32	37	14:45 (E13)	17:41			18:40		20:45			21:43	22:10	
27	08:24		14:09 (E13)	07:16			06:02		05:42			04:42	04:27	
	16:34	36	14:45 (E13)	17:43			18:43		20:47			21:45	22:10	
28	08:22		14:09 (E13)	07:13			05:59		05:39			04:41	04:28	
	16:36	36	14:45 (E13)	17:45			18:45		20:49			21:47	22:10	
29	08:20		14:10 (E13)				06:57		05:37			04:39	04:28	
	16:39	34	14:44 (E13)				19:47		20:51			21:48	22:10	
30	08:18		14:11 (E13)				06:54		05:35			04:38	04:29	
	16:41	33	14:44 (E13)				19:49		20:53			21:50	22:09	
31	08:17		14:11 (E13)				06:51					04:37		
	16:43	31	14:42 (E13)				19:51					21:51		
Potential sun hours	235			266			366		426		508		529	
Total, worst case	1136			112					311					
Sun reduction	0.13			0.20					0.50					
Oper. time red.	0.98			0.98					0.98					
Wind dir. red.	0.66			0.66					0.66					
Total reduction	0.09			0.13					0.32					
Total, real	98			15					100					

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	06:48 (E8) 21:09 (E8)	07:17 18:54	07:23 16:36
2	04:31 22:08	05:17 21:26	06:19 20:11	06:49 (E8) 07:08 (E8)	07:19 18:51	07:25 16:34
3	04:32 22:08	05:19 21:24	06:21 20:09	06:51 (E8) 07:06 (E8)	07:21 18:48	07:27 16:31
4	04:33 22:07	05:21 21:22	06:23 20:06	06:53 (E8) 07:04 (E8)	07:23 18:46	07:29 16:29
5	04:34 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	13:57 (E13) 13:59 (E13)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	13:51 (E13) 14:06 (E13)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	13:48 (E13) 14:08 (E13)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	13:47 (E13) 14:11 (E13)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	13:45 (E13) 14:12 (E13)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	13:44 (E13) 14:13 (E13)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	13:43 (E13) 14:14 (E13)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	13:42 (E13) 14:15 (E13)
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	13:42 (E13) 14:16 (E13)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	13:41 (E13) 14:17 (E13)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	13:41 (E13) 14:17 (E13)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	13:41 (E13) 14:18 (E13)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	13:40 (E13) 14:18 (E13)
18	04:51 21:52	05:49 20:49	06:51 19:29	07:52 18:09	07:59 16:02	13:40 (E13) 14:19 (E13)
19	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	13:41 (E13) 14:20 (E13)
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	13:40 (E13) 14:20 (E13)
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	13:40 (E13) 14:20 (E13)
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	13:41 (E13) 14:21 (E13)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	13:41 (E13) 14:21 (E13)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	13:41 (E13) 14:21 (E13)
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	13:42 (E13) 14:21 (E13)
26	05:04 21:39	06:05 20:29	07:07 19:07	08:09 17:50	08:15 15:51	13:42 (E13) 14:21 (E13)
27	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:49	13:43 (E13) 14:22 (E13)
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:19 15:48	13:44 (E13) 14:22 (E13)
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47	13:44 (E13) 14:22 (E13)
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:22 15:46	13:45 (E13) 14:22 (E13)
31	05:14 21:30	06:15 20:17	07:17 18:53	08:19 17:39	08:24 15:44	13:46 (E13) 14:23 (E13)
Potential sun hours	529	469	385	324	247	216
Total, worst case		249	66		870	973
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.32	0.28		0.05	0.05
Total, real		80	18		47	44

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	07:11 17:47	05:57 18:47	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	07:04 17:49	05:54 18:49	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	07:01 17:51	05:51 18:51	05:31 21:51	04:37 21:51	04:37 21:30	05:13 21:30	06:15 20:16	07:20 16:38	07:20 15:46	08:51 15:46	
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	09:16 (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	09:17 (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	09:19 (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
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5	08:49 15:53	08:07 16:54	09:23 (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
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24	08:29 16:28	07:23 17:37	07:23 17:37	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	08:52 15:41
25	08:27 16:30	07:21 17:39	07:21 17:39	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	08:53 15:41
26	08:26 16:32	07:18 17:41	07:18 17:41	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	08:55 15:42
27	08:24 16:34	07:16 17:43	07:16 17:43	06:02 20:47	05:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 20:03	08:12 17:47	08:17 15:49	08:56 15:43
28	08:22 16:36	07:13 17:45	07:13 17:45	05:59 20:49	05:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 20:03	08:14 17:46	08:19 15:48	08:58 15:44
29	08:20 16:39	07:11 17:48	07:11 17:48	05:57 20:51	05:37 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 20:03	08:16 17:46	08:21 15:47	08:51 15:45
30	08:19 16:41	07:09 17:49	07:09 17:49	05:54 20:53	05:35 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 20:03	08:18 17:46	08:22 15:46	08:52 15:46
31	08:17 16:43	07:07 17:51	07:07 17:51	05:51 20:51	05:32 21:51	04:27 21:51	05:14 21:30	06:15 20:17	07:16 20:03	08:19 17:46	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	390	87									482	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.98	0.98									0.98	
Wind dir. red.	0.59	0.59									0.59	
Total reduction	0.08	0.12									0.05	
Total, real	30	10									23	

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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		07:59 (E14) 08:27 (E14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	5	07:34 (E14) 07:39 (E14)	06:46 19:55	05:30 20:58	04:35 21:54	05:18 22:09	06:19 20:11		07:19 18:51	28	08:27 (E14) 08:27 (E14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	12	07:32 (E14) 07:44 (E14)	06:44 19:57	05:28 21:00	04:34 21:55	05:20 22:08	06:21 20:09		07:21 18:48	28	08:27 (E14) 08:27 (E14)	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	16	07:29 (E14) 07:45 (E14)	06:41 19:59	05:26 21:02	04:33 21:57	05:22 22:07	06:23 20:06		07:23 18:46	29	08:27 (E14) 08:26 (E14)	07:29 16:30	08:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	20	07:26 (E14) 07:46 (E14)	06:38 20:01	05:24 21:04	04:32 21:58	05:24 22:07	06:25 20:04		07:25 18:43	28	08:26 (E14) 08:26 (E14)	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	24	07:24 (E14) 07:48 (E14)	06:36 20:03	05:21 21:06	04:31 21:59	05:25 22:06	06:27 20:01		07:28 18:40	27	08:25 (E14) 08:25 (E14)	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	26	07:22 (E14) 07:48 (E14)	06:33 20:06	05:19 21:08	04:30 22:00	05:27 22:05	06:29 19:58		07:30 18:38	24	08:24 (E14) 08:23 (E14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	27	07:21 (E14) 07:48 (E14)	06:30 20:08	05:17 21:10	04:29 22:01	05:29 22:04	06:31 19:56		07:32 18:35	22	08:23 (E14) 08:22 (E14)	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	28	07:21 (E14) 07:49 (E14)	06:28 20:10	05:15 21:12	04:29 22:02	05:31 22:03	06:33 19:53		07:34 18:33	18	08:23 (E14) 08:21 (E14)	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	06:48 18:07	29	07:20 (E14) 07:49 (E14)	06:25 20:12	05:13 21:14	04:28 22:03	05:33 22:02	06:35 19:50		07:36 18:30	14	08:22 (E14) 08:19 (E14)	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	28	07:20 (E14) 07:48 (E14)	06:22 20:14	05:11 21:16	04:27 22:04	05:35 22:01	06:37 19:48		07:38 18:27	9	08:21 (E14) 08:16 (E14)	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	29	07:20 (E14) 07:49 (E14)	06:20 20:16	05:09 21:18	04:27 22:05	05:37 22:00	06:39 19:45		07:40 18:25		08:21 (E14) 08:16 (E14)	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	28	07:20 (E14) 07:48 (E14)	06:17 20:18	05:07 21:20	04:27 22:06	05:39 21:59	06:41 19:42		07:42 18:22		08:21 (E14) 08:16 (E14)	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	27	07:20 (E14) 07:47 (E14)	06:15 20:20	05:05 21:22	04:26 22:07	05:41 21:58	06:43 19:39		07:44 18:20		08:21 (E14) 08:16 (E14)	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	25	07:21 (E14) 07:46 (E14)	06:12 20:22	05:03 21:24	04:26 22:07	05:43 21:57	06:45 19:37		07:46 18:17		08:21 (E14) 08:16 (E14)	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	24	07:21 (E14) 07:45 (E14)	06:09 20:24	05:01 21:26	04:26 22:08	05:45 21:55	06:47 19:34		07:48 18:15		08:21 (E14) 08:16 (E14)	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	21	07:22 (E14) 07:43 (E14)	06:07 20:26	04:59 21:27	04:25 22:08	05:47 21:54	06:49 19:31		07:50 18:12		08:21 (E14) 08:16 (E14)	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	17	07:23 (E14) 07:40 (E14)	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:52	06:51 19:29		07:52 18:09		08:21 (E14) 08:16 (E14)	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	12	07:26 (E14) 07:38 (E14)	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:51	06:53 19:26		07:55 18:07		08:21 (E14) 08:16 (E14)	08:01 16:01	08:48 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 21:49	05:53 20:45	06:55 19:23		07:57 18:04		08:21 (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		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		08:21 (E14) 08:16 (E14)	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		08:21 (E14) 08:16 (E14)	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		08:21 (E14) 08:16 (E14)	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	10	08:11 (E14) 08:21 (E14)		08:21 (E14) 08:16 (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	05:03 22:10	06:03 21:41	07:05 20:32	07:05 19:10	15	08:08 (E14) 08:23 (E14)		08:21 (E14) 08:16 (E14)	07:07 16:52	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41		05:45 20:45	04:44 21:43	05:05 22:10	06:03 21:39	07:07 20:30	07:07 19:07	20	08:05 (E14) 08:25 (E14)		08:21 (E14) 08:16 (E14)	07:10 16:50	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	04:42 21:45	05:06 22:10	06:05 21:38	07:09 20:27	07:09 19:04	22	08:04 (E14) 08:26 (E14)		08:21 (E14) 08:16 (E14)	07:12 16:48	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45		05:40 20:49	04:41 21:47	05:08 22:10	06:09 21:36	07:11 20:24	07:11 19:02	25	08:02 (E14) 08:27 (E14)		08:21 (E14) 08:16 (E14)	07:14 16:45	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 21:34	07:13 20:22	07:13 18:59	26	08:01 (E14) 08:27 (E14)		08:21 (E14) 08:16 (E14)	07:16 16:43	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 21:32	07:15 20:19	07:15 18:56	27	08:00 (E14) 08:27 (E14)		08:21 (E14) 08:16 (E14)	07:18 16:41	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51	05:14 21:51		06:15 21:30	07:18 20:17	07:20 19:17		07:20 16:38		08:21 (E14) 08:16 (E14)	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				398								145		255		
Sun reduction				0.41								0.43		0.26		
Oper. time red.				0.98								0.98		0.98		
Wind dir. red.				0.62								0.62		0.62		
Total reduction				0.25								0.26		0.16		
Total, real				100								38		40		

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

Day in month	Sun rise (hh:mm)	First time (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		

Mezares\_AB211223

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
25/06/2024 18:40/4.0.540

### Assumptions for shadow calculations

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

windPRO 4.0.540 by EMD International A/S. Tel. +45 69 16 48 50. [www.emd-international.com](http://www.emd-international.com). [support@emd.dk](mailto:support@emd.dk)

windPRO 

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	13	07:46 (E14) 07:59 (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	2	07:51 (E14) 07:53 (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			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 15:56	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	04:40 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		07:08 (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	11	07:05 (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	11	07:53 (E14) 08:04 (E14)			07:42 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	16	07:21 (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	16	07:50 (E14) 08:06 (E14)			07:44 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	21	07:02 (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	20	07:48 (E14) 08:08 (E14)			07:46 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	24	07:25 (E14)	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	23	07:46 (E14) 08:09 (E14)			07:48 (E14) 18:15	07:55 16:06
17	08:39 16:14	07:40 17:21	06:29 18:22	26	06:59 (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	25	07:45 (E14) 08:10 (E14)			07:50 (E14) 18:12	07:57 16:04
18	08:38 16:16	07:38 17:23	06:26 18:24	27	06:58 (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	28	07:43 (E14) 08:11 (E14)			07:52 (E14) 18:09	07:59 16:03
19	08:36 16:18	07:36 17:26	06:24 18:26	29	06:56 (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	29	07:42 (E14) 08:11 (E14)			07:55 (E14) 18:07	08:01 16:01
20	08:35 16:20	07:33 17:28	06:21 18:28	30	06:56 (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	29	07:42 (E14) 08:11 (E14)			07:57 (E14) 18:04	08:03 15:59
21	08:33 16:22	07:31 17:30	06:18 18:30	30	06:55 (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	30	07:41 (E14) 08:11 (E14)			07:59 (E14) 18:02	08:05 15:58
22	08:32 16:24	07:28 17:32	06:16 18:32	31	06:55 (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	31	07:40 (E14) 08:11 (E14)			08:01 (E14) 18:00	08:07 15:56
23	08:30 16:26	07:26 17:34	06:13 18:34	30	06:55 (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	31	07:03 (E14) 08:11 (E14)			08:03 (E14) 17:57	08:09 15:55
24	08:29 16:28	07:23 17:37	06:10 18:36	29	06:55 (E14)	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	30	07:03 (E14) 08:10 (E14)			08:05 (E14) 17:55	08:11 15:53
25	08:27 16:30	07:21 17:39	06:08 18:39	27	06:56 (E14)	05:47 20:43	04:45 21:42	04:27 22:10	06:01 21:41	06:03 20:32	07:05 19:10	29	07:05 (E14) 08:09 (E14)			08:05 (E14) 17:55	08:13 15:52
26	08:26 16:32	07:18 17:41	06:05 18:41	26	06:56 (E14)	05:45 20:45	04:44 21:43	04:27 22:10	06:05 21:39	06:05 20:30	07:07 19:07	28	07:07 (E14) 08:08 (E14)			08:07 (E14) 17:50	08:15 15:51
27	08:24 16:34	07:16 17:43	06:02 18:43	24	06:56 (E14)	05:42 20:47	04:42 21:45	04:28 22:10	06:06 21:38	06:07 20:27	07:09 19:04	26	07:09 (E14) 08:07 (E14)			08:13 (E14) 17:48	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	21	06:58 (E14)	05:40 20:49	04:41 21:47	04:28 22:10	06:09 21:36	06:09 20:24	07:11 19:02	25	07:11 (E14) 08:06 (E14)			08:19 (E14) 17:46	08:51 15:44
29	08:20 16:39	07:11 17:47	06:57 18:47	17	07:59 (E14)	05:37 20:51	04:40 21:48	04:29 22:10	06:11 21:34	07:13 20:22	07:13 18:59	22	07:13 (E14) 08:04 (E14)			08:21 (E14) 17:44	08:51 15:45
30	08:19 16:41	07:10 17:49	06:54 18:49	12	08:01 (E14)	05:35 20:53	04:38 21:50	04:29 22:09	06:13 21:32	07:15 20:19	07:15 18:56	18	07:15 (E14) 08:02 (E14)			08:22 (E14) 17:41	08:51 15:46
31	08:17 16:43	07:09 17:51	06:52 18:51				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	385		324		247	216	
Total, worst case				461							451		15				
Sun reduction				0.41							0.43		0.26				
Oper. time red.				0.98							0.98		0.98				
Wind dir. red.				0.63							0.63		0.63				
Total reduction				0.26							0.27		0.16				
Total, real				118							120		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)
	Minutes with flicker		

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June
1	08:51 15:48 25	10:00 (E13) 16:45 40	08:15 10:02 (E13) 07:11	06:49 17:48 19:53	05:33 20:55 21:53	04:36 21:53 21:53
2	08:50 15:49 26	10:00 (E13) 16:47 39	08:13 10:03 (E13) 07:08	06:46 17:50 19:55	05:30 20:57 21:54	04:35 21:54 21:54
3	08:50 15:51 27	10:00 (E13) 16:50 38	08:11 10:04 (E13) 07:06	06:43 17:52 19:57	05:28 21:00 21:55	04:34 21:55 21:55
4	08:50 15:52 28	09:59 (E13) 16:52 36	08:09 10:05 (E13) 07:03	06:41 17:54 19:59	05:26 21:02 21:57	04:33 21:57 21:57
5	08:49 15:53 29	10:00 (E13) 16:54 35	08:07 10:06 (E13) 07:00	06:38 17:56 20:01	05:23 21:04 21:58	04:32 21:58 21:58
6	08:49 15:55 31	09:59 (E13) 16:56 32	08:05 10:07 (E13) 06:58	06:35 17:58 20:03	05:21 21:06 21:59	04:31 21:59 21:59
7	08:48 15:56 32	09:59 (E13) 16:59 30	08:03 10:08 (E13) 06:55	06:33 18:00 20:05	05:19 21:08 22:00	04:30 22:00 22:00
8	08:48 15:58 33	09:59 (E13) 17:01 27	08:01 10:10 (E13) 06:53	06:30 18:03 20:08	05:17 21:10 22:01	04:29 22:01 22:01
9	08:47 15:59 34	09:59 (E13) 17:03 23	07:58 10:11 (E13) 06:50	06:28 18:05 20:10	05:15 21:12 22:02	04:29 22:02 22:02
10	08:46 16:01 35	09:59 (E13) 17:05 18	07:56 10:14 (E13) 06:47	06:25 18:07 20:12	05:13 21:14 22:03	04:28 22:03 22:03
11	08:45 16:03 36	09:59 (E13) 17:08 9	07:54 10:19 (E13) 06:45	06:22 18:09 20:14	05:11 21:16 22:04	04:27 22:04 22:04
12	08:44 16:04 37	09:59 (E13) 17:10 12	07:52 10:28 (E13) 06:42	06:20 18:11 20:16	05:08 21:18 22:05	04:27 22:05 22:05
13	08:43 16:06 38	09:58 (E13) 17:12 14	07:49 18:13 20:18	06:17 20:18 21:20	05:06 21:20 22:06	04:26 22:06 22:06
14	08:42 16:08 38	10:36 (E13) 17:14 15	07:47 18:15 20:20	06:14 20:20 21:22	05:04 21:22 22:07	04:26 22:07 22:07
15	08:41 16:10 39	09:58 (E13) 17:17 16	07:45 18:18 20:22	06:12 20:22 21:24	05:03 21:24 22:07	04:26 22:07 22:07
16	08:40 16:12 39	10:37 (E13) 17:19 17	07:43 18:20 20:24	06:09 20:24 21:25	05:01 21:25 22:08	04:25 22:08 22:08
17	08:39 16:14 40	09:59 (E13) 17:21 18	07:40 18:22 20:26	06:07 20:26 21:27	04:59 21:27 22:08	04:25 22:08 22:08
18	08:37 16:16 41	09:59 (E13) 17:23 19	07:38 18:24 20:28	06:04 20:28 21:29	04:57 21:29 22:09	04:25 22:09 22:09
19	08:36 16:18 42	10:40 (E13) 17:26 20	07:36 18:26 20:30	06:02 20:30 21:31	04:55 21:31 22:09	04:25 22:09 22:09
20	08:35 16:20 42	09:59 (E13) 17:28 21	07:33 18:28 20:33	06:21 20:33 21:33	04:53 21:33 22:10	04:25 22:10 22:10
21	08:33 16:22 42	10:41 (E13) 17:30 22	07:31 18:30 20:35	06:18 20:35 21:35	04:52 21:35 22:10	04:25 22:10 22:10
22	08:32 16:24 42	09:59 (E13) 17:32 23	07:28 18:32 20:37	06:16 20:37 21:37	04:50 21:37 22:10	04:25 22:10 22:10
23	08:30 16:26 43	09:59 (E13) 17:34 24	07:26 18:34 20:39	06:13 20:39 21:38	04:48 21:38 22:10	04:26 22:10 22:10
24	08:29 16:28 43	10:00 (E13) 17:37 25	07:23 18:36 20:41	06:10 20:41 21:40	04:47 21:40 22:10	04:26 22:10 22:10
25	08:27 16:30 43	10:43 (E13) 17:39 26	07:21 18:38 20:43	06:07 20:43 21:42	04:45 21:42 22:10	04:26 22:10 22:10
26	08:26 16:32 43	10:00 (E13) 17:41 27	07:18 18:41 20:45	06:05 20:45 21:43	04:44 21:43 22:10	04:27 22:10 22:10
27	08:24 16:34 43	10:00 (E13) 17:43 28	07:16 18:43 20:47	06:02 20:47 21:45	04:42 21:45 22:10	04:27 22:10 22:10
28	08:22 16:36 42	10:43 (E13) 17:45 29	07:13 18:45 20:49	05:59 20:49 21:47	04:41 21:47 22:10	04:28 22:10 22:10
29	08:20 16:39 42	10:01 (E13) 17:47 30	07:11 19:47 20:51	06:57 20:51 21:48	04:40 21:48 22:10	04:29 22:10 22:10
30	08:18 16:41 41	10:02 (E13) 17:49 31	07:09 19:49 20:53	06:54 20:53 21:50	04:38 21:50 22:09	04:29 22:09 22:09
31	08:17 16:43 41	10:02 (E13) 17:51 366	07:07 19:51 21:51	06:51 20:51 21:51	04:37 21:51 21:51	04:29 22:09 22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case	1157	327				
Sun reduction	0.13	0.20				
Oper. time red.	0.98	0.98				
Wind dir. red.	0.61	0.61				
Total reduction	0.08	0.12				
Total, real	92	39				

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	09:43 (E13) 10:02 (E13)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	09:41 (E13) 10:04 (E13)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	09:39 (E13) 10:07 (E13)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	09:38 (E13) 10:08 (E13)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	09:36 (E13) 10:09 (E13)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	09:36 (E13) 10:10 (E13)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	09:35 (E13) 10:11 (E13)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	09:35 (E13) 10:12 (E13)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	09:34 (E13) 10:13 (E13)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:34 (E13) 10:14 (E13)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	09:33 (E13) 10:14 (E13)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	09:33 (E13) 10:14 (E13)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	09:33 (E13) 10:15 (E13)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	09:33 (E13) 10:15 (E13)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	09:32 (E13) 10:15 (E13)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	09:33 (E13) 10:16 (E13)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	09:33 (E13) 10:16 (E13)
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	09:34 (E13) 10:17 (E13)
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	09:34 (E13) 10:17 (E13)
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	09:34 (E13) 10:16 (E13)
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	09:34 (E13) 10:16 (E13)
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	09:35 (E13) 10:17 (E13)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	09:35 (E13) 10:17 (E13)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	09:36 (E13) 10:17 (E13)
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	09:36 (E13) 10:16 (E13)
26	05:04 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	09:37 (E13) 10:16 (E13)
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:47	08:17 15:49	09:38 (E13) 10:17 (E13)
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	09:39 (E13) 10:17 (E13)
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	09:40 (E13) 10:17 (E13)
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:40	08:22 15:46	09:40 (E13) 10:17 (E13)
31	05:14 21:30	06:15 20:17		08:20 16:38	09:47 (E13) 09:57 (E13)	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case				10	1139	758
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.61	0.61	0.61
Total reduction				0.16	0.05	0.04
Total, real				2	56	32

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January			February			March	April	May	June
1	08:51		10:03 (E13)	08:15		10:05 (E13)	07:11	06:49	05:33	04:36
	15:48	27	10:30 (E13)	16:45	42	10:47 (E13)	17:48	19:53	20:55	21:53
2	08:50		10:03 (E13)	08:13		10:06 (E13)	07:08	06:46	05:30	04:35
	15:49	28	10:31 (E13)	16:47	41	10:47 (E13)	17:50	19:55	20:57	21:54
3	08:50		10:03 (E13)	08:11		10:07 (E13)	07:06	06:43	05:28	04:34
	15:51	29	10:32 (E13)	16:50	40	10:47 (E13)	17:52	19:57	21:00	21:55
4	08:50		10:03 (E13)	08:09		10:08 (E13)	07:03	06:41	05:26	04:33
	15:52	29	10:32 (E13)	16:52	39	10:47 (E13)	17:54	19:59	21:02	21:57
5	08:49		10:03 (E13)	08:07		10:09 (E13)	07:00	06:38	05:23	04:32
	15:53	31	10:34 (E13)	16:54	37	10:46 (E13)	17:56	20:01	21:04	21:58
6	08:49		10:03 (E13)	08:05		10:09 (E13)	06:58	06:35	05:21	04:31
	15:55	32	10:35 (E13)	16:56	35	10:44 (E13)	17:58	20:03	21:06	21:59
7	08:48		10:03 (E13)	08:03		10:11 (E13)	06:55	06:33	05:19	04:30
	15:56	33	10:36 (E13)	16:59	33	10:44 (E13)	18:00	20:05	21:08	22:00
8	08:48		10:03 (E13)	08:01		10:12 (E13)	06:53	06:30	05:17	04:29
	15:58	34	10:37 (E13)	17:01	31	10:43 (E13)	18:03	20:08	21:10	22:01
9	08:47		10:02 (E13)	07:58		10:13 (E13)	06:50	06:28	05:15	04:29
	15:59	35	10:37 (E13)	17:03	27	10:40 (E13)	18:05	20:10	21:12	22:02
10	08:46		10:02 (E13)	07:56		10:16 (E13)	06:47	06:25	05:13	04:28
	16:01	36	10:38 (E13)	17:05	23	10:39 (E13)	18:07	20:12	21:14	22:03
11	08:45		10:03 (E13)	07:54		10:19 (E13)	06:45	06:22	05:11	04:27
	16:03	36	10:39 (E13)	17:08	17	10:36 (E13)	18:09	20:14	21:16	22:04
12	08:44		10:03 (E13)	07:52		10:24 (E13)	06:42	06:20	05:08	04:27
	16:04	38	10:41 (E13)	17:10	6	10:30 (E13)	18:11	20:16	21:18	22:05
13	08:43		10:02 (E13)	07:49			06:40	06:17	05:06	04:26
	16:06	39	10:41 (E13)	17:12			18:13	20:18	21:20	22:06
14	08:42		10:02 (E13)	07:47			06:37	06:14	05:04	04:26
	16:08	40	10:42 (E13)	17:14			18:15	20:20	21:22	22:07
15	08:41		10:02 (E13)	07:45			06:34	06:12	05:03	04:26
	16:10	40	10:42 (E13)	17:17			18:18	20:22	21:24	22:07
16	08:40		10:02 (E13)	07:43			06:32	06:09	05:01	04:25
	16:12	41	10:43 (E13)	17:19			18:20	20:24	21:25	22:08
17	08:39		10:03 (E13)	07:40			06:29	06:07	04:59	04:25
	16:14	41	10:44 (E13)	17:21			18:22	20:26	21:27	22:08
18	08:37		10:02 (E13)	07:38			06:26	06:04	04:57	04:25
	16:16	42	10:44 (E13)	17:23			18:24	20:28	21:29	22:09
19	08:36		10:02 (E13)	07:36			06:24	06:02	04:55	04:25
	16:18	43	10:45 (E13)	17:26			18:26	20:30	21:31	22:09
20	08:35		10:03 (E13)	07:33			06:21	05:59	04:53	04:25
	16:20	43	10:46 (E13)	17:28			18:28	20:33	21:33	22:10
21	08:33		10:02 (E13)	07:31			06:18	05:57	04:52	04:25
	16:22	44	10:46 (E13)	17:30			18:30	20:35	21:35	22:10
22	08:32		10:02 (E13)	07:28			06:16	05:54	04:50	04:25
	16:24	44	10:46 (E13)	17:32			18:32	20:37	21:37	22:10
23	08:30		10:02 (E13)	07:26			06:13	05:52	04:48	04:26
	16:26	45	10:47 (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	45	10:48 (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	45	10:48 (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	45	10:48 (E13)	17:41			18:41	20:45	21:43	22:10
27	08:24		10:04 (E13)	07:16			06:02	05:42	04:42	04:27
	16:34	44	10:48 (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	44	10:48 (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	44	10:48 (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	43	10:48 (E13)				19:49	20:53	21:50	22:09
31	08:17		10:06 (E13)				06:51		04:37	
	16:43	42	10:48 (E13)				19:51		21:51	
Potential sun hours	235			266			366	426	508	529
Total, worst case		1202			371					
Sun reduction		0.13			0.20					
Oper. time red.		0.98			0.98					
Wind dir. red.		0.61			0.61					
Total reduction		0.08			0.12					
Total, real		96			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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	09:45 (E13) 10:09 (E13)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	09:43 (E13) 10:10 (E13)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	09:42 (E13) 10:13 (E13)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	09:40 (E13) 10:13 (E13)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	09:39 (E13) 10:14 (E13)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	09:39 (E13) 10:16 (E13)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	09:38 (E13) 10:16 (E13)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	09:38 (E13) 10:18 (E13)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	09:37 (E13) 10:18 (E13)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:37 (E13) 10:19 (E13)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	09:36 (E13) 10:19 (E13)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	09:36 (E13) 10:19 (E13)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	09:36 (E13) 10:20 (E13)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	09:36 (E13) 10:20 (E13)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	09:36 (E13) 10:20 (E13)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	09:36 (E13) 10:21 (E13)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	09:36 (E13) 10:21 (E13)
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	09:37 (E13) 10:22 (E13)
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	09:37 (E13) 10:22 (E13)
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	09:37 (E13) 10:21 (E13)
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	09:37 (E13) 10:21 (E13)
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	09:39 (E13) 10:22 (E13)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	09:39 (E13) 10:22 (E13)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	09:39 (E13) 10:22 (E13)
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	09:40 (E13) 10:21 (E13)
26	05:04 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	09:40 (E13) 10:21 (E13)
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:47	08:17 15:49	09:42 (E13) 10:22 (E13)
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	09:42 (E13) 10:22 (E13)
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	09:43 (E13) 10:22 (E13)
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:40	08:22 15:46	09:44 (E13) 10:22 (E13)
31	05:14 21:30	06:15 20:17		08:20 16:38	09:47 (E13) 10:05 (E13)	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case				27	1202	814
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.61	0.61	0.61
Total reduction				0.16	0.05	0.04
Total, real				4	60	34

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 32	10:07 (E13) 16:45 40	10:13 (E13) 17:11 39	06:49 19:53 20:55	05:33 21:53 22:09	04:36 21:53 22:09	04:30 21:28 20:14	05:16 21:28 20:14	06:17 20:14 18:54	07:17 18:54 16:36	07:23 16:36 15:45	08:24 15:45 15:45
2	08:50 15:49 32	10:08 (E13) 16:47 38	10:14 (E13) 17:50 38	06:46 19:55 20:57	05:30 21:54 22:09	04:35 21:54 22:09	04:31 21:26 20:11	05:18 21:26 20:11	06:19 21:26 18:51	07:19 16:34 15:44	07:25 15:44 15:44	08:26 15:44 15:44
3	08:50 15:51 33	10:07 (E13) 16:50 37	10:15 (E13) 17:52 37	06:43 19:57 21:00	05:28 21:55 22:08	04:34 21:55 22:08	04:32 21:24 20:09	05:19 21:24 20:09	06:21 18:48 16:32	07:21 16:32 15:43	07:27 15:43 15:43	08:28 15:43 15:43
4	08:50 15:52 34	10:07 (E13) 16:52 35	10:16 (E13) 17:54 35	06:41 19:59 21:02	05:26 21:57 22:07	04:33 21:57 22:07	04:33 21:22 20:06	05:21 21:22 20:06	06:23 18:46 16:29	07:23 16:29 15:42	07:29 15:42 15:42	08:29 15:42 15:42
5	08:49 15:53 34	10:08 (E13) 16:54 34	10:17 (E13) 17:56 34	06:38 19:59 21:04	05:23 21:58 22:07	04:32 21:58 22:07	04:34 21:20 20:03	05:23 21:20 20:03	06:25 18:43 16:27	07:25 16:27 15:42	07:31 15:42 15:42	08:31 15:42 15:42
6	08:49 15:55 35	10:08 (E13) 16:56 31	10:18 (E13) 17:58 31	06:35 19:59 21:06	05:21 21:59 22:06	04:31 21:59 22:06	04:35 21:17 20:01	05:25 21:17 20:01	06:27 18:40 16:25	07:27 16:25 15:41	07:33 15:41 15:41	08:32 15:41 15:41
7	08:48 15:56 37	10:07 (E13) 16:59 28	10:20 (E13) 18:00 28	06:33 19:59 21:08	05:19 22:00 22:05	04:30 22:00 22:05	04:36 21:15 20:00	05:27 21:15 20:00	06:29 18:38 16:23	07:30 16:23 15:40	07:36 15:40 15:40	08:34 15:40 15:40
8	08:48 15:58 37	10:07 (E13) 17:01 24	10:22 (E13) 18:03 24	06:30 19:59 21:10	05:17 22:01 22:04	04:29 22:01 22:04	04:37 21:13 20:00	05:29 21:13 20:00	06:31 18:35 16:21	07:32 16:21 15:39	07:38 15:39 15:39	08:35 15:39 15:39
9	08:47 15:59 38	10:07 (E13) 17:03 19	10:24 (E13) 18:05 19	06:28 19:59 21:10	05:15 22:02 22:03	04:28 22:02 22:03	04:38 21:11 20:00	05:31 21:11 20:00	06:33 18:32 16:19	07:34 16:19 15:39	07:40 15:39 15:39	08:37 15:39 15:39
10	08:46 16:01 38	10:08 (E13) 17:05 11	10:28 (E13) 18:07 11	06:25 19:59 21:12	05:13 22:03 22:02	04:28 22:03 22:02	04:39 21:08 20:00	05:33 21:08 20:00	06:35 18:30 16:17	07:36 16:17 15:39	07:42 15:39 15:39	08:38 15:39 15:39
11	08:45 16:03 39	10:08 (E13) 17:08 12	10:39 (E13) 18:07 12	06:45 19:59 21:16	05:11 22:04 22:01	04:27 22:04 22:01	04:41 21:06 20:00	05:35 21:06 20:00	06:37 18:27 16:15	07:38 16:15 15:38	07:44 15:38 15:38	08:39 15:38 15:38
12	08:44 16:04 40	10:08 (E13) 17:10 13	10:40 (E13) 18:07 13	06:42 19:59 21:18	05:08 22:05 22:00	04:27 22:05 22:00	04:42 21:04 20:00	05:37 21:04 20:00	06:39 18:25 16:13	07:40 16:13 15:38	07:46 15:38 15:38	08:40 15:38 15:38
13	08:43 16:06 41	10:07 (E13) 17:12 14	10:41 (E13) 18:07 14	06:40 19:59 21:20	05:06 22:06 22:01	04:26 22:06 22:01	04:43 21:59 21:02	05:39 21:59 21:02	06:41 18:22 16:11	07:42 16:11 15:38	07:49 15:38 15:38	08:42 15:38 15:38
14	08:42 16:08 41	10:08 (E13) 17:14 15	10:42 (E13) 18:07 15	06:37 19:59 21:22	05:04 22:07 22:01	04:26 22:07 22:01	04:45 21:58 20:59	05:41 21:58 20:59	06:43 18:19 16:09	07:44 16:09 15:38	07:51 15:38 15:38	08:43 15:38 15:38
15	08:41 16:10 42	10:07 (E13) 17:17 16	10:43 (E13) 18:07 16	06:34 19:59 21:24	05:03 22:07 22:01	04:26 22:07 22:01	04:46 21:57 20:57	05:43 21:57 20:57	06:45 18:17 16:08	07:46 16:08 15:38	07:53 15:38 15:38	08:44 15:38 15:38
16	08:40 16:12 42	10:08 (E13) 17:19 17	10:44 (E13) 18:07 17	06:32 19:59 21:25	05:01 22:08 22:01	04:25 22:08 22:01	04:48 21:55 20:54	05:45 21:55 20:54	06:47 18:14 16:06	07:48 16:06 15:38	07:55 15:38 15:38	08:45 15:38 15:38
17	08:39 16:14 43	10:08 (E13) 17:21 18	10:45 (E13) 18:07 18	06:29 19:59 21:26	05:00 22:09 22:01	04:25 22:09 22:01	04:49 21:54 20:52	05:47 21:54 20:52	06:49 18:12 16:04	07:50 16:04 15:38	07:57 15:38 15:38	08:46 15:38 15:38
18	08:37 16:16 43	10:08 (E13) 17:23 19	10:46 (E13) 18:07 19	06:26 19:59 21:28	05:00 22:09 22:01	04:25 22:09 22:01	04:51 21:52 20:50	05:49 21:52 20:50	06:51 18:09 16:02	07:52 16:02 15:38	07:59 15:38 15:38	08:46 15:38 15:38
19	08:36 16:18 44	10:08 (E13) 17:26 20	10:47 (E13) 18:07 20	06:24 19:59 21:31	05:00 22:09 22:01	04:25 22:09 22:01	04:52 21:51 20:47	05:51 21:51 20:47	06:53 18:07 16:01	07:55 16:01 15:38	08:01 15:38 15:38	08:47 15:38 15:38
20	08:35 16:20 44	10:09 (E13) 17:28 21	10:48 (E13) 18:07 21	06:21 19:59 21:33	05:00 22:09 22:01	04:25 22:09 22:01	04:54 21:49 20:45	05:53 21:49 20:45	06:55 18:04 15:59	07:57 15:59 15:39	08:03 15:39 15:39	08:48 15:39 15:39
21	08:33 16:22 45	10:08 (E13) 17:30 22	10:49 (E13) 18:07 22	06:18 19:59 21:35	05:00 22:09 22:01	04:25 22:09 22:01	04:56 21:48 20:42	05:55 21:48 20:42	06:57 18:02 15:58	07:59 15:58 15:39	08:05 15:39 15:39	08:48 15:39 15:39
22	08:32 16:24 45	10:08 (E13) 17:32 23	10:50 (E13) 18:07 23	06:16 19:59 21:37	05:00 22:09 22:01	04:25 22:09 22:01	04:57 21:46 20:40	05:57 21:46 20:40	06:59 17:59 15:56	08:01 15:56 15:39	08:07 15:39 15:39	08:49 15:39 15:39
23	08:30 16:26 45	10:08 (E13) 17:34 24	10:51 (E13) 18:07 24	06:13 19:59 21:38	05:00 22:09 22:01	04:26 22:09 22:01	04:59 21:45 20:37	05:59 21:45 20:37	07:01 17:57 15:55	08:03 15:55 15:44	08:09 15:44 15:44	08:50 15:44 15:44
24	08:29 16:28 44	10:08 (E13) 17:37 25	10:52 (E13) 18:07 25	06:10 19:59 21:40	05:00 22:09 22:01	04:26 22:09 22:01	05:01 21:43 20:35	06:01 21:43 20:35	07:03 17:55 15:53	08:11 15:53 15:43	08:17 15:43 15:43	08:51 15:43 15:43
25	08:27 16:30 44	10:10 (E13) 17:39 26	10:53 (E13) 18:07 26	06:07 19:59 21:42	05:00 22:09 22:01	04:26 22:09 22:01	05:03 21:41 20:32	06:03 21:41 20:32	07:05 17:52 15:52	08:13 15:52 15:43	08:19 15:43 15:43	08:50 15:43 15:43
26	08:26 16:32 44	10:10 (E13) 17:41 27	10:54 (E13) 18:07 27	06:05 19:59 21:44	05:00 22:09 22:01	04:27 22:09 22:01	05:04 21:39 20:30	06:05 21:39 20:30	07:07 17:50 15:51	08:15 15:51 15:42	08:21 15:42 15:42	08:51 15:42 15:42
27	08:24 16:34 44	10:10 (E13) 17:43 28	10:54 (E13) 18:07 28	06:02 19:59 21:46	05:00 22:09 22:01	04:27 22:09 22:01	05:06 21:38 20:27	06:07 21:38 20:27	07:09 17:47 15:49	08:17 15:49 15:42	08:23 15:42 15:42	08:51 15:42 15:42
28	08:22 16:36 43	10:11 (E13) 17:45 29	10:55 (E13) 18:07 29	05:59 19:59 21:48	05:00 22:09 22:01	04:28 22:09 22:01	05:08 21:36 20:24	06:09 21:36 20:24	07:11 17:45 15:48	08:19 15:48 15:41	08:25 15:41 15:41	08:51 15:41 15:41
29	08:20 16:39 43	10:11 (E13) 17:47 30	10:55 (E13) 18:07 30	05:57 19:59 21:50	05:00 22:09 22:01	04:29 22:09 22:01	05:10 21:34 20:22	06:11 21:34 20:22	07:13 17:43 15:47	08:21 15:47 15:41	08:27 15:41 15:41	08:51 15:41 15:41
30	08:18 16:41 42	10:12 (E13) 17:49 31	10:56 (E13) 18:07 31	05:54 19:59 21:52	05:00 22:09 22:01	04:30 22:09 22:01	05:12 21:32 20:19	06:13 21:32 20:19	07:15 17:41 15:46	08:23 15:46 15:40	08:29 15:40 15:40	08:51 15:40 15:40
31	08:17 16:43 41	10:13 (E13) 17:51 31	10:57 (E13) 18:07 31	05:51 19:59 21:54	05:00 22:09 22:01	04:31 22:09 22:01	05:14 21:30 20:17	06:15 21:30 20:17	07:20 17:38 15:47	08:25 15:47 15:41	08:31 15:41 15:41	08:51 15:41 15:41
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	1249	297								1165		966
Sun reduction	0.13	0.20								0.08		0.07
Oper. time red.	0.98	0.98								0.98		0.98
Wind dir. red.	0.61	0.61								0.61		0.61
Total reduction	0.08	0.12								0.05		0.04
Total, real	100	36								58		41

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	08:51 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:42 (E13) 15:45
2	08:50 15:49	08:13 16:47	09:13 (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	09:13 (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	08:42 (E13) 15:43
4	08:50 15:52	08:09 16:52	09:13 (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	08:42 (E13) 15:42
5	08:49 15:53	08:07 16:54	09:13 (E13) 17:56	07:00 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	08:42 (E13) 15:42
6	08:49 15:55	08:05 16:56	09:12 (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	08:43 (E13) 15:41
7	08:48 15:56	08:03 16:59	09:12 (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	08:43 (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	05:17 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:44 (E13) 15:40
9	08:47 15:59	07:58 17:03	09:12 (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 19:53	07:34 18:32	07:40 16:19	08:44 (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	05:13 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:45 (E13) 15:39
11	08:45 16:03	07:54 17:08	09:13 (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	08:46 (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	08:46 (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	08:48 (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	08:49 (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	08:50 (E13) 15:38
16	08:40 16:12	07:43 17:19	09:14 (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	08:52 (E13) 15:38
17	08:39 16:14	07:40 17:21	09:15 (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	08:53 (E13) 15:38
18	08:37 16:16	07:38 17:23	09:16 (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	08:56 (E13) 15:38
19	08:36 16:18	07:36 17:26	09:18 (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	08:59 (E13) 15:38
20	08:35 16:20	07:33 17:28	09:19 (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 16:00	09:01 (E13) 15:39
21	08:33 16:22	07:31 17:30	09:21 (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 16:02	09:03 (E13) 15:39
22	08:32 16:24	07:28 17:32	09:23 (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 16:00	09:04 (E13) 15:39
23	08:30 16:26	07:26 17:36	09:27 (E13) 18:36	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 16:00	09:07 (E13) 15:40
24	08:29 16:28	07:23 17:39	09:37 (E13) 18:41	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 16:00	09:09 (E13) 15:41
25	08:27 16:30	07:21 17:42	09:39 (E13) 18:43	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 16:00	09:11 (E13) 15:41
26	08:26 16:32	07:18 17:43	09:42 (E13) 18:47	06:05 20:45	05:44 21:43	04:44 22:10	05:04 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 16:00	09:13 (E13) 15:42
27	08:24 16:34	07:16 17:45	09:43 (E13) 18:49	06:02 20:47	05:42 21:45	04:42 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:47	08:17 16:00	09:15 (E13) 15:43
28	08:22 16:36	07:13 17:46	09:45 (E13) 18:51	05:59 20:49	05:40 21:47	04:41 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:19 16:00	09:17 (E13) 15:44
29	08:20 16:39	07:11 17:48	09:46 (E13) 18:53	05:57 20:51	05:37 21:48	04:39 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 16:00	09:19 (E13) 15:45
30	08:18 16:41	07:03 17:51	09:48 (E13) 19:00	05:54 20:54	05:35 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:22 16:00	09:21 (E13) 15:46
31	08:17 16:43	07:01 17:55	09:49 (E13) 19:05	05:51 20:53	05:37 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:20 18:38	08:19 17:42	08:24 16:00	09:23 (E13) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	232	812								426	629	
Sun reduction	0.13	0.20								0.26	0.08	
Oper. time red.	0.98	0.98								0.98	0.98	
Wind dir. red.	0.59	0.59								0.59	0.59	
Total reduction	0.08	0.12								0.15	0.05	
Total, real	18	95								64	30	

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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		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		07:01 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:22 21:20	06:25 20:03	07:25 18:43	07:31 16:27
6	08:49 15:55	08:05 16:56	08:34 (E13) 10 08:44 (E13)	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
7	08:48 15:56	08:03 16:59	08:32 (E13) 14 08:46 (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	08:31 (E13) 17 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	08:29 (E13) 20 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 18:32	07:40 16:19
10	08:46 16:01	07:56 17:05	08:28 (E13) 22 08:50 (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	08:27 (E13) 23 08:51 (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	08:27 (E13) 24 08:51 (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	07:46 16:13
13	08:43 16:06	07:50 17:12	08:27 (E13) 25 08:52 (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	08:27 (E13) 24 08:51 (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	08:27 (E13) 25 08:52 (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	08:27 (E13) 24 08:51 (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	08:28 (E13) 23 08:51 (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	08:28 (E13) 22 08:50 (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	07:52 18:09	07:59 16:02
19	08:36 16:18	07:36 17:26	08:29 (E13) 20 08:49 (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	08:30 (E13) 18 08:48 (E13)	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	08:32 (E13) 14 08:46 (E13)	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	08:34 (E13) 9 08:43 (E13)	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 18:38	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 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	08:09 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			06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47
30	08:19 16:41			06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 16:41	08:22 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	08:18 16:20	08:23 15:47
Potential sun hours	235	266		366	426	508	529	529	469	385	324	247
Total, worst case			334								253	81
Sun reduction			0.20								0.26	0.08
Oper. time red.			0.98								0.98	0.98
Wind dir. red.			0.61								0.61	0.61
Total reduction			0.12								0.16	0.05
Total, real			40								39	4

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 32	10:08 (E13) 16:45 17:48	08:15 16:45 17:48	07:11 16:45 17:48	06:49 16:45 17:48	05:33 16:45 17:48	04:36 16:45 17:48	04:30 16:45 17:48	05:16 16:45 17:48	06:17 16:45 17:48	07:17 16:45 17:48	08:24 16:45 17:48
2	08:51 15:49 33	10:08 (E13) 16:47 17:50	08:13 16:47 17:50	07:08 16:47 17:50	06:46 16:47 17:50	05:30 16:47 17:50	04:35 16:47 17:50	04:31 16:47 17:50	05:18 16:47 17:50	06:19 16:47 17:50	07:19 16:47 17:50	08:26 16:47 17:50
3	08:50 15:51 34	10:08 (E13) 16:50 17:52	08:11 16:50 17:52	07:06 16:50 17:52	06:43 16:50 17:52	05:28 16:50 17:52	04:34 16:50 17:52	04:32 16:50 17:52	05:19 16:50 17:52	06:21 16:50 17:52	07:21 16:50 17:52	08:28 16:50 17:52
4	08:50 15:52 34	10:08 (E13) 16:52 17:54	08:09 16:52 17:54	07:03 16:52 17:54	06:41 16:52 17:54	05:26 16:52 17:54	04:33 16:52 17:54	04:33 16:52 17:54	05:21 16:52 17:54	06:23 16:52 17:54	07:23 16:52 17:54	08:29 16:52 17:54
5	08:49 15:53 34	10:09 (E13) 16:54 17:56	08:07 16:54 17:56	07:00 16:54 17:56	06:38 16:54 17:56	05:23 16:54 17:56	04:32 16:54 17:56	04:34 16:54 17:56	05:23 16:54 17:56	06:25 16:54 17:56	07:25 16:54 17:56	08:31 16:54 17:56
6	08:49 15:55 33	10:10 (E13) 16:56 17:58	08:05 16:56 17:58	06:58 16:56 17:58	06:35 16:56 17:58	05:21 16:56 17:58	04:31 16:56 17:58	04:35 16:56 17:58	05:25 16:56 17:58	06:27 16:56 17:58	07:27 16:56 17:58	08:32 16:56 17:58
7	08:48 15:56 33	10:11 (E13) 16:59 18:00	08:03 16:59 18:00	06:55 16:59 18:00	06:33 16:59 18:00	05:19 16:59 18:00	04:30 16:59 18:00	04:36 16:59 18:00	05:27 16:59 18:00	06:29 16:59 18:00	07:30 16:59 18:00	08:34 16:59 18:00
8	08:48 15:58 34	10:11 (E13) 17:01 18:03	08:01 17:01 18:03	06:53 17:01 18:03	06:30 17:01 18:03	05:17 17:01 18:03	04:29 17:01 18:03	04:37 17:01 18:03	05:29 17:01 18:03	06:31 17:01 18:03	07:32 17:01 18:03	08:35 17:01 18:03
9	08:47 15:59 33	10:11 (E13) 17:03 18:05	07:58 17:03 18:05	06:50 17:03 18:05	06:28 17:03 18:05	05:15 17:03 18:05	04:28 17:03 18:05	04:38 17:03 18:05	05:31 17:03 18:05	06:33 17:03 18:05	07:34 17:03 18:05	08:37 17:03 18:05
10	08:46 16:01 34	10:11 (E13) 17:05 18:07	07:56 17:05 18:07	06:47 17:05 18:07	06:25 17:05 18:07	05:13 17:05 18:07	04:28 17:05 18:07	04:39 17:05 18:07	05:33 17:05 18:07	06:35 17:05 18:07	07:36 17:05 18:07	08:38 17:05 18:07
11	08:45 16:03 33	10:12 (E13) 17:08 18:09	07:54 17:08 18:09	06:45 17:08 18:09	06:22 17:08 18:09	05:11 17:08 18:09	04:27 17:08 18:09	04:41 17:08 18:09	05:35 17:08 18:09	06:37 17:08 18:09	07:38 17:08 18:09	08:39 17:08 18:09
12	08:44 16:04 33	10:13 (E13) 17:10 18:11	07:52 17:10 18:11	06:42 17:10 18:11	06:20 17:10 18:11	05:08 17:10 18:11	04:27 17:10 18:11	04:42 17:10 18:11	05:37 17:10 18:11	06:39 17:10 18:11	07:40 17:10 18:11	08:40 17:10 18:11
13	08:43 16:06 33	10:12 (E13) 17:12 18:13	07:50 17:12 18:13	06:40 17:12 18:13	06:17 17:12 18:13	05:06 17:12 18:13	04:26 17:12 18:13	04:43 17:12 18:13	05:39 17:12 18:13	06:41 17:12 18:13	07:42 17:12 18:13	08:42 17:12 18:13
14	08:42 16:08 33	10:13 (E13) 17:14 18:15	07:47 17:14 18:15	06:37 17:14 18:15	06:14 17:14 18:15	05:04 17:14 18:15	04:26 17:14 18:15	04:45 17:14 18:15	05:41 17:14 18:15	06:43 17:14 18:15	07:44 17:14 18:15	08:43 17:14 18:15
15	08:41 16:10 32	10:14 (E13) 17:17 18:18	07:45 17:17 18:18	06:34 17:17 18:18	06:12 17:17 18:18	05:03 17:17 18:18	04:26 17:17 18:18	04:46 17:17 18:18	05:43 17:17 18:18	06:45 17:17 18:18	07:46 17:17 18:18	08:44 17:17 18:18
16	08:40 16:12 32	10:14 (E13) 17:19 18:20	07:43 17:19 18:20	06:32 17:19 18:20	06:09 17:19 18:20	05:01 17:19 18:20	04:25 17:19 18:20	04:48 17:19 18:20	05:45 17:19 18:20	06:47 17:19 18:20	07:48 17:19 18:20	08:45 17:19 18:20
17	08:39 16:14 30	10:16 (E13) 17:21 18:22	07:40 17:21 18:22	06:29 17:21 18:22	06:07 17:21 18:22	05:00 17:21 18:22	04:25 17:21 18:22	04:49 17:21 18:22	05:47 17:21 18:22	06:49 17:21 18:22	07:50 17:21 18:22	08:46 17:21 18:22
18	08:38 16:16 30	10:16 (E13) 17:23 18:24	07:38 17:23 18:24	06:26 17:23 18:24	06:04 17:23 18:24	05:00 17:23 18:24	04:25 17:23 18:24	04:51 17:23 18:24	05:49 17:23 18:24	06:51 17:23 18:24	07:52 17:23 18:24	08:46 17:23 18:24
19	08:36 16:18 29	10:16 (E13) 17:26 18:26	07:36 17:26 18:26	06:24 17:26 18:26	06:02 17:26 18:26	05:00 17:26 18:26	04:25 17:26 18:26	04:52 17:26 18:26	05:51 17:26 18:26	06:53 17:26 18:26	07:55 17:26 18:26	08:47 17:26 18:26
20	08:35 16:20 28	10:18 (E13) 17:28 18:28	07:33 17:28 18:28	06:21 17:28 18:28	05:59 17:28 18:28	05:00 17:28 18:28	04:25 17:28 18:28	04:54 17:28 18:28	05:53 17:28 18:28	06:55 17:28 18:28	07:57 17:28 18:28	08:48 17:28 18:28
21	08:33 16:22 27	10:18 (E13) 17:30 18:30	07:31 17:30 18:30	06:18 17:30 18:30	05:57 17:30 18:30	05:00 17:30 18:30	04:25 17:30 18:30	04:56 17:30 18:30	05:55 17:30 18:30	06:57 17:30 18:30	07:59 17:30 18:30	08:49 17:30 18:30
22	08:32 16:24 25	10:19 (E13) 17:32 18:32	07:28 17:32 18:32	06:16 17:32 18:32	05:54 17:32 18:32	05:00 17:32 18:32	04:25 17:32 18:32	04:57 17:32 18:32	05:57 17:32 18:32	06:59 17:32 18:32	08:01 17:32 18:32	08:49 17:32 18:32
23	08:30 16:26 23	10:20 (E13) 17:34 18:34	07:26 17:34 18:34	06:13 17:34 18:34	05:52 17:34 18:34	05:00 17:34 18:34	04:26 17:34 18:34	04:59 17:34 18:34	05:59 17:34 18:34	07:01 17:34 18:34	08:03 17:34 18:34	08:50 17:34 18:34
24	08:29 16:28 20	10:23 (E13) 17:37 18:36	07:23 17:37 18:36	06:10 17:37 18:36	05:49 17:37 18:36	05:00 17:37 18:36	04:26 17:37 18:36	05:01 17:37 18:36	06:01 17:37 18:36	07:03 17:37 18:36	08:05 17:37 18:36	08:51 17:37 18:36
25	08:27 16:30 18	10:24 (E13) 17:39 18:38	07:21 17:39 18:38	06:07 17:39 18:38	05:47 17:39 18:38	05:00 17:39 18:38	04:26 17:39 18:38	05:03 17:39 18:38	06:03 17:39 18:38	07:05 17:39 18:38	08:07 17:39 18:38	08:53 17:39 18:38
26	08:26 16:32 14	10:26 (E13) 17:41 18:41	07:18 17:41 18:41	06:05 17:41 18:41	05:44 17:41 18:41	05:00 17:41 18:41	04:27 17:41 18:41	05:04 17:41 18:41	06:05 17:41 18:41	07:07 17:41 18:41	08:09 17:41 18:41	08:55 17:41 18:41
27	08:24 16:34 6	10:30 (E13) 17:43 18:43	07:16 17:43 18:43	06:02 17:43 18:43	05:42 17:43 18:43	05:00 17:43 18:43	04:27 17:43 18:43	05:06 17:43 18:43	06:07 17:43 18:43	07:09 17:43 18:43	08:11 17:43 18:43	08:57 17:43 18:43
28	08:22 16:36 29	10:36 (E13) 17:45 18:45	07:13 17:45 18:45	05:59 17:45 18:45	05:40 17:45 18:45	05:00 17:45 18:45	04:28 17:45 18:45	05:08 17:45 18:45	06:09 17:45 18:45	07:11 17:45 18:45	08:13 17:45 18:45	08:59 17:45 18:45
29	08:20 16:39 30	10:42 (E13) 17:49 18:49	07:11 17:49 18:49	05:57 17:49 18:49	05:37 17:49 18:49	05:00 17:49 18:49	04:29 17:49 18:49	05:10 17:49 18:49	06:11 17:49 18:49	07:13 17:49 18:49	08:15 17:49 18:49	09:01 17:49 18:49
30	08:18 16:41 31	10:43 (E13) 17:51 18:51	07:10 17:51 18:51	05:56 17:51 18:51	05:35 17:51 18:51	05:00 17:51 18:51	04:29 17:51 18:51	05:12 17:51 18:51	06:13 17:51 18:51	07:15 17:51 18:51	08:17 17:51 18:51	09:03 17:51 18:51
31	08:17 16:43	10:43 (E13)	07:10	05:56	05:35	05:00	04:29	05:12	06:13	07:15	08:17	09:03
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	780											1014
Sun reduction	0.13											0.07
Oper. time red.	0.98											0.98
Wind dir. red.	0.61											0.61
Total reduction	0.08											0.04
Total, real	62											43

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Anna / anna@environment.lv  
Calculated:  
25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 34	10:12 (E13) 10:46 (E13) 16:45	08:15 10:23 (E13) 17:11	06:49 10:54 (E13) 17:48	05:33 19:53 20:55	04:36 21:53 22:09	04:30 21:28 20:14	05:16 21:28 18:54	06:17 20:14 16:36	07:17 20:19 16:34	07:23 16:27 15:45	08:24 15:45 39
2	08:50 15:49 35	10:12 (E13) 10:47 (E13) 16:47	08:13 10:24 (E13) 17:50	06:46 10:54 (E13) 17:50	05:30 19:55 20:57	04:35 21:54 22:09	04:31 21:26 20:11	05:18 21:26 18:51	06:19 20:11 16:34	07:19 18:51 16:34	07:25 16:34 15:44	08:26 15:44 39
3	08:50 15:51 35	10:12 (E13) 10:47 (E13) 16:50	08:11 10:26 (E13) 17:52	06:43 10:52 (E13) 17:52	05:28 19:57 21:00	04:34 21:55 22:08	04:32 21:24 20:09	05:19 21:24 18:48	06:21 20:09 16:32	07:21 18:48 16:32	07:27 16:32 15:43	08:28 15:43 39
4	08:50 15:52 36	10:12 (E13) 10:48 (E13) 16:52	08:09 10:28 (E13) 17:54	06:41 10:51 (E13) 17:54	05:26 19:59 21:02	04:33 21:57 22:07	04:33 21:22 20:06	05:21 21:22 18:46	06:23 20:06 16:29	07:23 18:46 16:29	07:29 16:29 15:42	08:29 15:42 38
5	08:49 15:53 36	10:13 (E13) 10:49 (E13) 16:54	08:07 10:30 (E13) 17:56	06:38 10:49 (E13) 17:56	05:23 20:01 21:04	04:32 21:58 22:07	04:34 21:20 20:03	05:23 21:20 18:43	06:25 20:03 16:27	07:25 18:43 16:27	07:31 16:27 15:42	08:31 15:42 37
6	08:49 15:55 37	10:13 (E13) 10:50 (E13) 16:56	08:05 10:33 (E13) 17:58	06:35 10:45 (E13) 17:58	05:21 20:03 21:06	04:31 21:59 22:06	04:35 21:17 20:01	05:25 21:17 18:40	06:27 20:01 16:25	07:27 18:40 16:25	07:33 16:25 15:41	08:32 15:41 37
7	08:48 15:56 37	10:13 (E13) 10:50 (E13) 16:59	08:03 10:33 (E13) 17:59	06:33 10:45 (E13) 17:59	05:19 20:05 21:08	04:30 21:58 22:05	04:36 21:15 20:01	05:27 21:15 18:58	06:29 20:01 16:23	07:30 18:58 16:23	07:36 16:23 15:40	08:34 15:40 36
8	08:48 15:58 38	10:13 (E13) 10:51 (E13) 17:01	08:01 10:35 (E13) 17:01	06:30 10:48 (E13) 17:01	05:17 20:08 21:10	04:37 21:22 22:04	05:29 21:13 20:03	06:31 21:13 18:55	06:31 20:03 16:21	07:32 18:55 16:21	07:38 16:21 15:40	08:35 15:40 36
9	08:47 15:59 39	10:13 (E13) 10:52 (E13) 17:03	07:58 10:36 (E13) 17:03	06:28 10:48 (E13) 17:03	05:15 20:10 21:12	04:38 21:22 22:03	05:31 21:11 20:03	06:33 21:11 18:53	06:35 20:03 16:19	07:34 18:53 16:19	07:40 16:19 15:39	08:37 15:39 35
10	08:46 16:01 39	10:13 (E13) 10:52 (E13) 17:05	07:56 10:36 (E13) 17:05	06:25 10:48 (E13) 17:05	05:13 20:12 21:14	04:39 21:23 22:02	05:33 21:08 20:03	06:35 21:08 18:50	06:35 20:03 16:17	07:36 18:50 16:17	07:42 16:17 15:39	08:38 15:39 35
11	08:45 16:03 39	10:14 (E13) 10:53 (E13) 17:08	07:54 10:37 (E13) 17:08	06:22 10:49 (E13) 17:08	05:11 20:14 21:16	04:41 21:24 22:01	05:35 21:06 20:03	06:37 21:06 18:52	06:37 20:03 16:15	07:38 18:52 16:15	07:44 16:15 15:38	08:39 15:38 34
12	08:44 16:04 40	10:14 (E13) 10:54 (E13) 17:10	07:52 10:38 (E13) 17:10	06:20 10:50 (E13) 17:10	05:08 20:16 21:18	04:42 21:25 22:00	05:37 21:04 20:03	06:39 21:04 18:52	06:39 20:03 16:13	07:40 18:52 16:13	07:46 16:13 15:38	08:40 15:38 34
13	08:43 16:06 41	10:13 (E13) 10:54 (E13) 17:12	07:49 10:39 (E13) 17:12	06:17 10:51 (E13) 17:12	05:06 20:18 21:20	04:43 21:26 22:06	05:39 21:59 21:02	06:41 21:02 18:52	06:41 20:03 16:11	07:42 18:52 16:11	07:49 16:11 15:38	08:42 15:38 34
14	08:42 16:08 41	10:14 (E13) 10:55 (E13) 17:14	07:47 10:40 (E13) 17:14	06:14 10:52 (E13) 17:14	05:04 20:20 21:22	04:26 21:27 22:07	05:41 21:58 20:59	06:43 21:58 18:59	06:43 20:59 16:09	07:44 18:59 16:09	07:51 16:09 15:38	08:43 15:38 33
15	08:41 16:10 41	10:14 (E13) 10:55 (E13) 17:17	07:45 10:41 (E13) 17:17	06:12 10:53 (E13) 17:17	05:03 20:22 21:24	04:26 21:27 22:07	05:44 21:57 20:57	06:45 21:57 18:57	06:45 20:57 16:08	07:46 18:57 16:08	07:53 16:08 15:38	08:44 15:38 32
16	08:40 16:12 42	10:14 (E13) 10:56 (E13) 17:19	07:43 10:42 (E13) 17:19	06:10 10:54 (E13) 17:19	05:01 20:24 21:25	04:28 21:25 22:08	05:48 21:55 20:54	06:47 21:55 19:34	06:47 20:54 16:06	07:48 19:34 16:06	07:55 16:06 15:38	08:45 15:38 32
17	08:39 16:14 41	10:15 (E13) 10:56 (E13) 17:21	07:40 10:43 (E13) 17:21	06:09 10:56 (E13) 17:21	05:01 20:26 21:27	04:25 21:27 22:08	05:49 21:54 20:52	06:49 21:54 19:31	06:49 20:52 16:04	07:50 19:31 16:04	07:57 16:04 15:38	08:46 15:38 32
18	08:37 16:16 41	10:15 (E13) 10:56 (E13) 17:23	07:38 10:44 (E13) 17:23	06:06 10:57 (E13) 17:23	04:57 20:28 21:29	04:25 21:29 22:09	05:49 21:52 20:50	06:51 21:52 19:29	06:51 20:50 16:02	07:52 19:29 16:02	07:59 16:02 15:38	08:46 15:38 31
19	08:36 16:18 41	10:15 (E13) 10:56 (E13) 17:26	07:36 10:45 (E13) 17:26	06:04 10:58 (E13) 17:26	04:55 20:30 21:31	04:25 21:31 22:09	05:51 21:52 20:47	06:53 21:52 19:26	06:53 20:47 16:01	07:55 19:26 16:01	08:01 16:01 15:38	08:47 15:38 32
20	08:35 16:20 41	10:16 (E13) 10:57 (E13) 17:28	07:33 10:46 (E13) 17:28	06:02 10:59 (E13) 17:28	04:53 20:33 21:33	04:25 21:33 22:10	05:53 21:49 20:45	06:55 21:49 19:23	06:55 20:45 15:59	07:57 19:23 15:59	08:03 15:59 15:39	08:48 15:39 32
21	08:33 16:22 41	10:16 (E13) 10:57 (E13) 17:30	07:31 10:47 (E13) 17:30	06:01 10:59 (E13) 17:30	04:52 20:35 21:35	04:25 21:35 22:10	05:55 21:48 20:42	06:57 21:48 19:20	06:57 20:42 15:58	07:59 19:20 15:58	08:05 15:58 15:39	08:48 15:39 32
22	08:32 16:24 41	10:16 (E13) 10:57 (E13) 17:32	07:28 10:48 (E13) 17:32	06:00 10:59 (E13) 17:32	04:50 20:37 21:37	04:25 21:37 22:10	05:57 21:46 20:40	06:59 21:46 19:18	06:59 20:40 15:56	08:01 19:18 15:56	08:07 15:56 15:39	08:49 15:39 32
23	08:30 16:26 41	10:16 (E13) 10:57 (E13) 17:34	07:26 10:49 (E13) 17:34	06:00 10:59 (E13) 17:34	04:48 20:39 21:38	04:26 21:38 22:10	05:59 21:45 20:37	07:01 21:45 19:15	07:01 20:37 15:55	08:03 19:15 15:55	08:09 15:55 15:39	08:50 15:39 32
24	08:29 16:28 41	10:17 (E13) 10:58 (E13) 17:37	07:23 10:50 (E13) 17:37	06:00 10:59 (E13) 17:37	04:47 20:41 21:40	04:26 21:40 22:10	06:01 21:43 20:35	07:03 21:43 19:12	07:03 20:35 15:53	08:05 19:12 15:53	08:11 15:53 15:41	08:51 15:41 32
25	08:27 16:30 40	10:18 (E13) 10:58 (E13) 17:39	07:21 10:51 (E13) 17:39	06:00 10:59 (E13) 17:39	04:45 20:43 21:42	04:25 21:42 22:10	06:03 21:41 20:32	07:05 21:42 19:10	07:05 20:32 15:52	08:07 19:10 15:52	08:13 15:52 15:41	08:50 15:41 31
26	08:26 16:32 40	10:18 (E13) 10:58 (E13) 17:41	07:18 10:52 (E13) 17:41	06:00 10:59 (E13) 17:41	04:44 20:45 21:43	04:27 21:43 22:10	06:05 21:39 20:30	07:07 21:39 19:07	07:07 20:30 15:51	08:15 19:07 15:51	08:15 15:51 15:42	08:51 15:42 32
27	08:24 16:34 39	10:19 (E13) 10:59 (E13) 17:43	07:16 10:53 (E13) 17:43	06:00 10:59 (E13) 17:43	04:42 20:47 21:45	04:27 21:45 22:10	06:06 21:38 20:27	07:09 21:38 19:04	07:09 20:27 15:49	08:17 19:04 15:49	08:17 15:49 15:41	08:51 15:41 32
28	08:22 16:36 37	10:20 (E13) 10:59 (E13) 17:45	07:13 10:54 (E13) 17:45	06:00 10:59 (E13) 17:45	04:41 20:49 21:47	04:28 21:47 22:10	06:09 21:36 20:24	07:11 21:36 19:02	07:11 20:24 15:48	08:19 19:02 15:48	08:19 15:48 15:44	08:51 15:44 33
29	08:20 16:39 37	10:20 (E13) 10:59 (E13) 17:47	07:11 10:54 (E13) 17:47	06:00 10:59 (E13) 17:47	04:40 20:51 21:48	04:29 21:48 22:10	06:11 21:34 20:22	07:13 21:34 18:59	07:13 20:22 16:43	08:21 18:59 16:43	08:21 16:43 15:45	08:51 15:45 33
30	08:18 16:41 36	10:21 (E13) 10:59 (E13) 17:49	07:09 10:54 (E13) 17:49	06:00 10:59 (E13) 17:49	04:38 20:53 21:50	04:29 21:50 22:09	06:13 21:32 20:19	07:15 21:32 18:56	07:15 20:19 16:40	08:22 18:56 16:40	08:22 16:40 15:46	08:51 15:46 34
31	08:17 16:43 34	10:22 (E13) 10:56 (E13)	07:08 10:54 (E13)	06:00 10:59 (E13)	04:37 21:51	04:29 21:51	06:15 21:30	07:20 21:30	07:20 21:30	08:23 16:38	08:23 16:38	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	1201	141								943		1054
Sun reduction	0.13	0.20								0.08		0.07
Oper. time red.	0.98	0.98								0.98		0.98
Wind dir. red.	0.61	0.61								0.61		0.61
Total reduction	0.08	0.12								0.05		0.04
Total, real	96	17								47		44

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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		09:41 (E13)	08:15	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23	08:24	09:25 (E13)
	15:48	22	10:03 (E13)	16:45	17:48	19:53	20:55	21:53	22:09	21:28	20:14	18:54	16:36	15:45	28 09:53 (E13)
2	08:51		09:41 (E13)	08:13	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26	09:25 (E13)
	15:49	24	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	28 09:53 (E13)
3	08:50		09:41 (E13)	08:11	07:06	06:43	05:28	04:34	04:32	05:19	06:21	07:21	07:27	08:28	09:26 (E13)
	15:51	24	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	27 09:53 (E13)
4	08:50		09:41 (E13)	08:09	07:03	06:41	05:26	04:33	04:33	05:21	06:23	07:23	07:29	08:29	09:26 (E13)
	15:52	24	10:05 (E13)	16:52	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:46	16:29	15:42	27 09:53 (E13)
5	08:49		09:42 (E13)	08:07	07:01	06:38	05:23	04:32	04:34	05:23	06:25	07:25	07:31	08:31	09:27 (E13)
	15:53	25	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	26 09:53 (E13)
6	08:49		09:42 (E13)	08:05	06:58	06:35	05:21	04:31	04:35	05:25	06:27	07:27	07:33	08:32	09:28 (E13)
	15:55	25	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	26 09:54 (E13)
7	08:48		09:42 (E13)	08:03	06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:30	07:36	08:34	09:28 (E13)
	15:56	26	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	25 09:53 (E13)
8	08:48		09:42 (E13)	08:01	06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:32	07:38	08:35	09:29 (E13)
	15:58	27	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	25 09:54 (E13)
9	08:47		09:42 (E13)	07:58	06:50	06:28	05:15	04:28	04:38	05:31	06:33	07:34	07:40	08:37	09:30 (E13)
	15:59	27	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	24 09:54 (E13)
10	08:46		09:42 (E13)	07:56	06:47	06:25	05:13	04:28	04:39	05:33	06:35	07:36	07:42	08:38	09:31 (E13)
	16:01	28	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	23 09:54 (E13)
11	08:45		09:43 (E13)	07:54	06:45	06:22	05:11	04:27	04:41	05:35	06:37	07:38	07:44		09:31 (E13)
	16:03	28	10:11 (E13)	17:08	18:09	20:14	21:16	22:04	22:01	21:06	19:47	18:27	16:15	5 09:36 (E13)	15:38 23 09:54 (E13)
12	08:44		09:43 (E13)	07:52	06:42	06:20	05:08	04:27	04:42	05:37	06:39	07:40	07:46		09:27 (E13)
	16:04	29	10:12 (E13)	17:10	18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:25	16:13	12 09:39 (E13)	15:38 22 09:54 (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		09:26 (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	16 09:42 (E13)	15:38 21 09:54 (E13)
14	08:42		09:43 (E13)	07:47	06:37	06:15	05:04	04:26	04:45	05:41	06:43	07:44	07:51		09:24 (E13)
	16:08	29	10:12 (E13)	17:14	18:15	20:20	21:22	22:07	21:58	20:59	19:39	18:20	16:09	19 09:43 (E13)	15:38 21 09:54 (E13)
15	08:41		09:44 (E13)	07:45	06:34	06:12	05:03	04:26	04:46	05:43	06:45	07:46	07:53		09:24 (E13)
	16:10	29	10:13 (E13)	17:17	18:18	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:08	21 09:45 (E13)	15:38 20 09:54 (E13)
16	08:40		09:44 (E13)	07:43	06:32	06:09	05:01	04:25	04:48	05:45	06:47	07:48	07:55		09:23 (E13)
	16:12	29	10:13 (E13)	17:19	18:20	20:24	21:26	22:08	21:55	20:54	19:34	18:14	16:06	23 09:46 (E13)	15:38 20 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		09:22 (E13)
	16:14	30	10:14 (E13)	17:21	18:22	20:26	21:27	22:09	21:54	20:52	19:31	18:12	16:04	25 09:47 (E13)	15:38 20 09:55 (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		09:22 (E13)
	16:16	30	10:14 (E13)	17:23	18:24	20:28	21:29	22:09	21:52	20:50	19:29	18:09	16:02	26 09:48 (E13)	15:38 20 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		09:22 (E13)
	16:18	30	10:14 (E13)	17:26	18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:01	27 09:49 (E13)	15:38 19 09:56 (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		09:21 (E13)
	16:20	29	10:14 (E13)	17:28	18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:04	15:59	28 09:49 (E13)	15:39 19 09:56 (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		09:21 (E13)
	16:22	28	10:14 (E13)	17:30	18:30	20:35	21:35	22:10	21:48	20:42	19:20	18:02	15:58	28 09:49 (E13)	15:39 19 09:57 (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		09:22 (E13)
	16:24	28	10:14 (E13)	17:32	18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56	28 09:50 (E13)	15:39 19 09:57 (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		09:21 (E13)
	16:26	27	10:14 (E13)	17:34	18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:55	30 09:51 (E13)	15:40 19 09:58 (E13)
24	08:29		09:48 (E13)	07:23	06:10	05:49	04:47	04:26	05:01	06:01	07:03	08:05	08:11		09:21 (E13)
	16:28	26	10:14 (E13)	17:37	18:36	20:41	21:40	22:10	21:43	20:35	19:12	17:55	15:53	30 09:51 (E13)	15:41 19 09:58 (E13)
25	08:27		09:49 (E13)	07:21	06:07	05:47	04:45	04:26	05:03	06:03	07:05	08:07	08:13		09:21 (E13)
	16:30	25	10:14 (E13)	17:39	18:38	20:43	21:42	22:10	21:41	20:32	19:10	17:52	15:52	30 09:51 (E13)	15:41 19 09:58 (E13)
26	08:26		09:50 (E13)	07:18	06:05	05:44	04:44	04:27	05:04	06:05	07:07	08:09	08:15		09:23 (E13)
	16:32	23	10:13 (E13)	17:41	18:41	20:45	21:43	22:10	21:39	20:30	19:07	17:50	15:51	29 09:52 (E13)	15:42 20 09:59 (E13)
27	08:24		09:51 (E13)	07:16	06:02	05:42	04:42	04:27	05:06	06:07	07:09	08:12	08:17		09:23 (E13)
	16:34	21	10:12 (E13)	17:43	18:43	20:47	21:45	22:10	21:38	20:27	19:04	17:47	15:49	29 09:52 (E13)	15:43 19 09:59 (E13)
28	08:22		09:52 (E13)	07:13	05:59	05:40	04:41	04:28	05:08	06:09	07:11	08:14	08:19		09:23 (E13)
	16:36	20	10:12 (E13)	17:45	18:45	20:49	21:47	22:10	21:36	20:24	19:02	17:45	15:48	29 09:52 (E13)	15:44 20 10:00 (E13)
29	08:20		09:54 (E13)		06:57	05:37	04:40	04:29	05:10	06:11	07:13	08:16	08:21		09:24 (E13)
	16:39	16	10:10 (E13)		19:47	20:51	21:48	22:10	21:34	20:22	18:59	17:43	15:47	29 09:53 (E13)	15:45 21 10:01 (E13)
30	08:19		09:56 (E13)		06:54	05:35	04:38	04:29	05:12	06:13	07:15	08:18	08:22		09:24 (E13)
	16:41	12	10:08 (E13)		19:49	20:53	21:50	22:09	21:32	20:19	18:56	17:41	15:46	29 09:53 (E13)	15:46 21 10:02 (E13)
31	08:17		10:00 (E13)		06:51		04:37		05:14	06:15		07:20	08:24		09:25
	16:43	5	10:05 (E13)		19:51		21:51		21:30	20:17		16:38		15:47	22 10:03 (E13)
Potential sun hours	235			266	366	426	508	529	529	469	385	324	247	216	
Total, worst case		775											493		682
Sun reduction		0.13											0.08		0.07
Oper. time red.		0.98											0.98		0.98
Wind dir. red.		0.61											0.61		0.61
Total reduction		0.08											0.05		0.04
Total, real		62											24		29

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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		10:50 (E5)	08:15	07:11	06:49	05:32	04:35	04:30	05:15	06:17	07:17	07:23	08:24	10:37 (E5)
	15:48	43	11:33 (E5)	16:45	17:47	19:53	20:55	21:53	22:09	21:28	20:14	18:53	16:36	15:45	43 11:20 (E5)
2	08:51		10:51 (E5)	08:13	07:08	06:46	05:30	04:34	04:30	05:17	06:19	07:19	07:25	08:26	10:37 (E5)
	15:49	43	11:34 (E5)	16:47	17:50	19:55	20:57	21:54	22:09	21:26	20:11	18:51	16:34	15:44	43 11:20 (E5)
3	08:50		10:51 (E5)	08:11	07:06	06:43	05:28	04:33	04:31	05:19	06:21	07:21	07:27	08:28	10:38 (E5)
	15:50	43	11:34 (E5)	16:49	17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:31	15:43	43 11:21 (E5)
4	08:50		10:51 (E5)	08:09	07:03	06:41	05:25	04:32	04:32	05:21	06:23	07:23	07:29	08:29	10:37 (E5)
	15:52	43	11:34 (E5)	16:52	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:45	16:29	15:42	43 11:20 (E5)
5	08:49		10:52 (E5)	08:07	07:00	06:38	05:23	04:31	04:33	05:23	06:25	07:25	07:31	08:31	10:38 (E5)
	15:53	43	11:35 (E5)	16:54	17:56	20:01	21:04	21:58	22:07	21:19	20:03	18:43	16:27	15:41	43 11:21 (E5)
6	08:49		10:53 (E5)	08:05	06:58	06:35	05:21	04:30	04:34	05:25	06:27	07:27	07:33	08:32	10:39 (E5)
	15:54	43	11:36 (E5)	16:56	17:58	20:03	21:06	21:59	22:06	21:17	20:01	18:40	16:25	15:41	43 11:22 (E5)
7	08:48		10:53 (E5)	08:03	06:55	06:33	05:19	04:30	04:35	05:27	06:29	07:29	07:36	08:34	10:38 (E5)
	15:56	43	11:36 (E5)	16:58	18:00	20:05	21:08	22:00	22:05	21:15	19:58	18:38	16:23	15:40	43 11:21 (E5)
8	08:48		10:53 (E5)	08:00	06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:31	07:38	08:35	10:39 (E5)
	15:58	43	11:36 (E5)	17:01	18:02	20:07	21:10	22:01	22:04	21:13	19:55	18:35	16:21	15:39	43 11:22 (E5)
9	08:47		10:54 (E5)	07:58	06:50	06:27	05:14	04:28	04:38	05:31	06:33	07:34	07:40	08:37	10:40 (E5)
	15:59	43	11:37 (E5)	17:03	18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:32	16:19	15:39	43 11:23 (E5)
10	08:46		10:54 (E5)	07:56	06:47	06:25	05:12	04:28	04:39	05:33	06:35	07:36	07:42	08:38	10:40 (E5)
	16:01	43	11:37 (E5)	17:05	18:07	20:12	21:14	22:03	22:02	21:08	19:50	18:30	16:17	15:38	43 11:23 (E5)
11	08:45		10:55 (E5)	07:54	06:45	06:22	05:10	04:27	04:40	05:35	06:37	07:38	07:44	08:39	10:40 (E5)
	16:02	42	11:37 (E5)	17:07	18:09	20:14	21:16	22:04	22:01	21:06	19:47	18:27	16:15	15:38	43 11:23 (E5)
12	08:44		10:56 (E5)	07:52	06:42	06:19	05:08	04:26	04:42	05:37	06:39	07:40	07:46	8:40	10:41 (E5)
	16:04	42	11:38 (E5)	17:10	18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:24	16:13	7 10:56 (E5)	15:38 43 11:24 (E5)
13	08:43		10:55 (E5)	07:49	06:39	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:49	8:42	10:42 (E5)
	16:06	42	11:37 (E5)	17:12	18:13	20:18	21:20	22:06	21:59	21:01	19:42	18:22	16:11	15 11:01 (E5)	15:38 42 11:24 (E5)
14	08:42		10:56 (E5)	07:47	06:37	06:14	05:04	04:26	04:44	05:41	06:43	07:44	07:51	8:43	10:42 (E5)
	16:08	42	11:38 (E5)	17:14	18:15	20:20	21:22	22:07	21:58	20:59	19:39	18:19	16:09	20 11:03 (E5)	15:38 43 11:25 (E5)
15	08:41		10:57 (E5)	07:45	06:34	06:12	05:02	04:25	04:46	05:43	06:45	07:46	07:53	8:44	10:42 (E5)
	16:10	42	11:39 (E5)	17:16	18:17	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:07	24 11:05 (E5)	15:37 43 11:25 (E5)
16	08:40		10:57 (E5)	07:43	06:31	06:09	05:00	04:25	04:47	05:45	06:47	07:48	07:55	8:45	10:43 (E5)
	16:12	41	11:38 (E5)	17:19	18:19	20:24	21:25	22:08	21:55	20:54	19:34	18:14	16:06	27 11:07 (E5)	15:37 42 11:25 (E5)
17	08:39		10:59 (E5)	07:40	06:29	06:07	04:58	04:25	04:49	05:47	06:49	07:50	07:57	8:46	10:44 (E5)
	16:13	40	11:39 (E5)	17:21	18:22	20:26	21:27	22:09	21:54	20:52	19:31	18:12	16:04	30 11:09 (E5)	15:38 42 11:26 (E5)
18	08:37		10:59 (E5)	07:38	06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:52	07:59	8:46	10:44 (E5)
	16:15	39	11:38 (E5)	17:23	18:24	20:28	21:29	22:09	21:52	20:49	19:28	18:09	16:02	31 11:10 (E5)	15:38 42 11:26 (E5)
19	08:36		10:59 (E5)	07:35	06:23	06:01	04:55	04:25	04:52	05:51	06:53	07:54	08:01	8:47	10:45 (E5)
	16:17	39	11:38 (E5)	17:25	18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:00	33 11:11 (E5)	15:38 42 11:27 (E5)
20	08:35		11:01 (E5)	07:33	06:21	05:59	04:53	04:25	04:54	05:53	06:55	07:57	08:03	8:48	10:45 (E5)
	16:19	37	11:38 (E5)	17:28	18:28	20:32	21:33	22:10	21:49	20:45	19:23	18:04	15:59	35 11:12 (E5)	15:38 42 11:27 (E5)
21	08:33		11:01 (E5)	07:31	06:18	05:56	04:51	04:25	04:55	05:55	06:57	07:59	08:05	8:49	10:46 (E5)
	16:21	37	11:38 (E5)	17:30	18:30	20:35	21:35	22:10	21:48	20:42	19:20	18:02	15:57	37 11:13 (E5)	15:39 42 11:28 (E5)
22	08:32		11:02 (E5)	07:28	06:15	05:54	04:50	04:25	04:57	05:57	06:59	08:01	08:07	8:49	10:46 (E5)
	16:23	35	11:37 (E5)	17:32	18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56	37 11:14 (E5)	15:39 42 11:28 (E5)
23	08:30		11:03 (E5)	07:26	06:13	05:51	04:48	04:25	04:59	05:59	07:01	08:03	08:09	8:50	10:47 (E5)
	16:26	33	11:36 (E5)	17:34	18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:54	39 11:15 (E5)	15:40 42 11:29 (E5)
24	08:29		11:05 (E5)	07:23	06:10	05:49	04:46	04:26	05:01	06:01	07:03	08:05	08:11	8:50	10:47 (E5)
	16:28	31	11:36 (E5)	17:36	18:36	20:41	21:40	22:10	21:43	20:35	19:12	17:54	15:53	39 11:15 (E5)	15:40 42 11:29 (E5)
25	08:27		11:06 (E5)	07:21	06:07	05:47	04:45	04:26	05:02	06:03	07:05	07:07	08:13	8:50	10:47 (E5)
	16:30	30	11:36 (E5)	17:39	18:38	20:43	21:42	22:10	21:41	20:32	19:10	16:52	15:52	40 11:16 (E5)	15:41 42 11:29 (E5)
26	08:26		11:07 (E5)	07:18	06:05	05:44	04:43	04:26	05:04	06:05	07:07	07:09	08:15	8:51	10:47 (E5)
	16:32	27	11:34 (E5)	17:41	18:40	20:45	21:43	22:10	21:39	20:29	19:07	16:50	15:50	41 11:17 (E5)	15:42 43 11:30 (E5)
27	08:24		11:09 (E5)	07:16	06:02	05:42	04:42	04:27	05:06	06:07	07:09	07:12	08:17	8:51	10:48 (E5)
	16:34	24	11:33 (E5)	17:43	18:42	20:47	21:45	22:10	21:38	20:27	19:04	16:47	15:49	42 11:18 (E5)	15:42 42 11:30 (E5)
28	08:22		11:11 (E5)	07:13	05:59	05:39	04:41	04:28	05:08	06:09	07:11	07:14	08:19	8:51	10:48 (E5)
	16:36	20	11:31 (E5)	17:45	18:45	20:49	21:47	22:10	21:36	20:24	19:01	16:45	15:48	42 11:18 (E5)	15:43 43 11:31 (E5)
29	08:20		11:14 (E5)		06:57	05:37	04:39	04:28	05:10	06:11	07:13	07:16	08:21	8:51	10:49 (E5)
	16:38	15	11:29 (E5)		19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	42 11:19 (E5)	15:44 42 11:31 (E5)
30	08:18		11:19 (E5)		06:54	05:35	04:38	04:29	05:12	06:13	07:15	07:18	08:22	8:51	10:49 (E5)
	16:41	5	11:24 (E5)		19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:40	15:46	42 11:19 (E5)	15:45 43 11:32 (E5)
31	08:17				06:51		04:37		05:13	06:15		07:20		8:51	10:50 (E5)
	16:43				19:51		21:51		21:30	20:17		16:38		15:46	43 11:33 (E5)
Potential sun hours	235		266	366	426	508	529	529	469	385	324	247		216	
Total, worst case	1093											623		1320	
Sun reduction	0.13											0.08		0.07	
Oper. time red.	0.98											0.98		0.98	
Wind dir. red.	0.60											0.60		0.60	
Total reduction	0.08											0.05		0.04	
Total, real	85											30		55	

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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) 15 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	06:50 (E14) 8 06:58 (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		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	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 17:14	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	06:56 (E14) 5 07:01 (E14)	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	06:52 (E14) 13 07:05 (E14)	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	06:50 (E14) 17 07:07 (E14)	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	06:49 (E14) 19 07:08 (E14)	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	06:48 (E14) 21 07:09 (E14)	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	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	06:46 (E14) 23 07:09 (E14)	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 21:49	05:53 20:45	06:55 19:23	06:45 (E14) 25 07:10 (E14)	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	06:44 (E14) 26 07:10 (E14)	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	06:44 (E14) 27 07:11 (E14)	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	06:44 (E14) 27 07:11 (E14)	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	06:43 (E14) 28 07:11 (E14)	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	06:43 (E14) 27 07:10 (E14)	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	06:43 (E14) 27 07:10 (E14)	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	06:43 (E14) 26 07:09 (E14)	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 19:02	06:43 (E14) 25 07:08 (E14)	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 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	06:43 (E14) 24 07:07 (E14)	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 20:19	06:13 20:19	07:15 18:56	06:44 (E14) 21 07:05 (E14)	08:18 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51	05:32 20:53	04:37 21:51	04:37 21:51	05:14 20:17	06:15 20:17		06:45 (E14) 19 07:04 (E14)	08:20 17:38	08:51 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385		324	247	216
Total, worst case				416				400	23				
Sun reduction				0.50				0.50	0.43				
Oper. time red.				0.98				0.98	0.98				
Wind dir. red.				0.66				0.66	0.66				
Total reduction				0.32				0.32	0.27				
Total, real				134				128	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January			February			March			April	May	June
1	08:51		09:51 (E14)	08:15		07:11				06:49	05:33	04:36
	15:48	29	10:20 (E14)	16:45		17:48				19:53	20:55	21:53
2	08:50		09:52 (E14)	08:13		07:08				06:46	05:30	04:35
	15:49	29	10:21 (E14)	16:48		17:50				19:55	20:58	21:54
3	08:50		09:52 (E14)	08:11		07:06				06:43	05:28	04:34
	15:51	30	10:22 (E14)	16:50		17:52				19:57	21:00	21:55
4	08:50		09:52 (E14)	08:09		07:03				06:41	05:26	04:33
	15:52	30	10:22 (E14)	16:52		17:54				19:59	21:02	21:57
5	08:49		09:53 (E14)	08:07		07:01				06:38	05:23	04:32
	15:53	30	10:23 (E14)	16:54		17:56				20:01	21:04	21:58
6	08:49		09:53 (E14)	08:05		06:58				06:36	05:21	04:31
	15:55	30	10:23 (E14)	16:56		17:58				20:03	21:06	21:59
7	08:48		09:53 (E14)	08:03		06:55				06:33	05:19	04:30
	15:56	31	10:24 (E14)	16:59		18:01				20:06	21:08	22:00
8	08:48		09:53 (E14)	08:01		06:53			07:23 (E13)	06:30	05:17	04:29
	15:58	31	10:24 (E14)	17:01		18:03	10		07:33 (E13)	20:08	21:10	22:01
9	08:47		09:54 (E14)	07:58		06:50			07:20 (E13)	06:28	05:15	04:29
	16:00	31	10:25 (E14)	17:03		18:05	17		07:37 (E13)	20:10	21:12	22:02
10	08:46		09:54 (E14)	07:56		06:47			07:18 (E13)	06:25	05:13	04:28
	16:01	31	10:25 (E14)	17:05		18:07	20		07:38 (E13)	20:12	21:14	22:03
11	08:45		09:55 (E14)	07:54		06:45			07:15 (E13)	06:22	05:11	04:27
	16:03	31	10:26 (E14)	17:08		18:09	24		07:39 (E13)	20:14	21:16	22:04
12	08:44		09:55 (E14)	07:52		06:42			07:15 (E13)	06:20	05:09	04:27
	16:05	31	10:26 (E14)	17:10		18:11	26		07:41 (E13)	20:16	21:18	22:05
13	08:43		09:55 (E14)	07:50		06:40			07:13 (E13)	06:17	05:07	04:26
	16:06	31	10:26 (E14)	17:12		18:13	28		07:41 (E13)	20:18	21:20	22:06
14	08:42		09:56 (E14)	07:47		06:37			07:12 (E13)	06:15	05:05	04:26
	16:08	31	10:27 (E14)	17:14		18:15	29		07:41 (E13)	20:20	21:22	22:07
15	08:41		09:57 (E14)	07:45		06:34			07:12 (E13)	06:12	05:03	04:26
	16:10	30	10:27 (E14)	17:17		18:18	30		07:42 (E13)	20:22	21:24	22:07
16	08:40		09:57 (E14)	07:43		06:32			07:11 (E13)	06:09	05:01	04:26
	16:12	30	10:27 (E14)	17:19		18:20	31		07:42 (E13)	20:24	21:26	22:08
17	08:39		09:58 (E14)	07:40		06:29			07:11 (E13)	06:07	04:59	04:25
	16:14	30	10:28 (E14)	17:21		18:22	30		07:41 (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	29	10:27 (E14)	17:23		18:24	30		07:40 (E13)	20:28	21:29	22:09
19	08:36		09:58 (E14)	07:36		06:24			07:11 (E13)	06:02	04:55	04:25
	16:18	29	10:27 (E14)	17:26		18:26	30		07:41 (E13)	20:31	21:31	22:09
20	08:35		10:00 (E14)	07:33		06:21			07:11 (E13)	05:59	04:53	04:25
	16:20	27	10:27 (E14)	17:28		18:28	28		07:39 (E13)	20:33	21:33	22:10
21	08:33		10:00 (E14)	07:31		06:18			07:11 (E13)	05:57	04:52	04:25
	16:22	27	10:27 (E14)	17:30		18:30	27		07:38 (E13)	20:35	21:35	22:10
22	08:32		10:01 (E14)	07:28		06:16			07:12 (E13)	05:54	04:50	04:26
	16:24	25	10:26 (E14)	17:32		18:32	26		07:38 (E13)	20:37	21:37	22:10
23	08:30		10:02 (E14)	07:26		06:13			07:12 (E13)	05:52	04:48	04:26
	16:26	23	10:25 (E14)	17:34		18:34	24		07:36 (E13)	20:39	21:38	22:10
24	08:29		10:04 (E14)	07:23		06:10			07:13 (E13)	05:49	04:47	04:26
	16:28	22	10:26 (E14)	17:37		18:36	21		07:34 (E13)	20:41	21:40	22:10
25	08:27		10:05 (E14)	07:21		06:08			07:15 (E13)	05:47	04:45	04:26
	16:30	20	10:25 (E14)	17:39		18:38	17		07:32 (E13)	20:43	21:42	22:10
26	08:26		10:07 (E14)	07:18		06:05			07:18 (E13)	05:44	04:44	04:27
	16:32	16	10:23 (E14)	17:41		18:41	10		07:28 (E13)	20:45	21:43	22:10
27	08:24		10:09 (E14)	07:16		06:02				05:42	04:42	04:27
	16:34	12	10:21 (E14)	17:43		18:43				20:47	21:45	22:10
28	08:22		10:13 (E14)	07:13		05:59				05:40	04:41	04:28
	16:37	4	10:17 (E14)	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		750				458						
Sun reduction		0.13				0.41						
Oper. time red.		0.98				0.98						
Wind dir. red.		0.61				0.62						
Total reduction		0.08				0.25						
Total, real		60				114						

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	07:53 (E13) 16:36	08:24 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:54 (E13) 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:55 (E13) 16:32	08:28 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:56 (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	07:28 18:40	08:03 (E13) 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	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 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	08:46 15:38
19	04:53 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	08:01 18:00	08:07 15:56	08:49 15:39
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:51 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:17 15:49	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:46	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		08:19 17:38	08:24 15:45	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			358	111	419	900
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.62	0.62	0.61	0.61
Total reduction			0.26	0.16	0.05	0.04
Total, real			93	17	21	38

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January		February		March	April	May		June	
1	08:51		10:50 (E13)	08:15	07:11	06:49	05:32		06:19 (E7)	04:36
	15:48	33	11:23 (E13)	16:45	17:48	19:53	20:55	19	06:38 (E7)	21:53
2	08:50		10:51 (E13)	08:13	07:08	06:46	05:30		06:20 (E7)	04:35
	15:49	32	11:23 (E13)	16:47	17:50	19:55	20:57	17	06:37 (E7)	21:54
3	08:50		10:51 (E13)	08:11	07:06	06:43	05:28		06:21 (E7)	04:34
	15:51	32	11:23 (E13)	16:50	17:52	19:57	21:00	15	06:36 (E7)	21:55
4	08:50		10:52 (E13)	08:09	07:03	06:41	05:26		06:23 (E7)	04:33
	15:52	31	11:23 (E13)	16:52	17:54	19:59	21:02	11	06:34 (E7)	21:57
5	08:49		10:53 (E13)	08:07	07:00	06:38	05:23		06:25 (E7)	04:32
	15:53	31	11:24 (E13)	16:54	17:56	20:01	21:04	6	06:31 (E7)	21:58
6	08:49		10:53 (E13)	08:05	06:58	06:35	05:21			04:31
	15:55	31	11:24 (E13)	16:56	17:58	20:03	21:06			21:59
7	08:48		10:54 (E13)	08:03	06:55	06:33	05:19			04:30
	15:56	30	11:24 (E13)	16:59	18:00	20:05	21:08			22:00
8	08:48		10:55 (E13)	08:01	06:53	06:30	05:17			04:29
	15:58	29	11:24 (E13)	17:01	18:03	20:08	21:10			22:01
9	08:47		10:56 (E13)	07:58	06:50	06:28	05:15			04:28
	15:59	28	11:24 (E13)	17:03	18:05	20:10	21:12			22:02
10	08:46		10:56 (E13)	07:56	06:47	06:25	05:13			04:28
	16:01	28	11:24 (E13)	17:05	18:07	20:12	21:14			22:03
11	08:45		10:58 (E13)	07:54	06:45	06:22	05:10			04:27
	16:03	26	11:24 (E13)	17:08	18:09	20:14	21:16			22:04
12	08:44		10:59 (E13)	07:52	06:42	06:20	05:08			04:27
	16:04	25	11:24 (E13)	17:10	18:11	20:16	21:18			22:05
13	08:43		10:59 (E13)	07:50	06:40	06:17	05:06			04:26
	16:06	24	11:23 (E13)	17:12	18:13	20:18	21:20			22:06
14	08:42		11:01 (E13)	07:47	06:37	06:14	05:04			04:26
	16:08	22	11:23 (E13)	17:14	18:15	20:20	21:22			22:07
15	08:41		11:02 (E13)	07:45	06:34	06:12	05:02			04:26
	16:10	21	11:23 (E13)	17:17	18:18	20:22	21:24			22:07
16	08:40		11:04 (E13)	07:43	06:32	06:09	05:01			04:25
	16:12	17	11:21 (E13)	17:19	18:20	20:24	21:25			22:08
17	08:39		11:06 (E13)	07:40	06:29	06:07	04:59			04:25
	16:14	14	11:20 (E13)	17:21	18:22	20:26	21:27			22:08
18	08:37		11:08 (E13)	07:38	06:26	06:04	06:30 (E7)	04:57		04:25
	16:16	10	11:18 (E13)	17:23	18:24	20:28	2 06:32 (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	06:19 (E7)	04:48		04:26
	16:26			17:34	18:34	20:39	21 06:40 (E7)	21:38		22:10
24	08:29			07:23	06:10	05:49	06:19 (E7)	04:47		04:26
	16:28			17:37	18:36	20:41	22 06:41 (E7)	21:40		22:10
25	08:27			07:21	06:07	05:47	06:19 (E7)	04:45		04:26
	16:30			17:39	18:38	20:43	22 06:41 (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	22 06:40 (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	22 06:40 (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	22 06:40 (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	22 06:40 (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	21 06:39 (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	464					233		68		
Sun reduction	0.13					0.50		0.57		
Oper. time red.	0.98					0.98		0.98		
Wind dir. red.	0.60					0.65		0.65		
Total reduction	0.08					0.32		0.36		
Total, real	36					74		25		

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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 (E7) 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) 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 (E7) 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 (E7) 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 19:10	08:13 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	08:25 16:34	08:25 15:43	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		306			131	995
Sun reduction		0.50			0.08	0.07
Oper. time red.		0.98			0.98	0.98
Wind dir. red.		0.65			0.60	0.60
Total reduction		0.32			0.05	0.04
Total, real		97			6	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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			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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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		10:10 (E13)	08:15	10:20 (E13)	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23	08:24
	15:48	33	10:43 (E13)	16:45	10:52 (E13)	17:48	19:53	20:55	21:53	22:09	21:28	20:14	18:54	16:36	15:45
2	08:50		10:10 (E13)	08:13	10:21 (E13)	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26
	15:49	34	10:44 (E13)	16:47	10:52 (E13)	17:50	19:55	20:57	21:54	22:09	21:26	20:11	18:51	16:34	15:44
3	08:50		10:10 (E13)	08:11	10:23 (E13)	07:06	06:43	05:28	04:34	04:32	05:19	06:21	07:21	07:27	08:28
	15:51	35	10:45 (E13)	16:50	10:51 (E13)	17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:32	15:43
4	08:50		10:10 (E13)	08:09	10:25 (E13)	07:03	06:41	05:26	04:33	04:33	05:21	06:23	07:23	07:29	08:29
	15:52	35	10:45 (E13)	16:52	10:49 (E13)	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:46	16:29	15:42
5	08:49		10:11 (E13)	08:07	10:27 (E13)	07:00	06:38	05:23	04:32	04:34	05:23	06:25	07:25	07:31	08:31
	15:53	35	10:46 (E13)	16:54	10:48 (E13)	17:56	20:01	21:04	21:58	22:07	21:20	20:03	18:43	16:27	15:42
6	08:49		10:11 (E13)	08:05	10:29 (E13)	06:58	06:35	05:21	04:31	04:35	05:25	06:27	07:27	07:33	08:32
	15:55	36	10:47 (E13)	16:56	10:44 (E13)	17:58	20:03	21:06	21:59	22:06	21:17	20:01	18:40	16:25	15:41
7	08:48		10:11 (E13)	08:03	10:36 (E13)	06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:30	07:36	08:34
	15:56	37	10:48 (E13)	16:59	10:38 (E13)	18:00	20:05	21:08	22:00	22:05	21:15	19:58	18:38	16:23	15:40
8	08:48		10:11 (E13)	08:01		06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:32	07:38	08:35
	15:58	37	10:48 (E13)	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		10:11 (E13)	07:58		06:50	06:28	05:15	04:28	04:38	05:31	06:33	07:34	07:40	08:37
	15:59	38	10:49 (E13)	17:03		18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:32	16:19	15:39
10	08:46		10:11 (E13)	07:56		06:47	06:25	05:13	04:28	04:39	05:33	06:35	07:36	07:42	08:38
	16:01	39	10:50 (E13)	17:05		18:07	20:12	21:14	22:03	22:02	21:08	19:50	18:30	16:17	15:39
11	08:45		10:12 (E13)	07:54		06:45	06:22	05:11	04:27	04:41	05:35	06:37	07:38	07:44	08:39
	16:03	38	10:50 (E13)	17:08		18:09	20:14	21:16	22:04	22:01	21:06	19:47	18:27	16:15	15:38
12	08:44		10:12 (E13)	07:52		06:42	06:20	05:08	04:27	04:42	05:37	06:39	07:40	07:46	08:40
	16:04	39	10:51 (E13)	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		10:11 (E13)	07:49		06:40	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:49	08:42
	16:06	40	10:51 (E13)	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		10:12 (E13)	07:47		06:37	06:14	05:04	04:26	04:45	05:41	06:43	07:44	07:51	08:43
	16:08	40	10:52 (E13)	17:14		18:15	20:20	21:22	22:07	21:58	20:59	19:39	18:19	16:09	15:38
15	08:41		10:11 (E13)	07:45		06:34	06:12	05:03	04:26	04:46	05:43	06:45	07:46	07:53	08:44
	16:10	41	10:52 (E13)	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		10:12 (E13)	07:43		06:32	06:09	05:01	04:25	04:48	05:45	06:47	07:48	07:55	08:45
	16:12	41	10:53 (E13)	17:19		18:20	20:24	21:25	22:08	21:55	20:54	19:34	18:14	16:06	15:38
17	08:39		10:13 (E13)	07:40		06:29	06:07	04:59	04:25	04:49	05:47	06:49	07:50	07:57	08:46
	16:14	41	10:54 (E13)	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		10:13 (E13)	07:38		06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:52	07:59	08:46
	16:16	41	10:54 (E13)	17:23		18:24	20:28	21:29	22:09	21:52	20:50	19:29	18:09	16:02	15:38
19	08:36		10:13 (E13)	07:36		06:24	06:02	04:55	04:25	04:52	05:51	06:53	07:55	08:01	08:47
	16:18	41	10:54 (E13)	17:26		18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:01	15:38
20	08:35		10:13 (E13)	07:33		06:21	05:59	04:53	04:25	04:54	05:53	06:55	07:57	08:03	08:48
	16:20	42	10:55 (E13)	17:28		18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:04	15:59	15:39
21	08:33		10:13 (E13)	07:31		06:18	05:57	04:52	04:25	04:56	05:55	06:57	07:59	08:05	08:48
	16:22	42	10:55 (E13)	17:30		18:30	20:35	21:35	22:10	21:48	20:42	19:20	18:02	15:58	15:39
22	08:32		10:14 (E13)	07:28		06:16	05:54	04:50	04:25	04:57	05:57	06:59	08:01	08:07	08:49
	16:24	41	10:55 (E13)	17:32		18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56	15:39
23	08:30		10:14 (E13)	07:26		06:13	05:52	04:48	04:26	04:59	05:59	07:01	08:03	08:09	08:50
	16:26	41	10:55 (E13)	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		10:15 (E13)	07:23		06:10	05:49	04:47	04:26	05:01	06:01	07:03	08:05	08:11	08:50
	16:28	41	10:56 (E13)	17:37		18:36	20:41	21:40	22:10	21:43	20:35	19:12	17:55	15:53	15:41
25	08:27		10:15 (E13)	07:21		06:07	05:47	04:45	04:26	05:03	06:03	07:05	07:07	08:13	08:50
	16:30	41	10:56 (E13)	17:39		18:38	20:43	21:42	22:10	21:41	20:32	19:10	16:52	15:52	15:41
26	08:26		10:16 (E13)	07:18		06:05	05:44	04:44	04:27	05:04	06:05	07:07	07:10	08:15	08:51
	16:32	40	10:56 (E13)	17:41		18:41	20:45	21:43	22:10	21:39	20:30	19:07	16:50	15:51	15:41
27	08:24		10:16 (E13)	07:16		06:02	05:42	04:42	04:27	05:06	06:07	07:09	07:12	08:17	08:51
	16:34	39	10:55 (E13)	17:43		18:43	20:47	21:45	22:10	21:38	20:27	19:04	16:47	15:49	15:43
28	08:22		10:17 (E13)	07:13		05:59	05:40	04:41	04:28	05:08	06:09	07:11	07:14	08:19	08:51
	16:36	38	10:55 (E13)	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		10:18 (E13)			06:57	06:37	04:40	04:29	05:10	06:11	07:13	07:16	08:21	08:51
	16:39	37	10:55 (E13)			19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	15:42
30	08:18		10:19 (E13)			06:54	05:35	04:38	04:29	05:12	06:13	07:15	07:18	08:22	08:51
	16:41	36	10:55 (E13)			19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:40	15:46	15:42
31	08:17		10:20 (E13)			06:51		04:37		05:14	06:15		07:20		08:51
	16:43	34	10:54 (E13)			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		1193		153									950		1019
Sun reduction		0.13		0.20									0.08		0.07
Oper. time red.		0.98		0.98									0.98		0.98
Wind dir. red.		0.61		0.61									0.61		0.61
Total reduction		0.08		0.12									0.05		0.04
Total, real		95		18									47		43

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June
1	08:51	08:15	07:11	16:01 (E13)	06:49	05:32
	15:48	16:45	17:47	38 16:39 (E13)	19:53	20:55
2	08:50	08:13	07:08	16:01 (E13)	06:46	05:30
	15:49	16:47	17:50	37 16:38 (E13)	19:55	20:57
3	08:50	08:11	07:06	16:02 (E13)	06:43	05:28
	15:51	16:50	17:52	36 16:38 (E13)	19:57	20:59
4	08:50	08:09	07:03	16:02 (E13)	06:41	05:26
	15:52	16:52	17:54	35 16:37 (E13)	19:59	21:01
5	08:49	08:07	07:00	16:02 (E13)	06:38	05:23
	15:53	16:54	17:56	34 16:36 (E13)	20:01	21:04
6	08:49	08:05	06:58	16:04 (E13)	06:35	05:21
	15:55	16:56	17:58	31 16:35 (E13)	20:03	21:06
7	08:48	08:03	06:55	16:04 (E13)	06:33	05:19
	15:56	16:59	18:00	29 16:33 (E13)	20:05	21:08
8	08:47	08:00	06:53	16:05 (E13)	06:30	05:17
	15:58	17:01	18:03	26 16:31 (E13)	20:07	21:10
9	08:47	07:58	06:50	16:08 (E13)	06:27	05:15
	15:59	17:03	18:05	22 16:30 (E13)	20:10	21:12
10	08:46	07:56	06:47	16:10 (E13)	06:25	05:13
	16:01	17:05	18:07	17 16:27 (E13)	20:12	21:14
11	08:45	07:54	06:45	16:14 (E13)	06:22	05:10
	16:03	17:08	18:09	7 16:21 (E13)	20:14	21:16
12	08:44	07:52	06:42	16:20	05:08	05:43 (E8)
	16:04	17:10	18:11	20:16	21:18	21
13	08:43	07:49	06:39	16:17	05:06	05:41 (E8)
	16:06	17:12	18:13	20:18	21:20	24
14	08:42	07:47	16:17 (E13)	06:37	05:04	05:41 (E8)
	16:08	17:14	8 16:25 (E13)	18:15	20:20	21:22
15	08:41	07:45	16:13 (E13)	06:34	05:02	05:41 (E8)
	16:10	17:17	16 16:29 (E13)	18:17	20:22	21:23
16	08:40	07:43	16:10 (E13)	06:31	05:01	05:40 (E8)
	16:12	17:19	21 16:31 (E13)	18:20	20:24	21:25
17	08:39	07:40	16:09 (E13)	06:29	05:00	05:40 (E8)
	16:14	17:21	25 16:34 (E13)	18:22	20:26	21:27
18	08:37	07:38	16:06 (E13)	06:26	05:00	05:39 (E8)
	16:16	17:23	29 16:35 (E13)	18:24	20:28	21:29
19	08:36	07:35	16:06 (E13)	06:23	05:00	05:39 (E8)
	16:18	17:25	30 16:36 (E13)	18:26	20:30	21:31
20	08:35	07:33	16:04 (E13)	06:21	05:00	05:39 (E8)
	16:20	17:28	33 16:37 (E13)	18:28	20:32	21:33
21	08:33	07:31	16:04 (E13)	06:18	05:00	05:39 (E8)
	16:22	17:30	34 16:38 (E13)	18:30	20:35	21:35
22	08:32	07:28	16:03 (E13)	06:15	05:00	05:39 (E8)
	16:24	17:32	35 16:38 (E13)	18:32	20:37	21:36
23	08:30	07:26	16:03 (E13)	06:13	05:00	05:39 (E8)
	16:26	17:34	36 16:39 (E13)	18:34	20:39	21:38
24	08:29	07:23	16:02 (E13)	06:10	05:00	05:39 (E8)
	16:28	17:36	37 16:39 (E13)	18:36	20:41	21:40
25	08:27	07:21	16:01 (E13)	06:07	05:00	05:39 (E8)
	16:30	17:39	38 16:39 (E13)	18:38	20:43	21:42
26	08:25	07:18	16:01 (E13)	06:05	05:00	05:40 (E8)
	16:32	17:41	39 16:40 (E13)	18:40	20:45	21:43
27	08:24	07:16	16:01 (E13)	06:02	05:00	05:39 (E8)
	16:34	17:43	38 16:39 (E13)	18:43	20:47	21:45
28	08:22	07:13	16:01 (E13)	05:59	05:00	05:40 (E8)
	16:36	17:45	39 16:40 (E13)	18:45	20:49	21:46
29	08:20			06:57	05:00	05:40 (E8)
	16:39			19:47	20:51	21:48
30	08:18			06:54	05:00	05:41 (E8)
	16:41			19:49	20:53	21:50
31	08:17			06:51		05:41 (E8)
	16:43			19:51	21:51	27
Potential sun hours	235	266	366	426	508	529
Total, worst case		458	312		602	554
Sun reduction		0.20	0.41		0.57	0.56
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.67	0.67		0.67	0.67
Total reduction		0.13	0.27		0.37	0.37
Total, real		61	85		225	203

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

July			August			September			October			November			December		
1	04:30	05:51 (E8)	05:16	05:53 (E8)	06:17	07:17			07:22	08:24							
	22:09	19 06:10 (E8)	21:28	21 06:14 (E8)	20:14	18:54			16:36	15:45							
2	04:31	05:51 (E8)	05:17	05:55 (E8)	06:19	07:19			07:25	08:26							
	22:08	19 06:10 (E8)	21:26	18 06:13 (E8)	20:11	18:51			16:34	15:44							
3	04:32	05:51 (E8)	05:19	05:57 (E8)	06:21	07:21		16:50 (E13)	07:27	08:27							
	22:08	20 06:11 (E8)	21:24	14 06:11 (E8)	20:09	18:48	13	17:03 (E13)	16:31	15:43							
4	04:33	05:51 (E8)	05:21	05:59 (E8)	06:23	07:23		16:46 (E13)	07:29	08:29							
	22:07	21 06:12 (E8)	21:22	10 06:09 (E8)	20:06	18:46	20	17:06 (E13)	16:29	15:42							
5	04:34	05:51 (E8)	05:23		06:25	07:25		16:43 (E13)	07:31	08:31							
	22:07	21 06:12 (E8)	21:19		20:03	18:43	25	17:08 (E13)	16:27	15:42							
6	04:35	05:51 (E8)	05:25		06:27	07:27		16:41 (E13)	07:33	08:32							
	22:06	22 06:13 (E8)	21:17		20:01	18:40	28	17:09 (E13)	16:25	15:41							
7	04:36	05:50 (E8)	05:27		06:29	07:29		16:39 (E13)	07:36	08:34							
	22:05	24 06:14 (E8)	21:15		19:58	18:38	31	17:10 (E13)	16:23	15:40							
8	04:37	05:50 (E8)	05:29		06:31	07:31		16:38 (E13)	07:38	08:35							
	22:04	24 06:14 (E8)	21:13		19:55	18:35	32	17:10 (E13)	16:21	15:40							
9	04:38	05:50 (E8)	05:31		06:33	07:34		16:36 (E13)	07:40	08:36							
	22:03	24 06:14 (E8)	21:11		19:53	18:32	35	17:11 (E13)	16:19	15:39							
10	04:39	05:50 (E8)	05:33		06:35	07:36		16:36 (E13)	07:42	08:38							
	22:02	25 06:15 (E8)	21:08		19:50	18:30	36	17:12 (E13)	16:17	15:39							
11	04:41	05:49 (E8)	05:35		06:37	07:38		16:35 (E13)	07:44	08:39							
	22:01	26 06:15 (E8)	21:06		19:47	18:27	37	17:12 (E13)	16:15	15:38							
12	04:42	05:50 (E8)	05:37		06:39	07:40		16:34 (E13)	07:46	08:40					13:40 (E15)		
	22:00	26 06:16 (E8)	21:04		19:45	18:25	38	17:12 (E13)	16:13	15:38	5				13:45 (E15)		
13	04:43	05:49 (E8)	05:39		06:41	07:42		16:34 (E13)	07:48	08:41					13:40 (E15)		
	21:59	27 06:16 (E8)	21:01		19:42	18:22	38	17:12 (E13)	16:11	15:38	7				13:47 (E15)		
14	04:45	05:49 (E8)	05:41		06:43	07:44		16:33 (E13)	07:51	08:43					13:40 (E15)		
	21:58	28 06:17 (E8)	20:59		19:39	18:19	39	17:12 (E13)	16:09	15:38	8				13:48 (E15)		
15	04:46	05:49 (E8)	05:43		06:45	07:46		16:34 (E13)	07:53	08:44					13:40 (E15)		
	21:56	28 06:17 (E8)	20:57		19:37	18:17	38	17:12 (E13)	16:07	15:38	9				13:49 (E15)		
16	04:48	05:49 (E8)	05:45		06:47	07:48		16:33 (E13)	07:55	08:45					13:40 (E15)		
	21:55	29 06:18 (E8)	20:54		19:34	18:14	39	17:12 (E13)	16:06	15:38	10				13:50 (E15)		
17	04:49	05:49 (E8)	05:47		06:49	07:50		16:33 (E13)	07:57	08:45					13:40 (E15)		
	21:54	28 06:17 (E8)	20:52		19:31	18:12	38	17:11 (E13)	16:04	15:38	11				13:51 (E15)		
18	04:51	05:49 (E8)	05:49		06:51	07:52		16:33 (E13)	07:59	08:46					13:40 (E15)		
	21:52	29 06:18 (E8)	20:49		19:28	18:09	37	17:10 (E13)	16:02	15:38	12				13:52 (E15)		
19	04:52	05:49 (E8)	05:51		06:53	07:54		16:33 (E13)	08:01	08:47					13:40 (E15)		
	21:51	29 06:18 (E8)	20:47		19:26	18:07	36	17:09 (E13)	16:01	15:38	12				13:52 (E15)		
20	04:54	05:49 (E8)	05:53		06:55	07:57		16:34 (E13)	08:03	08:48					13:40 (E15)		
	21:49	30 06:19 (E8)	20:45		19:23	18:04	35	17:09 (E13)	15:59	15:39	13				13:53 (E15)		
21	04:56	05:49 (E8)	05:55		06:57	07:59		16:34 (E13)	08:05	08:48					13:41 (E15)		
	21:48	29 06:18 (E8)	20:42		19:20	18:02	34	17:08 (E13)	15:58	15:39	13				13:54 (E15)		
22	04:57	05:49 (E8)	05:57		06:59	08:01		16:35 (E13)	08:07	08:49					13:41 (E15)		
	21:46	30 06:19 (E8)	20:40		19:18	17:59	32	17:07 (E13)	15:56	15:39	13				13:54 (E15)		
23	04:59	05:49 (E8)	05:59		07:01	08:03		16:36 (E13)	08:09	08:49					13:41 (E15)		
	21:44	29 06:18 (E8)	20:37		19:15	17:57	30	17:06 (E13)	15:55	15:40	13				13:54 (E15)		
24	05:01	05:50 (E8)	06:01		07:03	08:05		16:37 (E13)	08:11	08:50					13:43 (E15)		
	21:43	28 06:18 (E8)	20:35		19:12	17:55	28	17:05 (E13)	15:53	15:40	12				13:55 (E15)		
25	05:03	05:49 (E8)	06:03		07:05	07:07		15:38 (E13)	08:13	08:50					13:43 (E15)		
	21:41	29 06:18 (E8)	20:32		19:10	16:52	25	16:03 (E13)	15:52	15:41	12				13:55 (E15)		
26	05:04	05:50 (E8)	06:05		07:07	07:09		15:41 (E13)	08:15	08:50					13:44 (E15)		
	21:39	28 06:18 (E8)	20:29		19:07	16:50	20	16:01 (E13)	15:51	15:42	11				13:55 (E15)		
27	05:06	05:51 (E8)	06:07		07:09	07:12		15:43 (E13)	08:17	08:51					13:44 (E15)		
	21:37	27 06:18 (E8)	20:27		19:04	16:47	15	15:58 (E13)	15:49	15:43	11				13:55 (E15)		
28	05:08	05:50 (E8)	06:09		07:11	07:14		15:48 (E13)	08:19	08:51					13:45 (E15)		
	21:36	27 06:17 (E8)	20:24		19:02	16:45	4	15:52 (E13)	15:48	15:44	10				13:55 (E15)		
29	05:10	05:51 (E8)	06:11		07:13	07:16			08:21	08:51					13:46 (E15)		
	21:34	25 06:16 (E8)	20:22		18:59	16:43			15:47	15:45	9				13:55 (E15)		
30	05:12	05:52 (E8)	06:13		07:15	07:18			08:22	08:51					13:48 (E15)		
	21:32	24 06:16 (E8)	20:19		18:56	16:40			15:46	15:46	7				13:55 (E15)		
31	05:14	05:53 (E8)	06:15			07:20				08:51					13:49 (E15)		
	21:30	23 06:16 (E8)	20:17			16:38				15:47	5				13:54 (E15)		
Potential sun hours	529		469		385	324			247	216							
Total, worst case		798		63		783				203							
Sun reduction		0.49		0.50		0.26				0.07							
Oper. time red.		0.98		0.98		0.98				0.98							
Wind dir. red.		0.67		0.67		0.67				0.65							
Total reduction		0.32		0.33		0.17				0.04							
Total, real		258		21		133				9							

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	16:16 (E1) 16:47 (E1) 16:16 (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) 16:16 (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) 16:18 (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	16:45 (E1) 16:19 (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	16:43 (E1) 16:20 (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	17:07 (E1) 07:33
6	15:54 08:48	16:56 08:02	17:58 06:55	16:41 (E1) 16:22 (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	17:14 (E1) 07:35
7	15:56 08:47	16:58 08:00	18:00 06:52	16:39 (E1) 16:25 (E1)	20:05 06:30	21:07 05:16	22:00 04:29	22:05 04:36	21:15 05:29	19:58 06:31	18:37 07:31	17:16 (E1) 07:37
8	15:57 08:46	17:00 07:58	18:02 06:50	16:35 (E1) 16:27	20:07 05:14	21:09 04:28	22:01 04:38	22:04 05:31	21:13 06:33	19:55 07:33	18:35 07:33	17:17 (E1) 07:40
9	15:59 08:46	17:03 07:56	18:04 06:47	16:35 (E1) 16:24	20:09 05:12	22:02 04:27	22:03 04:39	21:10 05:33	19:52 06:35	18:32 07:35	17:18 (E1) 07:35	16:18 07:42
10	16:01 08:45	17:05 07:54	18:06 06:44	16:35 (E1) 16:22	20:11 05:10	22:03 04:27	22:02 04:40	21:08 05:35	19:50 06:37	18:29 07:37	17:19 (E1) 07:37	16:16 07:44
11	16:02 08:44	17:07 07:51	18:09 06:42	16:35 (E1) 16:19	20:13 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) 07:39	16:14 07:46
12	16:04 08:43	17:09 07:49	18:11 06:39	16:35 (E1) 16:13	20:15 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) 07:42	16:13 07:48
13	16:06 08:42	17:12 07:47	18:13 06:36	16:35 (E1) 16:15	20:18 05:04	22:06 04:25	21:59 04:44	21:01 05:41	19:42 06:43	18:22 07:44	17:20 (E1) 07:44	16:11 07:50
14	16:08 08:41	17:14 07:45	18:15 06:34	16:35 (E1) 16:31 (E1)	20:20 05:02	22:06 04:25	21:58 04:46	20:59 05:43	19:39 06:45	18:19 07:46	17:20 (E1) 07:46	16:09 07:52
15	16:09 08:40	17:16 07:42	18:17 06:31	16:35 (E1) 16:26 (E1)	20:22 05:00	22:07 04:25	21:56 04:47	20:56 05:45	19:36 06:47	18:16 07:48	17:20 (E1) 07:48	16:07 07:55
16	16:11 08:38	17:18 07:40	18:19 06:28	16:35 (E1) 16:24 (E1)	20:24 05:06	22:08 04:25	21:55 04:49	20:54 05:47	19:34 06:49	18:14 07:50	17:20 (E1) 07:50	16:05 07:57
17	16:13 08:37	17:21 07:38	18:21 06:26	16:35 (E1) 16:21 (E1)	20:26 05:04	22:08 04:25	21:54 04:50	20:52 05:49	19:31 06:51	18:11 07:52	17:20 (E1) 07:52	16:04 07:59
18	16:15 08:36	17:23 07:35	18:23 06:23	16:35 (E1) 16:20 (E1)	20:28 05:01	22:09 04:25	21:52 04:52	20:49 05:51	19:28 06:53	18:09 07:54	17:19 (E1) 07:54	16:02 08:01
19	16:17 08:34	17:25 07:33	18:25 06:20	16:35 (E1) 16:19 (E1)	20:30 05:09	22:09 04:25	21:51 04:54	20:47 05:53	19:25 06:55	18:06 07:56	17:18 (E1) 07:56	16:00 08:03
20	16:19 08:33	17:27 07:30	18:28 06:18	16:35 (E1) 16:17 (E1)	20:32 05:06	22:09 04:25	21:49 04:55	20:44 05:55	19:23 06:57	18:04 07:58	17:17 (E1) 07:58	15:59 08:05
21	16:21 08:32	17:29 07:28	18:30 06:15	16:35 (E1) 16:17 (E1)	20:34 05:04	22:10 04:25	21:48 04:57	20:42 05:57	19:20 06:59	18:01 08:01	17:17 (E1) 08:01	15:57 08:07
22	16:23 08:30	17:32 07:25	18:32 06:12	16:35 (E1) 16:16 (E1)	20:36 05:01	22:10 04:25	21:46 04:59	20:39 05:59	19:17 07:01	17:59 08:03	17:16 (E1) 08:03	15:56 08:09
23	16:25 08:28	17:34 07:23	18:34 06:10	16:35 (E1) 16:16 (E1)	20:38 05:09	22:10 04:25	21:44 05:00	20:37 06:01	19:15 07:03	17:57 08:05	17:14 (E1) 08:05	15:54 08:11
24	16:27 08:27	17:36 07:20	18:36 06:07	16:35 (E1) 16:16 (E1)	20:41 05:06	22:10 04:26	21:43 05:02	20:34 06:03	19:12 07:05	17:54 07:07	17:13 (E1) 08:07	15:53 08:13
25	16:29 08:25	17:38 07:18	18:38 06:04	16:35 (E1) 16:16 (E1)	20:43 05:04	22:10 04:26	21:41 05:04	20:32 06:05	19:09 07:07	16:52 07:09	16:11 (E1) 08:09	15:51 08:15
26	16:32 08:23	17:40 07:15	18:40 06:02	16:35 (E1) 16:16 (E1)	20:45 05:01	22:10 04:27	21:39 05:06	20:29 06:07	19:07 07:09	16:49 07:11	16:08 (E1) 08:11	15:50 08:17
27	16:34 08:22	17:43 07:13	18:42 05:59	16:35 (E1) 16:15 (E1)	20:47 05:09	22:10 04:27	21:37 05:08	20:27 06:09	19:04 07:11	16:47 07:13	16:08 (E1) 08:13	15:49 08:18
28	16:36 08:20	17:45 07:10	18:44 06:56	16:35 (E1) 16:16 (E1)	20:49 05:07	22:10 04:28	21:35 05:09	20:24 06:11	19:01 07:13	16:45 07:16	16:08 (E1) 08:14	15:48 08:19
29	16:38 08:18	17:46 07:09	19:46 06:54	16:35 (E1) 16:16 (E1)	20:51 05:03	22:09 04:38	21:33 05:11	20:21 06:13	18:59 07:15	16:42 07:18	16:08 (E1) 08:15	15:47 08:22
30	16:40 08:16	17:48 07:07	19:48 06:51	16:35 (E1) 16:16 (E1)	20:53 05:01	22:09 04:36	21:31 05:13	20:19 06:15	18:56 07:20	16:40 07:20	16:08 (E1) 08:16	15:45 08:23
31	16:42 08:16	17:48 07:07	19:50 06:51	16:35 (E1) 16:16 (E1)	20:55 05:01	22:10 04:36	21:32 05:14	20:20 06:16	18:56 07:21	16:40 07:21	16:08 (E1) 08:16	15:45 08:23
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction		0.20	0.41							0.26		
Oper. time red.		0.98	0.98							0.98		
Wind dir. red.		0.67	0.67							0.67		
Total reduction		0.13	0.27							0.17		
Total, real		48	51							94		

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	16:17 (E13) 19:53	06:49 20:55	04:36 05:30 (E8)
2	08:50 15:49	08:13 16:47	07:08 17:50	16:17 (E13) 19:55	06:46 20:57	04:35 05:30 (E8)
3	08:50 15:51	08:11 16:50	07:06 17:52	16:18 (E13) 19:57	06:43 20:59	04:34 05:30 (E8)
4	08:50 15:52	08:09 16:52	07:03 17:54	16:18 (E13) 19:59	06:41 21:01	04:33 05:30 (E8)
5	08:49 15:53	08:07 16:54	07:00 17:56	16:18 (E13) 20:01	06:38 21:04	04:32 05:31 (E8)
6	08:49 15:55	08:05 16:56	06:58 17:58	16:19 (E13) 20:03	06:35 21:06	04:31 05:31 (E8)
7	08:48 15:56	08:03 16:59	06:55 18:00	16:19 (E13) 20:05	06:33 21:08	04:30 05:31 (E8)
8	08:47 15:58	08:00 17:01	06:53 18:03	16:47 (E13) 20:07	20:05 21:10	04:29 05:32 (E8)
9	08:47 15:59	07:58 17:03	06:50 18:05	16:22 (E13) 20:10	06:27 21:12	04:28 05:31 (E8)
10	08:46 16:01	07:56 17:05	06:47 18:07	16:24 (E13) 20:12	06:25 21:14	04:28 05:32 (E8)
11	08:45 16:03	07:54 17:08	06:45 18:09	16:27 (E13) 20:14	06:22 21:16	04:27 05:32 (E8)
12	08:44 16:04	07:52 17:10	06:42 18:11	16:38 (E13) 20:16	20:14 21:18	04:27 05:32 (E8)
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 05:33 (E8)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 05:33 (E8)
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 05:33 (E8)
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:25 05:33 (E8)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 05:33 (E8)
18	08:37 16:16	07:38 17:23	16:30 (E13) 18:24	06:04 20:28	04:57 21:29	04:25 05:34 (E8)
19	08:36 16:18	07:35 17:25	16:27 (E13) 18:26	06:02 20:30	04:55 21:31	04:25 05:34 (E8)
20	08:35 16:20	07:33 17:28	16:24 (E13) 18:28	06:55 (E9) 20:32	05:59 21:33	04:25 05:34 (E8)
21	08:33 16:22	07:31 17:30	16:23 (E13) 18:30	06:43 (E9) 20:35	05:57 21:35	04:25 05:35 (E8)
22	08:32 16:24	07:28 17:32	16:21 (E13) 18:32	06:41 (E9) 20:37	05:54 21:36	04:25 05:35 (E8)
23	08:30 16:26	07:26 17:34	16:21 (E13) 18:34	06:39 (E9) 20:39	05:52 21:38	04:26 05:35 (E8)
24	08:29 16:28	07:23 17:36	16:20 (E13) 18:36	06:38 (E9) 20:41	05:49 21:40	04:26 05:35 (E8)
25	08:27 16:30	07:21 17:39	16:18 (E13) 18:38	06:59 (E9) 20:43	05:47 21:42	04:26 05:35 (E8)
26	08:25 16:32	07:18 17:41	16:18 (E13) 18:40	06:38 (E9) 20:45	05:44 21:43	04:27 05:35 (E8)
27	08:24 16:34	07:16 17:43	16:18 (E13) 18:43	06:38 (E9) 20:47	05:42 21:45	04:27 05:36 (E8)
28	08:22 16:36	07:13 17:45	16:18 (E13) 18:45	06:58 (E9) 20:49	05:39 21:46	04:28 05:36 (E8)
29	08:20 16:39	07:11 17:48	16:52 (E13) 18:47	06:57 (E9) 20:51	05:37 21:48	04:28 05:36 (E8)
30	08:18 16:41	07:09 17:50	19:47 18:49	07:56 (E9) 20:53	21:48 04:38	06:02 (E8) 04:29
31	08:17 16:43	07:08 17:51	19:49 18:51	07:54 (E9) 20:55	21:50 04:37	06:03 (E8) 05:30 (E8)
Potential sun hours	235	266	366	426	508	529
Total, worst case		296	512		441	974
Sun reduction		0.20	0.41		0.57	0.56
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.67	0.66		0.67	0.67
Total reduction		0.13	0.27		0.37	0.37
Total, real		39	136		165	358

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July		August		September		October		November		December	
1	04:30	05:36 (E8)	05:16	06:17			07:17		07:22	08:24		
	22:09	32 06:08 (E8)	21:28	20:14			18:54		16:36	15:45		
2	04:31	05:36 (E8)	05:17	06:19			07:19		17:08 (E13)	07:25	08:26	
	22:08	33 06:09 (E8)	21:26	20:11			18:51	7	17:15 (E13)	16:34	15:44	
3	04:32	05:37 (E8)	05:19	06:21			07:21		17:03 (E13)	07:27	08:27	
	22:08	32 06:09 (E8)	21:24	20:09			18:48	16	17:19 (E13)	16:31	15:43	
4	04:33	05:37 (E8)	05:21	06:23			07:23		17:00 (E13)	07:29	08:29	
	22:07	33 06:10 (E8)	21:22	20:06			18:46	21	17:21 (E13)	16:29	15:42	
5	04:34	05:37 (E8)	05:23	06:25			07:25		16:58 (E13)	07:31	08:31	
	22:07	33 06:10 (E8)	21:19	20:03			18:43	24	17:22 (E13)	16:27	15:42	
6	04:35	05:37 (E8)	05:25	06:27			07:27		16:56 (E13)	07:33	08:32	
	22:06	33 06:10 (E8)	21:17	20:01			18:40	27	17:23 (E13)	16:25	15:41	
7	04:36	05:37 (E8)	05:27	06:29			07:29		16:55 (E13)	07:36	08:34	
	22:05	33 06:10 (E8)	21:15	19:58			18:38	29	17:24 (E13)	16:23	15:40	
8	04:37	05:38 (E8)	05:29	06:31			07:31		16:53 (E13)	07:38	08:35	
	22:04	33 06:11 (E8)	21:13	19:55			18:35	31	17:24 (E13)	16:21	15:40	
9	04:38	05:38 (E8)	05:31	06:33			07:34		16:52 (E13)	07:40	08:36	
	22:03	33 06:11 (E8)	21:11	19:53			18:32	32	17:24 (E13)	16:19	15:39	
10	04:39	05:38 (E8)	05:33	06:35			07:36		16:52 (E13)	07:42	08:38	
	22:02	33 06:11 (E8)	21:08	19:50			18:30	33	17:25 (E13)	16:17	15:39	
11	04:41	05:38 (E8)	05:35	06:37			07:38		16:51 (E13)	07:44	08:39	
	22:01	32 06:10 (E8)	21:06	19:47			18:27	34	17:25 (E13)	16:15	15:38	
12	04:42	05:39 (E8)	05:37	06:39		07:34 (E9)	07:40		16:51 (E13)	07:46	08:40	
	22:00	32 06:11 (E8)	21:04	19:45	9	07:43 (E9)	18:25	34	17:25 (E13)	16:13	15:38	
13	04:43	05:39 (E8)	05:39	06:41		07:31 (E9)	07:42		16:50 (E13)	07:48	08:41	
	21:59	32 06:11 (E8)	21:01	19:42	14	07:45 (E9)	18:22	34	17:24 (E13)	16:11	15:38	
14	04:45	05:39 (E8)	05:41	06:43		07:30 (E9)	07:44		16:50 (E13)	07:51	08:43	
	21:58	32 06:11 (E8)	20:59	19:39	16	07:46 (E9)	18:19	34	17:24 (E13)	16:09	15:38	
15	04:46	05:39 (E8)	05:43	06:45		07:28 (E9)	07:46		16:51 (E13)	07:53	08:44	
	21:56	31 06:10 (E8)	20:57	19:37	19	07:47 (E9)	18:17	33	17:24 (E13)	16:07	15:38	
16	04:48	05:40 (E8)	05:45	06:47		07:27 (E9)	07:48		16:51 (E13)	07:55	08:45	
	21:55	31 06:11 (E8)	20:54	19:34	20	07:47 (E9)	18:14	32	17:23 (E13)	16:06	15:38	
17	04:49	05:40 (E8)	05:47	06:49		07:27 (E9)	07:50		16:51 (E13)	07:57	08:45	
	21:54	30 06:10 (E8)	20:52	19:31	20	07:47 (E9)	18:12	31	17:22 (E13)	16:04	15:38	
18	04:51	05:40 (E8)	05:49	06:51		07:26 (E9)	07:52		16:51 (E13)	07:59	08:46	
	21:52	31 06:11 (E8)	20:49	19:28	21	07:47 (E9)	18:09	30	17:21 (E13)	16:02	15:38	
19	04:52	05:40 (E8)	05:51	06:53		07:26 (E9)	07:54		16:51 (E13)	08:01	08:47	
	21:51	30 06:10 (E8)	20:47	19:26	21	07:47 (E9)	18:07	29	17:20 (E13)	16:01	15:38	
20	04:54	05:41 (E8)	05:53	06:55		07:25 (E9)	07:57		16:53 (E13)	08:03	08:48	
	21:49	29 06:10 (E8)	20:45	19:23	20	07:45 (E9)	18:04	27	17:20 (E13)	15:59	15:38	
21	04:56	05:42 (E8)	05:55	06:57		07:25 (E9)	07:59		16:54 (E13)	08:05	08:48	
	21:48	27 06:09 (E8)	20:42	19:20	19	07:44 (E9)	18:02	24	17:18 (E13)	15:58	15:39	
22	04:57	05:43 (E8)	05:57	06:59		07:27 (E9)	08:01		16:55 (E13)	08:07	08:49	
	21:46	26 06:09 (E8)	20:40	19:18	16	07:43 (E9)	17:59	21	17:16 (E13)	15:56	15:39	
23	04:59	05:43 (E8)	05:59	07:01		07:29 (E9)	08:03		16:58 (E13)	08:09	08:49	
	21:44	25 06:08 (E8)	20:37	19:15	12	07:41 (E9)	17:57	16	17:14 (E13)	15:55	15:40	
24	05:01	05:44 (E8)	06:01	07:03		07:31 (E9)	08:05		17:01 (E13)	08:11	08:50	
	21:43	24 06:08 (E8)	20:35	19:12	8	07:39 (E9)	17:55	9	17:10 (E13)	15:53	15:40	
25	05:03	05:44 (E8)	06:03	07:05			07:07			08:13	08:50	
	21:41	22 06:06 (E8)	20:32	19:10			16:52			15:52	15:41	
26	05:04	05:46 (E8)	06:05	07:07			07:09			08:15	08:50	
	21:39	19 06:05 (E8)	20:29	19:07			16:50			15:51	15:42	
27	05:06	05:48 (E8)	06:07	07:09			07:12			08:17	08:51	
	21:37	16 06:04 (E8)	20:27	19:04			16:47			15:49	15:43	
28	05:08	05:49 (E8)	06:09	07:11			07:14			08:19	08:51	
	21:36	13 06:02 (E8)	20:24	19:02			16:45			15:48	15:44	
29	05:10	05:53 (E8)	06:11	07:13			07:16			08:21	08:51	
	21:34	6 05:59 (E8)	20:22	18:59			16:43			15:47	15:44	
30	05:12		06:13	07:15			07:18			08:22	08:51	
	21:32		20:19	18:56			16:40			15:46	15:46	
31	05:14		06:15				07:20				08:51	
	21:30		20:16				16:38				15:47	
Potential sun hours	529		469	385			324		247		216	
Total, worst case		816		215			608					
Sun reduction		0.49		0.43			0.26					
Oper. time red.		0.98		0.98			0.98					
Wind dir. red.		0.67		0.65			0.67					
Total reduction		0.32		0.27			0.17					
Total, real		265		58			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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	05:14 (E14) 22:09	05:20 (E14) 21:28	05:16 20:14	06:17 18:54	07:17 16:36	07:23 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	05:14 (E14) 22:08	05:20 (E14) 21:26	05:18 20:11	06:19 18:51	07:19 16:34	07:25 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	05:15 (E14) 22:08	05:20 (E14) 21:24	05:20 20:09	06:21 18:48	07:21 16:32	07:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	05:15 (E14) 22:07	05:20 (E14) 21:22	05:22 20:06	06:23 18:46	07:23 16:30	07:29 15:43
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	05:14 (E14) 22:07	05:20 (E14) 21:19	05:24 20:03	06:25 18:43	07:25 16:27	07:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	05:14 (E14) 22:06	05:21 (E14) 21:17	05:26 20:01	06:27 18:40	07:28 16:25	07:33 15:41
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	05:15 (E14) 22:05	05:21 (E14) 21:15	05:27 19:58	06:29 18:38	07:30 16:23	07:36 15:41
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	05:18 (E14) 22:04	05:21 (E14) 21:13	05:29 19:56	06:31 18:35	07:32 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	05:16 (E14) 22:03	05:21 (E14) 21:11	05:31 19:53	06:33 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	05:13 21:14	04:28 22:03	05:15 (E14) 22:02	05:21 (E14) 21:08	05:33 19:50	06:35 18:30	07:36 16:17	07:42 15:39
11	08:45 16:03	07:54 17:08	06:47 18:09	06:22 20:14	05:11 21:16	04:28 22:04	05:16 (E14) 22:01	05:22 (E14) 21:06	05:35 19:47	06:37 18:27	07:38 16:15	07:44 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	05:16 (E14) 22:00	05:22 (E14) 21:04	05:37 19:45	06:39 18:25	07:40 16:13	07:46 15:38
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	05:16 (E14) 21:59	05:22 (E14) 21:02	05:39 19:42	06:41 18:22	07:42 16:11	07:49 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	05:17 (E14) 21:58	05:22 (E14) 20:59	05:41 19:39	06:43 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	05:03 21:24	04:26 22:07	05:17 (E14) 21:57	05:24 (E14) 20:57	05:43 19:37	06:45 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	05:01 21:25	04:26 22:08	05:17 (E14) 21:55	05:24 (E14) 20:54	05:45 19:34	06:47 18:15	07:48 16:06	07:55 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	05:17 (E14) 21:54	05:26 (E14) 20:52	05:47 19:31	06:49 18:12	07:50 16:04	07:57 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	05:17 (E14) 21:52	05:27 (E14) 20:50	05:49 19:29	06:51 18:10	07:52 16:03	07:59 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	05:18 (E14) 21:51	05:28 (E14) 20:47	05:51 19:26	06:53 18:07	07:55 16:01	08:01 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	05:18 (E14) 21:49	05:30 (E14) 20:45	05:53 19:23	06:55 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	04:52 21:35	04:26 22:10	05:18 (E14) 21:48	05:31 (E14) 20:42	05:55 19:21	06:57 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	04:50 21:36	04:26 22:10	05:18 (E14) 21:46	05:33 (E14) 20:40	05:57 19:18	06:59 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	04:49 21:38	04:26 22:10	05:18 (E14) 21:45	05:35 (E14) 20:37	05:59 19:15	07:01 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	04:47 21:40	04:26 22:10	05:19 (E14) 21:43	05:01 20:35	05:01 19:12	07:03 17:55	08:05 15:54	08:11 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:19 (E14) 21:41	05:03 20:32	06:03 19:10	07:05 16:52	07:07 15:52	08:13 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	05:19 (E14) 21:39	05:05 20:30	06:05 19:07	07:07 16:50	07:10 15:51	08:15 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:19 (E14) 21:37	05:07 20:27	06:07 19:04	07:09 16:48	07:12 15:50	08:17 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	05:20 (E14) 21:36	05:08 20:24	06:09 19:02	07:11 16:45	07:14 15:48	08:19 15:44
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 20:22	06:11 18:59	07:13 16:43	07:16 15:47	08:21 15:45
30	08:18 16:41		06:54 19:59	05:35 20:53	04:39 21:50	04:30 22:09	05:20 (E14) 21:32	05:12 20:19	06:13 18:56	07:15 16:41	07:18 15:46	08:22 15:46
31	08:17 16:43		06:52 19:51	05:33 20:51	04:37 21:51	04:30 22:09	05:14 (E14) 21:30	05:14 20:17	06:15 18:56	07:20 16:38	07:20 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case					174	683	441					
Sun reduction					0.57	0.56	0.49					
Oper. time red.					0.98	0.98	0.98					
Wind dir. red.					0.67	0.67	0.67					
Total reduction					0.37	0.37	0.32					
Total, real					65	251	143					

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first 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 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 17:58	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
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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
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
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			07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	07:38 (E15)	05:33
	15:48	16:45	17:48	19:53	07:51 (E15)	20:55
2	08:50	08:13	07:08	06:46	07:40 (E15)	05:30
	15:50	16:48	17:50	19:55	07:47 (E15)	20:57
3	08:50	08:11	07:06	06:43		05:28
	15:51	16:50	17:52	19:57		21:00
4	08:50	08:09	07:03	06:41		05:26
	15:52	16:52	17:54	19:59		21:02
5	08:49	08:07	07:01	06:38		05:24
	15:54	16:54	17:56	20:01		21:04
6	08:49	08:05	06:58	06:36		05:21
	15:55	16:57	17:58	20:03		21:06
7	08:48	08:03	06:55	06:33		05:19
	15:56	16:59	18:01	20:06		21:08
8	08:47	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	06:47	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	06:55 (E14)	05:07
	16:06	17:12	18:13	20:18	07:05 (E14)	21:20
14	08:42	07:47	06:37	06:15	06:50 (E14)	05:05
	16:08	17:14	18:15	20:20	07:08 (E14)	21:22
15	08:41	07:45	06:34	06:12	06:48 (E14)	05:03
	16:10	17:17	18:18	20:22	07:11 (E14)	21:24
16	08:40	07:43	06:32	06:09	06:46 (E14)	05:01
	16:12	17:19	18:20	20:24	07:12 (E14)	21:25
17	08:39	07:40	06:29	06:07	06:44 (E14)	04:59
	16:14	17:21	18:22	20:26	07:13 (E14)	21:27
18	08:37	07:38	06:26	06:04	06:42 (E14)	04:57
	16:16	17:23	18:24	20:28	07:14 (E14)	21:29
19	08:36	07:36	06:24	06:02	06:41 (E14)	04:55
	16:18	17:26	18:26	20:30	07:15 (E14)	21:31
20	08:35	07:33	06:21	06:59	06:41 (E14)	04:54
	16:20	17:28	18:28	20:33	07:16 (E14)	21:33
21	08:33	07:31	06:18	06:57	06:39 (E14)	04:52
	16:22	17:30	18:30	20:35	07:16 (E14)	21:35
22	08:32	07:28	06:16	06:54	06:39 (E14)	04:50
	16:24	17:32	18:32	20:37	07:17 (E14)	21:36
23	08:30	07:26	06:13	06:52	06:38 (E14)	04:48
	16:26	17:34	18:34	20:39	07:16 (E14)	21:38
24	08:29	07:23	06:10	06:49	06:37 (E14)	04:47
	16:28	17:37	18:36	20:41	07:17 (E14)	21:40
25	08:27	07:21	06:08	06:47	06:37 (E14)	04:45
	16:30	17:39	18:39	20:43	07:17 (E14)	21:42
26	08:26	07:18	06:05	06:44	06:36 (E14)	04:44
	16:32	17:41	18:41	20:45	07:16 (E14)	21:43
27	08:24	07:16	06:02	06:42	06:36 (E14)	04:42
	16:34	17:43	18:43	20:47	07:16 (E14)	21:45
28	08:22	07:13	06:00	06:40	06:37 (E14)	04:41
	16:37	17:45	18:45	20:49	07:16 (E14)	21:47
29	08:20		06:57	06:37 (E14)	06:37 (E14)	04:40
	16:39		19:47	20:51	07:16 (E14)	21:48
30	08:18		06:54	06:35 (E15)	06:37 (E14)	04:38
	16:41		19:49	20:53	07:16 (E14)	21:50
31	08:17		06:51	07:37 (E15)		04:37
	16:43		19:51	07:53 (E15)		21:51
Potential sun hours	235	266	366	426	508	528
Total, worst case			221	617	536	656
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.98	0.98	0.98	0.98
Wind dir. red.			0.65	0.66	0.66	0.67
Total reduction			0.26	0.32	0.37	0.37
Total, real			58	198	197	241

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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		06:56 (E14)	06:17			07:17	07:23	08:24
	22:09	22	05:42 (E13)	21:28	17	07:13 (E14)	20:14			18:54	16:36	15:45
2	04:31		05:19 (E13)	05:18		06:54 (E14)	06:19			07:19	07:25	08:26
	22:08	23	05:42 (E13)	21:26	21	07:15 (E14)	20:11			18:51	16:34	15:44
3	04:32		05:20 (E13)	05:20		06:53 (E14)	06:21			07:21	07:27	08:28
	22:08	22	05:42 (E13)	21:24	24	07:17 (E14)	20:09			18:48	16:32	15:43
4	04:33		05:20 (E13)	05:22		06:52 (E14)	06:23			07:23	07:29	08:29
	22:07	22	05:42 (E13)	21:22	26	07:18 (E14)	20:06			18:46	16:30	15:43
5	04:34		05:20 (E13)	05:24		06:51 (E14)	06:25			07:25	07:31	08:31
	22:07	23	05:43 (E13)	21:19	29	07:20 (E14)	20:03			18:43	16:27	15:42
6	04:35		05:20 (E13)	05:25		06:49 (E14)	06:27			07:28	07:33	08:32
	22:06	23	05:43 (E13)	21:17	31	07:20 (E14)	20:01			18:40	16:25	15:41
7	04:36		05:20 (E13)	05:27		06:48 (E14)	06:29			07:30	07:36	08:34
	22:05	23	05:43 (E13)	21:15	33	07:21 (E14)	19:58			18:38	16:23	15:40
8	04:37		05:21 (E13)	05:29		06:48 (E14)	06:31			07:32	07:38	08:35
	22:04	22	05:43 (E13)	21:13	34	07:22 (E14)	19:56			18:35	16:21	15:40
9	04:38		05:21 (E13)	05:31		06:47 (E14)	06:33			07:34	07:40	08:37
	22:03	22	05:43 (E13)	21:11	35	07:22 (E14)	19:53			18:33	16:19	15:39
10	04:40		05:21 (E13)	05:33		06:47 (E14)	06:35		07:34 (E15)	07:36	07:42	08:38
	22:02	22	05:43 (E13)	21:08	36	07:23 (E14)	19:50	6	07:40 (E15)	18:30	16:17	15:39
11	04:41		05:22 (E13)	05:35		06:46 (E14)	06:37		07:31 (E15)	07:38	07:44	08:39
	22:01	22	05:44 (E13)	21:06	38	07:24 (E14)	19:47	12	07:43 (E15)	18:27	16:15	15:39
12	04:42		05:22 (E13)	05:37		06:45 (E14)	06:39		07:28 (E15)	07:40	07:46	08:40
	22:00	22	05:44 (E13)	21:04	38	07:23 (E14)	19:45	17	07:45 (E15)	18:25	16:13	15:38
13	04:44		05:22 (E13)	05:39		06:44 (E14)	06:41		07:27 (E15)	07:42	07:49	08:42
	21:59	22	05:44 (E13)	21:02	39	07:23 (E14)	19:42	19	07:46 (E15)	18:22	16:11	15:38
14	04:45		05:22 (E13)	05:41		06:44 (E14)	06:43		07:26 (E15)	07:44	07:51	08:43
	21:58	21	05:43 (E13)	20:59	40	07:24 (E14)	19:39	20	07:46 (E15)	18:20	16:10	15:38
15	04:46		05:23 (E13)	05:43		06:44 (E14)	06:45		07:25 (E15)	07:46	07:53	08:44
	21:57	21	05:44 (E13)	20:57	40	07:24 (E14)	19:37	21	07:46 (E15)	18:17	16:08	15:38
16	04:48		05:24 (E13)	05:45		06:44 (E14)	06:47		07:24 (E15)	07:48	07:55	08:45
	21:55	19	05:43 (E13)	20:54	40	07:24 (E14)	19:34	22	07:46 (E15)	18:15	16:06	15:38
17	04:49		05:25 (E13)	05:47		06:44 (E14)	06:49		07:24 (E15)	07:50	07:57	08:46
	21:54	18	05:43 (E13)	20:52	40	07:24 (E14)	19:31	22	07:46 (E15)	18:12	16:04	15:38
18	04:51		05:27 (E13)	05:49		06:44 (E14)	06:51		07:24 (E15)	07:52	07:59	08:46
	21:52	16	05:43 (E13)	20:50	39	07:23 (E14)	19:29	22	07:46 (E15)	18:09	16:03	15:38
19	04:53		05:28 (E13)	05:51		06:43 (E14)	06:53		07:24 (E15)	07:55	08:01	08:47
	21:51	14	05:42 (E13)	20:47	39	07:22 (E14)	19:26	21	07:45 (E15)	18:07	16:01	15:38
20	04:54		05:30 (E13)	05:53		06:43 (E14)	06:55		07:24 (E15)	07:57	08:03	08:48
	21:49	12	05:42 (E13)	20:45	39	07:22 (E14)	19:23	20	07:44 (E15)	18:04	15:59	15:39
21	04:56		05:31 (E13)	05:55		06:44 (E14)	06:57		07:26 (E15)	07:59	08:05	08:48
	21:48	10	05:41 (E13)	20:42	37	07:21 (E14)	19:21	17	07:43 (E15)	18:02	15:58	15:39
22	04:58		05:33 (E13)	05:57		06:44 (E14)	06:59		07:28 (E15)	08:01	08:07	08:49
	21:46	7	05:40 (E13)	20:40	36	07:20 (E14)	19:18	13	07:41 (E15)	18:00	15:56	15:40
23	04:59		05:34 (E13)	05:59		06:45 (E14)	07:01		07:30 (E15)	08:03	08:09	08:49
	21:45	4	05:38 (E13)	20:37	35	07:20 (E14)	19:15	9	07:39 (E15)	17:57	15:55	15:40
24	05:01			06:01		06:45 (E14)	07:03		07:32 (E15)	08:05	08:11	08:50
	21:43			20:35	34	07:19 (E14)	19:12	4	07:36 (E15)	17:55	15:53	15:41
25	05:03			06:03		06:46 (E14)	07:05			07:07	08:13	08:50
	21:41			20:32	31	07:17 (E14)	19:10			16:52	15:52	15:41
26	05:05			06:05		06:47 (E14)	07:07			07:10	08:15	08:51
	21:39			20:30	29	07:16 (E14)	19:07			16:50	15:51	15:42
27	05:06			06:07		06:48 (E14)	07:09			07:12	08:17	08:51
	21:38			20:27	26	07:14 (E14)	19:04			16:48	15:50	15:43
28	05:08			06:09		06:49 (E14)	07:11			07:14	08:19	08:51
	21:36			20:24	22	07:11 (E14)	19:02			16:45	15:48	15:44
29	05:10			06:11		06:51 (E14)	07:13			07:16	08:21	08:51
	21:34			20:22	18	07:09 (E14)	18:59			16:43	15:47	15:45
30	05:12			06:13		06:55 (E14)	07:15			07:18	08:22	08:51
	21:32			20:19	9	07:04 (E14)	18:56			16:41	15:46	15:46
31	05:14		07:00 (E14)	06:15						07:20		08:51
	21:30	11	07:11 (E14)	20:17						16:38		15:47
Potential sun hours	529			469			385			324	247	216
Total, worst case		443			955		245					
Sun reduction		0.49			0.50		0.43					
Oper. time red.		0.98			0.98		0.98					
Wind dir. red.		0.67			0.66		0.65					
Total reduction		0.32			0.32		0.27					
Total, real		143			306		66					

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	09:07 (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	09:07 (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	09:09 (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 19:58	07:30 18:38	07:36 16:23	08:34 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 19:56	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 19:53	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 19:50	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 19:47	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 19:45	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 19:42	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	04:26 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	09:27 (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	08:44 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 19:34	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 19:31	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 19:29	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 19:26	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 19:23	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 19:21	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 19:18	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 19:15	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 19:12	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 19:10	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 19:07	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 20:42	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 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	09:40 (E13) 18:45	05:59 20:40	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 15:48	08:51 15:44
29	08:20 16:39	07:11 17:48	09:41 (E13) 18:47	05:57 20:37	05:37 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:04 17:51	09:42 (E13) 18:49	05:54 20:35	05:35 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:04 17:52	09:43 (E13) 18:51	05:51 20:37	05:32 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:17 18:48	08:19 17:38	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	245	149									394	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.98	0.98									0.98	
Wind dir. red.	0.59	0.59									0.59	
Total reduction	0.08	0.12									0.05	
Total, real	19	17									19	

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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		14:00 (E13)	07:11		06:49				05:32		04:36			
	15:48	37	14:23 (E13)	16:45	30	14:30 (E13)	17:47		19:53				20:55		21:53			
2	08:50		13:47 (E13)	08:13		14:02 (E13)	07:08		06:46				05:30		04:35			
	15:49	37	14:24 (E13)	16:47	27	14:29 (E13)	17:50		19:55				20:57		21:54			
3	08:50		13:47 (E13)	08:11		14:04 (E13)	07:06		06:43				05:28		04:34			
	15:51	37	14:24 (E13)	16:50	23	14:27 (E13)	17:52		19:57				20:59		21:55			
4	08:50		13:47 (E13)	08:09		14:06 (E13)	07:03		06:41				05:26		04:33			
	15:52	37	14:24 (E13)	16:52	19	14:25 (E13)	17:54		19:59				21:02		21:57			
5	08:49		13:48 (E13)	08:07		14:10 (E13)	07:00		06:38				05:23		04:32			
	15:53	38	14:26 (E13)	16:54	13	14:23 (E13)	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	38	14:26 (E13)	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	39	14:27 (E13)	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	39	14:27 (E13)	17:01			18:03		20:07		6	07:01 (E8)	21:10		22:01			
9	08:47		13:48 (E13)	07:58			06:50		06:27			06:53 (E8)	05:15		04:28			
	15:59	40	14:28 (E13)	17:03			18:05		20:10		11	07:04 (E8)	21:12		22:02			
10	08:46		13:48 (E13)	07:56			06:47		06:25			06:50 (E8)	05:13		04:28			
	16:01	41	14:29 (E13)	17:05			18:07		20:12		15	07:05 (E8)	21:14		22:03			
11	08:45		13:49 (E13)	07:54			06:45		06:22			06:48 (E8)	05:10		04:27			
	16:03	40	14:29 (E13)	17:08			18:09		20:14		19	07:07 (E8)	21:16		22:04			
12	08:44		13:48 (E13)	07:52			06:42		06:20			06:46 (E8)	05:08		04:27			
	16:04	41	14:29 (E13)	17:10			18:11		20:16		21	07:07 (E8)	21:18		22:05			
13	08:43		13:49 (E13)	07:49			06:39		06:17			06:46 (E8)	05:06		04:26			
	16:06	41	14:30 (E13)	17:12			18:13		20:18		22	07:08 (E8)	21:20		22:06			
14	08:42		13:49 (E13)	07:47			06:37		06:14			06:45 (E8)	05:04		04:26			
	16:08	42	14:31 (E13)	17:14			18:15		20:20		22	07:07 (E8)	21:22		22:07			
15	08:41		13:49 (E13)	07:45			06:34		06:12			06:45 (E8)	05:02		04:26			
	16:10	42	14:31 (E13)	17:17			18:17		20:22		23	07:08 (E8)	21:24		22:07			
16	08:40		13:50 (E13)	07:43			06:31		06:09			06:44 (E8)	05:01		04:25			
	16:12	42	14:32 (E13)	17:19			18:20		20:24		23	07:07 (E8)	21:25		22:08			
17	08:39		13:50 (E13)	07:40			06:29		06:07			06:44 (E8)	04:59		04:25			
	16:14	42	14:32 (E13)	17:21			18:22		20:26		23	07:07 (E8)	21:27		22:08			
18	08:37		13:50 (E13)	07:38			06:26		06:04			06:44 (E8)	04:57		04:25			
	16:16	42	14:32 (E13)	17:23			18:24		20:28		22	07:06 (E8)	21:29		22:09			
19	08:36		13:50 (E13)	07:35			06:23		06:02			06:45 (E8)	04:55		04:25			
	16:18	42	14:32 (E13)	17:25			18:26		20:30		20	07:05 (E8)	21:31		22:09			
20	08:35		13:51 (E13)	07:33			06:21		05:59			06:45 (E8)	04:53		04:25			
	16:20	42	14:33 (E13)	17:28			18:28		20:32		19	07:04 (E8)	21:33		22:10			
21	08:33		13:52 (E13)	07:31			06:18		05:57			06:46 (E8)	04:52		04:25			
	16:22	41	14:33 (E13)	17:30			18:30		20:35		17	07:03 (E8)	21:35		22:10			
22	08:32		13:52 (E13)	07:28			06:15		05:54			06:48 (E8)	04:50		04:25			
	16:24	41	14:33 (E13)	17:32			18:32		20:37		13	07:01 (E8)	21:36		22:10			
23	08:30		13:52 (E13)	07:26			06:13		05:52			06:49 (E8)	04:48		04:26			
	16:26	41	14:33 (E13)	17:34			18:34		20:39		9	06:58 (E8)	21:38		22:10			
24	08:29		13:53 (E13)	07:23			06:10		05:49				04:47		04:26			
	16:28	40	14:33 (E13)	17:37			18:36		20:41				21:40		22:10			
25	08:27		13:54 (E13)	07:21			06:07		05:47				04:45		04:26			
	16:30	40	14:34 (E13)	17:39			18:38		20:43				21:42		22:10			
26	08:25		13:55 (E13)	07:18			06:05		05:44				04:44		04:27			
	16:32	38	14:33 (E13)	17:41			18:40		20:45				21:43		22:10			
27	08:24		13:55 (E13)	07:16			06:02		05:42				04:42		04:27			
	16:34	38	14:33 (E13)	17:43			18:43		20:47				21:45		22:10			
28	08:22		13:56 (E13)	07:13			05:59		05:40				04:41		04:28			
	16:36	37	14:33 (E13)	17:45			18:45		20:49				21:47		22:10			
29	08:20		13:57 (E13)				06:57		05:37				04:39		04:28			
	16:39	35	14:32 (E13)				19:47		20:51				21:48		22:10			
30	08:18		13:58 (E13)				06:54		05:35				04:38		04:29			
	16:41	34	14:32 (E13)				19:49		20:53				21:50		22:09			
31	08:17		13:59 (E13)				06:51						04:37					
	16:43	31	14:30 (E13)				19:51						21:51					
Potential sun hours	235			266			366			426			508			529		
Total, worst case	1215			112						285								
Sun reduction	0.13			0.20						0.50								
Oper. time red.	0.98			0.98						0.98								
Wind dir. red.	0.66			0.66						0.66								
Total reduction	0.09			0.13						0.32								
Total, real	104			15						92								

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	19	07:06 (E8)	18:54
2	04:31	05:17	06:19	06:49 (E8)	07:19	07:25
	22:08	21:26	20:11	15	07:04 (E8)	18:51
3	04:32	05:19	06:21	06:51 (E8)	07:21	07:27
	22:08	21:24	20:09	11	07:02 (E8)	18:48
4	04:33	05:21	06:23	06:53 (E8)	07:23	07:29
	22:07	21:22	20:06	6	06:59 (E8)	18:46
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	13:39 (E13)
	22:06	21:17	20:01	18:40	16:25	14
7	04:36	05:27	06:29	07:29	07:36	13:36 (E13)
	22:05	21:15	19:58	18:38	16:23	19
8	04:37	05:29	06:31	07:32	07:38	13:34 (E13)
	22:04	21:13	19:55	18:35	16:21	24
9	04:38	05:31	06:33	07:34	07:40	13:32 (E13)
	22:03	21:11	19:53	18:32	16:19	27
10	04:39	05:33	06:35	07:36	07:42	13:31 (E13)
	22:02	21:08	19:50	18:30	16:17	29
11	04:41	05:35	06:37	07:38	07:44	13:30 (E13)
	22:01	21:06	19:47	18:27	16:15	32
12	04:42	05:37	06:39	07:40	07:46	13:29 (E13)
	22:00	21:04	19:45	18:25	16:13	34
13	04:43	05:39	06:41	07:42	07:49	13:29 (E13)
	21:59	21:01	19:42	18:22	16:11	35
14	04:45	05:41	06:43	07:44	07:51	13:28 (E13)
	21:58	20:59	19:39	18:19	16:09	37
15	04:46	05:43	06:45	07:46	07:53	13:27 (E13)
	21:57	20:57	19:37	18:17	16:08	38
16	04:48	05:45	06:47	07:48	07:55	13:28 (E13)
	21:55	20:54	19:34	18:14	16:06	38
17	04:49	05:47	06:49	07:50	07:57	13:27 (E13)
	21:54	20:52	19:31	18:12	16:04	40
18	04:51	05:49	06:51	07:52	07:59	13:27 (E13)
	21:52	20:49	19:29	18:09	16:02	40
19	04:52	05:51	06:53	07:54	08:01	13:27 (E13)
	21:51	20:47	19:26	18:07	16:01	41
20	04:54	05:53	06:55	07:57	08:03	13:27 (E13)
	21:49	20:45	10	07:04 (E8)	19:23	18:04
21	04:56	05:55	06:57	07:59	08:05	13:27 (E13)
	21:48	20:42	14	07:06 (E8)	19:20	18:02
22	04:57	05:57	06:59	08:01	08:07	13:28 (E13)
	21:46	20:40	17	07:07 (E8)	19:18	17:59
23	04:59	05:59	07:01	08:03	08:09	13:28 (E13)
	21:45	20:37	19	07:08 (E8)	19:15	17:57
24	05:01	06:01	07:03	08:05	08:11	13:28 (E13)
	21:43	20:35	21	07:09 (E8)	19:12	17:55
25	05:03	06:03	07:05	08:07	08:13	13:28 (E13)
	21:41	20:32	21	07:09 (E8)	19:10	16:52
26	05:04	06:05	07:07	08:09	08:15	13:28 (E13)
	21:39	20:29	23	07:09 (E8)	19:07	16:50
27	05:06	06:07	07:09	08:11	08:17	13:29 (E13)
	21:37	20:27	23	07:09 (E8)	19:04	16:47
28	05:08	06:09	07:11	08:13	08:19	13:29 (E13)
	21:36	20:24	23	07:08 (E8)	19:02	16:45
29	05:10	06:11	07:13	08:15	08:21	13:30 (E13)
	21:34	20:22	23	07:08 (E8)	18:59	16:43
30	05:12	06:13	07:15	08:17	08:22	13:30 (E13)
	21:32	20:19	21	07:07 (E8)	18:56	16:40
31	05:14	06:15	07:17	08:19	08:25	13:31 (E13)
	21:30	20:17	21	07:07 (E8)	18:54	16:38
Potential sun hours	529	469	385	324	247	216
Total, worst case		236	51		904	1116
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.98	0.98		0.98	0.98
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.32	0.28		0.05	0.05
Total, real		76	14		48	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

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

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

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:47	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:35	08:24 15:44
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:25	06:19 20:11	07:19 18:50	07:24 16:33	08:26 15:43
3	08:50 15:50	08:10 16:49	07:05 17:51	06:43 19:57	05:27 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:49 15:51	08:08 16:51	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:42	07:31 16:27	08:30 15:41
6	08:48 15:54	08:04 16:56	06:57 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:18 21:07	04:29 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:22	08:33 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	06:30 20:07	05:16 21:09	04:29 22:01	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:37 16:20	08:35 15:39
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:37 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	06:24 20:11	05:12 21:13	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
12	08:44 16:04	07:51 17:09	06:42 18:11	06:19 20:15	05:08 21:17	04:26 22:05	04:41 22:00	05:37 21:03	06:39 19:44	07:39 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:41 18:22	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	06:14 20:20	05:04 21:21	04:25 22:06	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	23 06:24 (E13) 21:53
2	08:50	08:13	07:08	06:46	05:30	06:01 (E13) 04:35
	15:50	16:48	17:50	19:55	20:58	23 06:24 (E13) 21:54
3	08:50	08:11	07:06	06:43	05:28	06:01 (E13) 04:34
	15:51	16:50	17:52	19:57	21:00	23 06:24 (E13) 21:55
4	08:50	08:09	07:03	06:41	05:26	06:01 (E13) 04:33
	15:52	16:52	17:54	19:59	21:02	23 06:24 (E13) 21:57
5	08:49	08:07	07:01	06:38	05:24	06:02 (E13) 04:32
	15:54	16:54	17:56	20:01	21:04	22 06:24 (E13) 21:58
6	08:49	08:05	06:58	06:36	05:21	06:02 (E13) 04:31
	15:55	16:57	17:58	20:03	21:06	21 06:23 (E13) 21:59
7	08:48	08:03	06:55	06:33	05:19	06:02 (E13) 04:30
	15:56	16:59	18:01	20:06	21:08	21 06:23 (E13) 22:00
8	08:48	08:01	06:53	06:30	05:17	06:03 (E13) 04:29
	15:58	17:01	18:03	20:08	21:10	19 06:22 (E13) 22:01
9	08:47	07:58	06:50	06:28	05:15	06:04 (E13) 04:29
	16:00	17:03	18:05	20:10	21:12	17 06:21 (E13) 22:02
10	08:46	07:56	06:48	07:17 (E14) 06:25	05:13	06:05 (E13) 04:28
	16:01	17:05	18:07	12 07:29 (E14) 20:12	21:14	14 06:19 (E13) 22:03
11	08:45	07:54	06:45	07:13 (E14) 06:22	05:11	06:06 (E13) 04:27
	16:03	17:08	18:09	19 07:32 (E14) 20:14	21:16	11 06:17 (E13) 22:04
12	08:44	07:52	06:42	07:12 (E14) 06:20	05:09	06:09 (E13) 04:27
	16:05	17:10	18:11	22 07:34 (E14) 20:16	21:18	6 06:15 (E13) 22:05
13	08:43	07:50	06:40	07:09 (E14) 06:17	05:07	04:27
	16:06	17:12	18:13	26 07:35 (E14) 20:18	21:20	22:06
14	08:42	07:47	06:37	07:08 (E14) 06:15	05:05	04:26
	16:08	17:14	18:15	28 07:36 (E14) 20:20	21:22	22:07
15	08:41	07:45	06:34	07:07 (E14) 06:12	05:03	04:26
	16:10	17:17	18:18	30 07:37 (E14) 20:22	21:24	22:07
16	08:40	07:43	06:32	07:06 (E14) 06:09	05:01	04:26
	16:12	17:19	18:20	32 07:38 (E14) 20:24	21:25	22:08
17	08:39	07:40	06:29	07:04 (E14) 06:07	04:59	04:25
	16:14	17:21	18:22	34 07:38 (E14) 20:26	21:27	22:08
18	08:37	07:38	06:26	07:03 (E14) 06:04	04:57	04:25
	16:16	17:23	18:24	34 07:37 (E14) 20:28	21:29	22:09
19	08:36	07:36	06:24	07:04 (E14) 06:02	04:55	04:25
	16:18	17:26	18:26	34 07:38 (E14) 20:31	21:31	22:09
20	08:35	07:33	06:21	07:03 (E14) 05:59	04:53	04:25
	16:20	17:28	18:28	35 07:38 (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	35 07:37 (E14) 20:35	21:35	22:10
22	08:32	07:28	06:16	07:03 (E14) 05:54	04:50	04:26
	16:24	17:32	18:32	34 07:37 (E14) 20:37	21:37	22:10
23	08:30	07:26	06:13	07:03 (E14) 05:52	04:48	04:26
	16:26	17:34	18:34	33 07:36 (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	33 07:35 (E14) 20:41	2 06:18 (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	32 07:35 (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	29 07:33 (E14) 20:45	10 06:21 (E13) 21:43	22:10
27	08:24	07:16	06:02	07:04 (E14) 05:42	06:09 (E13) 04:42	04:27
	16:34	17:43	18:43	27 07:31 (E14) 20:47	14 06:23 (E13) 21:45	22:10
28	08:22	07:13	06:00	07:06 (E14) 05:40	06:07 (E13) 04:41	04:28
	16:37	17:45	18:45	24 07:30 (E14) 20:49	17 06:24 (E13) 21:47	22:10
29	08:20		06:57	08:07 (E14) 05:37	06:05 (E13) 04:40	04:29
	16:39		19:47	21 08:28 (E14) 20:51	19 06:24 (E13) 21:48	22:10
30	08:18		06:54	08:09 (E14) 05:35	06:03 (E13) 04:38	04:29
	16:41		19:49	15 08:24 (E14) 20:53	22 06:25 (E13) 21:50	22:09
31	08:17		06:51	08:13 (E14)	04:37	
	16:43		19:51	7 08:20 (E14)	21:51	
Potential sun hours	235	266	366	426	508	528
Total, worst case			596	91	223	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.98	0.98	0.98	
Wind dir. red.			0.63	0.66	0.66	
Total reduction			0.25	0.32	0.37	
Total, real			150	29	82	

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	06:18 (E13) 20:14	07:17 18:54	07:50 (E14) 16:36	08:24 15:45
2	04:31 22:08	05:18 21:26	06:16 (E13) 20:11	07:19 18:51	07:51 (E14) 16:34	08:26 15:44
3	04:32 22:08	05:20 21:24	06:15 (E13) 20:09	07:21 18:48	07:53 (E14) 16:32	08:28 15:43
4	04:33 22:07	05:22 21:22	06:14 (E13) 20:06	07:23 18:46	07:58 (E14) 16:30	08:29 15:43
5	04:34 22:07	05:24 21:20	06:13 (E13) 20:03	07:25 18:43	07:31 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:12 (E13) 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:11 (E13) 19:58	07:30 18:38	07:36 16:23	08:34 15:40
8	04:37 22:04	05:29 21:13	06:11 (E13) 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	04:38 22:03	05:31 21:11	06:11 (E13) 19:53	07:34 18:33	07:40 16:19	08:37 15:39
10	04:40 22:02	05:33 21:08	06:11 (E13) 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:11 (E13) 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	04:42 22:00	05:37 21:04	06:10 (E13) 19:45	08:06 (E14) 18:25	07:40 16:13	08:40 15:38
13	04:44 21:59	05:39 21:02	06:11 (E13) 19:42	08:00 (E14) 18:22	07:49 16:11	08:42 15:38
14	04:45 21:58	05:41 20:59	06:13 (E13) 19:39	08:15 (E14) 18:20	07:51 16:10	08:43 15:38
15	04:46 21:57	05:43 20:57	06:15 (E13) 19:37	07:55 (E14) 18:17	07:53 16:08	08:44 15:38
16	04:48 21:55	05:45 20:54	06:17 (E13) 19:34	07:54 (E14) 18:15	07:55 16:06	08:45 15:38
17	04:49 21:54	05:47 20:52	06:19 (E13) 19:31	08:20 (E14) 18:12	07:57 16:04	08:46 15:38
18	04:51 21:52	05:49 20:50	06:21 (E13) 19:29	07:51 (E14) 18:09	07:59 16:03	08:46 15:38
19	04:53 21:51	05:51 20:47	06:22 (E13) 19:26	08:22 (E14) 18:07	07:55 16:01	08:47 15:38
20	04:54 21:49	05:53 20:45	06:23 (E13) 19:23	07:50 (E14) 18:04	08:01 15:59	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:21	07:49 (E14) 18:02	08:05 15:58	08:48 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	07:48 (E14) 18:00	08:07 15:56	08:49 15:40
23	04:59 21:45	05:59 20:37	07:01 19:15	07:48 (E14) 17:57	08:09 15:55	08:50 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	07:47 (E14) 17:55	08:11 15:53	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	07:47 (E14) 17:52	08:13 15:52	08:51 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	07:47 (E14) 17:50	08:15 15:51	08:51 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	07:47 (E14) 17:48	08:17 15:50	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:48 (E14) 17:45	08:19 15:48	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:48 (E14) 17:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	07:49 (E14) 17:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17		08:16 (E14) 17:20	15:46 15:47	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		311	542	67		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.66	0.63	0.63		
Total reduction		0.32	0.26	0.16		
Total, real		100	142	11		

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	07:49 (E14) 08:15 (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	07:49 (E14) 08:14 (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		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	8	07:21 (E14) 07:29 (E14)	06:33 20:06	05:19 21:08	04:30 22:00	05:27 21:15	06:29 19:58		07:30 18:38	4	07:58 (E14) 08:02 (E14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	13	07:18 (E14) 07:31 (E14)	06:30 20:08	05:17 21:10	04:29 22:01	05:29 21:13	06:31 19:56		07:32 18:35		07:59 (E14) 08:00 (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	05:31 21:11	06:33 19:53		07:34 18:33		07:54 (E14) 08:00 (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	05:33 21:08	06:35 19:50		07:36 18:30		07:56 (E14) 08:00 (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 22:04	05:35 21:06	06:37 19:48		07:38 18:27		07:58 (E14) 08:00 (E14)	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	25	07:09 (E14) 07:35 (E14)	06:17 20:16	05:09 21:18	04:27 22:05	05:37 21:04	06:39 19:45		07:40 18:25		07:59 (E14) 08:00 (E14)	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	26	07:09 (E14) 07:35 (E14)	06:17 20:18	05:07 21:20	04:27 22:06	05:39 21:02	06:41 19:42		07:42 18:22		08:00 (E14) 08:00 (E14)	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	27	07:08 (E14) 07:35 (E14)	06:15 20:20	05:05 21:22	04:26 22:07	05:41 20:59	06:43 19:39		07:44 18:20		08:01 (E14) 08:00 (E14)	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	28	07:08 (E14) 07:36 (E14)	06:12 20:22	05:03 21:24	04:26 22:07	05:43 20:57	06:45 19:37		07:46 18:17		08:02 (E14) 08:00 (E14)	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	27	07:08 (E14) 07:35 (E14)	06:09 20:24	05:01 21:26	04:48 22:08	05:45 20:54	06:47 19:34		07:48 18:15		08:03 (E14) 08:00 (E14)	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	27	07:07 (E14) 07:34 (E14)	06:07 20:26	04:59 21:27	04:49 21:54	05:47 20:52	06:49 19:31		07:50 18:12		08:04 (E14) 08:00 (E14)	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	26	07:07 (E14) 07:33 (E14)	06:04 20:28	04:57 21:29	04:51 22:09	05:49 20:50	06:51 19:29		07:53 18:09		08:05 (E14) 08:00 (E14)	07:59 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	24	07:09 (E14) 07:33 (E14)	06:02 20:31	04:55 21:31	04:53 22:09	05:51 20:47	06:53 19:26		07:55 18:07		08:06 (E14) 08:00 (E14)	08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	22	07:09 (E14) 07:31 (E14)	05:59 20:33	04:54 21:33	04:54 22:10	05:53 20:45	06:55 19:23	7	07:57 18:04	8	08:02 (E14) 08:09 (E14)	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	19	07:10 (E14) 07:29 (E14)	05:57 20:35	04:52 21:35	04:56 21:48	05:55 20:42	06:57 19:21	14	07:59 18:02	14	07:58 (E14) 08:12 (E14)	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	15	07:12 (E14) 07:27 (E14)	05:54 20:37	04:50 21:37	04:58 22:10	05:57 20:40	06:59 19:18	18	07:59 18:00	18	07:56 (E14) 08:14 (E14)	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	10	07:14 (E14) 07:24 (E14)	05:52 20:39	04:48 21:38	04:59 22:10	05:59 20:37	07:01 19:15	21	08:03 17:57	21	07:54 (E14) 08:15 (E14)	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	23	08:05 17:55	23	07:53 (E14) 08:16 (E14)	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	25	08:07 17:52	25	07:51 (E14) 08:16 (E14)	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	27	08:09 17:50	27	07:50 (E14) 08:17 (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	04:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	27	08:11 17:48	27	07:50 (E14) 08:17 (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	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	27	08:13 17:45	27	07:49 (E14) 08:16 (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	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	27	08:16 17:43	27	07:49 (E14) 08:16 (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	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	27	08:17 17:41	27	07:49 (E14) 08:15 (E14)	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		05:33 21:51	04:37 21:51		05:14 21:30	06:15 20:17		26	08:18 17:38	26	07:58 (E14) 08:15 (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				359												
Sun reduction				0.41												
Oper. time red.				0.98												
Wind dir. red.				0.62												
Total reduction				0.25												
Total, real				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)
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Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	9	07:54 (E14) 08:03 (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		07:27 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	6	07:18 (E14) 07:24 (E14)	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)	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)	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)	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)	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	25	07:06 (E14) 07:31 (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	26	07:05 (E14) 07:31 (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	27	07:05 (E14) 07:32 (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	26	07:05 (E14) 07:31 (E14)	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	27	07:04 (E14) 07:31 (E14)	05:09 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	07:04 (E14) 07:30 (E14)	05:04 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	25	07:05 (E14) 07:30 (E14)	05:02 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	7	07:55 (E14) 08:06 (E14)			08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	24	07:05 (E14) 07:29 (E14)	05:59 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	14	07:55 (E14) 08:09 (E14)			08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	22	07:05 (E14) 07:27 (E14)	05:57 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	18	07:53 (E14) 08:11 (E14)			08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	19	07:07 (E14) 07:26 (E14)	05:54 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	21	07:57 (E14) 08:12 (E14)			08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	15	07:08 (E14) 07:23 (E14)	05:52 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	23	08:01 (E14) 08:13 (E14)			08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	10	07:10 (E14) 07:20 (E14)	05:49 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	24	07:59 (E14) 08:13 (E14)			08:05 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39			05:47 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	26	07:48 (E14) 08:14 (E14)			08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41			05:45 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	27	07:47 (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 21:45	04:28 22:10	05:06 21:38	06:07 20:27	07:09 19:04	27	07:46 (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			05:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	27	07:46 (E14) 08:13 (E14)			08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47			05:37 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	26	07:46 (E14) 08:12 (E14)			08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49			05:35 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	26	07:46 (E14) 08:12 (E14)			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			08:24 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385		324		247	216	
Total, worst case				349							266		86			
Sun reduction				0.41							0.43		0.26			
Oper. time red.				0.98							0.98		0.98			
Wind dir. red.				0.63							0.63		0.63			
Total reduction				0.25							0.26		0.16			
Total, real				88							70		14			

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

Shadow receptor: Veikalni - 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January			February			March			April	May	June
1	08:51	09:35 (E14)	08:15	09:45 (E14)	07:11		06:49	05:33	04:36			
	15:48	19	09:54 (E14)	16:45	18	10:03 (E14)	17:48	19:53	20:55	21:53		
2	08:50	09:35 (E14)	08:13	09:48 (E14)	07:08		06:46	05:30	04:35			
	15:49	21	09:56 (E14)	16:48	13	10:01 (E14)	17:50	19:55	20:58	21:54		
3	08:50	09:35 (E14)	08:11	09:52 (E14)	07:06		06:43	05:28	04:34			
	15:51	21	09:56 (E14)	16:50	6	09:58 (E14)	17:52	19:57	21:00	21:55		
4	08:50	09:34 (E14)	08:09		07:03		06:41	05:26	04:33			
	15:52	23	09:57 (E14)	16:52		17:54	19:59	21:02	21:57			
5	08:49	09:35 (E14)	08:07		07:01		06:38	05:23	04:32			
	15:53	23	09:58 (E14)	16:54		17:56	20:01	21:04	21:58			
6	08:49	09:35 (E14)	08:05		06:58		06:36	05:21	04:31			
	15:55	24	09:59 (E14)	16:56		17:58	20:03	21:06	21:59			
7	08:48	09:35 (E14)	08:03		06:55		06:33	05:19	04:30			
	15:56	25	10:00 (E14)	16:59		18:01	20:06	21:08	22:00			
8	08:48	09:35 (E14)	08:01		06:53		06:30	05:17	04:29			
	15:58	26	10:01 (E14)	17:01		18:03	20:08	21:10	22:01			
9	08:47	09:35 (E14)	07:58		06:50		06:28	05:15	04:29			
	16:00	26	10:01 (E14)	17:03		18:05	20:10	21:12	22:02			
10	08:46	09:35 (E14)	07:56		06:47		06:25	05:13	04:28			
	16:01	27	10:02 (E14)	17:05		18:07	20:12	21:14	22:03			
11	08:45	09:35 (E14)	07:54		06:45		06:22	05:11	04:27			
	16:03	28	10:03 (E14)	17:08		18:09	20:14	21:16	22:04			
12	08:44	09:35 (E14)	07:52		06:42		06:20	05:09	04:27			
	16:05	29	10:04 (E14)	17:10		18:11	20:16	21:18	22:05			
13	08:43	09:35 (E14)	07:50		06:40		06:17	05:07	04:26			
	16:06	29	10:04 (E14)	17:12		18:13	20:18	21:20	22:06			
14	08:42	09:35 (E14)	07:47		06:37		06:15	05:05	04:26			
	16:08	30	10:05 (E14)	17:14		18:15	13 07:16 (E13)	20:20	21:22	22:07		
15	08:41	09:36 (E14)	07:45		06:34		07:01 (E13)	06:12	05:03	04:26		
	16:10	30	10:06 (E14)	17:17		18:18	18 07:19 (E13)	20:22	21:24	22:07		
16	08:40	09:35 (E14)	07:43		06:32		06:59 (E13)	06:09	05:01	04:26		
	16:12	31	10:06 (E14)	17:19		18:20	21 07:20 (E13)	20:24	21:26	22:08		
17	08:39	09:36 (E14)	07:40		06:29		06:57 (E13)	06:07	04:59	04:25		
	16:14	31	10:07 (E14)	17:21		18:22	24 07:21 (E13)	20:26	21:27	22:08		
18	08:38	09:36 (E14)	07:38		06:26		06:55 (E13)	06:04	04:57	04:25		
	16:16	31	10:07 (E14)	17:23		18:24	26 07:21 (E13)	20:28	21:29	22:09		
19	08:36	09:36 (E14)	07:36		06:24		06:55 (E13)	06:02	04:55	04:25		
	16:18	31	10:07 (E14)	17:26		18:26	27 07:22 (E13)	20:31	21:31	22:09		
20	08:35	09:36 (E14)	07:33		06:21		06:54 (E13)	05:59	04:53	04:25		
	16:20	32	10:08 (E14)	17:28		18:28	28 07:22 (E13)	20:33	21:33	22:10		
21	08:33	09:37 (E14)	07:31		06:18		06:53 (E13)	05:57	04:52	04:25		
	16:22	31	10:08 (E14)	17:30		18:30	29 07:22 (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	31	10:08 (E14)	17:32		18:32	29 07:22 (E13)	20:37	21:37	22:10		
23	08:30	09:37 (E14)	07:26		06:13		06:53 (E13)	05:52	04:48	04:26		
	16:26	31	10:08 (E14)	17:34		18:34	29 07:22 (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	31	10:09 (E14)	17:37		18:36	29 07:21 (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	30	10:09 (E14)	17:39		18:38	28 07:21 (E13)	20:43	21:42	22:10		
26	08:26	09:39 (E14)	07:18		06:05		06:53 (E13)	05:44	04:44	04:27		
	16:32	29	10:08 (E14)	17:41		18:41	27 07:20 (E13)	20:45	21:43	22:10		
27	08:24	09:40 (E14)	07:16		06:02		06:53 (E13)	05:42	04:42	04:27		
	16:34	28	10:08 (E14)	17:43		18:43	25 07:18 (E13)	20:47	21:45	22:10		
28	08:22	09:41 (E14)	07:13		05:59		06:55 (E13)	05:40	04:41	04:28		
	16:37	27	10:08 (E14)	17:45		18:45	22 07:17 (E13)	20:49	21:47	22:10		
29	08:20	09:42 (E14)			06:57		07:56 (E13)	05:37	04:40	04:29		
	16:39	25	10:07 (E14)		19:47	19	08:15 (E13)	20:51	21:48	22:10		
30	08:19	09:43 (E14)			06:54		07:57 (E13)	05:35	04:38	04:29		
	16:41	23	10:06 (E14)		19:49	15	08:12 (E13)	20:53	21:50	22:09		
31	08:17	09:44 (E14)			06:51		08:01 (E13)		04:37			
	16:43	21	10:05 (E14)		19:51	8	08:09 (E13)		21:51			
Potential sun hours	235		266		366		426		508		529	
Total, worst case	844		37		417							
Sun reduction	0.13		0.20		0.41							
Oper. time red.	0.98		0.98		0.98							
Wind dir. red.	0.61		0.61		0.64							
Total reduction	0.08		0.12		0.26							
Total, real	67		4		107							

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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 28
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 27
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43 26
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 26
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 25
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41 24
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 24
8	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40 23
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39 21
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 21
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39 20
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 19
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38 18
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38 17
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38 17
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 16
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 15
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 15
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 14
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 14
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 14
22	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40 14
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 14
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41 14
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41 14
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	08:51 15:42 15
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:17 15:49	08:51 15:43 16
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:46	08:19 15:48	08:51 15:44 17
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:44	08:21 15:47	08:51 15:45 17
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 18
31	05:14 21:30	06:15 20:17		08:19 17:40		08:51 15:47 19
Potential sun hours	529	469	385	324	247	216
Total, worst case			423		619	582
Sun reduction			0.43		0.08	0.07
Oper. time red.			0.98		0.98	0.98
Wind dir. red.			0.64		0.61	0.61
Total reduction			0.27		0.05	0.04
Total, real			113		30	24

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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) 20:55	04:36 05:48 (E14)
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:11 (E15) 20:57	04:35 05:48 (E14)
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57	07:09 (E15) 21:00	04:34 05:49 (E14)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:06 (E15) 21:02	04:33 05:50 (E14)
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	07:05 (E15) 21:04	04:32 05:50 (E14)
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:04 (E15) 21:06	04:31 05:50 (E14)
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06	07:04 (E15) 21:08	04:30 05:51 (E14)
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08	07:04 (E15) 21:10	04:29 05:51 (E14)
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	07:03 (E15) 21:12	04:29 05:51 (E14)
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	07:03 (E15) 21:14	04:28 05:51 (E14)
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:04 (E15) 21:16	04:28 05:52 (E14)
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	07:04 (E15) 21:18	04:27 05:52 (E14)
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:06 (E15) 21:20	04:27 05:53 (E14)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	07:07 (E15) 21:22	04:26 05:53 (E14)
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	07:10 (E15) 21:24	04:26 05:54 (E14)
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 05:53 (E14)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 05:53 (E14)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 05:54 (E14)
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 05:54 (E14)
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 05:55 (E14)
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 05:55 (E14)
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 05:55 (E14)
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 05:55 (E14)
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 05:56 (E14)
25	08:27 16:30	07:21 17:39	06:08 18:38	05:47 20:43	04:45 21:42	04:27 05:55 (E14)
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 05:56 (E14)
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 05:56 (E14)
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 05:56 (E14)
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 05:56 (E14)
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 05:56 (E14)
31	08:17 16:43		06:51 19:51		04:37 21:51	04:29 05:56 (E14)
Potential sun hours	235	266	366	426	508	528
Total, worst case				266		1039
Sun reduction				0.50		0.56
Oper. time red.				0.98		0.98
Wind dir. red.				0.66		0.67
Total reduction				0.32		0.37
Total, real				86	325	380

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

July			August			September			October	November	December
1	04:30	05:56 (E14)	05:16	06:02 (E14)	06:17	07:03 (E15)	07:17	07:23	08:24		
	22:09	35	06:31 (E14)	21:28	30	06:32 (E14)	20:14	20	07:23 (E15)	18:54	15:45
2	04:31	05:56 (E14)	05:18	06:02 (E14)	06:19	07:02 (E15)	07:19	07:25	08:26		
	22:08	35	06:31 (E14)	21:26	29	06:31 (E14)	20:11	22	07:24 (E15)	18:51	15:44
3	04:32	05:56 (E14)	05:20	06:04 (E14)	06:21	07:01 (E15)	07:21	07:27	08:28		
	22:08	35	06:31 (E14)	21:24	26	06:30 (E14)	20:09	23	07:24 (E15)	18:48	15:43
4	04:33	05:56 (E14)	05:22	06:05 (E14)	06:23	07:01 (E15)	07:23	07:29	08:29		
	22:07	36	06:32 (E14)	21:22	23	06:28 (E14)	20:06	23	07:24 (E15)	18:46	15:43
5	04:34	05:56 (E14)	05:24	06:07 (E14)	06:25	07:01 (E15)	07:25	07:31	08:31		
	22:07	36	06:32 (E14)	21:19	20	06:27 (E14)	20:03	23	07:24 (E15)	18:43	15:42
6	04:35	05:56 (E14)	05:25	06:09 (E14)	06:27	07:01 (E15)	07:28	07:33	08:32		
	22:06	37	06:33 (E14)	21:17	14	06:23 (E14)	20:01	22	07:23 (E15)	18:40	15:41
7	04:36	05:56 (E14)	05:27	06:13 (E14)	06:29	07:00 (E15)	07:30	07:36	08:34		
	22:05	37	06:33 (E14)	21:15	6	06:19 (E14)	19:58	21	07:21 (E15)	18:38	15:40
8	04:37	05:56 (E14)	05:29		06:31	07:00 (E15)	07:32	07:38	08:35		
	22:04	37	06:33 (E14)	21:13		19:55	21	07:21 (E15)	18:35	16:21	15:40
9	04:38	05:56 (E14)	05:31		06:33	07:02 (E15)	07:34	07:40	08:37		
	22:03	38	06:34 (E14)	21:11		19:53	17	07:19 (E15)	18:33	16:19	15:39
10	04:40	05:56 (E14)	05:33		06:35	07:04 (E15)	07:36	07:42	08:38		
	22:02	38	06:34 (E14)	21:08		19:50	14	07:18 (E15)	18:30	16:17	15:39
11	04:41	05:57 (E14)	05:35		06:37	07:06 (E15)	07:38	07:44	08:39		
	22:01	38	06:35 (E14)	21:06		19:47	9	07:15 (E15)	18:27	16:15	15:39
12	04:42	05:57 (E14)	05:37		06:39	07:08 (E15)	07:40	07:46	08:40		
	22:00	38	06:35 (E14)	21:04		19:45	3	07:11 (E15)	18:25	16:13	15:38
13	04:44	05:56 (E14)	05:39		06:41		07:42	07:49	08:41		
	21:59	39	06:35 (E14)	21:02		19:42		18:22	16:11	15:38	
14	04:45	05:56 (E14)	05:41		06:43		07:44	07:51	08:43		
	21:58	39	06:35 (E14)	20:59		19:39		18:20	16:10	15:38	
15	04:46	05:57 (E14)	05:43		06:45		07:46	07:53	08:44		
	21:57	39	06:36 (E14)	20:57		19:37		18:17	16:08	15:38	
16	04:48	05:56 (E14)	05:45		06:47		07:48	07:55	08:45		
	21:55	40	06:36 (E14)	20:54		19:34		18:15	16:06	15:38	
17	04:49	05:56 (E14)	05:47		06:49		07:50	07:57	08:45		
	21:54	39	06:35 (E14)	20:52		19:31		18:12	16:04	15:38	
18	04:51	05:57 (E14)	05:49		06:51		07:52	07:59	08:46		
	21:52	39	06:36 (E14)	20:50		19:29		18:09	16:03	15:38	
19	04:53	05:56 (E14)	05:51		06:53		07:55	08:01	08:47		
	21:51	40	06:36 (E14)	20:47		19:26		18:07	16:01	15:38	
20	04:54	05:57 (E14)	05:53		06:55		07:57	08:03	08:48		
	21:49	39	06:36 (E14)	20:45		19:23		18:04	15:59	15:39	
21	04:56	05:57 (E14)	05:55		06:57		07:59	08:05	08:48		
	21:48	39	06:36 (E14)	20:42		19:21		18:02	15:58	15:39	
22	04:58	05:57 (E14)	05:57		06:59		08:01	08:07	08:49		
	21:46	39	06:36 (E14)	20:40		19:18		18:00	15:56	15:40	
23	04:59	05:57 (E14)	05:59		07:01		08:03	08:09	08:49		
	21:45	38	06:35 (E14)	20:37		19:15		17:57	15:55	15:40	
24	05:01	05:58 (E14)	06:01		07:03		08:05	08:11	08:50		
	21:43	38	06:36 (E14)	20:35		19:12		17:55	15:53	15:41	
25	05:03	05:58 (E14)	06:03		07:05		07:07	08:13	08:50		
	21:41	38	06:36 (E14)	20:32		19:10		16:52	15:52	15:41	
26	05:05	05:58 (E14)	06:05		07:07		07:10	08:15	08:51		
	21:39	37	06:35 (E14)	20:30		19:07		16:50	15:51	15:42	
27	05:06	05:59 (E14)	06:07		07:09		07:12	08:17	08:51		
	21:37	36	06:35 (E14)	20:27		19:04		16:48	15:50	15:43	
28	05:08	06:00 (E14)	06:09	07:11 (E15)	07:11		07:14	08:19	08:51		
	21:36	35	06:35 (E14)	20:24	6	07:17 (E15)	19:02	16:45	15:48	15:44	
29	05:10	05:59 (E14)	06:11	07:07 (E15)	07:13		07:16	08:21	08:51		
	21:34	35	06:34 (E14)	20:22	13	07:20 (E15)	18:59	16:43	15:47	15:45	
30	05:12	06:00 (E14)	06:13	07:05 (E15)	07:15		07:18	08:22	08:51		
	21:32	33	06:33 (E14)	20:19	17	07:22 (E15)	18:56	16:41	15:46	15:46	
31	05:14	06:01 (E14)	06:15	07:04 (E15)			07:20		08:51		
	21:30	32	06:33 (E14)	20:17	19	07:23 (E15)		16:38		15:47	
Potential sun hours	529		469		385		324		248		216
Total, worst case	1154		203		218						
Sun reduction	0.49		0.50		0.43						
Oper. time red.	0.98		0.98		0.98						
Wind dir. red.	0.67		0.67		0.66						
Total reduction	0.32		0.32		0.28						
Total, real	372		66		60						

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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) 22 07:50 (E15)	05:33 20:55	06:23 (E14) 40 07:03 (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) 20 07:49 (E15)	05:30 20:57	06:22 (E14) 42 07:04 (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) 18 07:48 (E15)	05:28 21:00	06:22 (E14) 42 07:04 (E14)	04:34 21:55	05:08 (E13) 17 05:25 (E13)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:31 (E15) 15 07:46 (E15)	05:26 21:02	06:22 (E14) 42 07:04 (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	07:32 (E15) 10 07:42 (E15)	05:24 21:04	06:22 (E14) 42 07:04 (E14)	04:32 21:58	05:07 (E13) 19 05:26 (E13)
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03		05:21 21:06	06:22 (E14) 42 07:04 (E14)	04:31 21:59	05:06 (E13) 20 05:26 (E13)
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06		05:19 21:08	06:22 (E14) 42 07:04 (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		05:17 21:10	06:22 (E14) 42 07:04 (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		05:15 21:12	06:22 (E14) 41 07:03 (E14)	04:29 22:02	05:05 (E13) 22 05:27 (E13)
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12		05:13 21:14	06:22 (E14) 41 07:03 (E14)	04:28 22:03	05:06 (E13) 22 05:28 (E13)
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14		05:11 21:16	06:22 (E14) 40 07:02 (E14)	04:27 22:04	05:06 (E13) 22 05:28 (E13)
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16		05:09 21:18	06:22 (E14) 40 07:02 (E14)	04:27 22:05	05:06 (E13) 22 05:28 (E13)
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18		05:07 21:20	06:23 (E14) 39 07:02 (E14)	04:27 22:06	05:06 (E13) 23 05:29 (E13)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20		05:05 21:22	06:24 (E14) 37 07:01 (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		05:03 21:24	06:24 (E14) 36 07:00 (E14)	04:26 22:07	05:07 (E13) 23 05:30 (E13)
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24		05:01 21:25	06:24 (E14) 36 07:00 (E14)	04:26 22:08	05:06 (E13) 23 05:29 (E13)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26		04:59 21:27	06:25 (E14) 35 07:00 (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		04:57 21:29	06:26 (E14) 32 06:58 (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		04:55 21:31	06:27 (E14) 31 06:58 (E14)	04:25 22:09	05:07 (E13) 23 05:30 (E13)
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	06:40 (E14) 12 06:52 (E14)	04:54 21:33	06:27 (E14) 30 06:57 (E14)	04:25 22:10	05:08 (E13) 23 05:31 (E13)
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	06:36 (E14) 18 06:54 (E14)	04:52 21:35	06:29 (E14) 27 06:56 (E14)	04:25 22:10	05:08 (E13) 23 05:31 (E13)
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	06:34 (E14) 23 06:57 (E14)	04:50 21:36	06:29 (E14) 26 06:55 (E14)	04:26 22:10	05:08 (E13) 23 05:31 (E13)
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:31 (E14) 27 06:58 (E14)	04:48 21:38	06:31 (E14) 23 06:54 (E14)	04:26 22:10	05:08 (E13) 23 05:31 (E13)
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	06:30 (E14) 30 07:00 (E14)	04:47 21:40	06:32 (E14) 20 06:52 (E14)	04:26 22:10	05:09 (E13) 23 05:32 (E13)
25	08:27 16:30	07:21 17:39	06:08 18:38	05:47 20:43	06:28 (E14) 33 07:01 (E14)	04:45 21:42	06:34 (E14) 17 06:51 (E14)	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	06:26 (E14) 35 07:01 (E14)	04:44 21:43	06:36 (E14) 13 06:49 (E14)	04:27 22:10	05:09 (E13) 23 05:32 (E13)
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	06:26 (E14) 36 07:02 (E14)	04:42 21:45	05:16 (E13) 11 06:47 (E14)	04:28 22:10	05:09 (E13) 23 05:32 (E13)
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	06:25 (E14) 38 07:03 (E14)	04:41 21:47	05:14 (E13) 6 05:20 (E13)	04:28 22:10	05:10 (E13) 22 05:32 (E13)
29	08:20 16:39		06:57 19:47	05:37 20:51	06:25 (E14) 38 07:03 (E14)	04:40 21:48	05:13 (E13) 8 05:21 (E13)	04:29 22:10	05:09 (E13) 23 05:32 (E13)
30	08:18 16:41		06:54 19:49	05:35 20:53	06:24 (E14) 40 07:04 (E14)	04:38 21:50	05:12 (E13) 10 05:22 (E13)	04:29 22:09	05:10 (E13) 22 05:32 (E13)
31	08:17 16:43		06:51 19:51	05:32 20:54		04:37 21:51	05:11 (E13) 12 05:23 (E13)		
Potential sun hours	235	266	366	426		508		528	
Total, worst case			186	415		945		646	
Sun reduction			0.41	0.50		0.57		0.56	
Oper. time red.			0.98	0.98		0.98		0.98	
Wind dir. red.			0.65	0.65		0.65		0.67	
Total reduction			0.26	0.32		0.36		0.37	
Total, real			49	132		342		236	

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

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

	July			August			September			October	November	December
1	04:30		05:10 (E13)	05:16		06:32 (E14)	06:17			07:17	07:23	08:24
	22:09	23	05:33 (E13)	21:28	40	07:12 (E14)	20:14			18:54	16:36	15:45
2	04:31		05:10 (E13)	05:18		06:32 (E14)	06:19			07:19	07:25	08:26
	22:08	22	05:32 (E13)	21:26	41	07:13 (E14)	20:11			18:51	16:34	15:44
3	04:32		05:10 (E13)	05:20		06:32 (E14)	06:21			07:21	07:27	08:28
	22:08	22	05:32 (E13)	21:24	41	07:13 (E14)	20:09			18:48	16:32	15:43
4	04:33		05:11 (E13)	05:22		06:32 (E14)	06:23			07:23	07:29	08:29
	22:07	21	05:32 (E13)	21:22	42	07:14 (E14)	20:06			18:46	16:30	15:43
5	04:34		05:11 (E13)	05:24		06:32 (E14)	06:25			07:25	07:31	08:31
	22:07	22	05:33 (E13)	21:19	42	07:14 (E14)	20:03			18:43	16:27	15:42
6	04:35		05:12 (E13)	05:25		06:31 (E14)	06:27			07:28	07:33	08:32
	22:06	21	05:33 (E13)	21:17	42	07:13 (E14)	20:01			18:40	16:25	15:41
7	04:36		05:13 (E13)	05:27		06:31 (E14)	06:29		07:28 (E15)	07:30	07:36	08:34
	22:05	20	05:33 (E13)	21:15	42	07:13 (E14)	19:58	9	07:37 (E15)	18:38	16:23	15:40
8	04:37		05:14 (E13)	05:29		06:31 (E14)	06:31		07:25 (E15)	07:32	07:38	08:35
	22:04	18	05:32 (E13)	21:13	42	07:13 (E14)	19:55	15	07:40 (E15)	18:35	16:21	15:40
9	04:38		05:15 (E13)	05:31		06:31 (E14)	06:33		07:23 (E15)	07:34	07:40	08:37
	22:03	17	05:32 (E13)	21:11	42	07:13 (E14)	19:53	18	07:41 (E15)	18:33	16:19	15:39
10	04:40		05:16 (E13)	05:33		06:32 (E14)	06:35		07:22 (E15)	07:36	07:42	08:38
	22:02	16	05:32 (E13)	21:08	41	07:13 (E14)	19:50	20	07:42 (E15)	18:30	16:17	15:39
11	04:41		05:18 (E13)	05:35		06:32 (E14)	06:37		07:21 (E15)	07:38	07:44	08:39
	22:01	14	05:32 (E13)	21:06	41	07:13 (E14)	19:47	21	07:42 (E15)	18:27	16:15	15:39
12	04:42		05:19 (E13)	05:37		06:31 (E14)	06:39		07:20 (E15)	07:40	07:46	08:40
	22:00	13	05:32 (E13)	21:04	41	07:12 (E14)	19:45	23	07:43 (E15)	18:25	16:13	15:38
13	04:44		05:20 (E13)	05:39		06:32 (E14)	06:41		07:19 (E15)	07:42	07:49	08:42
	21:59	11	05:31 (E13)	21:02	39	07:11 (E14)	19:42	24	07:43 (E15)	18:22	16:11	15:38
14	04:45		05:21 (E13)	05:41		06:32 (E14)	06:43		07:19 (E15)	07:44	07:51	08:43
	21:58	9	05:30 (E13)	20:59	39	07:11 (E14)	19:39	23	07:42 (E15)	18:20	16:10	15:38
15	04:46		05:23 (E13)	05:43		06:33 (E14)	06:45		07:19 (E15)	07:46	07:53	08:44
	21:57	7	05:30 (E13)	20:57	37	07:10 (E14)	19:37	23	07:42 (E15)	18:17	16:08	15:38
16	04:48		05:24 (E13)	05:45		06:33 (E14)	06:47		07:19 (E15)	07:48	07:55	08:45
	21:55	7	06:53 (E14)	20:54	36	07:09 (E14)	19:34	22	07:41 (E15)	18:15	16:06	15:38
17	04:49		05:25 (E13)	05:47		06:34 (E14)	06:49		07:19 (E15)	07:50	07:57	08:45
	21:54	12	06:57 (E14)	20:52	34	07:08 (E14)	19:31	21	07:40 (E15)	18:12	16:04	15:38
18	04:51		06:44 (E14)	05:49		06:35 (E14)	06:51		07:20 (E15)	07:52	07:59	08:46
	21:52	16	07:00 (E14)	20:50	32	07:07 (E14)	19:29	19	07:39 (E15)	18:09	16:03	15:38
19	04:53		06:42 (E14)	05:51		06:35 (E14)	06:53		07:22 (E15)	07:55	08:01	08:47
	21:51	19	07:01 (E14)	20:47	30	07:05 (E14)	19:26	16	07:38 (E15)	18:07	16:01	15:38
20	04:54		06:41 (E14)	05:53		06:37 (E14)	06:55		07:24 (E15)	07:57	08:03	08:48
	21:49	22	07:03 (E14)	20:45	26	07:03 (E14)	19:23	12	07:36 (E15)	18:04	15:59	15:39
21	04:56		06:40 (E14)	05:55		06:39 (E14)	06:57		07:26 (E15)	07:59	08:05	08:48
	21:48	24	07:04 (E14)	20:42	22	07:01 (E14)	19:21	7	07:33 (E15)	18:02	15:58	15:39
22	04:58		06:39 (E14)	05:57		06:41 (E14)	06:59			08:01	08:07	08:49
	21:46	27	07:06 (E14)	20:40	18	06:59 (E14)	19:18			18:00	15:56	15:40
23	04:59		06:38 (E14)	05:59		06:45 (E14)	07:01			08:03	08:09	08:49
	21:45	28	07:06 (E14)	20:37	10	06:55 (E14)	19:15			17:57	15:55	15:40
24	05:01		06:37 (E14)	06:01			07:03			08:05	08:11	08:50
	21:43	31	07:08 (E14)	20:35			19:12			17:55	15:53	15:41
25	05:03		06:37 (E14)	06:03			07:05			07:07	08:13	08:50
	21:41	32	07:09 (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	33	07:09 (E14)	20:30			19:07			16:50	15:51	15:42
27	05:06		06:35 (E14)	06:07			07:09			07:12	08:17	08:51
	21:37	35	07:10 (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	36	07:11 (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	37	07:11 (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	38	07:12 (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	40	07:13 (E14)	20:17						16:38		15:47
Potential sun hours	529			469			385			324	247	216
Total, worst case		693			820			273				
Sun reduction		0.49			0.50			0.43				
Oper. time red.		0.98			0.98			0.98				
Wind dir. red.		0.66			0.65			0.65				
Total reduction		0.32			0.32			0.27				
Total, real		220			260			74				

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	08:49 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:46	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:42		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January			February			March	April	May	June
1	08:51		10:26 (E13)	08:15		10:43 (E13)	07:11	06:49	05:32	04:36
	15:48	39	11:05 (E13)	16:45	24	11:07 (E13)	17:48	19:53	20:55	21:53
2	08:50		10:26 (E13)	08:13		10:45 (E13)	07:08	06:46	05:30	04:35
	15:49	40	11:06 (E13)	16:47	20	11:05 (E13)	17:50	19:55	20:57	21:54
3	08:50		10:26 (E13)	08:11		10:48 (E13)	07:06	06:43	05:28	04:34
	15:51	40	11:06 (E13)	16:50	14	11:02 (E13)	17:52	19:57	21:00	21:55
4	08:50		10:26 (E13)	08:09			07:03	06:41	05:26	04:33
	15:52	40	11:06 (E13)	16:52			17:54	19:59	21:02	21:57
5	08:49		10:27 (E13)	08:07			07:00	06:38	05:23	04:32
	15:53	41	11:08 (E13)	16:54			17:56	20:01	21:04	21:58
6	08:49		10:27 (E13)	08:05			06:58	06:35	05:21	04:31
	15:55	41	11:08 (E13)	16:56			17:58	20:03	21:06	21:59
7	08:48		10:27 (E13)	08:03			06:55	06:33	05:19	04:30
	15:56	42	11:09 (E13)	16:59			18:00	20:05	21:08	22:00
8	08:48		10:28 (E13)	08:01			06:53	06:30	05:17	04:29
	15:58	41	11:09 (E13)	17:01			18:03	20:08	21:10	22:01
9	08:47		10:28 (E13)	07:58			06:50	06:28	05:15	04:28
	15:59	42	11:10 (E13)	17:03			18:05	20:10	21:12	22:02
10	08:46		10:29 (E13)	07:56			06:47	06:25	05:13	04:28
	16:01	42	11:10 (E13)	17:05			18:07	20:12	21:14	22:03
11	08:45		10:29 (E13)	07:54			06:45	06:22	05:11	04:27
	16:03	42	11:11 (E13)	17:08			18:09	20:14	21:16	22:04
12	08:44		10:29 (E13)	07:52			06:42	06:20	05:08	04:27
	16:04	43	11:12 (E13)	17:10			18:11	20:16	21:18	22:05
13	08:43		10:29 (E13)	07:49			06:40	06:17	05:06	04:26
	16:06	42	11:11 (E13)	17:12			18:13	20:18	21:20	22:06
14	08:42		10:30 (E13)	07:47			06:37	06:14	05:04	04:26
	16:08	42	11:12 (E13)	17:14			18:15	20:20	21:22	22:07
15	08:41		10:29 (E13)	07:45			06:34	06:12	05:03	04:26
	16:10	43	11:12 (E13)	17:17			18:18	20:22	21:24	22:07
16	08:40		10:30 (E13)	07:43			06:32	06:09	05:01	04:25
	16:12	43	11:13 (E13)	17:19			18:20	20:24	21:25	22:08
17	08:39		10:31 (E13)	07:40			06:29	06:07	04:59	04:25
	16:14	42	11:13 (E13)	17:21			18:22	20:26	21:27	22:08
18	08:37		10:31 (E13)	07:38			06:26	06:04	04:57	04:25
	16:16	42	11:13 (E13)	17:23			18:24	20:28	21:29	22:09
19	08:36		10:31 (E13)	07:35			06:24	06:02	04:55	04:25
	16:18	42	11:13 (E13)	17:26			18:26	20:30	21:31	22:09
20	08:35		10:32 (E13)	07:33			06:21	05:59	04:53	04:25
	16:20	42	11:14 (E13)	17:28			18:28	20:33	21:33	22:10
21	08:33		10:32 (E13)	07:31			06:18	05:57	04:52	04:25
	16:22	42	11:14 (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	40	11:13 (E13)	17:32			18:32	20:37	21:37	22:10
23	08:30		10:33 (E13)	07:26			06:13	05:52	04:48	04:26
	16:26	40	11:13 (E13)	17:34			18:34	20:39	21:38	22:10
24	08:29		10:35 (E13)	07:23			06:10	05:49	04:47	04:26
	16:28	39	11:14 (E13)	17:37			18:36	20:41	21:40	22:10
25	08:27		10:35 (E13)	07:21			06:07	05:47	04:45	04:26
	16:30	38	11:13 (E13)	17:39			18:38	20:43	21:42	22:10
26	08:26		10:36 (E13)	07:18			06:05	05:44	04:44	04:27
	16:32	37	11:13 (E13)	17:41			18:41	20:45	21:43	22:10
27	08:24		10:37 (E13)	07:16			06:02	05:42	04:42	04:27
	16:34	36	11:13 (E13)	17:43			18:43	20:47	21:45	22:10
28	08:22		10:38 (E13)	07:13			05:59	05:40	04:41	04:28
	16:36	34	11:12 (E13)	17:45			18:45	20:49	21:47	22:10
29	08:20		10:39 (E13)				06:57	05:37	04:40	04:29
	16:39	32	11:11 (E13)				19:47	20:51	21:48	22:10
30	08:18		10:40 (E13)				06:54	05:35	04:38	04:29
	16:41	30	11:10 (E13)				19:49	20:53	21:50	22:09
31	08:17		10:42 (E13)				06:51		04:37	
	16:43	27	11:09 (E13)				19:51		21:51	
Potential sun hours	235			266			366	426	508	529
Total, worst case		1226			58				340	
Sun reduction		0.13			0.20				0.57	
Oper. time red.		0.98			0.98				0.98	
Wind dir. red.		0.61			0.61				0.67	
Total reduction		0.08			0.12				0.37	
Total, real		97			7				126	

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30 22:09	05:16 21:28	05:58 (E7) 20:14	06:17 20:14	07:17 18:54	07:23 16:36
2	04:31 22:09	05:18 21:26	05:58 (E7) 20:11	06:19 20:11	07:19 18:51	07:25 16:34
3	04:32 22:08	05:19 21:24	05:59 (E7) 20:09	06:21 20:09	07:21 18:48	07:27 16:32
4	04:33 22:07	05:21 21:22	05:59 (E7) 20:06	06:23 20:06	07:23 18:46	07:29 16:29
5	04:34 22:07	05:23 21:20	05:58 (E7) 20:03	06:25 20:03	07:25 18:43	07:31 16:27
6	04:35 22:06	05:25 21:17	05:59 (E7) 20:01	06:27 20:01	07:27 18:40	07:33 16:25
7	04:36 22:05	05:27 21:15	06:00 (E7) 19:58	06:29 19:58	07:30 18:38	10:24 (E13) 16:23
8	04:37 22:04	05:29 21:13	06:02 (E7) 19:55	06:31 19:55	07:32 18:35	10:19 (E13) 16:21
9	04:38 22:03	05:31 21:11	06:04 (E7) 19:53	06:33 19:53	07:34 18:32	15 10:34 (E13)
10	04:39 22:02	05:33 21:08	06:06 (E7) 19:50	06:35 19:50	07:36 18:30	20 10:36 (E13)
11	04:41 22:01	05:35 21:06	06:07 (E7) 19:47	06:37 19:47	07:38 18:27	24 10:39 (E13)
12	04:42 22:00	05:37 21:04	06:09 19:45	06:39 19:45	07:40 18:25	10:13 (E13) 15:38
13	04:43 21:59	05:39 21:02	06:11 19:42	06:41 19:42	07:42 18:22	30 10:41 (E13)
14	04:45 21:58	05:41 20:59	06:13 19:39	06:43 19:39	07:44 18:19	32 10:43 (E13)
15	04:46 21:57	05:43 20:57	06:15 19:37	06:45 19:37	07:46 18:17	34 10:44 (E13)
16	04:48 21:55	05:45 20:54	06:17 19:34	06:47 19:34	07:48 18:14	35 10:46 (E13)
17	04:49 21:54	05:47 20:52	06:19 19:31	06:49 19:31	07:50 18:12	37 10:48 (E13)
18	04:51 21:52	05:49 20:50	06:21 19:29	06:51 19:29	07:52 18:09	38 10:49 (E13)
19	04:52 21:51	05:51 20:47	06:23 19:26	06:53 19:26	07:54 18:07	39 10:50 (E13)
20	04:54 21:49	05:53 20:45	06:25 19:23	06:55 19:23	07:56 18:04	40 10:51 (E13)
21	04:56 21:48	05:55 20:42	06:27 19:20	06:57 19:20	07:58 18:02	41 10:52 (E13)
22	04:57 21:46	05:57 20:40	06:29 19:18	06:59 19:18	08:00 17:59	42 10:53 (E13)
23	04:59 21:45	05:59 20:37	06:31 19:15	07:01 19:15	08:02 17:57	43 10:54 (E13)
24	05:01 21:43	06:01 20:35	06:33 19:12	07:03 19:12	08:04 17:55	44 10:55 (E13)
25	05:03 21:41	06:03 20:32	06:35 19:09	07:05 19:09	08:06 17:52	45 10:56 (E13)
26	05:04 21:39	06:05 20:30	06:37 19:07	07:07 19:07	08:08 17:50	46 10:57 (E13)
27	05:06 21:38	06:07 20:27	06:39 19:04	07:09 19:04	08:10 17:47	47 10:58 (E13)
28	05:08 21:36	06:09 20:24	06:41 19:02	07:11 19:02	08:12 17:45	48 10:59 (E13)
29	05:10 21:34	06:11 20:22	06:43 18:59	07:13 18:59	08:14 17:43	49 10:59 (E13)
30	05:12 21:32	06:13 20:19	06:45 18:56	07:15 18:56	08:16 17:40	50 10:59 (E13)
31	05:14 21:30	06:15 20:17	06:47 18:54	07:17 18:54	08:18 17:38	51 10:59 (E13)
Potential sun hours	529	469	385	324	247	216
Total, worst case	147	190			836	1210
Sun reduction	0.49	0.50			0.08	0.07
Oper. time red.	0.98	0.98			0.98	0.98
Wind dir. red.	0.67	0.67			0.61	0.61
Total reduction	0.32	0.33			0.05	0.04
Total, real	47	62			41	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

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January			February			March			April			May			June		
1	08:51		10:40 (E8)	08:15		09:12 (E6)	07:11		06:49				05:32		07:25 (E5)	04:36		07:34 (E5)
2	15:48	44	13:09 (E7)	16:45	29	09:41 (E6)	17:47		19:53				20:55	83	08:48 (E5)	21:53	59	08:33 (E5)
	08:50		10:42 (E8)	08:13		09:12 (E6)	07:08		06:46				05:30		07:25 (E5)	04:34		07:35 (E5)
3	15:49	40	13:09 (E7)	16:47	29	09:41 (E6)	17:50		19:55				20:57	83	08:48 (E5)	21:54	57	08:32 (E5)
	08:50		12:35 (E7)	08:11		09:13 (E6)	07:06		06:43				05:28		07:25 (E5)	04:33		07:35 (E5)
4	15:50	34	13:09 (E7)	16:49	28	09:41 (E6)	17:52		19:57				20:59	82	08:47 (E5)	21:55	56	08:31 (E5)
	08:50		12:35 (E7)	08:09		09:14 (E6)	07:03		06:41		08:04 (E5)	05:25		07:25 (E5)	04:32		07:36 (E5)	
5	15:52	34	13:09 (E7)	16:52	27	09:41 (E6)	17:54		19:59	19	08:23 (E5)	21:02	82	08:47 (E5)	21:57	55	08:31 (E5)	
	08:49		12:36 (E7)	08:07		09:15 (E6)	07:00		06:38		07:59 (E5)	05:23		07:25 (E5)	04:31		07:37 (E5)	
6	15:53	34	13:10 (E7)	16:54	26	09:41 (E6)	17:56		20:01	28	08:27 (E5)	21:04	82	08:47 (E5)	21:58	54	08:31 (E5)	
	08:49		12:37 (E7)	08:05		09:15 (E6)	06:58		06:35		07:55 (E5)	05:21		07:25 (E5)	04:31		07:37 (E5)	
7	15:55	33	13:10 (E7)	16:56	24	09:39 (E6)	17:58		20:03	36	08:31 (E5)	21:06	82	08:47 (E5)	21:59	53	08:30 (E5)	
	08:48		12:38 (E7)	08:03		09:16 (E6)	06:55		06:33		07:52 (E5)	05:19		07:25 (E5)	04:30		07:38 (E5)	
8	15:56	32	13:10 (E7)	16:58	23	09:39 (E6)	18:00		20:05	42	08:34 (E5)	21:08	81	08:46 (E5)	22:00	51	08:29 (E5)	
	08:48		12:38 (E7)	08:00		09:18 (E6)	06:53		06:30		07:48 (E5)	05:17		07:25 (E5)	04:29		07:39 (E5)	
9	15:58	32	13:10 (E7)	17:01	20	09:38 (E6)	18:02		20:07	47	08:35 (E5)	21:10	81	08:46 (E5)	22:01	51	08:30 (E5)	
	08:47		12:39 (E7)	07:58		09:19 (E6)	06:50		06:27		07:47 (E5)	05:14		07:25 (E5)	04:28		07:39 (E5)	
10	15:59	31	13:10 (E7)	17:03	17	09:36 (E6)	18:05		20:10	51	08:38 (E5)	21:12	80	08:45 (E5)	22:02	50	08:29 (E5)	
	08:46		12:40 (E7)	07:56		09:21 (E6)	06:47		06:25		07:44 (E5)	05:12		07:25 (E5)	04:28		07:40 (E5)	
11	16:01	30	13:10 (E7)	17:05	13	09:34 (E6)	18:07		20:12	55	08:39 (E5)	21:14	80	08:45 (E5)	22:03	49	08:29 (E5)	
	08:45		12:42 (E7)	07:54			06:45		06:22		07:43 (E5)	05:10		07:25 (E5)	04:27		07:40 (E5)	
12	16:03	28	13:10 (E7)	17:07			18:09		20:14	58	08:41 (E5)	21:16	79	08:44 (E5)	22:04	48	08:28 (E5)	
	08:44		12:43 (E7)	07:52			06:42		06:20		07:40 (E5)	05:08		07:25 (E5)	04:27		07:41 (E5)	
13	16:04	27	13:10 (E7)	17:10			18:11		20:16	62	08:42 (E5)	21:18	79	08:44 (E5)	22:05	47	08:28 (E5)	
	08:43		12:43 (E7)	07:49			06:39		06:17		07:39 (E5)	05:06		07:25 (E5)	04:26		07:42 (E5)	
14	16:06	25	13:08 (E7)	17:12			18:13		20:18	64	08:43 (E5)	21:20	78	08:43 (E5)	22:06	46	08:28 (E5)	
	08:42		12:45 (E7)	07:47			06:37		06:14		07:37 (E5)	05:04		07:25 (E5)	04:26		07:41 (E5)	
15	16:08	23	13:08 (E7)	17:14			18:15		20:20	67	08:44 (E5)	21:22	77	08:42 (E5)	22:07	46	08:27 (E5)	
	08:41		12:47 (E7)	07:45			06:34		06:12		07:36 (E5)	05:02		07:26 (E5)	04:25		07:42 (E5)	
16	16:10	21	13:08 (E7)	17:16			18:17		20:22	69	08:45 (E5)	21:24	76	08:42 (E5)	22:07	45	08:27 (E5)	
	08:40		09:20 (E6)	07:43			06:31		06:09		07:35 (E5)	05:00		07:26 (E5)	04:25		07:42 (E5)	
17	16:12	24	13:06 (E7)	17:19			18:19		20:24	70	08:45 (E5)	21:25	75	08:41 (E5)	22:08	45	08:27 (E5)	
	08:39		09:18 (E6)	07:40			06:29		06:07		07:34 (E5)	04:59		07:26 (E5)	04:25		07:43 (E5)	
18	16:13	25	13:05 (E7)	17:21			18:22		20:26	72	08:46 (E5)	21:27	75	08:41 (E5)	22:08	45	08:28 (E5)	
	08:37		09:16 (E6)	07:38			06:26		06:04		07:32 (E5)	04:57		07:27 (E5)	04:25		07:43 (E5)	
19	16:15	23	13:02 (E7)	17:23			18:24		20:28	74	08:46 (E5)	21:29	74	08:41 (E5)	22:09	45	08:28 (E5)	
	08:36		09:15 (E6)	07:35			06:23		06:02		07:32 (E5)	04:55		07:27 (E5)	04:25		07:44 (E5)	
20	16:17	17	09:32 (E6)	17:25			18:26		20:30	75	08:47 (E5)	21:31	73	08:40 (E5)	22:09	44	08:28 (E5)	
	08:35		09:14 (E6)	07:33			06:21		05:59		07:30 (E5)	04:53		07:28 (E5)	04:25		07:44 (E5)	
21	16:19	20	09:34 (E6)	17:28			18:28		20:32	77	08:47 (E5)	21:33	72	08:40 (E5)	22:10	44	08:28 (E5)	
	08:33		09:13 (E6)	07:31			06:18		05:56		07:30 (E5)	04:51		07:28 (E5)	04:25		07:44 (E5)	
22	16:21	22	09:35 (E6)	17:30			18:30		20:35	78	08:48 (E5)	21:35	71	08:39 (E5)	22:10	44	08:28 (E5)	
	08:32		09:13 (E6)	07:28			06:15		05:54		07:28 (E5)	04:50		07:29 (E5)	04:25		07:45 (E5)	
23	16:23	23	09:36 (E6)	17:32			18:32		20:37	79	08:47 (E5)	21:36	69	08:38 (E5)	22:10	44	08:29 (E5)	
	08:30		09:12 (E6)	07:26			06:13		05:52		07:28 (E5)	04:48		07:28 (E5)	04:25		07:45 (E5)	
24	16:26	25	09:37 (E6)	17:34			18:34		20:39	80	08:48 (E5)	21:38	69	08:37 (E5)	22:10	44	08:29 (E5)	
	08:29		09:13 (E6)	07:23			06:10		05:49		07:28 (E5)	04:46		07:29 (E5)	04:26		07:44 (E5)	
25	16:28	25	09:38 (E6)	17:36			18:36		20:41	80	08:48 (E5)	21:40	68	08:37 (E5)	22:10	45	08:29 (E5)	
	08:27		09:12 (E6)	07:21			06:07		05:47		07:27 (E5)	04:45		07:30 (E5)	04:26		07:45 (E5)	
26	16:30	27	09:39 (E6)	17:39			18:38		20:43	81	08:48 (E5)	21:42	67	08:37 (E5)	22:10	45	08:30 (E5)	
	08:25		09:12 (E6)	07:18			06:05		05:44		07:26 (E5)	04:43		07:30 (E5)	04:27		07:45 (E5)	
27	16:32	28	09:40 (E6)	17:41			18:40		20:45	82	08:48 (E5)	21:43	65	08:35 (E5)	22:10	44	08:29 (E5)	
	08:24		09:12 (E6)	07:16			06:02		05:42		07:26 (E5)	04:42		07:31 (E5)	04:27		07:45 (E5)	
28	16:34	28	09:40 (E6)	17:43			18:42		20:47	82	08:48 (E5)	21:45	64	08:35 (E5)	22:10	45	08:30 (E5)	
	08:22		09:12 (E6)	07:13			05:59		05:39		07:26 (E5)	04:41		07:32 (E5)	04:28		07:45 (E5)	
29	16:36	29	09:41 (E6)	17:45			18:45		20:49	82	08:48 (E5)	21:47	63	08:35 (E5)	22:10	45	08:30 (E5)	
	08:20		09:12 (E6)				06:57		05:37		07:25 (E5)	04:39		07:32 (E5)	04:28		07:45 (E5)	
30	16:38	29	09:41 (E6)				19:47		20:51	83	08:48 (E5)	21:48	62	08:34 (E5)	22:10	46	08:31 (E5)	
	08:18		09:12 (E6)				06:54		05:35		07:25 (E5)	04:38		07:33 (E5)	04:29		07:44 (E5)	
31	16:41	29	09:41 (E6)				19:49		20:53	83	08:48 (E5)	21:50	61	08:34 (E5)	22:09	47	08:31 (E5)	
	08:17		09:12 (E6)				06:51					04:37		07:34 (E5)				
	16:43	30	09:42 (E6)				19:51					21:51	59	08:33 (E5)				
Potential sun hours	235			266			366			426			508			529		
Total, worst case	872			236						1776			2292			1439		
Sun reduction	0.13			0.20						0.50			0.57			0.56		
Oper. time red.	0.98			0.98						0.98			0.98			0.98		
Wind dir. red.	0.62			0.59						0.65			0.65			0.65		
Total reduction	0.08			0.12						0.32			0.36			0.36		
Total, real	70			28						566			830			512		

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July				August				September				October				November				December			
1	04:30		07:44 (E5)	05:15		07:35 (E5)	06:17		07:42 (E5)	07:17		07:22		08:50 (E6)	08:24		12:24 (E7)							
	22:09	48	08:32 (E5)	21:28		08:54 (E5)	20:14		08:40 (E5)	18:53		16:36	14	09:04 (E6)	15:45		28		12:52 (E7)					
2	04:31		07:44 (E5)	05:17		07:35 (E5)	06:19		07:43 (E5)	07:19		07:25		08:48 (E6)	08:26		12:24 (E7)							
	22:09	49	08:33 (E5)	21:26		08:55 (E5)	20:11		08:38 (E5)	18:51		16:34	18	09:06 (E6)	15:44		29		12:53 (E7)					
3	04:31		07:44 (E5)	05:19		07:35 (E5)	06:21		07:45 (E5)	07:21		07:27		08:47 (E6)	08:28		12:22 (E7)							
	22:08	50	08:34 (E5)	21:24		08:55 (E5)	20:09		08:36 (E5)	18:48		16:31	21	09:08 (E6)	15:43		31		12:53 (E7)					
4	04:32		07:44 (E5)	05:21		07:34 (E5)	06:23		07:45 (E5)	07:23		07:29		08:46 (E6)	08:29		12:23 (E7)							
	22:07	51	08:35 (E5)	21:22		08:55 (E5)	20:06		08:32 (E5)	18:45		16:29	23	09:09 (E6)	15:42		31		12:54 (E7)					
5	04:33		07:44 (E5)	05:23		07:34 (E5)	06:25		07:48 (E5)	07:25		07:31		08:44 (E6)	08:31		12:23 (E7)							
	22:07	51	08:35 (E5)	21:19		08:55 (E5)	20:03		08:30 (E5)	18:43		16:27	25	09:09 (E6)	15:41		32		12:55 (E7)					
6	04:34		07:44 (E5)	05:25		07:34 (E5)	06:27		07:50 (E5)	07:27		07:33		08:44 (E6)	08:32		12:23 (E7)							
	22:06	52	08:36 (E5)	21:17		08:56 (E5)	20:01		08:27 (E5)	18:40		16:25	27	09:11 (E6)	15:41		33		12:56 (E7)					
7	04:35		07:44 (E5)	05:27		07:34 (E5)	06:29		07:53 (E5)	07:29		07:36		08:43 (E6)	08:34		12:23 (E7)							
	22:05	53	08:37 (E5)	21:15		08:56 (E5)	19:58		08:23 (E5)	18:38		16:23	28	09:11 (E6)	15:40		33		12:56 (E7)					
8	04:37		07:43 (E5)	05:29		07:34 (E5)	06:31		07:58 (E5)	07:31		07:38		08:44 (E6)	08:35		12:23 (E7)							
	22:04	55	08:38 (E5)	21:13		08:56 (E5)	19:55		08:17 (E5)	18:35		16:21	28	09:12 (E6)	15:39		34		12:57 (E7)					
9	04:38		07:43 (E5)	05:31		07:34 (E5)	06:33			07:34		07:40		08:43 (E6)	08:37		12:23 (E7)							
	22:03	55	08:38 (E5)	21:11		08:57 (E5)	19:53			18:32		16:19	29	09:12 (E6)	15:39		34		12:57 (E7)					
10	04:39		07:42 (E5)	05:33		07:33 (E5)	06:35			07:36		07:42		08:43 (E6)	08:38		10:31 (E8)							
	22:02	57	08:39 (E5)	21:08		08:56 (E5)	19:50			18:30		16:17	29	09:12 (E6)	15:39		39		12:58 (E7)					
11	04:40		07:42 (E5)	05:35		07:33 (E5)	06:37			07:38		07:44		08:43 (E6)	08:39		10:30 (E8)							
	22:01	58	08:40 (E5)	21:06		08:56 (E5)	19:47			18:27		16:15	30	09:13 (E6)	15:38		43		12:59 (E7)					
12	04:42		07:41 (E5)	05:37		07:33 (E5)	06:39			07:40		07:46		08:43 (E6)	08:40		10:30 (E8)							
	22:00	59	08:40 (E5)	21:04		08:56 (E5)	19:45			18:24		16:13	29	09:12 (E6)	15:38		46		13:00 (E7)					
13	04:43		07:42 (E5)	05:39		07:33 (E5)	06:41			07:42		07:49		08:44 (E6)	08:42		10:30 (E8)							
	21:59	60	08:42 (E5)	21:01		08:56 (E5)	19:42			18:22		16:11	29	09:13 (E6)	15:38		46		13:00 (E7)					
14	04:45		07:41 (E5)	05:41		07:33 (E5)	06:43			07:44		07:51		08:44 (E6)	08:43		10:30 (E8)							
	21:58	61	08:42 (E5)	20:59		08:56 (E5)	19:39			18:19		16:09	29	09:13 (E6)	15:38		48		13:01 (E7)					
15	04:46		07:40 (E5)	05:43		07:34 (E5)	06:45			07:46		07:53		08:44 (E6)	08:44		10:29 (E8)							
	21:57	63	08:43 (E5)	20:57		08:56 (E5)	19:37			18:17		16:07	28	09:12 (E6)	15:38		50		13:01 (E7)					
16	04:47		07:41 (E5)	05:45		07:33 (E5)	06:47			07:48		07:55		08:45 (E6)	08:45		10:30 (E8)							
	21:55	63	08:44 (E5)	20:54		08:55 (E5)	19:34			18:14		16:06	28	09:13 (E6)	15:38		50		13:02 (E7)					
17	04:49		07:40 (E5)	05:47		07:33 (E5)	06:49			07:50		07:57		08:45 (E6)	08:46		10:30 (E8)							
	21:54	65	08:45 (E5)	20:52		08:54 (E5)	19:31			18:12		16:04	27	09:12 (E6)	15:38		50		13:02 (E7)					
18	04:51		07:39 (E5)	05:49		07:33 (E5)	06:51			07:52		07:59		08:47 (E6)	08:46		10:30 (E8)							
	21:52	66	08:45 (E5)	20:49		08:54 (E5)	19:28			18:09		16:02	25	09:12 (E6)	15:38		52		13:03 (E7)					
19	04:52		07:39 (E5)	05:51		07:34 (E5)	06:53			07:54		08:01		08:47 (E6)	08:47		10:31 (E8)							
	21:51	67	08:46 (E5)	20:47		08:54 (E5)	19:26			18:07		16:01	25	09:12 (E6)	15:38		52		13:04 (E7)					
20	04:54		07:38 (E5)	05:53		07:34 (E5)	06:55			07:57		08:03		08:48 (E6)	08:48		10:31 (E8)							
	21:49	69	08:47 (E5)	20:45		08:53 (E5)	19:23			18:04		15:59	23	09:11 (E6)	15:38		52		13:04 (E7)					
21	04:56		07:39 (E5)	05:55		07:34 (E5)	06:57			07:59		08:05		08:48 (E6)	08:48		10:31 (E8)							
	21:48	69	08:48 (E5)	20:42		08:53 (E5)	19:20			18:02		15:57	22	09:10 (E6)	15:39		52		13:04 (E7)					
22	04:57		07:39 (E5)	05:57		07:35 (E5)	06:59			08:01		08:07		08:50 (E6)	08:49		10:31 (E8)							
	21:46	70	08:49 (E5)	20:40		08:52 (E5)	19:18			17:59		15:56	20	09:10 (E6)	15:39		52		13:04 (E7)					
23	04:59		07:38 (E5)	05:59		07:35 (E5)	07:01			08:03		08:09		08:52 (E6)	08:50		10:33 (E8)							
	21:45	71	08:49 (E5)	20:37		08:51 (E5)	19:15			17:57		15:54	17	09:09 (E6)	15:40		51		13:05 (E7)					
24	05:01		07:38 (E5)	06:01		07:36 (E5)	07:03			08:05		08:11		08:53 (E6)	08:50		10:33 (E8)							
	21:43	72	08:50 (E5)	20:35		08:51 (E5)	19:12			17:54		15:53	23	12:39 (E7)	15:40		52		13:06 (E7)					
25	05:02		07:37 (E5)	06:03		07:35 (E5)	07:05			07:07		08:13		08:55 (E6)	08:50		10:33 (E8)							
	21:41	73	08:50 (E5)	20:32		08:49 (E5)	19:10			16:52		15:52	25	12:42 (E7)	15:41		52		13:06 (E7)					
26	05:04		07:37 (E5)	06:05		07:36 (E5)	07:07			07:09		08:15		08:57 (E6)	08:51		10:34 (E8)							
	21:39	74	08:51 (E5)	20:29		08:48 (E5)	19:07			16:50		15:50	25	12:44 (E7)	15:42		50		13:06 (E7)					
27	05:06		07:37 (E5)	06:07		07:37 (E5)	07:09			07:12		08:17		12:26 (E7)	08:51		10:34 (E8)							
	21:38	75	08:52 (E5)	20:27		08:47 (E5)	19:04			16:47		15:49	21	12:47 (E7)	15:42		50		13:06 (E7)					
28	05:08		07:36 (E5)	06:09		07:37 (E5)	07:11			07:14		08:19		12:25 (E7)	08:51		10:35 (E8)							
	21:36	76	08:52 (E5)	20:24		08:46 (E5)	19:01			16:45		15:48	23	12:48 (E7)	15:43		50		13:07 (E7)					
29	05:10		07:36 (E5)	06:11		07:38 (E5)	07:13			07:16		08:21		12:24 (E7)	08:51		10:36 (E8)							
	21:34	77	08:53 (E5)	20:22		08:44 (E5)	18:59			16:43		15:47	25	12:49 (E7)	15:44		49		13:07 (E7)					
30	05:12		07:36 (E5)	06:13		07:39 (E5)	07:15			07:18		08:22		12:24 (E7)	08:51		10:37 (E8)							
	21:32	78	08:54 (E5)	20:19		08:43 (E5)	18:56			16:40		15:46	27	12:51 (E7)	15:45		48		13:08 (E7)					
31	05:14		07:35 (E5)	06:15		07:40 (E5)				07:20					08:51		10:39 (E8)							
	21:30	78	08:53 (E5)	20:17		08:41 (E5)				16:38	5	08:54 (E6)			15:46		46		13:09 (E7)					
Potential sun hours	529		469		385		324		247		216													
Total, worst case	1965		2413		339		5		743		1365													
Sun reduction	0.49		0.50		0.43		0.26		0.08		0.07													
Oper. time red.	0.98		0.98		0.98		0.98		0.98		0.98													
Wind dir. red.	0.65		0.65		0.65		0.59		0.60		0.63													
Total reduction	0.31		0.32		0.27		0.15		0.05		0.04													
Total, real	617		766		92		1		36		59													

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	06:43 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 21:02	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	07:00 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	07:27 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 20:05	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 15:41
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:06	06:47 18:07	06:25 20:12	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	05:05 21:22	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:10	08:42 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:23	04:26 22:07	04:47 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:44 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:29	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:35 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:38	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:29	07:07 19:07	07:10 16:50	08:15 15:51	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:37	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39		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	04:38 21:49	04:30 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		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	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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		09:51 (E13)	08:15	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23	08:24	09:36 (E13)
	15:48	28	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	31 10:07 (E13)
2	08:51		09:52 (E13)	08:13	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26	09:36 (E13)
	15:49	28	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	31 10:07 (E13)
3	08:50		09:51 (E13)	08:11	07:06	06:43	05:28	04:34	04:32	05:19	06:21	07:21	07:27	08:28	09:37 (E13)
	15:51	29	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	31 10:08 (E13)
4	08:50		09:51 (E13)	08:09	07:03	06:41	05:26	04:33	04:33	05:21	06:23	07:23	07:29	08:29	09:37 (E13)
	15:52	29	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	30 10:07 (E13)
5	08:49		09:52 (E13)	08:07	07:01	06:38	05:23	04:32	04:34	05:23	06:25	07:25	07:31	08:31	09:37 (E13)
	15:53	30	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 10:08 (E13)
6	08:49		09:52 (E13)	08:05	06:58	06:35	05:21	04:31	04:35	05:25	06:27	07:27	07:33	08:32	09:38 (E13)
	15:55	30	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	30 10:08 (E13)
7	08:48		09:52 (E13)	08:03	06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:30	07:36	08:34	09:38 (E13)
	15:56	31	10:23 (E13)	16:59	18:01	20:05	21:08	22:00	22:05	21:15	19:58	18:38	16:23	15:40	30 10:08 (E13)
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	09:39 (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	29 10:08 (E13)
9	08:47		09:53 (E13)	07:58	06:50	06:28	05:15	04:28	04:38	05:31	06:33	07:34	07:40	08:37	09:39 (E13)
	15:59	31	10:24 (E13)	17:03	18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:32	16:19	15:39	29 10:08 (E13)
10	08:46		09:53 (E13)	07:56	06:47	06:25	05:13	04:28	04:39	05:33	06:35	07:36	07:42	08:38	09:41 (E13)
	16:01	31	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	28 10:09 (E13)
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	09:41 (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	5 09:48 (E13)	15:38 28 10:09 (E13)
12	08:44		09:54 (E13)	07:52	06:42	06:20	05:08	04:27	04:42	05:37	06:39	07:40	07:46	08:39	09:42 (E13)
	16:04	32	10:26 (E13)	17:10	18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:25	16:13	13 09:52 (E13)	15:38 28 10:10 (E13)
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	08:38	09:43 (E13)
	16:06	33	10:26 (E13)	17:12	18:13	20:18	21:20	22:06	21:59	21:02	19:42	18:22	16:11	17 09:55 (E13)	15:38 27 10:10 (E13)
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	08:36	09:43 (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	20 09:56 (E13)	15:38 27 10:10 (E13)
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	08:35	09:44 (E13)
	16:10	32	10:27 (E13)	17:17	18:18	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:08	22 09:57 (E13)	15:38 26 10:10 (E13)
16	08:40		09:55 (E13)	07:43	06:32	06:09	05:01	04:25	04:48	05:45	06:47	07:48	07:55	08:34	09:44 (E13)
	16:12	32	10:27 (E13)	17:19	18:20	20:24	21:26	22:08	21:55	20:54	19:34	18:14	16:06	25 09:59 (E13)	15:38 26 10:10 (E13)
17	08:39		09:56 (E13)	07:40	06:29	06:07	04:59	04:25	04:49	05:47	06:49	07:50	07:57	08:34	09:45 (E13)
	16:14	32	10:28 (E13)	17:21	18:22	20:26	21:27	22:09	21:54	20:52	19:31	18:12	16:04	26 10:00 (E13)	15:38 26 10:11 (E13)
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	09:46 (E13)
	16:16	31	10:27 (E13)	17:23	18:24	20:28	21:29	22:09	21:52	20:50	19:29	18:09	16:02	28 10:02 (E13)	15:38 25 10:11 (E13)
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	08:33	09:46 (E13)
	16:18	31	10:27 (E13)	17:26	18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:01	29 10:02 (E13)	15:38 26 10:12 (E13)
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	09:46 (E13)
	16:20	31	10:28 (E13)	17:28	18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:04	15:59	29 10:02 (E13)	15:39 26 10:12 (E13)
21	08:33		09:57 (E13)	07:31	06:18	05:57	04:52	04:25	04:56	05:55	06:57	07:59	08:05	08:32	09:47 (E13)
	16:22	31	10:28 (E13)	17:30	18:30	20:35	21:35	22:10	21:48	20:42	19:20	18:02	15:58	31 10:03 (E13)	15:39 25 10:12 (E13)
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	09:47 (E13)
	16:24	29	10:27 (E13)	17:32	18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56	31 10:04 (E13)	15:39 25 10:12 (E13)
23	08:30		09:58 (E13)	07:26	06:13	05:52	04:48	04:26	04:59	05:59	07:01	08:03	08:09	08:33	09:48 (E13)
	16:26	29	10:27 (E13)	17:34	18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:55	31 10:04 (E13)	15:40 25 10:13 (E13)
24	08:29		10:00 (E13)	07:23	06:10	05:49	04:47	04:26	05:01	06:01	07:03	08:05	08:11	08:33	09:48 (E13)
	16:28	28	10:28 (E13)	17:37	18:36	20:41	21:40	22:10	21:43	20:35	19:12	17:55	15:53	32 10:05 (E13)	15:41 26 10:14 (E13)
25	08:27		10:01 (E13)	07:21	06:07	05:47	04:45	04:26	05:03	06:03	07:05	08:07	08:13	08:33	09:49 (E13)
	16:30	26	10:27 (E13)	17:39	18:38	20:43	21:42	22:10	21:41	20:32	19:10	16:52	15:52	32 10:05 (E13)	15:41 25 10:14 (E13)
26	08:26		10:02 (E13)	07:18	06:05	05:44	04:44	04:27	05:04	06:05	07:07	08:09	08:15	08:34	09:49 (E13)
	16:32	24	10:26 (E13)	17:41	18:41	20:45	21:43	22:10	21:39	20:30	19:07	16:50	15:51	32 10:06 (E13)	15:42 25 10:14 (E13)
27	08:24		10:03 (E13)	07:16	06:02	05:42	04:42	04:27	05:06	06:07	07:09	08:12	08:17	08:34	09:49 (E13)
	16:34	23	10:26 (E13)	17:43	18:43	20:47	21:45	22:10	21:38	20:27	19:04	16:47	15:49	32 10:06 (E13)	15:43 26 10:15 (E13)
28	08:22		10:04 (E13)	07:13	05:59	05:40	04:41	04:28	05:08	06:09	07:11	08:14	08:19	08:34	09:49 (E13)
	16:36	20	10:24 (E13)	17:45	18:45	20:49	21:47	22:10	21:36	20:24	19:02	16:45	15:48	32 10:06 (E13)	15:44 27 10:16 (E13)
29	08:20		10:06 (E13)		06:57	05:37	04:40	04:29	05:10	06:11	07:13	08:16	08:21	08:35	09:50 (E13)
	16:39	17	10:23 (E13)		19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	32 10:07 (E13)	15:45 26 10:16 (E13)
30	08:19		10:08 (E13)		06:54	05:35	04:38	04:29	05:12	06:13	07:15	08:18	08:22	08:35	09:50 (E13)
	16:41	13	10:21 (E13)		19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:41	15:46	32 10:07 (E13)	15:46 27 10:17 (E13)
31	08:17		10:13 (E13)		06:51		04:37		05:14	06:15		07:20		08:51	09:51 (E13)
	16:43	4	10:17 (E13)		19:51		21:51		21:30	20:17		16:38		15:47	27 10:18 (E13)
Potential sun hours	235			266	366	426	508	529	529	469	385	324	247	216	
Total, worst case		860											531		849
Sun reduction		0.13											0.08		0.07
Oper. time red.		0.98											0.98		0.98
Wind dir. red.		0.61											0.61		0.61
Total reduction		0.08											0.05		0.04
Total, real		69											26		36

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	12	07:50 (E14) 08:02 (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	7	07:52 (E14) 07:59 (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			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	4	07:16 (E14) 07:20 (E14)	06:28 20:10	05:15 21:12	04:29 22:02	05:31 22:03	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	10	07:13 (E14) 07:23 (E14)	06:25 20:12	05:13 21:14	04:28 22:03	05:33 21:11	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	15	07:10 (E14) 07:25 (E14)	06:22 20:14	05:11 21:16	04:27 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	19	07:08 (E14) 07:27 (E14)	06:20 20:16	05:09 21:18	04:27 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	22	07:05 (E14) 07:27 (E14)	06:17 20:18	05:07 21:20	04:27 22:06	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	24	07:03 (E14) 07:27 (E14)	06:15 20:20	05:05 21:22	04:26 22:07	05:41 21:58	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	25	07:03 (E14) 07:28 (E14)	06:12 20:22	05:03 21:24	04:26 22:07	05:43 21:57	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	07:02 (E14) 07:28 (E14)	06:09 20:24	05:01 21:26	04:26 22:08	05:45 21:55	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	27	07:01 (E14) 07:28 (E14)	06:07 20:26	04:59 21:27	04:25 22:08	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	06:26 18:24	26	07:01 (E14) 07:27 (E14)	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:52	06:51 19:29	7	07:56 (E14) 08:03 (E14)			07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	26	07:01 (E14) 07:27 (E14)	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:51	06:53 19:26	14	07:53 (E14) 08:07 (E14)			07:55 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	25	07:01 (E14) 07:26 (E14)	05:59 20:33	04:54 21:33	04:25 22:10	05:53 20:45	06:55 19:23	18	07:50 (E14) 08:08 (E14)			07:57 16:04	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	24	07:01 (E14) 07:25 (E14)	05:57 20:35	04:52 21:35	04:25 22:10	05:55 20:42	06:57 19:21	21	07:48 (E14) 08:09 (E14)			07:59 16:02	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	21	07:03 (E14) 07:24 (E14)	05:54 20:37	04:50 21:37	04:26 22:10	05:57 20:40	06:59 19:18	23	07:47 (E14) 08:10 (E14)			08:01 16:00	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	19	07:03 (E14) 07:22 (E14)	05:52 20:39	04:48 21:38	04:26 22:10	05:59 20:37	07:01 19:15	25	07:46 (E14) 08:11 (E14)			08:03 16:00	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	16	07:04 (E14) 07:20 (E14)	05:49 20:41	04:47 21:40	04:26 22:10	06:01 20:35	07:03 19:12	26	07:45 (E14) 08:11 (E14)			08:05 16:00	08:51 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	9	07:08 (E14) 07:17 (E14)	05:47 20:43	04:45 21:42	04:27 22:10	06:03 20:32	07:05 19:10	27	07:44 (E14) 08:11 (E14)			08:07 16:00	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	06:05 20:30	07:07 19:07	26	07:44 (E14) 08:10 (E14)			08:08 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	04:28 22:10	06:06 20:27	07:09 19:04	26	07:44 (E14) 08:10 (E14)			08:10 16:00	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	06:09 20:24	07:11 19:02	26	07:43 (E14) 08:09 (E14)			08:11 16:00	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	06:11 20:22	07:13 18:59	26	07:43 (E14) 08:09 (E14)			08:21 16:00	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	06:13 20:19	07:15 18:56	24	07:44 (E14) 08:08 (E14)			08:22 16:00	08:51 15:46
31	08:17 16:43		06:52 19:51			05:33 21:51	04:37 21:51		06:15 20:17						08:23 16:00	08:51 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385		324		247	216	
Total, worst case			338							289						
Sun reduction			0.41							0.43						
Oper. time red.			0.98							0.98						
Wind dir. red.			0.63							0.63						
Total reduction			0.25							0.26						
Total, real			86							76						

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 18:40/4.0.540

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  
442 466 539 464 488 781 784 938 1,215 1,079 833 556 8,584  
Idle 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) 04:30 20:36 (E15) 22:09	05:47 (E12) 05:16 20:33 (E16) 21:28	05:49 (E12) 06:17 20:50 (E15) 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	05:35 (E12) 04:31 20:34 (E15) 22:08	05:47 (E12) 05:18 20:34 (E16) 21:26	05:51 (E12) 06:19 20:50 (E15) 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	05:36 (E12) 04:32 20:29 (E16) 22:08	05:46 (E12) 05:19 20:34 (E16) 21:23	05:19 20:05 (E16) 20:21	06:21 20:49 (E15) 20:09	07:21 18:48	08:27 16:32
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	05:36 (E12) 04:33 20:29 (E16) 22:07	05:46 (E12) 05:21 20:35 (E16) 21:21	05:21 20:06 (E16) 20:23	06:23 20:48 (E15) 20:06	07:23 18:45	08:29 16:29
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	05:36 (E12) 04:34 20:18 (E16) 22:06	05:45 (E12) 05:23 20:35 (E16) 21:19	05:23 20:06 (E16) 20:25	06:25 20:45 (E15) 20:03	07:25 18:43	08:30 16:27
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	05:38 (E12) 04:35 20:33 (E15) 22:06	05:45 (E12) 05:25 20:36 (E16) 21:17	05:25 20:08 (E16) 20:27	06:27 20:43 (E15) 20:01	07:27 18:40	08:32 16:25
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	05:39 (E12) 04:36 20:29 (E16) 22:05	05:45 (E12) 05:27 20:36 (E16) 21:15	05:27 20:10 (E16) 20:29	06:29 20:41 (E15) 20:01	07:29 18:38	08:33 16:23
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	05:40 (E12) 04:37 20:30 (E16) 22:04	05:44 (E12) 05:29 20:36 (E16) 21:13	05:29 20:12 (E16) 20:33	06:31 20:45 (E15) 20:03	07:31 18:35	08:35 16:21
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 21:53	05:41 (E12) 04:38 20:29 (E16) 22:03	05:44 (E12) 05:31 20:37 (E16) 21:10	05:31 20:23 (E16) 20:33	06:33 20:45 (E15) 20:03	07:33 18:32	08:36 16:19
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:13 21:13	04:28 21:53	05:42 (E12) 04:39 20:29 (E16) 22:02	05:43 (E12) 05:33 20:40 (E15) 21:08	05:33 20:10 (E16) 20:33	06:35 20:45 (E15) 20:03	07:36 18:30	08:38 16:17
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	05:43 (E12) 04:41 20:29 (E16) 22:01	05:35 20:42 (E15) 21:06	05:35 20:17 (E16) 20:33	06:37 20:45 (E15) 20:03	07:38 18:27	08:39 16:15
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	05:45 (E12) 04:42 20:29 (E16) 22:00	05:37 20:45 (E15) 21:04	05:37 20:17 (E16) 20:33	06:39 20:45 (E15) 20:03	07:40 18:25	08:40 16:13
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) 04:43 20:30 (E16) 21:59	05:39 20:46 (E15) 21:01	05:39 20:12 (E16) 20:33	06:41 20:45 (E15) 20:03	07:42 18:22	08:41 16:11
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) 04:45 20:30 (E16) 21:58	05:42 (E12) 05:41 20:46 (E15) 20:59	05:41 20:10 (E16) 20:33	06:43 20:45 (E15) 20:03	07:44 18:19	08:42 16:09
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) 04:46 20:29 (E16) 21:56	05:42 (E12) 05:43 20:47 (E15) 20:57	05:43 20:12 (E16) 20:33	06:45 20:45 (E15) 20:03	07:53 18:17	08:43 16:08
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	05:33 (E12) 04:48 20:29 (E16) 21:55	05:42 (E12) 05:45 20:48 (E15) 20:54	05:45 20:12 (E16) 20:33	06:47 20:45 (E15) 20:03	07:55 18:14	08:44 16:06
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	05:33 (E12) 04:49 20:29 (E16) 21:54	05:47 (E12) 05:47 20:49 (E15) 20:52	05:47 20:12 (E16) 20:33	06:49 20:45 (E15) 20:03	07:57 18:12	08:45 16:04
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	05:32 (E12) 04:51 20:30 (E16) 21:52	05:49 (E12) 05:49 20:50 (E15) 20:49	05:49 20:12 (E16) 20:33	06:51 20:45 (E15) 20:03	07:59 18:09	08:46 16:02
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) 04:52 20:30 (E16) 21:51	05:51 (E12) 05:51 20:50 (E15) 20:47	05:51 20:12 (E16) 20:33	06:53 20:45 (E15) 20:03	08:01 18:07	08:47 16:01
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	05:32 (E12) 04:54 20:30 (E16) 21:49	05:52 (E12) 05:53 20:51 (E15) 20:44	05:53 20:12 (E16) 20:33	06:55 20:45 (E15) 20:03	08:03 18:04	08:48 15:59
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) 04:55 20:30 (E16) 21:48	05:55 (E12) 05:55 20:51 (E15) 20:42	05:55 20:12 (E16) 20:33	06:57 20:45 (E15) 20:03	08:05 18:02	08:48 15:58
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	05:32 (E12) 04:57 20:31 (E16) 21:46	05:57 (E12) 05:59 20:52 (E15) 20:39	05:57 20:12 (E16) 20:33	06:59 20:45 (E15) 20:03	08:07 18:03	08:49 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	05:32 (E12) 04:59 20:31 (E16) 21:44	05:59 (E12) 05:59 20:51 (E15) 20:37	05:59 20:12 (E16) 20:33	07:01 20:45 (E15) 20:03	08:09 18:05	08:49 15:55
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	05:32 (E12) 05:01 20:31 (E16) 21:43	05:42 (E12) 06:01 20:52 (E15) 20:34	06:01 20:12 (E16) 20:33	07:03 20:45 (E15) 20:03	08:11 18:05	08:50 15:53
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) 05:03 20:31 (E16) 21:41	05:42 (E12) 06:03 20:52 (E15) 20:32	06:03 20:12 (E16) 20:33	07:05 20:45 (E15) 20:03	08:13 18:05	08:50 15:52
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:26 22:10	05:33 (E12) 05:04 20:31 (E16) 21:39	05:42 (E12) 06:05 20:52 (E15) 20:29	06:05 20:12 (E16) 20:33	07:07 20:45 (E15) 20:03	08:15 18:07	08:50 15:51
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:26 22:10	05:32 (E12) 05:06 20:32 (E16) 21:37	05:43 (E12) 06:07 20:52 (E15) 20:27	06:07 20:12 (E16) 20:33	07:09 20:45 (E15) 20:03	08:17 18:09	08:50 15:49
28	08:22 16:36	07:13 17:45	05:59 18:45	05:40 20:49	04:41 21:46	04:26 22:10	05:33 (E12) 05:08 20:32 (E16) 21:35	05:43 (E12) 06:09 20:52 (E15) 20:24	06:09 20:12 (E16) 20:33	07:11 20:45 (E15) 20:03	08:19 18:10	08:51 15:48
29	08:20 16:39	07:11 17:47	05:57 18:47	05:37 20:51	04:40 21:48	04:26 22:09	05:33 (E12) 05:10 20:33 (E16) 21:33	05:44 (E12) 06:11 20:52 (E15) 20:22	06:11 20:12 (E16) 20:33	07:13 20:45 (E15) 20:03	08:20 18:13	08:51 15:47
30	08:18 16:41	07:04 17:54	05:54 18:54	05:35 20:53	04:38 21:49	04:26 22:09	05:34 (E12) 05:12 20:33 (E16) 21:32	05:46 (E12) 06:13 20:52 (E15) 20:19	06:13 20:12 (E16) 20:33	07:15 20:45 (E15) 20:03	08:22 18:15	08:51 15:46
31	08:16 16:43	07:01 17:51	05:51 18:51	05:33 20:51	04:37 21:51	04:26 22:09	05:34 (E12) 05:14 21:30	05:48 (E12) 06:15 20:52 (E15) 20:16	06:15 20:12 (E16) 20:33	07:20 20:45 (E15) 20:03	08:24 18:17	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case					1699	1147	1964	312				
Sun reduction					0.57	0.56	0.49	0.50				
Oper. time red.					0.98	0.98	0.98	0.98				
Wind dir. red.					0.64	0.63	0.64	0.63				
Total reduction					0.35	0.35	0.31	0.31				
Total, real					601	396	605	95				

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

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



Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

January		February		March		April		May		June	
1	08:51	13:11 (E13)	08:15	07:11		06:49		05:32		06:25 (E7)	04:36
	15:48	14	13:25 (E13)	16:45	17:47	19:53		20:55	39	07:04 (E7)	21:53
2	08:50	13:13 (E13)	08:13	07:08		06:46		05:30		06:25 (E7)	04:35
	15:49	13	13:26 (E13)	16:47	17:50	19:55		20:57	39	07:04 (E7)	21:54
3	08:50	13:14 (E13)	08:11	07:06		06:43		05:28		06:25 (E7)	04:34
	15:51	11	13:25 (E13)	16:50	17:52	19:57		21:00	39	07:04 (E7)	21:55
4	08:50	13:15 (E13)	08:09	07:03		06:41		05:26		06:25 (E7)	04:33
	15:52	8	13:23 (E13)	16:52	17:54	19:59		21:02	39	07:04 (E7)	21:57
5	08:49	13:19 (E13)	08:07	07:00		06:38		05:23		06:25 (E7)	04:32
	15:53	3	13:22 (E13)	16:54	17:56	20:01		21:04	39	07:04 (E7)	21:58
6	08:49		08:05	06:58		06:35		05:21		06:25 (E7)	04:31
	15:55		16:56	17:58		20:03		21:06	39	07:04 (E7)	21:59
7	08:48		08:03	06:55		06:33		05:19		06:26 (E7)	04:30
	15:56		16:59	18:00		20:05		21:08	37	07:03 (E7)	22:00
8	08:48		08:00	06:53		06:30		05:17		06:26 (E7)	04:29
	15:58		17:01	18:03		20:08		21:10	37	07:03 (E7)	22:01
9	08:47		07:58	06:50		06:27		05:15		06:26 (E7)	04:28
	15:59		17:03	18:05		20:10		21:12	36	07:02 (E7)	22:02
10	08:46		07:56	06:47		06:25		05:13		06:26 (E7)	04:28
	16:01		17:05	18:07		20:12		21:14	36	07:02 (E7)	22:03
11	08:45		07:54	06:45		06:22		05:10		06:27 (E7)	04:27
	16:03		17:08	18:09		20:14		21:16	34	07:01 (E7)	22:04
12	08:44		07:52	06:42		06:20		05:08		06:27 (E7)	04:27
	16:04		17:10	18:11		20:16		21:18	33	07:00 (E7)	22:05
13	08:43		07:49	06:39		06:17		05:06		06:28 (E7)	04:26
	16:06		17:12	18:13		20:18		21:20	31	06:59 (E7)	22:06
14	08:42		07:47	06:37	07:02 (E8)	06:14		05:04		06:29 (E7)	04:26
	16:08		17:14	18:15	6	07:08 (E8)	20:20	21:22	30	06:59 (E7)	22:07
15	08:41		07:45	06:34	06:59 (E8)	06:12		05:02		06:30 (E7)	04:26
	16:10		17:17	18:17	11	07:10 (E8)	20:22	21:24	28	06:58 (E7)	22:07
16	08:40		07:43	06:32	06:57 (E8)	06:09		05:01		06:30 (E7)	04:25
	16:12		17:19	18:20	15	07:12 (E8)	20:24	21:25	26	06:56 (E7)	22:08
17	08:39		07:40	06:29	06:54 (E8)	06:07		04:59		06:32 (E7)	04:25
	16:14		17:21	18:22	19	07:13 (E8)	20:26	21:27	24	06:56 (E7)	22:08
18	08:37		07:38	06:26	06:52 (E8)	06:04		04:57		06:33 (E7)	04:25
	16:16		17:23	18:24	21	07:13 (E8)	20:28	21:29	21	06:54 (E7)	22:09
19	08:36		07:35	06:23	06:52 (E8)	06:02	06:42 (E7)	04:55		06:34 (E7)	04:25
	16:18		17:25	18:26	22	07:14 (E8)	20:30	21:31	18	06:52 (E7)	22:09
20	08:35		07:33	06:21	06:52 (E8)	05:59	06:38 (E7)	04:53		06:37 (E7)	04:25
	16:20		17:28	18:28	21	07:13 (E8)	20:33	21:33	14	06:51 (E7)	22:10
21	08:33		07:31	06:18	06:51 (E8)	05:57	06:36 (E7)	04:52		06:39 (E7)	04:25
	16:22		17:30	18:30	22	07:13 (E8)	20:35	21:35	9	06:48 (E7)	22:10
22	08:32		07:28	06:15	06:52 (E8)	05:54	06:34 (E7)	04:50			04:25
	16:24		17:32	18:32	21	07:13 (E8)	20:37	21:36			22:10
23	08:30		07:26	06:13	06:52 (E8)	05:52	06:32 (E7)	04:48			04:26
	16:26		17:34	18:34	20	07:12 (E8)	20:39	21:38			22:10
24	08:29		07:23	06:10	06:52 (E8)	05:49	06:31 (E7)	04:47			04:26
	16:28		17:37	18:36	18	07:10 (E8)	20:41	21:40			22:10
25	08:27		07:21	06:07	06:52 (E8)	05:47	06:30 (E7)	04:45			04:26
	16:30		17:39	18:38	17	07:09 (E8)	20:43	21:42			22:10
26	08:26		07:18	06:05	06:54 (E8)	05:44	06:28 (E7)	04:44			04:27
	16:32		17:41	18:40	13	07:07 (E8)	20:45	21:43			22:10
27	08:24		07:16	06:02	06:57 (E8)	05:42	06:28 (E7)	04:42			04:27
	16:34		17:43	18:43	7	07:04 (E8)	20:47	21:45			22:10
28	08:22		07:13	05:59		05:39	06:27 (E7)	04:41			04:28
	16:36		17:45	18:45		20:49	07:04 (E7)	21:47			22:10
29	08:20			06:57		05:37	06:27 (E7)	04:39			04:28
	16:39			19:47		20:51	07:04 (E7)	21:48			22:10
30	08:18			06:54		05:35	06:26 (E7)	04:38			04:29
	16:41			19:49		20:53	07:04 (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		49		233			351		648		
Sun reduction		0.13		0.41			0.50		0.57		
Oper. time red.		0.98		0.98			0.98		0.98		
Wind dir. red.		0.63		0.64			0.65		0.65		
Total reduction		0.08		0.26			0.32		0.36		
Total, real		4		60			112		235		

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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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) 07:11 (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) 07:11 (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) 07:12 (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) 07:13 (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) 07:12 (E7)	06:25 20:03	07:25 18:43	08:31 15:42
6	04:35 22:06	05:25 21:17	06:35 (E7) 07:13 (E7)	06:27 20:01	07:27 18:40	08:32 15:41
7	04:36 22:05	05:27 21:15	06:35 (E7) 07:13 (E7)	06:29 19:58	07:29 18:38	08:34 15:40
8	04:37 22:04	05:29 21:13	06:35 (E7) 07:13 (E7)	06:31 19:55	07:32 18:35	08:35 15:40
9	04:38 22:03	05:31 21:11	06:35 (E7) 07:14 (E7)	06:33 19:53	07:34 18:32	08:37 15:39
10	04:39 22:02	05:33 21:08	06:34 (E7) 07:13 (E7)	06:35 19:50	07:36 18:30	08:38 15:39
11	04:41 22:01	05:35 21:06	06:34 (E7) 07:13 (E7)	06:37 19:47	07:38 18:27	08:39 15:38
12	04:42 22:00	05:37 21:04	06:34 (E7) 07:12 (E7)	06:39 19:45	07:40 18:25	08:40 15:38
13	04:43 21:59	05:39 21:01	06:34 (E7) 07:12 (E7)	06:41 19:42	07:42 18:22	08:42 15:38
14	04:45 21:58	05:41 20:59	06:34 (E7) 07:12 (E7)	06:43 19:39	07:44 18:19	08:43 15:38
15	04:46 21:57	05:43 20:57	06:35 (E7) 07:11 (E7)	06:45 19:37	07:46 18:17	08:44 15:38
16	04:48 21:55	05:45 20:54	06:35 (E7) 07:11 (E7)	06:47 19:34	07:48 18:14	08:45 15:38
17	04:49 21:54	05:47 20:52	06:35 (E7) 07:09 (E7)	06:49 19:31	07:50 18:12	08:46 15:38
18	04:51 21:52	05:49 20:50	06:36 (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	06:36 (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	06:38 (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	06:39 (E7) 07:04 (E7)	06:57 19:20	07:59 18:02	08:48 15:39
22	04:57 21:46	05:57 20:40	06:41 (E7) 07:02 (E7)	06:59 19:18	08:01 17:59	08:49 15:39
23	04:59 21:45	05:59 20:37	06:43 (E7) 07:00 (E7)	07:01 19:15	08:03 17:57	08:50 15:40
24	05:01 21:43	06:01 20:35	06:46 (E7) 06:56 (E7)	07:03 19:12	08:05 17:55	08:50 15:40
25	05:03 21:41	06:03 20:32	06:44 (E7) 07:03 (E7)	07:05 19:10	08:07 17:53	08:50 15:41
26	05:04 21:39	06:05 20:29	06:43 (E7) 07:05 (E7)	07:07 19:07	08:10 17:50	08:51 15:42
27	05:06 21:38	06:07 20:27	06:42 (E7) 07:07 (E7)	07:09 19:04	08:12 17:47	08:51 15:43
28	05:08 21:36	06:09 20:24	06:40 (E7) 07:07 (E7)	07:11 19:02	08:14 17:45	08:51 15:44
29	05:10 21:34	06:11 20:22	06:40 (E7) 07:09 (E7)	07:13 18:59	08:16 17:43	08:51 15:44
30	05:12 21:32	06:13 20:19	06:39 (E7) 07:10 (E7)	07:15 18:56	08:18 17:40	08:51 15:45
31	05:14 21:30	06:15 20:17	06:39 (E7) 07:11 (E7)	07:17 18:54	08:20 17:38	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case	214	793	237			409
Sun reduction	0.49	0.50	0.43			0.07
Oper. time red.	0.98	0.98	0.98			0.98
Wind dir. red.	0.65	0.65	0.64			0.63
Total reduction	0.31	0.32	0.27			0.04
Total, real	67	252	63			18

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## SHADOW - Calendar

Shadow receptor: Arsmeniki (kad. apz. 76860060006008) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (200)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

		January	February	March		April	May	June	July	August	September		October		November	December	
1	08:50	08:14	07:10			06:48	05:32	04:35	04:29	05:15	06:17		07:17		17:52 (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	24	18:16 (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	22	18:15 (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	21	18:14 (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	19	18:14 (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		17:58 (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	11	18:09 (E1)	16:25	15:40
7	08:48	08:02	06:55		17:24 (E1)	06:32	05:18	04:29	04:35	05:27	06:29		07:29			07:35	08:33
	15:56	16:58	18:00	6	17:30 (E1)	20:05	21:07	22:00	22:05	21:15	19:58		18:37			16:23	15:40
8	08:47	08:00	06:52		17:20 (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	13	17:33 (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	18	17:35 (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		17:16 (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	17:37 (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	22	17:37 (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	23	17:37 (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		17:12 (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	17:37 (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		17:13 (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	17:38 (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		17:12 (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	17:37 (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		17:12 (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	25	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		17:12 (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	25	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		17:12 (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	24	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		17:13 (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	21	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		17:14 (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	19	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		17:15 (E1)	05:56	04:51	04:25	04:55	05:55	06:57	18:04 (E1)	07:58			08:05	08:48
	16:21	17:29	18:30	16	17:31 (E1)	20:34	21:34	22:10	21:48	20:42	19:20	9	18:13 (E1)	18:01		15:57	15:38
22	08:32	07:28	06:15		17:17 (E1)	05:54	04:49	04:25	04:57	05:57	06:59		18:01 (E1)	08:01		08:07	08:49
	16:23	17:32	18:32	11	17:28 (E1)	20:36	21:36	22:10	21:46	20:39	19:17	14	18:15 (E1)	17:59		15:56	15:39
23	08:30	07:25	06:12		05:51	04:48	04:25	04:25	04:59	05:59	07:01		17:58 (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	19	18:17 (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		17:57 (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	21	18:18 (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		17:55 (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	23	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		17:54 (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	24	18:18 (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		17:54 (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	18:18 (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		17:53 (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	18:18 (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		17:52 (E1)	07:18			08:22	08:51
	16:40		19:48		20:53	21:49	22:09	21:31	20:19	18:56	25	18:17 (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		324		247	216		
Total, worst case				319							209		113				
Sun reduction				0.41							0.43		0.26				
Oper. time red.				0.98							0.98		0.98				
Wind dir. red.				0.65							0.65		0.65				
Total reduction				0.26							0.27		0.17				
Total, real				84							57		19				

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	07:42 (E14) 17:48	06:49 17:48	05:33 17:48	04:36 17:48	04:30 17:48	05:16 17:48	06:17 17:48	07:17 17:48	07:23 16:36
2	08:51 15:50	08:13 16:48	07:08 17:50	07:41 (E14) 17:50	06:46 17:50	05:30 17:50	04:35 17:50	04:31 17:50	05:18 17:50	06:19 17:50	07:19 17:50	07:25 16:34
3	08:50 15:51	08:11 16:50	07:06 17:52	07:42 (E14) 17:52	06:44 17:52	05:28 17:52	04:34 17:52	04:32 17:52	05:20 17:52	06:21 17:52	07:21 17:52	07:27 16:32
4	08:50 15:52	08:09 16:52	07:03 17:54	07:41 (E14) 17:54	06:41 17:54	05:26 17:54	04:33 17:54	04:33 17:54	05:22 17:54	06:23 17:54	07:23 17:54	07:29 16:30
5	08:49 15:54	08:07 16:54	07:01 17:56	07:41 (E14) 17:56	06:38 17:56	05:24 17:56	04:32 17:56	04:34 17:56	05:24 17:56	06:25 17:56	07:25 17:56	07:31 16:27
6	08:49 15:55	08:05 16:57	06:58 17:58	07:42 (E14) 17:58	06:36 17:58	05:21 17:58	04:31 17:58	04:35 17:58	05:25 17:58	06:27 17:58	07:28 17:58	07:34 16:25
7	08:48 15:56	08:03 16:59	06:55 18:01	07:42 (E14) 18:01	06:33 18:01	05:19 18:01	04:30 18:01	04:36 18:01	05:27 18:01	06:29 18:01	07:30 18:01	07:36 16:23
8	08:48 15:58	08:01 17:01	06:53 18:03	07:42 (E14) 18:03	06:30 18:03	05:17 18:03	04:29 18:03	04:37 18:03	05:29 18:03	06:31 18:03	07:32 18:03	07:38 16:21
9	08:47 16:00	07:58 17:03	06:50 18:05	07:44 (E14) 18:05	06:28 18:05	05:15 18:05	04:29 18:05	04:38 18:05	05:31 18:05	06:33 18:05	07:34 18:05	07:40 16:19
10	08:46 16:01	07:56 17:05	06:48 18:07	07:45 (E14) 18:07	06:25 18:07	05:13 18:07	04:28 18:07	04:40 18:07	05:33 18:07	06:35 18:07	07:36 18:07	07:42 16:17
11	08:45 16:03	07:54 17:08	06:45 18:09	07:47 (E14) 18:09	06:22 18:09	05:11 18:09	04:27 18:09	04:41 18:09	05:35 18:09	06:37 18:09	07:38 18:09	07:44 16:15
12	08:44 16:05	07:52 17:10	06:42 18:11	07:47 (E14) 18:11	06:20 18:11	05:09 18:11	04:27 18:11	04:42 18:11	05:37 18:11	06:39 18:11	07:40 18:11	07:46 16:13
13	08:43 16:06	07:50 17:12	06:40 18:13	07:47 (E14) 18:13	06:17 18:13	05:07 18:13	04:27 18:13	04:44 18:13	05:39 18:13	06:41 18:13	07:42 18:13	07:49 16:11
14	08:42 16:08	07:47 17:14	06:37 18:15	07:47 (E14) 18:15	06:15 18:15	05:05 18:15	04:26 18:15	04:45 18:15	05:41 18:15	06:43 18:15	07:44 18:15	07:51 16:10
15	08:41 16:10	07:45 17:17	06:34 18:18	07:47 (E14) 18:18	06:12 18:18	05:03 18:18	04:26 18:18	04:46 18:18	05:43 18:18	06:45 18:18	07:46 18:18	07:53 16:08
16	08:40 16:12	07:43 17:19	06:32 18:20	07:47 (E14) 18:20	06:10 18:20	05:01 18:20	04:26 18:20	04:48 18:20	05:45 18:20	06:47 18:20	07:48 18:20	07:55 16:06
17	08:39 16:14	07:40 17:21	06:29 18:22	07:47 (E14) 18:22	06:07 18:22	04:59 18:22	04:25 18:22	04:49 18:22	05:47 18:22	06:49 18:22	07:50 18:22	07:57 16:04
18	08:38 16:16	07:38 17:23	06:26 18:24	07:47 (E14) 18:24	06:04 18:24	04:57 18:24	04:25 18:24	04:51 18:24	05:49 18:24	06:51 18:24	07:53 18:24	07:59 16:03
19	08:36 16:18	07:36 17:26	06:24 18:26	07:47 (E14) 18:26	06:02 18:26	04:55 18:26	04:25 18:26	04:53 18:26	05:51 18:26	06:53 18:26	07:55 18:26	08:01 16:01
20	08:35 16:20	07:33 17:28	06:21 18:28	07:47 (E14) 18:28	06:01 18:28	04:53 18:28	04:25 18:28	04:54 18:28	05:53 18:28	06:55 18:28	07:57 18:28	08:03 15:59
21	08:33 16:22	07:31 17:30	06:18 18:30	07:47 (E14) 18:30	05:57 18:30	04:52 18:30	04:25 18:30	04:56 18:30	05:55 18:30	06:57 18:30	07:59 18:30	08:05 15:57
22	08:32 16:24	07:28 17:32	06:16 18:32	07:47 (E14) 18:32	05:54 18:32	04:50 18:32	04:26 18:32	04:58 18:32	05:57 18:32	06:59 18:32	08:01 18:32	08:07 15:56
23	08:30 16:26	07:26 17:34	06:13 18:34	07:47 (E14) 18:34	05:52 18:34	04:48 18:34	04:26 18:34	04:59 18:34	05:59 18:34	07:01 18:34	08:03 18:34	08:09 15:55
24	08:29 16:28	07:23 17:37	06:10 18:36	07:47 (E14) 18:36	05:49 18:36	04:47 18:36	04:26 18:36	05:01 18:36	06:01 18:36	07:03 18:36	08:05 18:36	08:11 15:53
25	08:27 16:30	07:21 17:39	06:08 18:39	07:47 (E14) 18:39	05:47 18:39	04:45 18:39	04:27 18:39	05:03 18:39	06:03 18:39	07:05 18:39	08:07 18:39	08:13 15:51
26	08:26 16:32	07:18 17:41	06:05 18:41	07:47 (E14) 18:41	05:44 18:41	04:44 18:41	04:27 18:41	05:05 18:41	06:05 18:41	07:07 18:41	08:09 18:41	08:15 15:49
27	08:24 16:34	07:16 17:43	06:02 18:43	07:47 (E14) 18:43	05:42 18:43	04:42 18:43	04:27 18:43	05:06 18:43	06:07 18:43	07:09 18:43	08:11 18:43	08:17 15:47
28	08:22 16:37	07:13 17:45	06:00 18:45	07:47 (E14) 18:45	05:40 18:45	04:41 18:45	04:28 18:45	05:08 18:45	06:09 18:45	07:11 18:45	08:13 18:45	08:19 15:45
29	08:20 16:39	07:11 17:47	05:57 18:47	07:47 (E14) 18:47	05:37 18:47	04:40 18:47	04:29 18:47	05:10 18:47	06:11 18:47	07:13 18:47	08:15 18:47	08:21 15:43
30	08:19 16:41	07:11 17:49	05:54 18:49	07:47 (E14) 18:49	05:35 18:49	04:38 18:49	04:29 18:49	05:12 18:49	06:13 18:49	07:15 18:49	08:17 18:49	08:23 15:41
31	08:17 16:43	07:11 17:51	05:52 18:51	07:47 (E14) 18:51	05:33 18:51	04:37 18:51	04:30 18:51	05:14 18:51	06:15 18:51	07:17 18:51	08:19 18:51	08:25 15:39
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		124	261							391		
Sun reduction		0.20	0.41							0.26		
Oper. time red.		0.98	0.98							0.98		
Wind dir. red.		0.63	0.63							0.63		
Total reduction		0.12	0.25							0.16		
Total, real		15	66							62		

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	21 07:58 (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	24 07:59 (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	26 08:01 (E14)	19:57	21:00
4	08:50	08:09	07:03	07:33 (E14)	06:41	05:26
	15:52	16:52	17:54	28 08:01 (E14)	19:59	21:02
5	08:49	08:07	07:01	07:32 (E14)	06:38	05:24
	15:54	16:54	17:56	29 08:01 (E14)	20:01	21:04
6	08:49	08:05	06:58	07:32 (E14)	06:36	05:21
	15:55	16:57	17:58	30 08:02 (E14)	20:03	21:06
7	08:48	08:03	06:55	07:31 (E14)	06:33	05:19
	15:56	16:59	18:01	31 08:02 (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	31 08:01 (E14)	20:08	21:10
9	08:47	07:58	06:50	07:31 (E14)	06:28	05:15
	16:00	17:03	18:05	31 08:02 (E14)	20:10	21:12
10	08:46	07:56	06:48	07:31 (E14)	06:25	05:13
	16:01	17:05	18:07	30 08:01 (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	30 08:00 (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	29 08:00 (E14)	20:16	21:18
13	08:43	07:50	06:40	07:31 (E14)	06:17	05:07
	16:06	17:12	18:13	28 07:59 (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	25 07:57 (E14)	20:20	21:22
15	08:41	07:45	06:34	07:34 (E14)	06:12	05:03
	16:10	17:17	18:18	22 07:56 (E14)	20:22	21:24
16	08:40	07:43	06:32	07:35 (E14)	06:09	05:01
	16:12	17:19	18:20	19 07:54 (E14)	20:24	21:25
17	08:39	07:40	06:29	07:37 (E14)	06:07	05:00
	16:14	17:21	18:22	14 07:51 (E14)	20:26	21:27
18	08:38	07:38	06:26	07:41 (E14)	06:04	05:00
	16:16	17:23	18:24	4 07:45 (E14)	20:28	21:29
19	08:36	07:36	06:24	06:02	06:02	05:00
	16:18	17:26	18:26	21 06:49 (E13)	21:31	22:09
20	08:35	07:33	06:21	05:59	06:27 (E13)	04:53
	16:20	17:28	18:28	22 06:49 (E13)	21:33	22:10
21	08:33	07:31	06:18	05:57	06:26 (E13)	04:52
	16:22	17:30	18:30	22 06:48 (E13)	21:35	22:10
22	08:32	07:28	06:16	05:54	06:26 (E13)	04:50
	16:24	17:32	18:32	22 06:48 (E13)	21:37	22:10
23	08:30	07:26	06:13	05:52	06:26 (E13)	04:48
	16:26	17:34	18:34	21 06:47 (E13)	21:38	22:10
24	08:29	07:23	06:10	05:49	06:26 (E13)	04:47
	16:28	17:37	18:36	21 06:47 (E13)	21:40	22:10
25	08:27	07:21	06:08	05:47	06:27 (E13)	04:45
	16:30	17:39	18:39	19 06:46 (E13)	21:42	22:10
26	08:26	07:18	06:05	05:44	06:27 (E13)	04:44
	16:32	17:41	18:41	17 06:44 (E13)	21:43	22:10
27	08:24	07:16	06:02	05:42	06:28 (E13)	04:42
	16:34	17:43	18:43	15 06:43 (E13)	21:45	22:10
28	08:22	07:13	06:00	05:40	06:30 (E13)	04:41
	16:37	17:45	18:45	11 06:41 (E13)	21:47	22:10
29	08:20		06:57	05:37	06:34 (E13)	04:40
	16:39		19:47	3 06:37 (E13)	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		29	452	251		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.98	0.98	0.98		
Wind dir. red.		0.62	0.62	0.65		
Total reduction		0.12	0.25	0.32		
Total, real		4	114	80		

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

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

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	28 08:39 (E14)	16:36
2	04:31	05:18	06:19	07:19	08:10 (E14)	07:25
	22:09	21:26	20:11	18:51	29 08:39 (E14)	16:34
3	04:32	05:20	06:21	07:21	08:09 (E14)	07:27
	22:08	21:24	20:09	18:48	30 08:39 (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	31 08:39 (E14)	16:30
5	04:34	05:23	06:25	07:25	08:08 (E14)	07:31
	22:07	21:20	20:04	18:43	31 08:39 (E14)	16:27
6	04:35	05:25	06:27	07:28	08:07 (E14)	07:33
	22:06	21:17	20:01	18:40	31 08:38 (E14)	16:25
7	04:36	05:27	06:29	07:30	08:07 (E14)	07:36
	22:05	21:15	19:58	18:38	31 08:38 (E14)	16:23
8	04:37	05:29	06:31	07:32	08:07 (E14)	07:38
	22:04	21:13	19:56	18:35	30 08:37 (E14)	16:21
9	04:38	05:31	06:33	07:34	08:08 (E14)	07:40
	22:03	21:11	19:53	18:33	29 08:37 (E14)	16:19
10	04:40	05:33	06:35	07:36	08:08 (E14)	07:42
	22:02	21:08	19:50	18:30	28 08:36 (E14)	16:17
11	04:41	05:35	06:37	07:38	08:09 (E14)	07:44
	22:01	21:06	19:47	18:27	25 08:34 (E14)	16:15
12	04:42	05:37	06:39	07:40	08:10 (E14)	07:46
	22:00	21:04	19:45	18:25	23 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	6 06:46 (E13)	18:20	15 08:28 (E14)	16:10
15	04:46	05:43	06:45	07:46	08:17 (E14)	07:53
	21:57	20:57	12 06:49 (E13)	18:17	8 08:25 (E14)	16:08
16	04:48	05:45	06:47	07:48		07:55
	21:55	20:54	15 06:51 (E13)	18:15		16:06
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	18 06:52 (E13)	18:12		16:04
18	04:51	05:49	06:51	07:52		07:59
	21:52	20:50	20 06:53 (E13)	18:09		16:03
19	04:53	05:51	06:53	07:55		08:01
	21:51	20:47	20 06:52 (E13)	18:07		16:01
20	04:54	05:53	06:55	07:57		08:03
	21:49	20:45	22 06:53 (E13)	18:04		15:59
21	04:56	05:55	06:57	07:59		08:05
	21:48	20:42	22 06:53 (E13)	18:02		15:58
22	04:58	05:57	06:59	08:01		08:07
	21:46	20:40	22 06:53 (E13)	18:00		15:56
23	04:59	05:59	07:01	08:03		08:09
	21:45	20:37	23 06:53 (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	18 06:52 (E13)	16:52		15:52
26	05:05	06:05	07:07	07:10	08:20 (E14)	08:15
	21:39	20:30	15 06:51 (E13)	16:50	08:32 (E14)	15:51
27	05:06	06:07	07:09	07:12	08:17 (E14)	08:17
	21:38	20:27	12 06:50 (E13)	16:48	08:35 (E14)	15:50
28	05:08	06:09	07:11	07:14	08:15 (E14)	08:19
	21:36	20:24	8 06:47 (E13)	16:45	08:36 (E14)	15:48
29	05:10	06:11	07:13	07:16	08:13 (E14)	08:21
	21:34	20:22	4 06:45 (E13)	16:43	08:38 (E14)	15:47
30	05:12	06:13	07:15	07:18	08:12 (E14)	08:22
	21:32	20:19	18:56	16:41	08:38 (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
Total, worst case						216
Sun reduction		257	102		389	
Oper. time red.		0.50	0.43		0.26	
Wind dir. red.		0.98	0.98		0.98	
Total reduction		0.65	0.62		0.62	
Total, real		0.32	0.26		0.16	
		82	27		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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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
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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.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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
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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	04:49 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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

Idle 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	08:15	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:22	08:24
	15:48	16:45	17:48	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	08:49	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	21:01	21:56	22:07	21:21	20:06	18:46	16:29	15:42
5	08:49	08:07	07:00	06:38	05:23	04:32	04:34	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:58	22:06	21:19	20:03	18:43	16:27	15:42
6	08:49	08:05	06:58	06:35	05:21	04:31	04:35	05:25	06:27	07:27	07:33	08:32
	15:55	16:56	17:58	20:03	21:05	21:59	22:06	21:17	20:01	18:40	16:25	15:41
7	08:48	08:02	06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	22:00	22:05	21:15	19:58	18:38	16:23	15:40
8	08:47	08:00	06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:31	07:38	08:35
	15:58	17:01	18:03	20:07	21:10	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	20:09	21:12	22:02	22:03	21:10	19:53	18:32	16:19	15:39
10	08:46	07:56	06:47	06:25	05:13	04:28	04:40	05:33	06:35	07:36	07:42	08:38
	16:01	17:05	18:07	20:12	21:14	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	04:27	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	19:47	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	21:17	22:05	22:00	21:04	19:45	18:25	16:13	15:38
13	08:43	07:49	06:39	06:17	05:07	04:27	04:44	05:39	06:41	07:42	07:48	08:41
	16:06	17:12	18:13	20:18	21:19	22:06	21:59	21:01	19:42	18:22	16:11	15:38
14	08:42	07:47	06:37	06:14	05:05	04:26	04:45	05:41	06:43	07:44	07:50	08:42
	16:08	17:14	18:15	20:20	21:21	22:06	21:58	20:59	19:39	18:19	16:09	15:38
15	08:41	07:45	06:34	06:12	05:03	04:26	04:46	05:43	06:45	07:46	07:53	08:43
	16:10	17:17	18:17	20:22	21:23	22:07	21:56	20:57	19:37	18:17	16:08	15:38
16	08:40	07:42	06:31	06:09	05:01	04:26	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	18:14	16:06	15:38
17	08:38	07:40	06:29	06:07	04:59	04:25	04:49	05:47	06:49	07:50	07:57	08:45
	16:14	17:21	18:22	20:26	21:27	22:08	21:54	20:52	19:31	18:12	16:04	15:38
18	08:37	07:38	06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:52	07:59	08:46
	16:16	17:23	18:24	20:28	21:29	22:09	21:52	20:49	19:28	18:09	16:02	15:38
19	08:36	07:35	06:23	06:02	04:55	04:25	04:53	05:51	06:53	07:54	08:01	08:47
	16:18	17:26	18:26	20:30	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	20:32	21:33	22:09	21:49	20:44	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	08:48
	16:22	17:30	18:30	20:34	21:34	22:10	21:48	20:42	19:20	18:02	15:58	15:39
22	08:32	07:28	06:15	05:54	04:50	04:26	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	20:39	19:18	17:59	15:56	15:40
23	08:30	07:26	06:13	05:52	04:48	04:26	04:59	05:59	07:01	08:03	08:09	08:49
	16:26	17:34	18:34	20:39	21:38	22:10	21:44	20:37	19:15	17:57	15:55	15:40
24	08:29	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	20:34	19:12	17:55	15:53	15:41
25	08:27	07:21	06:07	05:47	04:45	04:27	05:03	06:03	07:05	07:07	08:13	08:50
	16:30	17:39	18:38	20:43	21:41	22:10	21:41	20:32	19:10	16:52	15:52	15:41
26	08:25	07:18	06:05	05:44	04:44	04:27	05:05	06:05	07:07	07:09	08:15	08:50
	16:32	17:41	18:40	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	04:42	04:28	05:06	06:07	07:09	07:12	08:17	08:50
	16:34	17:43	18:43	20:47	21:45	22:10	21:37	20:27	19:04	16:47	15:50	15:43
28	08:22	07:13	05:59	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	21:46	22:10	21:35	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	08:20	08:51
	16:39		19:47	20:51	21:48	22:09	21:34	20:22	18:59	16:43	15:47	15:45
30	08:18		06:54	05:35	04:38	04:29	05:12	06:13	07:15	07:18	08:22	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	08:16		06:51		04:37		05:14	06:15		07:20		08:51
	16:43		19:51		21:51		21:30	20:16		16:38		15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
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 &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:55	04:36 21:52
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	05:23 (E15) 05:50 (E15)
Potential sun hours	235	266	366	426	508	528
Total, worst case				452	138	1068
Sun reduction				0.50	0.57	0.56
Oper. time red.				0.98	0.98	0.98
Wind dir. red.				0.66	0.67	0.67
Total reduction				0.32	0.37	0.37
Total, real				146	52	392

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

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

Project:

Mezares\_AB211223

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:40/4.0.540

## 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
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30 22:09	05:25 (E15) 06:02 (E15)	05:16 21:28	06:17 20:14	07:17 18:54	08:24 15:45
2	04:31 22:08	05:25 (E15) 06:01 (E15)	05:18 21:26	06:19 20:11	07:19 18:51	08:26 15:44
3	04:32 22:08	05:26 (E15) 06:01 (E15)	05:20 21:24	06:21 20:09	07:21 18:48	08:27 15:43
4	04:33 22:07	05:26 (E15) 06:01 (E15)	05:22 21:22	06:23 20:06	07:23 18:46	08:29 15:43
5	04:34 22:07	05:27 (E15) 06:01 (E15)	05:23 21:19	06:25 20:03	07:25 18:43	08:31 15:42
6	04:35 22:06	05:27 (E15) 06:01 (E15)	05:25 21:17	06:27 20:01	07:27 18:40	08:32 15:41
7	04:36 22:05	05:28 (E15) 06:01 (E15)	05:27 21:15	06:29 19:58	07:29 18:38	08:34 15:40
8	04:37 22:04	05:28 (E15) 06:00 (E15)	05:29 21:13	06:31 19:55	07:32 18:35	08:35 15:40
9	04:38 22:03	05:29 (E15) 06:00 (E15)	05:31 21:11	06:33 19:53	07:34 18:32	08:36 15:39
10	04:40 22:02	05:29 (E15) 05:59 (E15)	05:33 21:08	06:35 19:50	07:36 18:30	08:38 15:39
11	04:41 22:01	05:31 (E15) 06:00 (E15)	05:35 21:06	06:37 19:47	07:38 18:27	08:39 15:39
12	04:42 22:00	05:32 (E15) 05:59 (E15)	05:37 21:04	06:39 19:45	07:40 18:25	08:40 15:38
13	04:44 21:59	05:32 (E15) 05:58 (E15)	05:39 21:01	06:41 19:42	07:42 18:22	08:41 15:38
14	04:45 21:58	05:33 (E15) 05:57 (E15)	05:41 20:59	06:43 19:39	07:44 18:20	08:43 15:38
15	04:46 21:56	05:35 (E15) 05:57 (E15)	05:43 20:57	06:45 19:37	07:46 18:17	08:44 15:38
16	04:48 21:55	05:36 (E15) 05:55 (E15)	05:45 20:54	06:47 19:34	07:48 18:14	08:44 15:38
17	04:49 21:54	05:37 (E15) 05:54 (E15)	05:47 20:52	06:49 19:31	07:50 18:12	08:45 15:38
18	04:51 21:52	05:40 (E15) 05:52 (E15)	05:49 20:49	06:51 19:29	07:52 18:09	08:46 15:38
19	04:53 21:51	05:43 (E15) 05:48 (E15)	05:51 20:47	06:53 19:26	07:55 18:07	08:47 15:38
20	04:54 21:49	05:53 20:45	06:55 19:23	06:55 19:23	07:57 18:04	08:48 15:39
21	04:56 21:48	05:55 20:42	06:57 19:20	06:57 19:20	07:59 18:02	08:48 15:39
22	04:58 21:46	05:57 20:40	06:59 19:18	06:59 19:18	08:01 18:00	08:49 15:40
23	04:59 21:44	05:59 20:37	07:01 19:15	07:01 19:15	08:03 17:57	08:49 15:40
24	05:01 21:43	06:01 20:35	07:03 19:12	07:03 19:12	08:05 17:55	08:50 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	07:05 19:10	08:13 16:52	08:50 15:41
26	05:05 21:39	06:05 20:29	07:07 19:07	07:07 19:07	08:15 16:50	08:50 15:42
27	05:06 21:37	06:07 20:27	07:09 19:04	07:09 19:04	08:17 16:48	08:51 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	07:11 19:02	08:19 16:45	08:51 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	07:13 18:59	08:21 16:43	08:51 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	07:15 18:56	08:22 16:41	08:51 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	07:17 18:54	08:24 16:38	08:51 15:47
Potential sun hours	529	469	384	324	248	216
Total, worst case	518	394	64			
Sun reduction	0.49	0.50	0.43			
Oper. time red.	0.98	0.98	0.98			
Wind dir. red.	0.67	0.66	0.66			
Total reduction	0.32	0.32	0.28			
Total, real	168	126	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)