

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:15 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
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Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

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Vilandes 3-6

LV-1010 Riga

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Calculated:

26/06/2024 08:57/4.0.540

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) []

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Operational time

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

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

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

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	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

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Vilandes 3-6

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0037167242411

Anna / anna@environment.lv

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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
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Oper. time red.												
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Table layout: For each day in each month the following matrix apply

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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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) []

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

Operational time

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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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:

26/06/2024 08:57/4.0.540

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
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Operational time

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 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
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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	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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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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11	08:45 16:02	07:54 17:07	06:44 18:08	06:22 20:13	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:14	08:39 15:38
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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		17:42 (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	27	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		17:42 (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	26	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		17:15 (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	8	17:23 (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		17:43 (E1)	07:33	08:32
	15:54	16:56	17:58	18	17:27 (E1)	20:03	21:05	21:59	22:06	21:17	20:00		18:40	23	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		17:06 (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	17:29 (E1)	20:07	21:09	22:01	22:04	21:13	19:55		18:35	17	18:02 (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	24	17:29 (E1)	20:09	21:11	22:02	22:03	21:10	19:52		18:32	12	17:59 (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			07:42	08:38
	16:00	17:05	18:06	25	17:30 (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		17:04 (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	26	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		17:03 (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	27	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		17:03 (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	26	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		17:04 (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	24	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		17:04 (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	23	17:27 (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		17:05 (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	21	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		17:06 (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	18	17:24 (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		17:08 (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	13	17:21 (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		17:13 (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	5	17:18 (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		05:56	04:51	04:25	04:55	05:55	06:56	07:57		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		17:53 (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	11	18:04 (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		17:50 (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	16	18:06 (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		17:48 (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	19	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		17:46 (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	22	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		17:45 (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	24	18:09 (E1)	16:45			15:48	15:43
29	08:20		06:56		05:37	04:39	04:28	05:09	06:11	07:13		17:44 (E1)	07:16			08:20	08:51
	16:38		19:46		20:51	21:48	22:09	21:33	20:21	18:58	25	18:09 (E1)	16:42			15:47	15:44
30	08:18		06:54		05:34	04:38	04:29	05:11	06:13	07:15		17:43 (E1)	07:18			08:22	08:51
	16:40		19:48		20:53	21:49	22:09	21:31	20:19	18:56	26	18:09 (E1)	16:40			15:45	15:45
31	08:16		06:51			04:36			05:13				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			342								143		200				
Sun reduction			0.41								0.43		0.26				
Oper. time red.			0.94								0.94		0.94				
Wind dir. red.			0.65								0.65		0.65				
Total reduction			0.25								0.26		0.16				
Total, real			86								37		32				

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	07:52 (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	07:53 (E14) 20:01	06:38 21:04	05:24 21:58	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	07:55 (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	07:58 (E14) 20:06	06:33 21:08	05:19 22:00	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	08:32 (E14) 16:23	07:36 15:40	
8	08:48 15:58	08:01 17:01	06:53 18:03	08:06 (E14) 20:06	06:30 21:10	05:17 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	08:29 (E14) 16:21	07:38 15:40	
9	08:47 16:00	07:58 17:03	06:50 18:05		06:28 21:12	05:15 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	08:28 (E14) 16:19	07:40 15:39	
10	08:46 16:01	07:56 17:05	06:48 18:07		06:25 21:14	05:13 22:03	04:40 22:02	05:33 21:09	06:35 19:50	07:36 18:30	08:27 (E14) 16:17	07:42 15:39	
11	08:45 16:03	07:54 17:08	06:45 18:09		06:22 21:16	05:11 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	08:25 (E14) 16:15	07:44 15:39	
12	08:44 16:05	07:52 17:10	06:42 18:11		06:20 21:18	05:09 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:24 (E14) 16:13	07:46 15:38	
13	08:43 16:06	07:50 17:12	06:40 18:13		06:17 21:20	05:07 22:06	04:44 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:24 (E14) 16:11	07:49 15:38	
14	08:42 16:08	07:47 17:14	06:37 18:16		06:15 21:22	05:05 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	08:23 (E14) 16:10	07:51 15:38	
15	08:41 16:10	07:45 17:17	06:34 18:18		06:12 21:24	05:03 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	08:24 (E14) 16:08	07:53 15:38	
16	08:40 16:12	07:43 17:19	06:32 18:20		06:09 21:26	05:01 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:23 (E14) 16:06	07:55 15:38	
17	08:39 16:14	07:40 17:21	06:29 18:22		06:07 21:27	04:59 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:23 (E14) 16:04	07:57 15:38	
18	08:38 16:16	07:38 17:23	06:26 18:24		06:04 21:29	04:57 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:09	08:23 (E14) 16:03	07:59 15:38	
19	08:36 16:18	07:36 17:26	06:24 18:26	08:03 (E14)	06:02 21:31	04:55 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:25 (E14) 16:01	08:01 15:38	
20	08:35 16:20	07:33 17:28	06:21 18:28	08:10 (E14)	05:59 21:33	04:53 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:27 (E14) 15:59	08:03 15:39	
21	08:33 16:22	07:31 17:30	06:18 18:30	08:12 (E14)	05:57 21:35	04:52 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:29 (E14) 15:58	08:05 15:39	
22	08:32 16:24	07:28 17:32	06:16 18:32	08:14 (E14)	05:54 21:37	04:50 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:31 (E14) 15:56	08:07 15:40	
23	08:30 16:26	07:26 17:34	06:13 18:34	08:15 (E14)	05:52 21:38	04:48 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:34 (E14) 15:55	08:09 15:40	
24	08:29 16:28	07:23 17:37	06:10 18:36	08:16 (E14)	05:49 21:40	04:47 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:40 (E14) 15:53	08:09 15:41	
25	08:27 16:30	07:21 17:39	06:08 18:39	08:17 (E14)	05:47 21:42	04:47 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:41 (E14) 15:52	08:13 15:41	
26	08:26 16:32	07:18 17:41	06:05 18:41	08:18 (E14)	05:45 21:43	04:44 22:10	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:42 (E14) 15:51	08:15 15:42	
27	08:24 16:34	07:16 17:43	06:02 18:43	08:19 (E14)	05:42 21:45	04:42 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:43 (E14) 15:50	08:17 15:43	
28	08:22 16:37	07:13 17:45	06:00 18:45	08:20 (E14)	05:40 21:47	04:41 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:44 (E14) 15:48	08:19 15:44	
29	08:20 16:39		05:57 19:47	08:21 (E14)	05:37 21:48	04:40 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:45 (E14) 15:47	08:21 15:45	
30	08:19 16:41		06:54 19:49	08:22 (E14)	05:35 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:46 (E14) 15:46	08:22 15:46	
31	08:17 16:43		06:52 19:51	08:23 (E14)	05:33 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:17 18:58	08:19 17:40	08:47 (E14) 15:47	08:23 15:47	
Potential sun hours	235	266	366		426	508	529	529	469	385	324	247	216
Total, worst case		206	134								345		
Sun reduction		0.20	0.41								0.26		
Oper. time red.		0.94	0.94								0.94		
Wind dir. red.		0.63	0.63								0.63		
Total reduction		0.12	0.24								0.15		
Total, real		24	32								53		

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	07:49 (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	07:53 (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	07:56 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	05:59 21:33	04:53 22:10	04:53 21:49	04:53 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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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	08:04 (E14) 19:59	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
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31	08:17 16:43	07:07 17:51	05:52 18:51	08:04 (E14) 19:59	05:33 21:51	04:37 22:10	05:14 21:30	05:14 20:17	06:15 17:38	07:20 16:38	08:22 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	162							353		
Sun reduction		0.20	0.41							0.26		
Oper. time red.		0.94	0.94							0.94		
Wind dir. red.		0.63	0.63							0.63		
Total reduction		0.12	0.24							0.15		
Total, real		23	39							54		

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:23	04:26 22:07	04:47 21:56	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
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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	04:25 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			07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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) 18:17 (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
2	08:51 15:49	08:13 16:47	07:08 17:50	08:05 (E7) 18:14 (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
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
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
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
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
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
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
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
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
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
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 16:12
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
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
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
16	08:40 16:12	07:43 17:19	06:32 18:20		06:09 20:24	05:01 21:26	04:25 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06
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
18	08:38 16:16	07:38 17:23	06:26 18:24		06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02
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	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01
20	08:35 16:20	07:33 17:28	06:21 18:28		05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59
21	08:33 16:22	07:31 17:30	06:18 18:30		05:57 20:35	04:52 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58
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	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	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 22:11	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:50
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	05:03 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		05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:52
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	08:11 17:47	08:17 15:49
28	08:22 16:36	07:13 17:45	05:59 18:45		05:39 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:14 17:45	08:19 15:48
29	08:20 16:39		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	08:15 17:43	08:21 15:47
30	08:19 16:41		06:54 19:49		05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:40	08:23 15:46
31	08:17 16:43		06:51 19:51		05:33 21:51	04:37 21:51	04:27 22:10	05:14 21:30	06:15 20:17	07:20 16:38	08:19 17:38	08:25 15:47
Potential sun hours	235	266	366		426	508	529	529	469	385	324	247
Total, worst case		237	23								268	216
Sun reduction		0.20	0.41								0.26	
Oper. time red.		0.94	0.94								0.94	
Wind dir. red.		0.62	0.62								0.62	
Total reduction		0.12	0.24								0.15	
Total, real		28	6								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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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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
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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	04:25 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
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:48	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start wind speed: Cut 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 15:49	08:15 16:45 08:13 16:47	07:11 17:47 07:08 17:50	06:49 19:53 06:46 19:55	05:32 20:55 05:30 20:58	04:36 21:53 04:35 21:54	04:30 22:09 04:31 22:09	05:16 21:28 05:17 21:26	06:17 20:14 06:19 20:11	07:17 18:54 07:19 18:51		
2	08:50 15:50 08:50 15:52	08:11 16:50 08:09 16:52	07:06 17:52 07:03 17:54	06:43 19:57 06:41 19:59	05:28 21:00 05:26 21:02	04:33 21:55 04:32 21:57	04:32 22:08 04:32 22:07	05:19 21:24 05:21 21:22	06:21 20:09 06:23 20:06	07:21 18:48 07:23 18:46		
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		314								191	129	
Sun reduction		0.20								0.26	0.08	
Oper. time red.		0.94								0.94	0.94	
Wind dir. red.		0.61								0.61	0.61	
Total reduction		0.12								0.15	0.05	
Total, real		36								28	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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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
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22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January	February	March	April	May	June
1	08:51 15:48	08:15 16:45	08:47 (E15) 10:20 (E14)	07:11 17:48	06:49 19:53	07:22 (E13) 20:55
2	08:50 15:49	08:13 16:48	08:47 (E15) 10:20 (E14)	07:08 17:50	13 19:55	07:35 (E13) 20:57
3	08:50 15:51	08:11 16:50	08:47 (E15) 10:20 (E14)	07:06 17:52	19 19:57	07:37 (E13) 21:00
4	08:50 15:52	08:09 16:52	08:47 (E15) 10:20 (E14)	07:03 17:54	22 19:59	07:17 (E13) 21:02
5	08:49 15:53	09:49 (E14) 09:54 (E14)	08:07 16:54	07:01 17:56	26 20:01	07:40 (E13) 21:04
6	08:49 15:55	09:47 (E14) 09:57 (E14)	08:05 16:56	06:58 17:58	29 20:03	07:12 (E13) 21:06
7	08:48 15:56	09:45 (E14) 09:59 (E14)	08:03 16:59	06:55 18:01	30 20:06	07:10 (E13) 21:08
8	08:48 15:58	09:44 (E14) 10:01 (E14)	08:01 17:01	06:53 18:03	32 20:08	07:42 (E13) 21:10
9	08:47 16:00	09:43 (E14) 10:02 (E14)	07:58 17:03	06:50 18:05	33 20:10	07:09 (E13) 21:12
10	08:46 16:01	09:43 (E14) 10:04 (E14)	07:56 17:05	06:47 18:07	34 20:12	07:43 (E13) 21:14
11	08:45 16:03	09:42 (E14) 10:06 (E14)	07:54 17:08	06:45 18:09	35 20:14	07:08 (E13) 21:16
12	08:44 16:05	09:42 (E14) 10:07 (E14)	07:52 17:10	06:42 18:11	35 20:16	07:07 (E13) 21:18
13	08:43 16:06	09:40 (E14) 10:08 (E14)	07:50 17:12	06:40 18:13	35 20:18	07:07 (E13) 21:20
14	08:42 16:08	09:40 (E14) 10:09 (E14)	07:47 17:14	06:37 18:15	34 20:20	07:07 (E13) 21:22
15	08:41 16:10	09:39 (E14) 10:10 (E14)	07:45 17:17	06:34 18:18	34 20:22	07:07 (E13) 21:24
16	08:40 16:12	09:39 (E14) 10:11 (E14)	07:43 17:19	06:32 18:20	33 20:24	07:07 (E13) 21:25
17	08:39 16:14	09:40 (E14) 10:13 (E14)	07:40 17:21	06:29 18:22	33 20:26	07:08 (E13) 21:27
18	08:37 16:16	09:39 (E14) 10:13 (E14)	07:38 17:23	06:26 18:24	32 20:28	07:08 (E13) 21:29
19	08:36 16:18	09:38 (E14) 10:14 (E14)	07:36 17:26	06:24 18:26	30 20:30	07:09 (E13) 21:31
20	08:35 16:20	09:39 (E14) 10:16 (E14)	07:33 17:28	06:21 18:28	28 20:33	07:37 (E13) 21:33
21	08:33 16:22	09:38 (E14) 10:16 (E14)	07:31 17:30	06:18 18:30	26 20:35	07:10 (E13) 21:35
22	08:32 16:24	09:38 (E14) 10:16 (E14)	07:28 17:32	06:16 18:32	24 20:37	07:12 (E13) 21:37
23	08:30 16:26	09:37 (E14) 10:17 (E14)	07:26 17:34	06:13 18:34	20 20:39	07:14 (E13) 21:38
24	08:29 16:28	09:38 (E14) 10:18 (E14)	07:23 17:37	06:10 18:36	15 20:41	07:29 (E13) 21:40
25	08:27 16:30	09:38 (E14) 10:19 (E14)	07:21 17:39	06:08 18:38	7 20:43	07:25 (E13) 21:42
26	08:26 16:32	09:38 (E14) 10:19 (E14)	07:18 17:41	06:05 18:41		04:45 21:44
27	08:24 16:34	08:56 (E15) 10:20 (E14)	07:16 17:43	06:02 18:43		04:42 21:45
28	08:22 16:37	08:54 (E15) 10:20 (E14)	07:13 17:45	05:59 18:45		04:41 21:47
29	08:20 16:39	08:52 (E15) 10:20 (E14)		06:57 19:47		04:40 21:48
30	08:18 16:41	08:50 (E15) 10:21 (E14)		06:54 19:49		04:38 21:50
31	08:17 16:43	08:48 (E15) 10:21 (E14)		06:51 19:51		04:37 21:51
Potential sun hours	235	266	366	426	508	529
Total, worst case	911	743		661		
Sun reduction	0.13	0.20		0.50		
Oper. time red.	0.94	0.94		0.94		
Wind dir. red.	0.61	0.60		0.66		
Total reduction	0.08	0.11		0.31		
Total, real	69	85		205		

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:07 (E13) 18:54	07:17 16:36	08:18 (E15) 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:07 (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	07:07 (E13) 18:48	07:21 16:32	08:17 (E15) 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:07 (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	07:08 (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	08:18 (E15) 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:10 (E13) 18:32	07:34 16:19	08:18 (E15) 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:11 (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	07:14 (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	07:40 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	08:24 (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	09:11 (E14) 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	09:13 (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	09:15 (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	09:16 (E14) 15:41
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:13 15:52	09:17 (E14) 15:41
26	05:05 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:15 15:51	09:17 (E14) 15:42
27	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:17 15:49	09:19 (E14) 15:43
28	05:08 21:36	06:09 20:24	07:11 19:02	08:13 17:46	08:19 15:48	09:20 (E14) 15:44
29	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47	09:22 (E14) 15:45
30	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:23 15:46	09:23 (E14) 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:19 17:39	08:25 15:45	09:25 (E14) 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		361	310	150	1410	111
Sun reduction		0.50	0.43	0.26	0.08	0.07
Oper. time red.		0.94	0.94	0.94	0.94	0.94
Wind dir. red.		0.66	0.66	0.60	0.61	0.61
Total reduction		0.31	0.26	0.15	0.05	0.04
Total, real		111	82	22	66	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)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	55	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	60	10:10 (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	63	10:10 (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	66	10:11 (E14)	17:56	20:01		21:04		21:58	
6	08:49		08:05		08:39 (E15)	06:58	06:35	07:09 (E13)	05:21		04:31	
	15:55		16:56	67	10:10 (E14)	17:58	20:03	07:19 (E13)	21:06		21:59	
7	08:48		08:03		08:39 (E15)	06:55	06:33	07:05 (E13)	05:19		04:30	
	15:56		16:59	67	10:10 (E14)	18:01	20:06	07:22 (E13)	21:08		22:00	
8	08:48		08:01		08:39 (E15)	06:53	06:30	07:03 (E13)	05:17		04:29	
	15:58		17:01	67	10:10 (E14)	18:03	20:08	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	66	10:09 (E14)	18:05	20:10	07:26 (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	65	10:09 (E14)	18:07	20:12	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	63	10:09 (E14)	18:09	20:14	07:27 (E13)	21:16		22:04	
12	08:44		07:52		08:40 (E15)	06:42	06:20	06:56 (E13)	05:09		04:27	
	16:05		17:10	61	10:08 (E14)	18:11	20:16	07:27 (E13)	21:18		22:05	
13	08:43		07:50		08:41 (E15)	06:40	06:17	06:56 (E13)	05:07		04:26	
	16:06		17:12	58	10:07 (E14)	18:13	20:18	07:28 (E13)	21:20		22:06	
14	08:42		07:47		08:41 (E15)	06:37	06:15	06:54 (E13)	05:05		04:26	
	16:08	7	09:47 (E14)	17:14	55	10:06 (E14)	18:15	07:28 (E13)	21:22		22:07	
15	08:41		09:36 (E14)	07:45		08:43 (E15)	06:34	06:54 (E13)	05:03		04:26	
	16:10	14	09:50 (E14)	17:17	50	10:05 (E14)	18:18	07:29 (E13)	21:24		22:07	
16	08:40		09:35 (E14)	07:43		08:44 (E15)	06:32	06:53 (E13)	05:01		04:26	
	16:12	17	09:52 (E14)	17:19	43	10:03 (E14)	18:20	07:28 (E13)	21:25		22:08	
17	08:39		09:33 (E14)	07:40		08:48 (E15)	06:29	06:53 (E13)	04:59		04:25	
	16:14	21	09:54 (E14)	17:21	34	10:02 (E14)	18:22	07:28 (E13)	21:27		22:08	
18	08:37		09:32 (E14)	07:38		09:37 (E14)	06:26	06:52 (E13)	04:57		04:25	
	16:16	24	09:56 (E14)	17:23	22	09:59 (E14)	18:24	07:27 (E13)	21:29		22:09	
19	08:36		09:31 (E14)	07:36		09:40 (E14)	06:24	06:53 (E13)	04:55		04:25	
	16:18	27	09:58 (E14)	17:26	16	09:56 (E14)	18:26	07:28 (E13)	21:31		22:09	
20	08:35		09:31 (E14)	07:33		09:46 (E14)	06:21	06:53 (E13)	04:53		04:25	
	16:20	29	10:00 (E14)	17:28	3	09:49 (E14)	18:28	07:27 (E13)	21:33		22:10	
21	08:33		09:30 (E14)	07:31			06:18	06:53 (E13)	04:52		04:25	
	16:22	31	10:01 (E14)	17:30			18:30	07:26 (E13)	21:35		22:10	
22	08:32		09:29 (E14)	07:28			06:16	06:53 (E13)	04:50		04:26	
	16:24	33	10:02 (E14)	17:32			18:32	07:26 (E13)	21:37		22:10	
23	08:30		09:28 (E14)	07:26			06:13	06:53 (E13)	04:48		04:26	
	16:26	35	10:03 (E14)	17:34			18:34	07:24 (E13)	21:38		22:10	
24	08:29		09:29 (E14)	07:23			06:10	06:54 (E13)	04:47		04:26	
	16:28	35	10:04 (E14)	17:37			18:36	07:24 (E13)	21:40		22:10	
25	08:27		09:28 (E14)	07:21			06:08	06:55 (E13)	04:45		04:26	
	16:30	37	10:05 (E14)	17:39			18:38	07:23 (E13)	21:42		22:10	
26	08:26		09:28 (E14)	07:18			06:05	06:55 (E13)	04:44		04:27	
	16:32	38	10:06 (E14)	17:41			18:41	07:21 (E13)	21:43		22:10	
27	08:24		09:27 (E14)	07:16			06:02	06:57 (E13)	04:42		04:27	
	16:34	40	10:07 (E14)	17:43			18:43	07:19 (E13)	21:45		22:10	
28	08:22		09:27 (E14)	07:13			05:59	06:59 (E13)	04:41		04:28	
	16:37	41	10:08 (E14)	17:45			18:45	07:17 (E13)	21:47		22:10	
29	08:20		09:27 (E14)				06:57	07:01 (E13)	04:40		04:29	
	16:39	41	10:08 (E14)				19:47	07:15 (E13)	21:48		22:10	
30	08:18		08:50 (E15)				06:54	07:05 (E13)	04:38		04:29	
	16:41	45	10:09 (E14)				19:49	07:10 (E13)	21:50		22:09	
31	08:17		08:48 (E15)				06:51		04:37			
	16:43	51	10:10 (E14)				19:51		21:51			
Potential sun hours	235			266			366		426		508	
Total, worst case		566		1046				679				
Sun reduction		0.13		0.20				0.50				
Oper. time red.		0.94		0.94				0.94				
Wind dir. red.		0.60		0.60				0.66				
Total reduction		0.08		0.11				0.31				
Total, real		43		120				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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:00 (E13) 18:46	07:23 16:29	08:09 (E15) 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:02 (E13) 18:43	07:25 16:27	08:09 (E15) 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:05 (E13) 18:40	07:27 16:25	08:10 (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	07:11 (E13) 19:42	07:42 18:22	07:49 16:11	08:59 (E14) 15:38
14	04:45 21:58	05:41 20:59	07:08 (E13) 19:39	07:44 18:20	07:51 16:09	08:59 (E14) 15:38
15	04:46 21:57	05:43 20:57	07:06 (E13) 19:37	07:46 18:17	07:53 16:08	08:59 (E14) 15:38
16	04:48 21:55	05:45 20:54	07:04 (E13) 19:34	07:48 18:14	07:55 16:06	09:01 (E14) 15:38
17	04:49 21:54	05:47 20:52	07:03 (E13) 19:31	07:50 18:12	07:57 16:04	09:01 (E14) 15:38
18	04:51 21:52	05:49 20:50	07:01 (E13) 19:29	07:52 18:09	07:59 16:02	09:03 (E14) 15:38
19	04:53 21:51	05:51 20:47	07:28 (E13) 19:26	07:55 18:07	08:01 16:01	09:03 (E14) 15:38
20	04:54 21:49	05:53 20:45	07:29 (E13) 19:23	07:57 18:04	08:03 15:59	09:04 (E14) 15:39
21	04:56 21:48	05:55 20:42	06:58 (E13) 19:21	07:59 18:02	08:05 15:58	09:05 (E14) 15:39
22	04:58 21:46	05:57 20:40	06:57 (E13) 19:18	08:01 18:00	08:07 15:56	09:07 (E14) 15:40
23	04:59 21:45	05:59 20:37	07:31 (E13) 19:15	08:03 17:57	08:09 15:55	09:08 (E14) 15:40
24	05:01 21:43	06:01 20:35	06:57 (E13) 19:12	08:05 17:55	08:11 15:53	09:09 (E14) 15:41
25	05:03 21:41	06:03 20:32	06:56 (E13) 19:10	08:07 17:52	08:13 15:52	09:11 (E14) 15:41
26	05:05 21:39	06:05 20:30	06:56 (E13) 19:07	07:10 16:50	08:15 15:51	09:13 (E14) 15:42
27	05:06 21:38	06:07 20:27	06:55 (E13) 19:04	07:12 16:48	08:17 15:49	09:16 (E14) 15:43
28	05:08 21:36	06:09 20:24	06:55 (E13) 19:02	07:14 16:45	08:19 15:48	09:19 (E14) 15:44
29	05:10 21:34	06:11 20:22	06:55 (E13) 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	05:12 21:32	06:13 20:19	06:55 (E13) 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	05:14 21:30	06:15 20:17	06:56 (E13) 18:56	07:20 16:38	08:08 (E15) 15:46	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		550	134	429	1211	
Sun reduction		0.50	0.43	0.26	0.08	
Oper. time red.		0.94	0.94	0.94	0.94	
Wind dir. red.		0.66	0.66	0.60	0.60	
Total reduction		0.31	0.27	0.15	0.05	
Total, real		170	36	63	57	

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start 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	06:50 (E14)	07:17	07:23	08:24	
	15:48	16:45	17:48	19:53		20:55	21:53	22:09	21:28		20:14	24 07:14 (E14)	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	06:50 (E14)	07:19	07:25	08:26	
	15:50	16:48	17:50	19:55		20:58	21:54	22:08	21:26		20:11	23 07:13 (E14)	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	06:51 (E14)	07:21	07:27	08:28	
	15:51	16:50	17:52	19:57		21:00	21:55	22:08	21:24		20:09	21 07:12 (E14)	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	06:53 (E14)	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 07:11 (E14)	18:46	16:30	15:43	
5	08:49	08:07	07:01	06:38		05:24	04:32	04:34	05:24		06:25	06:55 (E14)	07:26	07:31	08:31	
	15:54	16:54	17:56	20:01		21:04	21:58	22:07	21:20		20:04	14 07:09 (E14)	18:43	16:27	15:42	
6	08:49	08:05	06:58	06:36		07:01 (E14)	05:21	04:31	05:26		06:27	06:57 (E14)	07:28	07:33	08:32	
	15:55	16:57	17:58	20:03	9	07:10 (E14)	21:06	21:59	22:06	21:17	20:01	9 07:06 (E14)	18:40	16:25	15:41	
7	08:48	08:03	06:55	06:33		06:58 (E14)	05:19	04:30	04:36	05:27	06:29		07:30	07:36	08:34	
	15:57	16:59	18:01	20:06	14	07:12 (E14)	21:08	22:00	22:05	21:15	19:58		18:38	16:23	15:41	
8	08:48	08:01	06:53	06:30		06:56 (E14)	05:17	04:29	04:37	05:29	06:31		07:32	07:38	08:35	
	15:58	17:01	18:03	20:08	18	07:14 (E14)	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		06:53 (E14)	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	07:14 (E14)	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		06:51 (E14)	05:13	04:28	04:40	05:33	06:35		07:36	07:42	08:38	
	16:01	17:06	18:07	20:12	23	07:14 (E14)	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		06:51 (E14)	05:11	04:28	04:41	05:35	06:37		07:38	07:44	08:39	
	16:03	17:08	18:09	20:14	24	07:15 (E14)	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		06:50 (E14)	05:09	04:27	04:42	05:37	06:39		07:40	07:46	08:40	
	16:05	17:10	18:11	20:16	24	07:14 (E14)	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		06:50 (E14)	05:07	04:27	04:44	05:39	06:41		07:42	07:49	08:42	
	16:06	17:12	18:13	20:18	25	07:15 (E14)	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		06:49 (E14)	05:05	04:26	04:45	05:41	06:43		07:44	07:51	08:43	
	16:08	17:15	18:16	20:20	25	07:14 (E14)	21:22	22:07	21:58	20:59	19:39		18:20	16:10	15:38	
15	08:41	07:45	06:34	06:12		06:50 (E14)	05:03	04:26	04:46	05:43	06:45		07:46	07:53	08:44	
	16:10	17:17	18:18	20:22	24	07:14 (E14)	21:24	22:07	21:57	20:57	19:37		18:17	16:08	15:38	
16	08:40	07:43	06:32	06:10		06:49 (E14)	05:01	04:26	04:48	05:45	06:47		07:48	07:55	08:45	
	16:12	17:19	18:20	20:24	24	07:13 (E14)	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		06:50 (E14)	04:59	04:26	04:50	05:47	06:49		07:50	07:57	08:46	
	16:14	17:21	18:22	20:26	23	07:13 (E14)	21:27	22:08	21:54	20:52	19:31		18:12	16:04	15:38	
18	08:38	07:38	06:26	06:04		06:50 (E14)	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	07:11 (E14)	21:29	22:09	21:52	20:50	19:29		18:10	16:03	15:38	
19	08:36	07:36	06:24	06:02		06:51 (E14)	04:55	04:25	04:53	05:51	06:53		07:55	08:01	08:47	
	16:18	17:26	18:26	20:31	19	07:10 (E14)	21:31	22:09	21:51	20:47	19:26		18:07	16:01	15:39	
20	08:35	07:33	06:21	05:59		06:53 (E14)	04:54	04:25	04:54	05:53	06:55		07:57	08:03	08:48	
	16:20	17:28	18:28	20:33	16	07:09 (E14)	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		06:54 (E14)	04:52	04:26	04:56	05:55	06:57	07:02 (E14)	07:59	08:05	08:48	
	16:22	17:30	18:30	20:35	12	07:06 (E14)	21:35	22:10	21:48	20:42	5 07:07 (E14)	19:21	18:02	15:58	15:39	
22	08:32	07:28	06:16	05:54		06:59 (E14)	04:50	04:26	04:58	05:57	06:59 (E14)	06:59	08:01	08:07	08:49	
	16:24	17:32	18:32	20:37	2	07:01 (E14)	21:37	22:10	21:46	20:40	12 07:11 (E14)	19:18	18:00	15:56	15:40	
23	08:30	07:26	06:13	05:52		06:50 (E14)	04:49	04:26	04:59	05:59	06:56 (E14)	07:01	08:03	08:09	08:50	
	16:26	17:35	18:34	20:39		07:13 (E14)	21:38	22:10	21:45	20:37	17 07:13 (E14)	19:15	17:57	15:55	15:40	
24	08:29	07:23	06:10	05:49		06:50 (E14)	04:47	04:26	05:01	06:01	06:55 (E14)	07:03	08:05	08:11	08:50	
	16:28	17:37	18:36	20:41		07:14 (E14)	21:40	22:10	21:43	20:35	19 07:14 (E14)	19:12	17:55	15:53	15:41	
25	08:27	07:21	06:08	05:47		06:50 (E14)	04:45	04:27	05:03	06:03	06:54 (E14)	07:05	07:07	08:13	08:50	
	16:30	17:39	18:39	20:43		07:15 (E14)	21:42	22:10	21:41	20:32	21 07:15 (E14)	19:10	16:52	15:52	15:41	
26	08:26	07:18	06:05	05:45		06:50 (E14)	04:44	04:27	05:05	06:05	06:53 (E14)	07:07	07:10	08:15	08:51	
	16:32	17:41	18:41	20:45		07:16 (E14)	21:43	22:10	21:39	20:30	22 07:15 (E14)	19:07	16:50	15:51	15:42	
27	08:24	07:16	06:02	05:42		06:50 (E14)	04:42	04:28	05:07	06:07	06:52 (E14)	07:09	07:12	08:17	08:51	
	16:34	17:43	18:43	20:47		07:17 (E14)	21:45	22:10	21:38	20:27	24 07:16 (E14)	19:04	16:48	15:50	15:43	
28	08:22	07:13	06:00	05:40		06:50 (E14)	04:41	04:28	05:08	06:09	06:51 (E14)	07:11	07:14	08:19	08:51	
	16:37	17:45	18:45	20:49		07:18 (E14)	21:47	22:10	21:36	20:24	24 07:15 (E14)	19:02	16:45	15:48	15:44	
29	08:20		06:57	05:37		06:50 (E14)	04:40	04:29	05:10	06:11	06:50 (E14)	07:13	07:16	08:21	08:51	
	16:39		19:47	20:51		07:19 (E14)	21:48	22:10	21:34	20:22	25 07:15 (E14)	18:59	16:43	15:47	15:45	
30	08:19		06:54	05:35		06:50 (E14)	04:38	04:29	05:12	06:13	06:50 (E14)	07:15	07:18	08:22	08:51	
	16:41		19:49	20:53		07:20 (E14)	21:50	22:09	21:32	20:19	25 07:15 (E14)	18:56	16:41	15:46	15:46	
31	08:17		06:52			06:50 (E14)	04:37		05:14	06:15	06:50 (E14)		07:20		08:51	
	16:43		19:51			07:21 (E14)	21:51		21:30	20:17	24 07:14 (E14)		16:38		15:47	
Potential sun hours	235	266	366	426		508	528	529	469		385		324	247	216	
Total, worst case				324						218		109				
Sun reduction				0.50						0.50		0.43				
Oper. time red.				0.94						0.94		0.94				
Wind dir. red.				0.66						0.66		0.66				
Total reduction				0.31						0.31		0.26				
Total, real				100						67		29				

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January			February		March		April		May		June	
1	08:51		10:03 (E14)	08:15		07:11			06:49	05:33		04:36	
	15:48	32	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	34	10:37 (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	34	10:39 (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	35	10:40 (E14)	17:03		18:05			20:10	21:12		22:02	
10	08:46		10:06 (E14)	07:56		06:47			06:25	05:13		04:28	
	16:01	34	10:40 (E14)	17:05		18:07			20:12	21:14		22:03	
11	08:45		10:06 (E14)	07:54		06:45		07:19 (E13)	06:22	05:11		04:27	
	16:03	35	10:41 (E14)	17:08		18:09	13	07:32 (E13)	20:14	21:16		22:04	
12	08:44		10:07 (E14)	07:52		06:42		07:16 (E13)	06:20	05:09		04:27	
	16:05	34	10:41 (E14)	17:10		18:11	19	07:35 (E13)	20:16	21:18		22:05	
13	08:43		10:07 (E14)	07:50		06:40		07:14 (E13)	06:17	05:07		04:26	
	16:06	34	10:41 (E14)	17:12		18:13	23	07:37 (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		10:07 (E14)	07:45		06:34		07:11 (E13)	06:12	05:03		04:26	
	16:10	34	10:41 (E14)	17:17		18:18	28	07:39 (E13)	20:22	21:24		22:07	
16	08:40		10:08 (E14)	07:43		06:32		07:09 (E13)	06:09	05:01		04:26	
	16:12	34	10:42 (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		07:08 (E13)	06:07	04:59		04:25	
	16:14	32	10:42 (E14)	17:21		18:22	32	07:40 (E13)	20:26	21:27		22:08	
18	08:38		10:10 (E14)	07:38		06:26		07:07 (E13)	06:04	04:57		04:25	
	16:16	32	10:42 (E14)	17:23		18:24	32	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		10:11 (E14)	07:33		06:21		07:06 (E13)	05:59	04:53		04:25	
	16:20	31	10:42 (E14)	17:28		18:28	34	07:40 (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	29	10:41 (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	28	10:41 (E14)	17:32		18:32	34	07:40 (E13)	20:37	21:37		22:10	
23	08:30		10:13 (E14)	07:26		06:13		07:05 (E13)	05:52	04:48		04:26	
	16:26	27	10:40 (E14)	17:34		18:34	34	07:39 (E13)	20:39	21:38		22:10	
24	08:29		10:15 (E14)	07:23		06:10		07:05 (E13)	05:49	04:47		04:26	
	16:28	25	10:40 (E14)	17:37		18:36	33	07:38 (E13)	20:41	21:40		22:10	
25	08:27		10:17 (E14)	07:21		06:08		07:06 (E13)	05:47	04:45		04:26	
	16:30	22	10:39 (E14)	17:39		18:38	31	07:37 (E13)	20:43	21:42		22:10	
26	08:26		10:18 (E14)	07:18		06:05		07:06 (E13)	05:44	04:44		04:27	
	16:32	20	10:38 (E14)	17:41		18:41	30	07:36 (E13)	20:45	21:43		22:10	
27	08:24		10:20 (E14)	07:16		06:02		07:06 (E13)	05:42	04:42		04:27	
	16:34	17	10:37 (E14)	17:43		18:43	28	07:34 (E13)	20:47	21:45		22:10	
28	08:22		10:22 (E14)	07:13		05:59		07:08 (E13)	05:40	04:41		04:28	
	16:37	13	10:35 (E14)	17:45		18:45	25	07:33 (E13)	20:49	21:47		22:10	
29	08:20					06:57		08:09 (E13)	05:37	04:40		04:29	
	16:39					19:47	22	08:31 (E13)	20:51	21:48		22:10	
30	08:19					06:54		08:10 (E13)	05:35	04:38		04:29	
	16:41					19:49	18	08:28 (E13)	20:53	21:50		22:09	
31	08:17					06:51		08:14 (E13)		04:37			
	16:43					19:51	11	08:25 (E13)		21:51			
Potential sun hours	235			266		366			426	508		529	
Total, worst case		848				570							
Sun reduction		0.13				0.41							
Oper. time red.		0.94				0.94							
Wind dir. red.		0.61				0.62							
Total reduction		0.08				0.24							
Total, real		65				138							

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:54 (E13) 16:36	07:23 15:45
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:56 (E13) 16:34	07:25 15:44
3	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	08:00 (E13) 16:32	07:27 15:43
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	07:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	07:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	07:33 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	07:36 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	07:38 15:40
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	07:40 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	07:42 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	07:44 15:39
12	04:42 22:00	05:37 21:04	06:39 19:45	08:06 (E13) 18:25	07:40 16:13	07:40 15:38
13	04:43 21:59	05:39 21:02	06:41 19:42	08:02 (E13) 18:22	07:49 16:11	07:49 15:38
14	04:45 21:58	05:41 21:01	06:43 19:39	08:19 (E13) 18:20	3 10:02 (E14) 16:09	3 10:02 (E14) 15:38
15	04:46 21:57	05:43 20:59	06:45 19:37	08:00 (E13) 18:17	07:51 16:07	07:51 15:38
16	04:48 21:55	05:45 20:57	06:47 19:35	07:58 (E13) 18:14	13 10:07 (E14) 16:05	13 10:07 (E14) 15:38
17	04:49 21:54	05:47 20:55	06:49 19:33	07:55 (E13) 18:12	17 10:09 (E14) 16:04	17 10:09 (E14) 15:38
18	04:51 21:52	05:49 20:53	06:51 19:31	07:56 (E13) 18:10	20 10:11 (E14) 16:02	20 10:11 (E14) 15:38
19	04:53 21:51	05:51 20:51	06:53 19:29	08:24 (E13) 18:08	23 10:12 (E14) 16:01	23 10:12 (E14) 15:38
20	04:54 21:49	05:53 20:49	06:55 19:27	07:52 (E13) 18:06	25 10:14 (E14) 16:00	25 10:14 (E14) 15:38
21	04:56 21:48	05:55 20:47	06:57 19:25	07:51 (E13) 18:04	27 10:15 (E14) 16:00	27 10:15 (E14) 15:38
22	04:58 21:46	05:57 20:45	06:59 19:23	07:53 (E13) 18:02	28 10:16 (E14) 16:00	28 10:16 (E14) 15:38
23	04:59 21:45	05:59 20:43	07:01 19:21	07:51 (E13) 18:00	29 10:16 (E14) 16:00	29 10:16 (E14) 15:38
24	05:01 21:43	06:01 20:41	07:03 19:19	08:07 (E13) 17:58	31 10:18 (E14) 16:00	31 10:18 (E14) 15:38
25	05:03 21:41	06:03 20:39	07:05 19:17	08:25 (E13) 17:56	31 10:18 (E14) 16:00	31 10:18 (E14) 15:38
26	05:05 21:39	06:05 20:37	07:07 19:15	08:25 (E13) 17:55	32 10:19 (E14) 16:00	32 10:19 (E14) 15:38
27	05:06 21:38	06:07 20:35	07:09 19:13	08:23 (E13) 17:53	32 10:19 (E14) 16:00	32 10:19 (E14) 15:38
28	05:08 21:36	06:09 20:33	07:11 19:11	08:23 (E13) 17:52	33 10:20 (E14) 16:00	33 10:20 (E14) 15:38
29	05:10 21:34	06:11 20:31	07:13 19:09	08:24 (E13) 17:51	33 10:21 (E14) 16:00	33 10:21 (E14) 15:38
30	05:12 21:32	06:13 20:29	07:15 19:07	08:25 (E13) 17:50	34 10:22 (E14) 16:00	34 10:22 (E14) 15:38
31	05:14 21:30	06:15 20:27	07:16 19:06	08:19 (E13) 17:48	34 10:22 (E14) 16:00	34 10:22 (E14) 15:38
Potential sun hours	529	469	385	324	247	216
Total, worst case			539	45	478	1009
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.94	0.94	0.94	0.94
Wind dir. red.			0.62	0.62	0.61	0.61
Total reduction			0.25	0.15	0.05	0.04
Total, real			135	7	23	41

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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		07:12 (E7)	04:36
		15:48	16:45	17:47		19:53		20:55	17	07:29 (E7)	21:53
	2	08:50	08:13	07:08		06:46		05:30		07:15 (E7)	04:35
		15:49	16:47	17:50		19:55		20:57	11	07:26 (E7)	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	07:24 (E7)	05:26			04:33
		15:52	16:52	17:54		19:59	8 07:32 (E7)	21:02			21:57
	5	08:49	08:07	07:00		06:38	07:19 (E7)	05:23			04:32
		15:53	16:54	17:56		20:01	17 07:36 (E7)	21:04			21:58
	6	08:49	08:05	06:58	07:24 (E8)	06:35	07:16 (E7)	05:21			04:31
		15:55	16:56	17:58	7 07:31 (E8)	20:03	23 07:39 (E7)	21:06			21:59
	7	08:48	08:03	06:55	07:21 (E8)	06:33	07:14 (E7)	05:19			04:30
		15:56	16:59	18:00	12 07:33 (E8)	20:05	26 07:40 (E7)	21:08			22:00
	8	08:48	08:00	06:53	07:18 (E8)	06:30	07:11 (E7)	05:17			04:29
		15:58	17:01	18:03	16 07:34 (E8)	20:08	30 07:41 (E7)	21:10			22:01
	9	08:47	07:58	06:50	07:17 (E8)	06:27	07:10 (E7)	05:15			04:28
		15:59	17:03	18:05	19 07:36 (E8)	20:10	33 07:43 (E7)	21:12			22:02
	10	08:46	07:56	06:47	07:15 (E8)	06:25	07:09 (E7)	05:12			04:28
		16:01	17:05	18:07	21 07:36 (E8)	20:12	34 07:43 (E7)	21:14			22:03
	11	08:45	07:54	06:45	07:14 (E8)	06:22	07:08 (E7)	05:10			04:27
		16:03	17:08	18:09	22 07:36 (E8)	20:14	36 07:44 (E7)	21:16			22:04
	12	08:44	07:52	06:42	07:14 (E8)	06:20	07:07 (E7)	05:08			04:27
		16:04	17:10	18:11	23 07:37 (E8)	20:16	37 07:44 (E7)	21:18			22:05
	13	08:43	07:49	06:39	07:14 (E8)	06:17	07:06 (E7)	05:06			04:26
		16:06	17:12	18:13	22 07:36 (E8)	20:18	39 07:45 (E7)	21:20			22:06
	14	08:42	07:47	06:37	07:14 (E8)	06:14	07:05 (E7)	05:04			04:26
		16:08	17:14	18:15	21 07:35 (E8)	20:20	40 07:45 (E7)	21:22			22:07
	15	08:41	07:45	06:34	07:13 (E8)	06:12	07:05 (E7)	05:02			04:26
		16:10	17:17	18:17	21 07:34 (E8)	20:22	40 07:45 (E7)	21:24			22:07
	16	08:40	07:43	06:32	07:15 (E8)	06:09	07:04 (E7)	05:01			04:25
		16:12	17:19	18:20	19 07:34 (E8)	20:24	41 07:45 (E7)	21:25			22:08
	17	08:39	07:40	06:29	07:15 (E8)	06:07	07:04 (E7)	04:59			04:25
		16:14	17:21	18:22	17 07:32 (E8)	20:26	41 07:45 (E7)	21:27			22:08
	18	08:37	07:38	06:26	07:16 (E8)	06:04	07:03 (E7)	04:57			04:25
		16:16	17:23	18:24	14 07:30 (E8)	20:28	41 07:44 (E7)	21:29			22:09
	19	08:36	07:35	06:23	07:19 (E8)	06:02	07:04 (E7)	04:55			04:25
		16:18	17:25	18:26	8 07:27 (E8)	20:30	40 07:44 (E7)	21:31			22:09
	20	08:35	07:33	06:21		05:59	07:03 (E7)	04:53			04:25
		16:20	17:28	18:28		20:33	40 07:43 (E7)	21:33			22:10
	21	08:33	07:31	06:18		05:57	07:03 (E7)	04:52			04:25
		16:22	17:30	18:30		20:35	40 07:43 (E7)	21:35			22:10
	22	08:32	07:28	06:15		05:54	07:04 (E7)	04:50			04:25
		16:24	17:32	18:32		20:37	38 07:42 (E7)	21:37			22:10
	23	08:30	07:26	06:13		05:52	07:04 (E7)	04:48			04:26
		16:26	17:34	18:34		20:39	37 07:41 (E7)	21:38			22:10
	24	08:29	07:23	06:10		05:49	07:04 (E7)	04:47			04:26
		16:28	17:37	18:36		20:41	37 07:41 (E7)	21:40			22:10
	25	08:27	07:21	06:07		05:47	07:05 (E7)	04:45			04:26
		16:30	17:39	18:38		20:43	35 07:40 (E7)	21:42			22:10
	26	08:26	07:18	06:05		05:44	07:05 (E7)	04:44			04:27
		16:32	17:41	18:40		20:45	33 07:38 (E7)	21:43			22:10
	27	08:24	07:16	06:02		05:42	07:06 (E7)	04:42			04:27
		16:34	17:43	18:43		20:47	31 07:37 (E7)	21:45			22:10
	28	08:22	07:13	05:59		05:39	07:07 (E7)	04:41			04:28
		16:36	17:45	18:45		20:49	29 07:36 (E7)	21:47			22:10
	29	08:20		06:57		05:37	07:09 (E7)	04:39			04:28
		16:39		19:47		20:51	25 07:34 (E7)	21:48			22:10
	30	08:18		06:54		05:35	07:10 (E7)	04:38			04:29
		16:41		19:49		20:53	22 07:32 (E7)	21:50			22:09
	31	08:17		06:51				04:37			
		16:43		19:51				21:51			
Potential sun hours		235	266	366		426		508			529
Total, worst case				242		893		28			
Sun reduction				0.41		0.50		0.57			
Oper. time red.				0.94		0.94		0.94			
Wind dir. red.				0.62		0.66		0.66			
Total reduction				0.24		0.31		0.35			
Total, real				58		277		10			

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:07 (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	07:08 (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	07:10 (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	07:11 (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	07:14 (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	07:18 (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	07:27 (E7) 18:32	07:34 18:32	08:03 (E8) 16:19
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:36 18:30	08:08 (E8) 16:17
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:38 18:27	08:11 (E8) 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 (E7) 18:25	07:40 18:25	08:13 (E8) 16:13
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:42 18:22	08:15 (E8) 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:44 18:19	08:17 (E8) 16:09
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:46 18:17	08:19 (E8) 16:07
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:48 18:14	08:21 (E8) 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:50 18:12	08:23 (E8) 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:52 18:09	08:25 (E8) 16:02
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	07:55 18:07	08:27 (E8) 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	07:57 18:04	08:29 (E8) 15:59
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	07:59 18:02	08:31 (E8) 15:58
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:01 17:59	08:33 (E8) 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:03 17:57	08:35 (E8) 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12	08:04 (E8) 17:55	08:05 17:55	08:37 (E8) 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10	08:08 (E8) 17:52	08:08 (E8) 17:52	08:39 (E8) 15:52
26	05:04 21:39	06:05 20:29	07:07 19:07	08:12 (E8) 17:50	08:12 (E8) 17:50	08:41 (E8) 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04	08:14 (E8) 17:47	08:14 (E8) 17:47	08:43 (E8) 15:49
28	05:08 21:36	06:09 20:24	07:11 19:02	08:16 (E8) 17:45	08:16 (E8) 17:45	08:45 (E8) 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	08:18 (E8) 17:43	08:18 (E8) 17:43	08:47 (E8) 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	08:20 (E8) 17:40	08:20 (E8) 17:40	08:49 (E8) 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54	08:22 (E8) 17:38	08:22 (E8) 17:38	08:51 (E8) 15:45
Potential sun hours	529	469	385	324	247	216
Total, worst case		720	321	131		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.94	0.94	0.94		
Wind dir. red.		0.66	0.64	0.62		
Total reduction		0.31	0.26	0.15		
Total, real		222	83	20		

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

		January		February		March		April		May		June		July		August		September		October		November		December
1	08:51		10:01 (E13)	08:15		10:04 (E13)	07:11	06:49	05:33	04:36	04:30	05:16	06:17	07:17	07:23		09:47 (E13)	08:24		09:43 (E13)				
	15:48	25	10:26 (E13)	16:45	38	10:42 (E13)	17:48	19:53	20:55	21:53	22:09	21:28	20:14	18:54	16:36	13	10:00 (E13)	15:45	34	10:17 (E13)				
2	08:50		10:01 (E13)	08:13		10:05 (E13)	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25		09:44 (E13)	08:26		09:43 (E13)				
	15:49	26	10:27 (E13)	16:47	37	10:42 (E13)	17:50	19:55	20:57	21:54	22:09	21:26	20:11	18:51	16:34	19	10:03 (E13)	15:44	34	10:17 (E13)				
3	08:50		10:01 (E13)	08:11		10:06 (E13)	07:06	06:43	05:28	04:34	04:32	05:19	06:21	07:21	07:27		09:42 (E13)	08:28		09:43 (E13)				
	15:51	27	10:28 (E13)	16:50	36	10:42 (E13)	17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:32	24	10:06 (E13)	15:43	33	10:16 (E13)				
4	08:50		10:00 (E13)	08:09		10:07 (E13)	07:03	06:41	05:26	04:33	04:33	05:21	06:23	07:23	07:29		09:40 (E13)	08:29		09:44 (E13)				
	15:52	28	10:28 (E13)	16:52	34	10:41 (E13)	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:46	16:29	27	10:07 (E13)	15:42	32	10:16 (E13)				
5	08:49		10:01 (E13)	08:07		10:08 (E13)	07:00	06:39	05:23	04:32	04:34	05:23	06:25	07:25	07:31		09:38 (E13)	08:31		09:46 (E13)				
	15:53	29	10:30 (E13)	16:54	32	10:40 (E13)	17:56	20:01	21:04	21:58	22:07	21:20	20:03	18:43	16:27	30	10:08 (E13)	15:42	31	10:17 (E13)				
6	08:49		10:01 (E13)	08:05		10:09 (E13)	06:58	06:35	05:21	04:31	04:35	05:25	06:27	07:27	07:33		09:38 (E13)	08:32		09:47 (E13)				
	15:55	30	10:31 (E13)	16:56	30	10:39 (E13)	17:58	20:03	21:06	21:59	22:06	21:17	20:01	18:40	16:25	32	10:10 (E13)	15:41	30	10:17 (E13)				
7	08:48		10:01 (E13)	08:03		10:11 (E13)	06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:30	07:36		09:37 (E13)	08:34		09:47 (E13)				
	15:56	30	10:31 (E13)	16:59	26	10:37 (E13)	18:00	20:05	21:08	22:00	22:05	21:15	19:58	18:38	16:23	34	10:11 (E13)	15:40	29	10:16 (E13)				
8	08:48		10:00 (E13)	08:01		10:13 (E13)	06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:32	07:38		09:36 (E13)	08:35		09:48 (E13)				
	15:58	32	10:32 (E13)	17:01	23	10:36 (E13)	18:03	20:08	21:10	22:01	22:04	21:13	19:55	18:35	16:21	36	10:12 (E13)	15:40	28	10:16 (E13)				
9	08:47		10:00 (E13)	07:58		10:14 (E13)	06:50	06:28	05:15	04:29	04:38	05:31	06:33	07:34	07:40		09:35 (E13)	08:37		09:49 (E13)				
	15:59	33	10:33 (E13)	17:03	19	10:33 (E13)	18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:32	16:19	38	10:13 (E13)	15:39	27	10:16 (E13)				
10	08:46		10:00 (E13)	07:56		10:18 (E13)	06:47	06:25	05:13	04:28	04:39	05:33	06:35	07:36	07:42		09:36 (E13)	08:38		09:50 (E13)				
	16:01	34	10:34 (E13)	17:05	12	10:30 (E13)	18:07	20:12	21:14	22:03	22:02	21:08	19:50	18:30	16:17	38	10:14 (E13)	15:39	26	10:16 (E13)				
11	08:45		10:00 (E13)	07:54			06:45	06:22	05:11	04:27	04:41	05:35	06:37	07:38	07:44		09:35 (E13)	08:39		09:51 (E13)				
	16:03	35	10:35 (E13)	17:08			18:09	20:14	21:16	22:06	22:01	21:06	19:47	18:27	16:15	39	10:14 (E13)	15:38	25	10:16 (E13)				
12	08:44		10:00 (E13)	07:52			06:49	06:27	05:08	04:27	04:43	05:37	06:39	07:40	07:46		09:34 (E13)	08:40		09:53 (E13)				
	16:04	36	10:36 (E13)	17:10			18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:25	16:13	40	10:14 (E13)	15:38	23	10:16 (E13)				
13	08:43		10:00 (E13)	07:50			06:40	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:49		09:35 (E13)	08:42		09:53 (E13)				
	16:06	36	10:36 (E13)	17:12			18:13	20:18	21:20	22:06	21:59	21:02	19:42	18:22	16:11	41	10:16 (E13)	15:38	23	10:16 (E13)				
14	08:42		10:00 (E13)	07:47			06:37	06:14	05:04	04:26	04:45	05:41	06:43	07:44	07:51		09:34 (E13)	08:43		09:54 (E13)				
	16:08	37	10:37 (E13)	17:14			18:15	20:20	21:22	22:07	21:58	20:59	19:39	18:19	16:09	42	10:16 (E13)	15:38	22	10:16 (E13)				
15	08:41		10:00 (E13)	07:45			06:34	06:12	05:03	04:26	04:46	05:43	06:45	07:46	07:53		09:34 (E13)	08:44		09:55 (E13)				
	16:10	38	10:38 (E13)	17:17			18:18	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:08	42	10:16 (E13)	15:38	21	10:16 (E13)				
16	08:40		10:00 (E13)	07:43			06:32	06:09	05:01	04:25	04:48	05:45	06:47	07:48	07:55		09:35 (E13)	08:45		09:56 (E13)				
	16:12	39	10:39 (E13)	17:19			18:20	20:24	21:25	22:08	21:55	20:54	19:34	18:14	16:06	41	10:16 (E13)	15:38	20	10:16 (E13)				
17	08:39		10:01 (E13)	07:40			06:29	06:07	04:59	04:25	04:49	05:47	06:49	07:50	07:57		09:34 (E13)	08:46		09:56 (E13)				
	16:14	39	10:40 (E13)	17:21			18:22	20:26	21:27	22:08	21:54	20:52	19:31	18:12	16:04	42	10:16 (E13)	15:38	20	10:16 (E13)				
18	08:37		10:00 (E13)	07:38			06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:52	07:59		09:35 (E13)	08:46		09:57 (E13)				
	16:16	40	10:40 (E13)	17:23			18:24	20:28	21:29	22:09	21:52	20:50	19:29	18:09	16:02	42	10:17 (E13)	15:38	19	10:17 (E13)				
19	08:36		10:00 (E13)	07:36			06:24	06:02	04:55	04:25	04:52	05:51	06:53	07:55	08:01		09:35 (E13)	08:47		09:57 (E13)				
	16:18	40	10:40 (E13)	17:26			18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:01	42	10:17 (E13)	15:38	19	10:16 (E13)				
20	08:35		10:01 (E13)	07:33			06:21	05:59	04:53	04:25	04:54	05:53	06:55	07:57	08:03		09:35 (E13)	08:48		09:58 (E13)				
	16:20	40	10:41 (E13)	17:28			18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:04	15:59	42	10:17 (E13)	15:39	19	10:17 (E13)				
21	08:33		10:00 (E13)	07:31			06:18	05:57	04:52	04:25	04:56	05:55	06:57	07:59	08:05		09:35 (E13)	08:48		09:59 (E13)				
	16:22	42	10:42 (E13)	17:30			18:30	20:35	21:35	22:10	21:48	20:42	19:20	18:02	15:58	42	10:17 (E13)	15:39	19	10:18 (E13)				
22	08:32		10:00 (E13)	07:28			06:16	05:54	04:50	04:25	04:57	05:57	06:59	08:01	08:07		09:37 (E13)	08:49		09:59 (E13)				
	16:24	42	10:42 (E13)	17:32			18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56	41	10:18 (E13)	15:39	19	10:18 (E13)				
23	08:30		10:00 (E13)	07:26			06:13	05:52	04:48	04:26	04:59	05:59	07:01	08:03	08:09		09:37 (E13)	08:50		10:00 (E13)				
	16:26	42	10:42 (E13)	17:34			18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:55	40	10:17 (E13)	15:40	19	10:19 (E13)				
24	08:29		10:01 (E13)	07:23			06:10	05:49	04:47	04:26	05:01	06:01	07:03	08:05	08:11		09:37 (E13)	08:50		10:00 (E13)				
	16:28	42	10:43 (E13)	17:37			18:36	20:41	21:40	22:10	21:43	20:35	19:12	17:55	15:53	40	10:17 (E13)	15:41	19	10:19 (E13)				
25	08:27		10:01 (E13)	07:21			16:07	05:47	04:45	04:26	04:50	05:53	07:05	08:07	08:13		09:38 (E13)	08:50		10:01 (E13)				
	16:30	42	10:43 (E13)	17:39			18:38	20:43	21:42	22:10	21:41	20:32	19:10	16:52	15:52	39	10:17 (E13)	15:41	19	10:19 (E13)				
26	08:26		10:02 (E13)	07:18			06:05	05:44	04:44	04:27	05:04	06:05	07:07	07:10	08:15		09:38 (E13)	08:51		10:00 (E13)				
	16:32	41	10:43 (E13)	17:41			18:41	20:45	21:43	22:10	21:39	20:30	19:07	16:50	15:51	39	10:17 (E13)	15:42	20	10:20 (E13)				
27	08:24		10:02 (E13)	07:16			06:02	05:42	04:42	04:27	05:06	06:07	07:09	07:12	08:17		09:40 (E13)	08:51		10:01 (E13)				
	16:34	42	10:44 (E13)	17:43			18:43	20:47	21:45	22:10														

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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			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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	24	10:38 (E7)	16:45		17:47				19:53	20:55	21:53
2	08:51		10:15 (E7)	08:13		07:08				06:46	05:30	04:34
	15:49	24	10:39 (E7)	16:47		17:50				19:55	20:57	21:54
3	08:50		10:15 (E7)	08:11		07:06			07:36 (E5)	06:43	05:28	04:33
	15:50	23	10:38 (E7)	16:50		17:52	9		07:45 (E5)	19:57	21:00	21:55
4	08:50		10:16 (E7)	08:09		07:03			07:32 (E5)	06:41	05:25	04:32
	15:52	22	10:38 (E7)	16:52		17:54	16		07:48 (E5)	19:59	21:02	21:57
5	08:49		10:17 (E7)	08:07		07:00			07:30 (E5)	06:38	05:23	04:31
	15:53	22	10:39 (E7)	16:54		17:56	19		07:49 (E5)	20:01	21:04	21:58
6	08:49		10:18 (E7)	08:05		06:58			07:29 (E5)	06:35	05:21	04:31
	15:55	21	10:39 (E7)	16:56		17:58	22		07:51 (E5)	20:03	21:06	21:59
7	08:48		10:19 (E7)	08:03		06:55			07:27 (E5)	06:33	05:19	04:30
	15:56	20	10:39 (E7)	16:58		18:00	25		07:52 (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	19	10:39 (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	17	10:38 (E7)	17:03		18:05	28		07:53 (E5)	20:10	21:12	22:02
10	08:46		10:22 (E7)	07:56		06:47			07:24 (E5)	06:25	05:12	04:28
	16:01	16	10:38 (E7)	17:05		18:07	29		07:53 (E5)	20:12	21:14	22:03
11	08:45		10:23 (E7)	07:54		06:45			07:24 (E5)	06:22	05:10	04:27
	16:03	15	10:38 (E7)	17:07		18:09	28		07:52 (E5)	20:14	21:16	22:04
12	08:44		10:25 (E7)	07:52		06:42			07:24 (E5)	06:20	05:08	04:27
	16:04	12	10:37 (E7)	17:10		18:11	29		07:53 (E5)	20:16	21:18	22:05
13	08:43		10:27 (E7)	07:49		06:39			07:23 (E5)	06:17	05:06	04:26
	16:06	8	10:35 (E7)	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	27		07:50 (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	26		07:50 (E5)	20:24	21:26	22:08
17	08:39			07:40		06:29			07:24 (E5)	06:07	04:59	04:25
	16:14			17:21		18:22	24		07:48 (E5)	20:26	21:27	22:09
18	08:38			07:38		06:26			07:25 (E5)	06:04	04:57	04:25
	16:15			17:23		18:24	22		07:47 (E5)	20:28	21:29	22:09
19	08:36			07:35		06:23			07:27 (E5)	06:02	04:55	04:25
	16:17			17:25		18:26	18		07:45 (E5)	20:30	21:31	22:09
20	08:35			07:33		06:21			07:29 (E5)	05:59	04:53	04:25
	16:19			17:28		18:28	13		07:42 (E5)	20:33	21:33	22:10
21	08:33			07:31		06:18			07:34 (E5)	05:57	04:51	04:25
	16:21			17:30		18:30	2		07:36 (E5)	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		243				421						
Sun reduction		0.13				0.41						
Oper. time red.		0.94				0.94						
Wind dir. red.		0.61				0.62						
Total reduction		0.08				0.24						
Total, real		19				101						

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	29 08:32 (E5)	16:36
2	04:31	05:17	06:19	07:19	08:03 (E5)	07:25
	22:09	21:26	20:11	18:51	29 08:32 (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	29 08:31 (E5)	16:31
4	04:32	05:21	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	08:03 (E5)	07:33
	22:06	21:17	20:01	18:40	25 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		07:44
	22:01	21:06	19:47	18:27		16:15
12	04:42	05:37	06:39	07:40		07:46
	22:00	21:04	19:45	18:25		16:13
13	04:43	05:39	06:41	07:42		07:49
	21:59	21:02	19:42	18:22		16:11
14	04:45	05:41	06:43	07:44		07:51
	21:58	20:59	19:39	18:19		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	08:14 (E5)	08:03	08:09
	21:45	20:37	19:15	11 08:25 (E5)	17:57	15:54
24	05:01	06:01	07:03	08:11 (E5)	08:05	08:11
	21:43	20:35	19:12	16 08:27 (E5)	17:54	15:53
25	05:02	06:03	07:05	08:08 (E5)	07:07	08:13
	21:41	20:32	19:10	21 08:29 (E5)	16:52	15:52
26	05:04	06:05	07:07	08:07 (E5)	07:10	08:15
	21:39	20:30	19:07	23 08:30 (E5)	16:50	15:50
27	05:06	06:07	07:09	08:06 (E5)	07:12	08:17
	21:38	20:27	19:04	26 08:32 (E5)	16:47	15:49
28	05:08	06:09	07:11	08:05 (E5)	07:14	08:19
	21:36	20:24	19:02	27 08:32 (E5)	16:45	15:48
29	05:10	06:11	07:13	08:04 (E5)	07:16	08:21
	21:34	20:22	18:59	28 08:32 (E5)	16:43	15:47
30	05:12	06:13	07:15	08:03 (E5)	07:18	08:22
	21:32	20:19	18:56	29 08:32 (E5)	16:40	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			181	243	20	718
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.94	0.94	0.94	0.94
Wind dir. red.			0.62	0.62	0.61	0.61
Total reduction			0.25	0.15	0.05	0.04
Total, real			45	37	1	29

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first 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:
26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	07:35 (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) 19:57	06:35 21:03	05:21 21:59	04:31 22:06	04:35 21:17	05:25 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) 19:57	06:33 20:05	05:19 22:00	04:30 22:05	04:36 21:15	05:27 19:58	06:29 18:38	08:08 (E7) 16:23	07:36 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	07:31 (E7) 19:57	06:30 20:08	05:17 22:01	04:29 22:04	04:37 21:13	05:29 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) 19:57	06:27 20:10	05:15 22:02	04:28 22:03	04:38 21:11	05:31 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) 19:57	06:25 20:12	05:13 22:04	04:28 22:02	04:39 21:08	05:33 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) 19:57	06:22 20:14	05:10 22:04	04:27 22:01	04:41 21:06	05:35 19:47	06:37 18:27	08:09 (E7) 16:15	07:44 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	07:34 (E7) 19:57	06:20 20:16	05:08 22:05	04:27 22:00	04:42 21:04	05:37 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	07:35 (E7) 19:57	06:17 20:18	05:06 22:06	04:26 21:59	04:43 21:02	05:39 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	07:38 (E7) 19:57	06:14 20:20	05:04 22:07	04:26 21:58	04:45 20:59	05:41 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	07:47 (E7) 19:57	06:12 20:22	05:02 22:07	04:26 21:57	04:46 20:57	05:43 19:37	06:45 18:17	08:17 (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	04:48 20:54	05:45 19:34	06:47 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 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24		06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:52 16:02	08:46 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	04:52 21:51	05:51 20:47	06:53 19:26	07:55 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 16:00	08:48 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	04:56 21:48	05:55 20:42	06:57 19:20	07:59 16:00	08:49 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	04:57 21:46	05:57 20:40	06:59 19:18	08:01 16:00	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34		05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 16:00	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	08:05 16:00	08:51 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	06:03 20:32	07:05 19:10	08:07 16:00	08:51 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41		05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:30	07:07 19:07	08:08 16:00	08:51 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	06:07 20:27	07:09 19:04	08:10 16:00	08:51 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	06:09 20:24	07:11 19:02	08:11 16:00	08:51 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	06:11 20:22	07:13 18:59	08:12 (E7) 16:00	08:51 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	06:13 20:19	07:15 18:56	08:16 (E7) 16:00	08:51 15:45
31	08:17 16:43		06:51 19:51		06:51 21:51	04:37 21:51	04:29 21:30	05:14 21:30	06:15 20:17	07:20 16:38	08:29 (E7) 16:00	08:51 15:47
Potential sun hours	235	266	366		426	508	529	529	469	385	324	247
Total, worst case		21			295					18	300	
Sun reduction		0.20			0.41					0.43	0.26	
Oper. time red.		0.94			0.94					0.94	0.94	
Wind dir. red.		0.62			0.62					0.62	0.62	
Total reduction		0.12			0.24					0.25	0.15	
Total, real		2			71					5	46	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	30 08:27 (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	29 08:26 (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	28 08:26 (E14)	19:57	21:00
4	08:50	08:09	07:03	07:58 (E14)	06:41	05:26
	15:52	16:52	17:54	26 08:24 (E14)	19:59	21:02
5	08:49	08:07	07:01	07:59 (E14)	06:38	05:24
	15:54	16:54	17:56	24 08:23 (E14)	20:01	21:04
6	08:49	08:05	06:58	08:01 (E14)	06:36	05:21
	15:55	16:56	17:58	20 08:21 (E14)	20:03	21:06
7	08:48	08:03	06:55	08:02 (E14)	06:33	05:19
	15:56	16:59	18:01	17 08:19 (E14)	20:06	21:08
8	08:48	08:01	06:53	08:05 (E14)	06:30	05:17
	15:58	17:01	18:03	10 08:15 (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	21 08:24 (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	08:01 (E14)	06:18	05:57	04:52
	16:22	17:30	25 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	29 08:28 (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	30 08:28 (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	31 08:28 (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	31 08:28 (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		304	184		264	
Oper. time red.		0.20	0.41		0.50	
Wind dir. red.		0.94	0.94		0.94	
Total reduction		0.62	0.62		0.66	
Total, real		0.12	0.24		0.31	
		36	45		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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) 20:14	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		07:30 18:38	07:36 16:23
8	04:37 22:04	05:29 21:13	06:31 19:56		07:32 18:35	07:38 16:21
9	04:38 22:03	05:31 21:11	06:33 19:53		07:34 18:33	07:40 16:19
10	04:40 22:02	05:33 21:08	06:35 19:50		07:36 18:30	07:42 16:17
11	04:41 22:01	05:35 21:06	06:37 19:47		07:38 18:27	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45		07:40 18:25	07:46 16:13
13	04:44 21:59	05:39 21:02	06:41 19:42		07:42 18:22	07:49 16:11
14	04:45 21:58	05:41 20:59	06:43 19:39		07:44 18:20	07:51 16:10
15	04:46 21:57	05:43 20:57	06:45 19:37		07:46 18:17	07:53 16:08
16	04:48 21:55	05:45 20:54	06:47 19:34		07:48 18:15	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 19:31		07:50 18:12	07:57 16:04
18	04:51 21:52	05:49 20:50	06:51 19:29		07:52 18:09	07:59 16:03
19	04:53 21:51	05:51 20:47	06:53 19:26		07:55 18:07	08:01 16:01
20	04:54 21:49	05:53 20:45	06:55 19:23		07:57 18:04	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 19:21		07:59 18:02	08:05 15:58
22	04:58 21:46	05:57 20:40	06:59 19:18		08:01 18:00	08:07 15:56
23	04:59 21:45	05:59 20:37	07:01 19:15		08:03 17:57	08:09 15:55
24	05:01 21:43	06:01 20:35	07:03 19:12		08:05 17:55	08:11 15:53
25	05:03 21:41	06:03 20:32	07:05 19:10		08:07 17:52	08:13 15:52
26	05:05 21:39	06:05 20:30	07:07 19:07		08:09 17:50	08:15 15:51
27	05:06 21:38	06:07 20:27	07:09 19:04		08:11 17:48	08:17 15:50
28	05:08 21:36	06:09 20:24	07:11 19:02		08:13 17:45	08:19 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59		08:15 17:43	08:21 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56		08:17 17:41	08:22 15:46
31	05:14 21:30	06:15 20:17	07:17 18:54		08:19 17:39	08:24 15:45
Potential sun hours	529	469	385	324	247	216
Total, worst case		191	77	491		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.94	0.94	0.94		
Wind dir. red.		0.66	0.66	0.62		
Total reduction		0.31	0.26	0.15		
Total, real		59	20	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 17:05	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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	06:29 (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	06:19 (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	06:26 (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	06:22 (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	06:24 (E14) 22:07	04:46 21:57	05:43 20:57	06:26 (E14) 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	06:09 20:24	05:01 21:25	06:25 (E14) 22:08	04:48 21:55	05:45 20:54	06:27 (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	06:26 (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	06:28 (E14) 22:08	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	06:29 (E14) 22:09	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	06:30 (E14) 22:10	04:54 21:49	05:53 20:45	06:30 (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	06:31 (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	06:32 (E14) 22:10	04:58 21:46	05:57 20:40	06:34 (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	06:33 (E14) 22:10	04:59 21:45	05:59 20:37	06:46 (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	06:34 (E14) 22:10	05:01 21:43	06:01 20:35	06:47 (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	06:35 (E14) 22:10	05:03 21:41	06:03 20:32	06:48 (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	06:36 (E14) 22:10	05:05 21:39	06:05 20:32	06:49 (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	06:37 (E14) 22:10	05:06 21:38	1 06:43 (E14)	06:50 (E14) 19:07	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	06:38 (E14) 22:10	05:08 21:36	11 06:48 (E14)	06:51 (E14) 19:09	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	06:39 (E14) 22:10	05:10 21:34	15 06:52 (E14)	06:52 (E14) 19:06	07:13 16:43	08:16 15:47	08:21 15:45
30	08:18 16:41	07:04 17:54	05:54 18:54	05:35 20:53	04:38 21:50	06:40 (E14) 22:09	05:12 21:32	19 06:54 (E14)	06:54 (E14) 19:06	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	06:41 (E14) 22:09	05:14 21:30	24 06:55 (E14)	06:55 (E14) 19:06	07:16 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				259	450		92	625				
Sun reduction				0.50	0.57		0.49	0.50				
Oper. time red.				0.94	0.94		0.94	0.94				
Wind dir. red.				0.65	0.65		0.65	0.65				
Total reduction				0.31	0.35		0.30	0.31				
Total, real				79	157		28	191				

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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		07:12 (E7)	04:36
	15:48	16:45	17:47		19:53		20:55	11	07:23 (E7)	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		07:18 (E7)	05:23		04:32
	15:53	16:54	17:56		20:01	13	07:31 (E7)	21:04		21:58
6	08:49	08:05	06:58		06:35		07:15 (E7)	05:21		04:31
	15:55	16:56	17:58		20:03	19	07:34 (E7)	21:06		21:59
7	08:48	08:03	06:55	07:21 (E8)	06:33		07:12 (E7)	05:19		04:30
	15:56	16:59	18:00	6	07:27 (E8)	24	07:36 (E7)	21:08		22:00
8	08:48	08:00	06:53	07:18 (E8)	06:30		07:09 (E7)	05:17		04:29
	15:58	17:01	18:03	11	07:29 (E8)	28	07:37 (E7)	21:10		22:01
9	08:47	07:58	06:50	07:16 (E8)	06:27		07:08 (E7)	05:15		04:28
	15:59	17:03	18:05	15	07:31 (E8)	30	07:38 (E7)	21:12		22:02
10	08:46	07:56	06:47	07:13 (E8)	06:25		07:06 (E7)	05:13		04:28
	16:01	17:05	18:07	19	07:32 (E8)	33	07:39 (E7)	21:14		22:03
11	08:45	07:54	06:45	07:12 (E8)	06:22		07:06 (E7)	05:10		04:27
	16:03	17:08	18:09	20	07:32 (E8)	34	07:40 (E7)	21:16		22:04
12	08:44	07:52	06:42	07:12 (E8)	06:20		07:04 (E7)	05:08		04:27
	16:04	17:10	18:11	21	07:33 (E8)	36	07:40 (E7)	21:18		22:05
13	08:43	07:49	06:39	07:11 (E8)	06:17		07:04 (E7)	05:06		04:26
	16:06	17:12	18:13	22	07:33 (E8)	37	07:41 (E7)	21:20		22:06
14	08:42	07:47	06:37	07:11 (E8)	06:14		07:03 (E7)	05:04		04:26
	16:08	17:14	18:15	21	07:32 (E8)	37	07:40 (E7)	21:22		22:07
15	08:41	07:45	06:34	07:10 (E8)	06:12		07:03 (E7)	05:02		04:26
	16:10	17:17	18:17	21	07:31 (E8)	38	07:41 (E7)	21:24		22:07
16	08:40	07:43	06:32	07:11 (E8)	06:09		07:02 (E7)	05:01		04:25
	16:12	17:19	18:20	20	07:31 (E8)	38	07:40 (E7)	21:25		22:08
17	08:39	07:40	06:29	07:11 (E8)	06:07		07:02 (E7)	04:59		04:25
	16:14	17:21	18:22	19	07:30 (E8)	39	07:41 (E7)	21:27		22:08
18	08:37	07:38	06:26	07:12 (E8)	06:04		07:01 (E7)	04:57		04:25
	16:16	17:23	18:24	16	07:28 (E8)	39	07:40 (E7)	21:29		22:09
19	08:36	07:35	06:23	07:14 (E8)	06:02		07:01 (E7)	04:55		04:25
	16:18	17:25	18:26	12	07:26 (E8)	39	07:40 (E7)	21:31		22:09
20	08:35	07:33	06:21	07:17 (E8)	05:59		07:01 (E7)	04:53		04:25
	16:20	17:28	18:28	5	07:22 (E8)	38	07:39 (E7)	21:33		22:10
21	08:33	07:31	06:18		05:57		07:01 (E7)	04:52		04:25
	16:22	17:30	18:30		20:35	38	07:39 (E7)	21:35		22:10
22	08:32	07:28	06:15		05:54		07:02 (E7)	04:50		04:25
	16:24	17:32	18:32		20:37	36	07:38 (E7)	21:37		22:10
23	08:30	07:26	06:13		05:52		07:01 (E7)	04:48		04:26
	16:26	17:34	18:34		20:39	36	07:37 (E7)	21:38		22:10
24	08:29	07:23	06:10		05:49		07:02 (E7)	04:47		04:26
	16:28	17:37	18:36		20:41	34	07:36 (E7)	21:40		22:10
25	08:27	07:21	06:07		05:47		07:03 (E7)	04:45		04:26
	16:30	17:39	18:38		20:43	32	07:35 (E7)	21:42		22:10
26	08:26	07:18	06:05		05:44		07:03 (E7)	04:44		04:27
	16:32	17:41	18:40		20:45	31	07:34 (E7)	21:43		22:10
27	08:24	07:16	06:02		05:42		07:04 (E7)	04:42		04:27
	16:34	17:43	18:43		20:47	28	07:32 (E7)	21:45		22:10
28	08:22	07:13	05:59		05:39		07:06 (E7)	04:41		04:28
	16:36	17:45	18:45		20:49	25	07:31 (E7)	21:47		22:10
29	08:20		06:57		05:37		07:07 (E7)	04:39		04:28
	16:39		19:47		20:51	22	07:29 (E7)	21:48		22:10
30	08:18		06:54		05:35		07:09 (E7)	04:38		04:29
	16:41		19:49		20:53	17	07:26 (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			228		821		11			
Sun reduction			0.41		0.50		0.57			
Oper. time red.			0.94		0.94		0.94			
Wind dir. red.			0.62		0.66		0.66			
Total reduction			0.24		0.31		0.35			
Total, real			55		254		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

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Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	July	August	September	October	November	December
1	04:30	05:16	06:17	07:05 (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	07:08 (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	07:10 (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	07:13 (E7)	07:29	07:59 (E8)
	22:05	21:15	19:58	18:38	18:00 (E8)	16:23
8	04:37	05:29	06:31	07:13 (E7)	07:32	07:38
	22:04	21:13	19:55	18:35		16:21
9	04:38	05:31	06:33	07:13 (E7)	07:34	07:40
	22:03	21:11	19:53	18:32		16:19
10	04:39	05:33	06:35	07:13 (E7)	07:36	07:42
	22:02	21:08	19:50	18:30		16:17
11	04:41	05:35	07:25 (E7)	06:37	07:38	07:44
	22:01	21:06	19:47	18:27		16:15
12	04:42	05:37	07:19 (E7)	06:39	07:40	07:46
	22:00	21:04	19:45	18:25		16:13
13	04:43	05:39	07:16 (E7)	06:41	07:42	07:49
	21:59	21:01	19:42	18:22		16:11
14	04:45	05:41	07:15 (E7)	06:43	07:44	07:51
	21:58	20:59	19:39	18:19		16:09
15	04:46	05:43	07:13 (E7)	06:45	07:46	07:53
	21:57	20:57	19:37	18:17		16:07
16	04:48	05:45	07:12 (E7)	06:47	07:48	07:55
	21:55	20:54	19:34	18:14		16:06
17	04:49	05:47	07:10 (E7)	06:49	07:50	07:57
	21:54	20:52	19:31	18:12		16:04
18	04:51	05:49	07:09 (E7)	06:51	07:52	07:59
	21:52	20:50	19:29	18:09		16:02
19	04:52	05:51	07:08 (E7)	06:53	07:55	08:01
	21:51	20:47	19:26	18:07		16:01
20	04:54	05:53	07:07 (E7)	06:55	07:57	08:03
	21:49	20:45	19:23	18:04		15:59
21	04:56	05:55	07:06 (E7)	06:57	07:59	08:05
	21:48	20:42	19:20	18:02		15:58
22	04:57	05:57	07:06 (E7)	06:59	08:01	08:07
	21:46	20:40	19:18	17:59		15:56
23	04:59	05:59	07:05 (E7)	07:01	08:03	08:09
	21:45	20:37	19:15	17:57		15:55
24	05:01	06:01	07:05 (E7)	07:03	08:05	08:11
	21:43	20:35	19:12	17:55		15:53
25	05:03	06:03	07:05 (E7)	07:05	08:08 (E8)	08:13
	21:41	20:32	19:10	17:52		15:52
26	05:04	06:05	07:04 (E7)	07:07	08:10 (E8)	08:15
	21:39	20:29	19:07	17:50		15:51
27	05:06	06:07	07:04 (E7)	07:09	08:12 (E8)	08:17
	21:38	20:27	19:04	17:47		15:49
28	05:08	06:09	07:04 (E7)	07:11	08:13 (E8)	08:19
	21:36	20:24	19:02	17:45		15:48
29	05:10	06:11	07:04 (E7)	07:13	08:14 (E8)	08:21
	21:34	20:22	18:59	17:43		15:47
30	05:12	06:13	07:04 (E7)	07:15	08:15 (E8)	08:22
	21:32	20:19	18:56	17:40		15:46
31	05:14	06:15	07:04 (E7)	07:17	08:16 (E8)	08:23
	21:30	20:17	18:53	17:38		15:44
Potential sun hours	529	469	385	324	247	216
Total, worst case		657	307	100		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.94	0.94	0.94		
Wind dir. red.		0.66	0.64	0.62		
Total reduction		0.31	0.26	0.15		
Total, real		203	79	15		

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January				February				March				April				May				June			
1	08:51		13:19 (E13)	08:15	07:11								06:49				05:32		06:40 (E7)	04:36				
	15:48	10	13:29 (E13)	16:45	17:47								19:53				20:55	41	07:21 (E7)	21:53				
2	08:50		13:21 (E13)	08:13	07:08								06:46				05:30		06:40 (E7)	04:35				
	15:49	7	13:28 (E13)	16:47	17:50								19:55				20:57	41	07:21 (E7)	21:54				
3	08:50		13:23 (E13)	08:11	07:06								06:43				05:28		06:40 (E7)	04:34				
	15:51	3	13:26 (E13)	16:50	17:52								19:57				21:00	40	07:20 (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	39	07:20 (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	38	07:19 (E7)	21:58				
6	08:49			08:05	06:58								06:35				05:21		06:41 (E7)	04:31				
	15:55			16:56	17:58								20:03				21:06	38	07:19 (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	36	07:18 (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	34	07:17 (E7)	22:01				
9	08:47			07:58	06:50								06:27				05:15		06:43 (E7)	04:28				
	15:59			17:03	18:05								20:10				21:12	33	07:16 (E7)	22:02				
10	08:46			07:56	06:47								06:25				05:13		06:44 (E7)	04:28				
	16:01			17:05	18:07	6	07:19 (E8)	20:12					20:12				21:14	31	07:15 (E7)	22:03				
11	08:45			07:54	06:45								06:22				05:10		06:45 (E7)	04:27				
	16:03			17:08	18:09	12	07:22 (E8)	20:14					20:14				21:16	29	07:14 (E7)	22:04				
12	08:44			07:52	06:42								06:20				05:08		06:46 (E7)	04:27				
	16:04			17:10	18:11	16	07:24 (E8)	20:16					20:16				21:18	26	07:12 (E7)	22:05				
13	08:43			07:49	06:39								06:17				05:06		06:47 (E7)	04:26				
	16:06			17:12	18:13	19	07:25 (E8)	20:18					20:18				21:20	23	07:10 (E7)	22:06				
14	08:42			07:47	06:37								06:14				05:04		06:50 (E7)	04:26				
	16:08			17:14	18:15	21	07:25 (E8)	20:20	14	07:11 (E7)	21:22		20:20				21:22	19	07:09 (E7)	22:07				
15	08:41			07:45	06:34								06:12				05:02		06:51 (E7)	04:26				
	16:10			17:17	18:17	22	07:25 (E8)	20:22	21	07:15 (E7)	21:24		20:22				21:24	16	07:07 (E7)	22:07				
16	08:40			07:43	06:31								06:09				05:01		06:54 (E7)	04:25				
	16:12			17:19	18:20	23	07:26 (E8)	20:24	25	07:16 (E7)	21:25		20:24				21:25	9	07:03 (E7)	22:08				
17	08:39			07:40	06:29								06:07				04:59			04:25				
	16:14			17:21	18:22	23	07:25 (E8)	20:26	29	07:18 (E7)	21:27		20:26				21:27			22:08				
18	08:37			07:38	06:26								06:04				06:47 (E7)	04:57		04:25				
	16:16			17:23	18:24	22	07:24 (E8)	20:28	32	07:19 (E7)	21:29		20:28				21:29			22:09				
19	08:36			07:35	06:23								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		20:30				21:31			22:09				
20	08:35			07:33	06:21								05:59				06:44 (E7)	04:53		04:25				
	16:20			17:28	18:28	20	07:23 (E8)	20:33	36	07:20 (E7)	21:33		20:33				21:33			22:10				
21	08:33			07:31	06:18								05:57				06:44 (E7)	04:52		04:25				
	16:22			17:30	18:30	19	07:22 (E8)	20:35	37	07:21 (E7)	21:35		20:35				21:35			22:10				
22	08:32			07:28	06:15								05:54				06:43 (E7)	04:50		04:25				
	16:24			17:32	18:32	16	07:21 (E8)	20:37	39	07:22 (E7)	21:36		20:37				21:36			22:10				
23	08:30			07:26	06:13								05:52				06:42 (E7)	04:48		04:26				
	16:26			17:34	18:34	12	07:18 (E8)	20:39	40	07:22 (E7)	21:38		20:39				21:38			22:10				
24	08:29			07:23	06:10								05:49				06:42 (E7)	04:47		04:26				
	16:28			17:37	18:36	3	07:13 (E8)	20:41	40	07:22 (E7)	21:40		20:41				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				07:23 (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				07:22 (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				07:22 (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				07:22 (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				07:22 (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				07:21 (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		20			255								599				493							
Sun reduction		0.13			0.41								0.50				0.57							
Oper. time red.		0.94			0.94								0.94				0.94							
Wind dir. red.		0.63			0.63								0.66				0.66							
Total reduction		0.08			0.24								0.31				0.35							
Total, real		2			62								185				173							

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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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Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

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N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	06:56 (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	06:55 (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	06:54 (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	06:53 (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	06:51 (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	06:48 (E7) 19:50	07:36 18:30	07:42 16:17	2 13:17 (E13)
11	04:41 22:01	05:35 21:06	06:48 (E7) 19:47	07:38 18:27	07:44 16:15	13:09 (E13)
12	04:42 22:00	05:37 21:04	06:48 (E7) 19:45	07:40 18:25	07:46 16:13	10 13:19 (E13)
13	04:43 21:59	05:39 21:01	06:48 (E7) 19:42	07:42 18:22	07:49 16:11	12 13:21 (E13)
14	04:45 21:58	05:41 20:59	06:48 (E7) 19:39	07:44 18:19	07:51 16:09	12 13:22 (E13)
15	04:46 21:57	05:43 20:57	06:48 (E7) 19:37	07:46 18:17	07:53 16:07	14 13:23 (E13)
16	04:48 21:55	05:45 20:54	06:48 (E7) 19:34	07:48 18:14	07:55 16:06	15 13:24 (E13)
17	04:49 21:54	05:47 20:52	06:47 (E7) 19:31	07:50 18:12	07:57 16:04	16 13:25 (E13)
18	04:51 21:52	05:49 20:50	06:47 (E7) 19:29	07:52 18:09	07:59 16:02	16 13:25 (E13)
19	04:52 21:51	05:51 20:47	06:47 (E7) 19:26	07:55 18:07	08:01 16:01	16 13:25 (E13)
20	04:54 21:49	05:53 20:45	06:48 (E7) 19:23	07:57 18:04	08:03 15:59	16 13:26 (E13)
21	04:56 21:48	05:55 20:42	06:48 (E7) 19:20	07:59 18:02	08:05 15:58	17 13:27 (E13)
22	04:57 21:46	05:57 20:40	06:49 (E7) 19:18	08:01 17:59	08:07 15:56	17 13:27 (E13)
23	04:59 21:45	05:59 20:37	06:49 (E7) 19:15	08:03 17:57	08:09 15:55	17 13:28 (E13)
24	05:01 21:43	06:01 20:35	06:50 (E7) 19:12	08:05 17:55	08:11 15:53	17 13:28 (E13)
25	05:03 21:41	06:03 20:32	06:51 (E7) 19:10	08:07 (E8) 17:52	08:13 15:52	16 13:28 (E13)
26	05:04 21:39	06:05 20:29	06:51 (E7) 19:07	08:07 (E8) 17:50	08:15 15:51	17 13:29 (E13)
27	05:06 21:38	06:07 20:27	06:53 (E7) 19:04	07:45 (E8) 17:47	08:17 15:49	17 13:29 (E13)
28	05:08 21:36	06:09 20:24	06:55 (E7) 19:02	07:47 (E8) 17:44	08:19 15:48	16 13:29 (E13)
29	05:10 21:34	07:01 (E7) 20:22	06:11 18:59	07:45 (E8) 17:46	08:21 15:47	15 13:29 (E13)
30	05:12 21:32	06:59 (E7) 20:19	07:12 (E7) 18:56	08:06 (E8) 17:45	08:22 15:46	14 13:29 (E13)
31	05:14 21:30	06:58 (E7) 20:17		08:05 (E8) 17:40	08:22 15:46	13 13:29 (E13)
Potential sun hours	529	469	385	324	247	216
Total, worst case	74	1029	215	40		322
Sun reduction	0.49	0.50	0.43	0.26		0.07
Oper. time red.	0.94	0.94	0.94	0.94		0.94
Wind dir. red.	0.66	0.66	0.63	0.63		0.63
Total reduction	0.30	0.31	0.25	0.15		0.04
Total, real	23	317	54	6		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

SHADOW - Calendar

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

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

SHADOW - Calendar

Shadow receptor: Jaunlakstigalas - 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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	08:04 (E14) 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:48 (E14) 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	08:10 (E14) 20:50	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:57 (E14) 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	04:32 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	07:37 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	07:49 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	07:47 18:20	07:51 16:10	08:43 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	07:41 18:07	07:55 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	07:41 18:04	07:57 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	07:40 18:02	07:59 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	07:40 18:00	08:01 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	07:40 18:03	08:03 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	07:40 18:05	08:05 15:53	08:51 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:40 18:09	08:07 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:40 18:12	08:09 15:51	08:51 15:42
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28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	07:42 18:05	08:12 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:43 18:03	08:13 15:47	08:51 15:45
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31	08:17 16:43	07:08 17:51	05:52 18:51	05:34 20:54	04:37 21:51	04:27 22:10	05:14 21:30	06:15 20:17	07:16 18:57	07:46 18:02	08:15 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
Total, worst case												
Sun reduction				493					501		9	
Oper. time red.				0.41					0.43		0.26	
Wind dir. red.				0.94					0.94		0.94	
Total reduction				0.63					0.63		0.63	
Total, real				0.25					0.26		0.15	
				121					128		1	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	07:26 18:43	07:31 16:27	08:31 15:42
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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 20:50	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
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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
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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	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:

26/06/2024 08:57/4.0.540

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
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Operational time

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

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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
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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 22:01	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 17:19	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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	08:51 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:29 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:45
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	9	07:14 (E14) 07:23 (E14)	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	18	07:03 (E14) 07:21 (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	13	07:11 (E14) 07:24 (E14)	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	20	07:02 (E14) 07:22 (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	17	07:09 (E14) 07:26 (E14)	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	21	07:01 (E14) 07:22 (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	20	07:06 (E14) 07:26 (E14)	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	22	07:01 (E14) 07:23 (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	22	07:04 (E14) 07:26 (E14)	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20	06:25 20:04	22	07:00 (E14) 07:22 (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	22	07:04 (E14) 07:26 (E14)	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17	06:27 20:01	22	07:00 (E14) 07:22 (E14)	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	22	07:03 (E14) 07:25 (E14)	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	22	07:00 (E14) 07:22 (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	22	07:04 (E14) 07:26 (E14)	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	20	07:00 (E14) 07:20 (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	21	07:03 (E14) 07:24 (E14)	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	17	07:02 (E14) 07:19 (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	20	07:03 (E14) 07:23 (E14)	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08	06:35 19:50	14	07:04 (E14) 07:18 (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	17	07:05 (E14) 07:22 (E14)	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	10	07:06 (E14) 07:16 (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	15	07:05 (E14) 07:20 (E14)	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	5	07:08 (E14) 07:13 (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	11	07:50 (E14) 07:18 (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 17:15	06:37 18:16		06:15 20:20	2	07:11 (E14) 07:13 (E14)	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39			07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18		06:12 20:22			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 20:54	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			07:09 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			07:05 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			07:07 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			07:09 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 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43			04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10			08:07 17:52	08:13 15:52	08:50 15:41
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27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47			04:42 21:45	04:28 22:10	05:07 21:38	06:07 20:27	07:09 19:04			08:12 17:42	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			08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47		05:37 20:51			04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	4	07:11 (E14) 07:15 (E14)	07:13 18:59	08:21 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49		05:35 20:53			04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	11	07:07 (E14) 07:18 (E14)	07:15 18:56	08:22 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51	5	07:17 (E14) 07:22 (E14)			04:37 21:51		05:14 21:30	06:15 20:17	15	07:05 (E14) 07:20 (E14)	07:16 18:57	08:24 17:42	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				5	233						30		213				
Sun reduction				0.41	0.50						0.50		0.43				
Oper. time red.				0.94	0.94						0.94		0.94				
Wind dir. red.				0.66	0.66						0.66		0.66				
Total reduction				0.26	0.31						0.31		0.26				
Total, real				1	72						9		56				

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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		10:56 (E7)	07:11	06:49		05:32		06:31 (E5)	04:36	
	15:48	57	11:18 (E7)	16:45	19	11:15 (E7)	17:47	19:53		20:55	44	07:15 (E5)	21:53	
2	08:50		09:30 (E8)	08:13		11:00 (E7)	07:08	06:46		05:30		06:31 (E5)	04:34	
	15:49	59	11:19 (E7)	16:47	12	11:12 (E7)	17:50	19:55		20:57	44	07:15 (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	44	07:15 (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	44	07:15 (E5)	21:57	
5	08:49		09:28 (E8)	08:07			07:00	06:38		05:23		06:31 (E5)	04:31	
	15:53	64	11:21 (E7)	16:54			17:56	20:01		21:04	43	07:14 (E5)	21:58	
6	08:49		09:27 (E8)	08:05			06:58	06:35		05:21		06:32 (E5)	04:31	
	15:55	65	11:21 (E7)	16:56			17:58	20:03		21:06	42	07:14 (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	41	07:13 (E5)	22:00	
8	08:48		09:27 (E8)	08:00			06:53	06:30		05:17		06:32 (E5)	04:29	
	15:58	67	11:22 (E7)	17:01			18:03	20:07		21:10	41	07:13 (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	39	07:12 (E5)	22:02	
10	08:46		09:27 (E8)	07:56			06:47	06:25		05:12		06:33 (E5)	04:28	
	16:01	69	11:23 (E7)	17:05			18:07	20:12		21:14	39	07:12 (E5)	22:03	
11	08:45		09:28 (E8)	07:54			06:45	06:22		05:10		06:33 (E5)	04:27	
	16:03	68	11:23 (E7)	17:07			18:09	20:14		21:16	38	07:11 (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	69	11:24 (E7)	17:10	5	08:25 (E6)	18:11	20:16		21:18	36	07:10 (E5)	22:05	
13	08:43		09:28 (E8)	07:49		08:18 (E6)	06:39	06:17		05:06		06:34 (E5)	04:26	
	16:06	69	11:23 (E7)	17:12	11	08:29 (E6)	18:13	20:18		21:20	35	07:09 (E5)	22:06	
14	08:42		09:28 (E8)	07:47		08:15 (E6)	06:37	06:14		05:04		06:36 (E5)	04:26	
	16:08	69	11:24 (E7)	17:14	15	08:30 (E6)	18:15	20:20		21:22	33	07:09 (E5)	22:07	
15	08:41		09:29 (E8)	07:45		08:13 (E6)	06:34	06:12		05:02		06:36 (E5)	04:25	
	16:10	69	11:25 (E7)	17:16	19	08:32 (E6)	18:17	20:22		21:24	31	07:07 (E5)	22:07	
16	08:40		09:29 (E8)	07:43		08:11 (E6)	06:31	06:09		06:50 (E5)	05:00	06:37 (E5)	04:25	
	16:12	68	11:24 (E7)	17:19	21	08:32 (E6)	18:20	20:24	12	07:02 (E5)	21:25	29	07:06 (E5)	22:08
17	08:39		09:30 (E8)	07:40		08:11 (E6)	06:29	06:07		06:47 (E5)	04:59	06:38 (E5)	04:25	
	16:14	68	11:25 (E7)	17:21	22	08:33 (E6)	18:22	20:26	19	07:06 (E5)	21:27	26	07:04 (E5)	22:09
18	08:37		09:30 (E8)	07:38		08:09 (E6)	06:26	06:04		06:43 (E5)	04:57	06:40 (E5)	04:25	
	16:15	68	11:25 (E7)	17:23	24	08:33 (E6)	18:24	20:28	25	07:08 (E5)	21:29	24	07:04 (E5)	22:09
19	08:36		09:30 (E8)	07:35		08:10 (E6)	06:23	06:02		06:42 (E5)	04:55	06:41 (E5)	04:25	
	16:17	67	11:25 (E7)	17:25	24	08:34 (E6)	18:26	20:30	28	07:10 (E5)	21:31	21	07:02 (E5)	22:09
20	08:35		09:31 (E8)	07:33		08:09 (E6)	06:21	05:59		06:39 (E5)	04:53	06:43 (E5)	04:25	
	16:19	66	11:25 (E7)	17:28	25	08:34 (E6)	18:28	20:32	31	07:10 (E5)	21:33	17	07:00 (E5)	22:10
21	08:33		09:31 (E8)	07:31		08:09 (E6)	06:18	05:57		06:38 (E5)	04:51	06:45 (E5)	04:25	
	16:21	65	11:25 (E7)	17:30	25	08:34 (E6)	18:30	20:35	34	07:12 (E5)	21:35	12	06:57 (E5)	22:10
22	08:32		09:32 (E8)	07:28		08:09 (E6)	06:15	05:54		06:37 (E5)	04:50	06:51 (E5)	04:25	
	16:24	63	11:25 (E7)	17:32	25	08:34 (E6)	18:32	20:37	36	07:13 (E5)	21:37	2	06:53 (E5)	22:10
23	08:30		09:33 (E8)	07:26		08:10 (E6)	06:13	05:52		06:36 (E5)	04:48		04:25	
	16:26	60	11:24 (E7)	17:34	24	08:34 (E6)	18:34	20:39	37	07:13 (E5)	21:38		22:10	
24	08:29		09:34 (E8)	07:23		08:10 (E6)	06:10	05:49		06:35 (E5)	04:47		04:26	
	16:28	59	11:25 (E7)	17:36	23	08:33 (E6)	18:36	20:41	39	07:14 (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	54	11:24 (E7)	17:39	21	08:31 (E6)	18:38	20:43	41	07:15 (E5)	21:42		22:10	
26	08:26		09:37 (E8)	07:18		08:12 (E6)	06:05	05:44		06:33 (E5)	04:44		04:27	
	16:32	51	11:24 (E7)	17:41	19	08:31 (E6)	18:40	20:45	41	07:14 (E5)	21:43		22:10	
27	08:24		09:39 (E8)	07:16		08:13 (E6)	06:02	05:42		06:33 (E5)	04:42		04:27	
	16:34	46	11:23 (E7)	17:43	15	08:28 (E6)	18:43	20:47	42	07:15 (E5)	21:45		22:10	
28	08:22		09:43 (E8)	07:13		08:16 (E6)	05:59	05:39		06:32 (E5)	04:41		04:28	
	16:36	36	11:22 (E7)	17:45	10	08:26 (E6)	18:45	20:49	43	07:15 (E5)	21:47		22:10	
29	08:20		10:51 (E7)				06:57	05:37		06:31 (E5)	04:39		04:28	
	16:38	30	11:21 (E7)				19:47	20:51	44	07:15 (E5)	21:48		22:10	
30	08:18		10:53 (E7)				06:54	05:35		06:31 (E5)	04:38		04:29	
	16:41	27	11:20 (E7)				19:49	20:53	44	07:15 (E5)	21:50		22:09	
31	08:17		10:55 (E7)				06:51			04:37				
	16:43	23	11:18 (E7)				19:51			21:51				
Potential sun hours	235			266			366			508			529	
Total, worst case	1830			359			516			725				
Sun reduction	0.13			0.20			0.50			0.57				
Oper. time red.	0.94			0.94			0.94			0.94				
Wind dir. red.	0.61			0.62			0.65			0.65				
Total reduction	0.08			0.12			0.31			0.35				
Total, real	139			42			159			254				

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	36	07:20 (E5)	20:14		18:53			16:36			15:45	68	11:05 (E7)	
2	04:31			05:17		06:43 (E5)	06:19		07:19			07:25			08:26		09:11 (E8)	
	22:09			21:26	38	07:21 (E5)	20:11		18:51			16:34			15:44	67	11:06 (E7)	
3	04:31			05:19		06:43 (E5)	06:21		07:21			07:27			08:28		09:11 (E8)	
	22:08			21:24	39	07:22 (E5)	20:09		18:48			16:31			15:43	68	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	40	07:23 (E5)	20:06		18:46			16:29			15:42	67	11:06 (E7)	
5	04:33			05:23		06:41 (E5)	06:25		07:25			07:31			08:31		09:12 (E8)	
	22:07			21:19	41	07:22 (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	42	07:23 (E5)	20:01		18:40			16:25			15:41	66	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	42	07:23 (E5)	19:58		18:38			16:23			15:40	64	11:07 (E7)	
8	04:37			05:29		06:41 (E5)	06:31		07:31			07:38			08:35		09:16 (E8)	
	22:04			21:13	43	07:24 (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		10:30 (E7)	08:37		09:18 (E8)	
	22:03			21:11	43	07:24 (E5)	19:53		18:32			16:19	13	10:43 (E7)	15:39	60	11:08 (E7)	
10	04:39			05:33		06:40 (E5)	06:35		07:36			07:42		10:27 (E7)	08:38		09:19 (E8)	
	22:02			21:08	43	07:23 (E5)	19:50		18:30			16:17	19	10:46 (E7)	15:39	59	11:08 (E7)	
11	04:40			05:35		06:40 (E5)	06:37		07:38			07:44		10:25 (E7)	08:39		09:20 (E8)	
	22:01			21:06	43	07:23 (E5)	19:47		18:27			16:15	24	10:49 (E7)	15:38	57	11:08 (E7)	
12	04:42			05:37		06:40 (E5)	06:39		07:40			07:46		10:23 (E7)	08:40		09:22 (E8)	
	22:00			21:04	43	07:23 (E5)	19:45		18:25			16:13	28	10:51 (E7)	15:38	56	11:09 (E7)	
13	04:43			05:39		06:40 (E5)	06:41		07:42			07:49		10:23 (E7)	08:42		09:23 (E8)	
	21:59			21:01	43	07:23 (E5)	19:42		18:22	5	08:56 (E6)	16:11	30	10:53 (E7)	15:38	54	11:09 (E7)	
14	04:45			05:41		06:40 (E5)	06:43		07:44			07:51		09:14 (E8)	08:43		09:24 (E8)	
	21:58			20:59	43	07:23 (E5)	19:39		18:19	13	09:00 (E6)	16:09	37	10:54 (E7)	15:38	54	11:10 (E7)	
15	04:46			05:43		06:40 (E5)	06:45		07:46			07:53		09:11 (E8)	08:44		09:25 (E8)	
	21:57			20:57	43	07:23 (E5)	19:37		18:17	17	09:02 (E6)	16:07	46	10:55 (E7)	15:38	53	11:10 (E7)	
16	04:48			05:45		06:40 (E5)	06:47		07:48			07:55		09:10 (E8)	08:45		09:26 (E8)	
	21:55			20:54	42	07:22 (E5)	19:34		18:14	20	09:03 (E6)	16:06	50	10:56 (E7)	15:38	51	11:10 (E7)	
17	04:49			05:47		06:40 (E5)	06:49		07:50			07:57		09:09 (E8)	08:46		09:27 (E8)	
	21:54			20:52	41	07:21 (E5)	19:31		18:12	22	09:04 (E6)	16:04	54	10:57 (E7)	15:38	50	11:11 (E7)	
18	04:51			05:49		06:40 (E5)	06:51		07:52			07:59		09:08 (E8)	08:46		09:28 (E8)	
	21:52			20:49	40	07:20 (E5)	19:28		18:09	23	09:04 (E6)	16:02	59	10:59 (E7)	15:38	50	11:11 (E7)	
19	04:52			05:51		06:41 (E5)	06:53		07:54			08:01		09:08 (E8)	08:47		09:29 (E8)	
	21:51			20:47	38	07:19 (E5)	19:26		18:07	24	09:05 (E6)	16:01	60	10:59 (E7)	15:38	49	11:12 (E7)	
20	04:54			05:53		06:41 (E5)	06:55		07:57			08:03		09:07 (E8)	08:48		09:29 (E8)	
	21:49			20:45	38	07:19 (E5)	19:23		18:04	25	09:05 (E6)	15:59	63	11:00 (E7)	15:38	49	11:12 (E7)	
21	04:56			05:55		06:42 (E5)	06:57		07:59			08:05		09:07 (E8)	08:49		09:30 (E8)	
	21:48			20:42	36	07:18 (E5)	19:20		18:02	25	09:05 (E6)	15:57	64	11:00 (E7)	15:39	49	11:13 (E7)	
22	04:57		06:58 (E5)	05:57		06:43 (E5)	06:59		08:01			08:39 (E6)		09:07 (E8)	08:49		09:30 (E8)	
	21:46	8	07:06 (E5)	20:40	33	07:16 (E5)	19:18		17:59	25	09:04 (E6)	15:56	66	11:01 (E7)	15:39	49	11:13 (E7)	
23	04:59		06:54 (E5)	05:59		06:44 (E5)	07:01		08:03			08:40 (E6)		09:07 (E8)	08:50		09:31 (E8)	
	21:45	15	07:09 (E5)	20:37	31	07:15 (E5)	19:15		17:57	24	09:04 (E6)	15:54	67	11:02 (E7)	15:40	49	11:14 (E7)	
24	05:01		06:53 (E5)	06:01		06:46 (E5)	07:03		08:05			08:40 (E6)		09:07 (E8)	08:50		09:31 (E8)	
	21:43	19	07:12 (E5)	20:35	27	07:13 (E5)	19:12		17:54	24	09:04 (E6)	15:53	68	11:02 (E7)	15:40	49	11:14 (E7)	
25	05:02		06:51 (E5)	06:03		06:46 (E5)	07:05		07:07			07:40 (E6)		09:07 (E8)	08:50		09:31 (E8)	
	21:41	22	07:13 (E5)	20:32	24	07:10 (E5)	19:10		16:52	23	08:03 (E6)	15:52	68	11:02 (E7)	15:41	50	11:14 (E7)	
26	05:04		06:50 (E5)	06:05		06:49 (E5)	07:07		07:09			07:41 (E6)		09:08 (E8)	08:51		09:31 (E8)	
	21:39	25	07:15 (E5)	20:29	18	07:07 (E5)	19:07		16:50	21	08:02 (E6)	15:50	69	11:04 (E7)	15:42	51	11:15 (E7)	
27	05:06		06:49 (E5)	06:07		06:53 (E5)	07:09		07:12			07:43 (E6)		09:08 (E8)	08:51		09:31 (E8)	
	21:38	27	07:16 (E5)	20:27	10	07:03 (E5)	19:04		16:47	18	08:01 (E6)	15:49	69	11:04 (E7)	15:43	51	11:15 (E7)	
28	05:08		06:47 (E5)	06:09			07:11		07:14			07:45 (E6)		09:08 (E8)	08:51		09:31 (E8)	
	21:36	30	07:17 (E5)	20:24			19:02		16:45	14	07:59 (E6)	15:48	69	11:04 (E7)	15:43	53	11:16 (E7)	
29	05:10		06:46 (E5)	06:11			07:13		07:16			07:48 (E6)		09:09 (E8)	08:51		09:31 (E8)	
	21:34	32	07:18 (E5)	20:22			18:59		16:43	10	07:58 (E6)	15:47	70	11:05 (E7)	15:44	53	11:16 (E7)	
30	05:12		06:46 (E5)	06:13			07:15		07:18			07:50 (E6)		09:09 (E8)	08:51		09:31 (E8)	
	21:32	33	07:19 (E5)	20:19			18:56		16:40	3	07:53 (E6)	15:46	69	11:05 (E7)	15:45	55	11:17 (E7)	
31	05:14		06:44 (E5)	06:15					07:20						08:51		09:31 (E8)	
	21:30	35	07:19 (E5)	20:17					16:38						15:46	56	11:18 (E7)	
Potential sun hours	529			469				385		324			247		216			
Total, worst case		246			1000					336			1162			1734		
Sun reduction		0.49			0.50					0.26			0.08			0.07		
Oper. time red.		0.94			0.94					0.94			0.94			0.94		
Wind dir. red.		0.65			0.65					0.62			0.61			0.61		
Total reduction		0.30			0.31					0.15			0.05			0.04		
Total, real		75			307					51			55			69		

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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
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	08:48 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	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	04:57 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	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	07:11 16:47	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 19:01	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 21:33	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 21:32	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	08:13 (E7) 19:55	05:30 20:58	04:35 21:54
3	08:50 15:50	08:11 16:50	07:06 17:52	08:15 (E7) 19:57	05:28 21:00	04:33 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	08:18 (E7) 19:59	05:26 21:02	04:32 21:57
5	08:49 15:53	08:07 16:54	07:00 17:56	08:27 (E7) 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	08:21 (E7) 18:13	06:17 20:18	06:43 (E5) 21:20	05:06 22:06
14	08:42 16:08	07:47 17:14	08:29 (E7) 18:15	06:14 20:20	06:46 (E5) 21:22	05:04 22:07
15	08:41 16:10	07:45 17:17	08:32 (E7) 18:17	06:12 20:22	06:50 (E5) 21:24	05:02 22:07
16	08:40 16:12	07:43 17:19	08:34 (E7) 18:20	06:09 20:24	06:38 (E5) 21:26	05:00 22:08
17	08:39 16:14	07:40 17:21	08:35 (E7) 18:22	06:07 20:26	06:53 (E5) 21:27	04:59 22:09
18	08:38 16:16	07:38 17:23	08:37 (E7) 18:24	06:04 20:28	06:54 (E5) 21:29	04:57 22:09
19	08:36 16:18	07:35 17:25	08:37 (E7) 18:26	06:02 20:30	06:53 (E5) 21:31	04:55 22:09
20	08:35 16:20	07:33 17:28	08:38 (E7) 18:28	06:00 20:32	06:54 (E5) 21:33	04:53 22:10
21	08:33 16:22	07:31 17:30	08:38 (E7) 18:30	05:59 20:35	06:31 (E5) 21:35	04:52 22:10
22	08:32 16:24	07:28 17:32	08:39 (E7) 18:32	05:57 20:37	06:32 (E5) 21:37	04:50 22:10
23	08:30 16:26	07:26 17:34	08:39 (E7) 18:34	05:52 20:39	06:32 (E5) 21:38	04:48 22:10
24	08:29 16:28	07:23 17:37	08:39 (E7) 18:36	05:49 20:41	06:52 (E5) 21:40	04:47 22:10
25	08:27 16:30	07:21 17:39	08:39 (E7) 18:38	05:47 20:43	06:51 (E5) 21:42	04:45 22:10
26	08:26 16:32	07:18 17:41	08:38 (E7) 18:40	05:44 20:45	06:50 (E5) 21:44	04:44 22:10
27	08:24 16:34	07:16 17:43	08:38 (E7) 18:43	05:42 20:47	06:48 (E5) 21:45	04:42 22:10
28	08:22 16:36	07:13 17:45	08:37 (E7) 18:45	05:39 20:49	06:37 (E5) 21:47	04:41 22:10
29	08:20 16:39		08:36 (E7) 19:47	05:37 20:51	06:46 (E5) 21:48	04:39 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		396	66	259		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.94	0.94	0.94		
Wind dir. red.		0.62	0.62	0.65		
Total reduction		0.12	0.24	0.31		
Total, real		47	16	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	08:51 (E7) 09:03 (E7)	07:42 16:17
11	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	08:48 (E7) 09:06 (E7)	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:46 (E7) 09:07 (E7)	07:46 16:13
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	08:44 (E7) 09:08 (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) 09:09 (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) 09:10 (E7)	07:53 16:07
16	04:48 21:55	05:45 20:54	06:47 (E5) 19:34	07:48 18:14	08:42 (E7) 09:10 (E7)	07:55 16:06
17	04:49 21:54	05:47 20:52	06:49 (E5) 19:31	07:50 18:12	08:41 (E7) 09:10 (E7)	07:57 16:04
18	04:51 21:53	05:49 20:50	06:51 (E5) 19:29	07:52 18:09	08:40 (E7) 09:10 (E7)	07:59 16:02
19	04:52 21:51	05:51 20:47	06:53 (E5) 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 (E5) 19:23	07:57 18:04	08:41 (E7) 09:10 (E7)	08:03 15:59
21	04:56 21:48	05:55 20:42	06:57 (E5) 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 (E5) 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	06:59 (E5) 19:15	08:03 17:57	08:42 (E7) 09:08 (E7)	08:09 15:55
24	05:01 21:43	06:01 20:35	06:59 (E5) 19:12	08:05 17:55	08:42 (E7) 09:07 (E7)	08:11 15:53
25	05:03 21:41	06:03 20:32	06:59 (E5) 19:10	08:07 16:52	08:42 (E7) 08:06 (E7)	08:13 15:52
26	05:04 21:39	06:05 20:30	06:59 (E5) 19:07	08:07 16:50	07:44 (E7) 08:05 (E7)	08:15 15:51
27	05:06 21:38	06:07 20:27	06:59 (E5) 19:04	08:09 16:47	07:45 (E7) 08:03 (E7)	08:17 15:49
28	05:08 21:36	06:09 20:24	06:59 (E5) 19:02	08:11 16:45	07:47 (E7) 08:01 (E7)	08:19 15:48
29	05:10 21:34	06:11 20:22	06:41 (E5) 18:59	07:16 16:43	07:52 (E7) 07:57 (E7)	08:21 15:47
30	05:12 21:32	06:13 20:19	06:43 (E5) 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		260		463		
Sun reduction		0.50		0.26		
Oper. time red.		0.94		0.94		
Wind dir. red.		0.65		0.62		
Total reduction		0.31		0.15		
Total, real		80		70		

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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) 08:07 (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) 08:07 (E11)	05:30 20:57	04:35 21:54	05:49 (E10) 06:22 (E10)
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	07:30 (E11) 08:06 (E11)	05:28 20:59	04:34 21:55	05:49 (E10) 06:22 (E10)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:30 (E11) 08:07 (E11)	05:26 21:01	04:33 21:56	05:49 (E10) 06:22 (E10)
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	07:29 (E11) 08:06 (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	07:29 (E11) 08:07 (E11)	05:21 21:05	04:31 21:59	05:50 (E10) 06:22 (E10)
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	07:28 (E11) 08:06 (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	07:28 (E11) 08:05 (E11)	05:17 21:10	04:29 22:01	05:51 (E10) 06:22 (E10)
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	07:28 (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	07:28 (E11) 08:04 (E11)	05:13 21:14	04:28 22:03	05:52 (E10) 06:22 (E10)
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:29 (E11) 08:03 (E11)	05:10 21:16	04:27 22:04	05:52 (E10) 06:21 (E10)
12	08:44 16:04	07:52 17:10	06:42 18:11	06:20 20:16	07:29 (E11) 08:02 (E11)	05:08 21:18	04:27 22:05	05:53 (E10) 06:22 (E10)
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	07:30 (E11) 08:01 (E11)	05:06 21:19	04:26 22:06	05:53 (E10) 06:22 (E10)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	07:30 (E11) 07:59 (E11)	05:04 21:21	04:26 22:06	05:53 (E10) 06:21 (E10)
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	07:32 (E11) 07:58 (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	07:33 (E11) 07:55 (E11)	05:01 21:25	04:25 22:08	05:54 (E10) 06:22 (E10)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	07:35 (E11) 07:53 (E11)	04:59 21:27	04:25 22:08	05:54 (E10) 06:22 (E10)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	07:38 (E11) 07:49 (E11)	04:57 21:29	04:25 22:09	05:55 (E10) 06:22 (E10)
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	07:49 (E11) 07:39 (E12)	04:55 21:31	04:25 22:09	05:55 (E10) 06:22 (E10)
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:32	07:18 (E12) 07:38 (E12)	04:53 21:33	04:25 22:09	05:55 (E10) 06:22 (E10)
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	07:19 (E12) 07:35 (E12)	04:52 21:35	04:25 22:10	05:56 (E10) 06:23 (E10)
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:37	07:21 (E12) 07:32 (E12)	04:50 21:36	04:25 22:10	05:56 (E10) 06:23 (E10)
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	07:22 (E12) 07:02 (E11)	04:48 21:38	04:26 22:10	05:56 (E10) 06:23 (E10)
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	07:17 (E12) 07:03 (E11)	04:47 21:40	04:26 22:10	05:56 (E10) 06:23 (E10)
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	07:04 (E11) 06:55 (E11)	04:45 21:41	04:26 22:10	05:56 (E10) 06:24 (E10)
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	06:43 (E11) 07:00 (E11)	04:44 21:43	04:27 22:10	05:56 (E10) 06:24 (E10)
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	06:40 (E11) 07:02 (E11)	04:42 21:45	04:27 22:10	05:57 (E10) 06:24 (E10)
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	06:37 (E11) 07:03 (E11)	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	07:36 (E11) 08:05 (E11)	04:39 21:48	04:28 22:09	05:57 (E10) 06:25 (E10)
30	08:18 16:41		06:54 19:49	05:35 20:53	07:34 (E11) 08:05 (E11)	04:38 21:49	04:29 22:09	05:57 (E10) 06:26 (E10)
31	08:16 16:43		06:51 19:51	05:33 20:55	07:32 (E11) 08:05 (E11)	04:37 21:51	04:29 22:09	
Potential sun hours	235	266	366	426	508	528		
Total, worst case		536	820	571	788	875		
Sun reduction		0.20	0.41	0.50	0.57	0.56		
Oper. time red.		0.94	0.94	0.94	0.94	0.94		
Wind dir. red.		0.67	0.64	0.65	0.67	0.67		
Total reduction		0.13	0.25	0.31	0.36	0.35		
Total, real		68	202	175	282	308		

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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		07:28 (E11)	07:17		07:56 (E12)	07:22			15:20 (E16)	08:24	
	22:09	29	06:25 (E10)	21:28	28	06:28 (E10)	20:14	34	08:02 (E11)	18:53	51	18:08 (E15)	16:36	28		15:48 (E16)	15:45	
2	04:31		05:56 (E10)	05:17		06:02 (E10)	06:19		07:27 (E11)	07:19		07:56 (E12)	07:25			15:20 (E16)	08:26	
	22:08	30	06:26 (E10)	21:26	25	06:27 (E10)	20:11	36	08:03 (E11)	18:51	50	18:07 (E15)	16:34	27		15:47 (E16)	15:44	
3	04:32		05:57 (E10)	05:19		06:03 (E10)	06:21		07:26 (E11)	07:21		07:57 (E12)	07:27			15:20 (E16)	08:27	
	22:08	30	06:27 (E10)	21:24	23	06:26 (E10)	20:09	37	08:03 (E11)	18:48	48	18:07 (E15)	16:31	26		15:46 (E16)	15:43	
4	04:33		05:57 (E10)	05:21		06:05 (E10)	06:23		07:25 (E11)	07:23		07:57 (E12)	07:29			15:22 (E16)	08:29	
	22:07	30	06:27 (E10)	21:21	20	06:25 (E10)	20:06	37	08:02 (E11)	18:45	47	18:07 (E15)	16:29	24		15:46 (E16)	15:42	
5	04:34		05:57 (E10)	05:23		06:05 (E10)	06:25		07:24 (E11)	07:25		07:58 (E12)	07:31			15:23 (E16)	08:31	
	22:06	31	06:28 (E10)	21:19	17	06:22 (E10)	20:03	38	08:02 (E11)	18:43	43	18:06 (E15)	16:27	21		15:44 (E16)	15:42	
6	04:35		05:57 (E10)	05:25		06:08 (E10)	06:27		07:24 (E11)	07:27		07:59 (E12)	07:33			15:25 (E16)	08:32	
	22:06	31	06:28 (E10)	21:17	12	06:20 (E10)	20:01	38	08:02 (E11)	18:40	39	18:05 (E15)	16:25	18		15:43 (E16)	15:41	
7	04:36		05:57 (E10)	05:27			06:29		07:24 (E11)	07:29		08:01 (E12)	07:35			15:26 (E16)	08:34	
	22:05	32	06:29 (E10)	21:15			19:58	37	08:01 (E11)	18:38	33	18:04 (E15)	16:23	15		15:41 (E16)	15:40	
8	04:37		05:56 (E10)	05:29			06:31		07:24 (E11)	07:31		17:44 (E15)	07:38			15:29 (E16)	08:35	
	22:04	33	06:29 (E10)	21:13			19:55	37	08:01 (E11)	18:35	18	18:02 (E15)	16:21	9		15:38 (E16)	15:40	
9	04:38		05:56 (E10)	05:31			06:33		07:24 (E11)	07:33		17:45 (E15)	07:40				08:36	
	22:03	33	06:29 (E10)	21:11			19:53	37	08:01 (E11)	18:32	16	18:01 (E15)	16:19				15:39	
10	04:39		05:56 (E10)	05:33			06:35		07:24 (E11)	07:36		17:47 (E15)	07:42				08:38	
	22:02	33	06:29 (E10)	21:08			19:50	36	08:00 (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			07:44				08:39	
	22:01	34	06:30 (E10)	21:06			19:47	35	07:59 (E11)	18:27			16:15				15:38	
12	04:42		05:57 (E10)	05:37			06:39		07:25 (E11)	07:40			07:46				08:40	
	22:00	34	06:31 (E10)	21:04			19:45	33	07:58 (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	35	06:31 (E10)	21:01			19:42	32	07:57 (E11)	18:22			16:11				15:38	
14	04:45		05:56 (E10)	05:41			06:43		07:26 (E11)	07:44			07:50				08:42	
	21:58	35	06:31 (E10)	20:59			19:39	29	07:55 (E11)	18:19			16:09				15:38	
15	04:46		05:56 (E10)	05:43			06:45		07:27 (E11)	07:46			07:53				08:43	
	21:56	35	06:31 (E10)	20:57			19:37	27	07:54 (E11)	18:17			16:07				15:38	
16	04:48		05:56 (E10)	05:45			06:47		07:29 (E11)	07:48			07:55				08:44	
	21:55	36	06:32 (E10)	20:54			19:34	22	07:51 (E11)	18:14			16:06				15:38	
17	04:49		05:56 (E10)	05:47			06:49		07:31 (E11)	07:50			07:57				08:45	
	21:54	36	06:32 (E10)	20:52			19:31	18	07:49 (E11)	18:12			16:04				15:38	
18	04:51		05:56 (E10)	05:49			06:51		07:34 (E11)	07:52		16:29 (E16)	07:59				08:46	
	21:52	36	06:32 (E10)	20:49			19:28	11	07:45 (E11)	18:09	12	16:41 (E16)	16:02				15:38	
19	04:52		05:56 (E10)	05:51			06:53			07:54		16:26 (E16)	08:01				08:47	
	21:51	36	06:32 (E10)	20:47			19:26			18:07	18	16:44 (E16)	16:01				15:38	
20	04:54		05:57 (E10)	05:53			06:55			07:56		16:24 (E16)	08:03				08:48	
	21:49	36	06:33 (E10)	20:44			19:23			18:04	22	16:46 (E16)	15:59				15:39	
21	04:56		05:56 (E10)	05:55			06:57		08:08 (E12)	07:59		16:23 (E16)	08:05				08:48	
	21:48	36	06:32 (E10)	20:42			19:20	8	08:16 (E12)	18:02	24	16:47 (E16)	15:58				15:39	
22	04:57		05:57 (E10)	05:57			06:59		08:04 (E12)	08:01		16:21 (E16)	08:07				08:49	
	21:46	36	06:33 (E10)	20:39			19:18	15	08:19 (E12)	17:59	26	16:47 (E16)	15:56				15:39	
23	04:59		05:56 (E10)	05:59			07:01		08:02 (E12)	08:03		16:21 (E16)	08:09				08:49	
	21:44	36	06:32 (E10)	20:37			19:15	19	08:21 (E12)	17:57	28	16:49 (E16)	15:55				15:40	
24	05:01		05:57 (E10)	06:01			07:03		08:00 (E12)	08:05		16:20 (E16)	08:11				08:50	
	21:43	35	06:32 (E10)	20:34			19:12	22	08:22 (E12)	17:54	29	16:49 (E16)	15:53				15:40	
25	05:03		05:57 (E10)	06:03			07:05		07:59 (E12)	07:07		15:19 (E16)	08:13				08:50	
	21:41	34	06:31 (E10)	20:32	12	07:52 (E11)	19:10	24	08:23 (E12)	16:52	30	15:49 (E16)	15:52				15:41	
26	05:04		05:57 (E10)	06:05			07:37 (E11)	07:07	07:58 (E12)	07:09		15:18 (E16)	08:15				08:50	
	21:39	35	06:32 (E10)	20:29	18	07:55 (E11)	19:07	35	18:02 (E15)	16:50	31	15:49 (E16)	15:51				15:42	
27	05:06		05:58 (E10)	06:07			07:34 (E11)	07:09	07:57 (E12)	07:12		15:19 (E16)	08:17				08:51	
	21:37	34	06:32 (E10)	20:27	23	07:57 (E11)	19:04	41	18:04 (E15)	16:47	30	15:49 (E16)	15:49				15:43	
28	05:08		05:58 (E10)	06:09			07:33 (E11)	07:11	07:56 (E12)	07:14		15:18 (E16)	08:19				08:51	
	21:35	33	06:31 (E10)	20:24	26	07:59 (E11)	19:01	45	18:05 (E15)	16:45	31	15:49 (E16)	15:48				15:44	
29	05:10		05:59 (E10)	06:11			07:31 (E11)	07:13	07:56 (E12)	07:16		15:19 (E16)	08:20				08:51	
	21:34	31	06:30 (E10)	20:22	29	08:00 (E11)	18:59	48	18:06 (E15)	16:43	30	15:49 (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	31	08:01 (E11)	18:56	49	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	30	06:30 (E10)	20:16	33	08:02 (E11)				16:38	29	15:48 (E16)					15:47	
Potential sun hours	529			469			385			324		247					216	
Total, worst case		1036			297		880			727		168						
Sun reduction		0.49			0.50		0.43			0.26		0.08						
Oper. time red.		0.94			0.94		0.94			0.94		0.94						
Wind dir. red.		0.67			0.66		0.64			0.65		0.67						
Total reduction		0.31			0.31		0.26			0.16		0.05						
Total, real		322			92		228			116		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:33 (E11) 20:55	04:36 21:52
2	08:50 15:49	08:13 16:47	07:08 17:50	06:46 19:55	07:32 (E11) 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50	07:05 17:52	06:43 19:57	07:31 (E11) 20:59	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:31 (E11) 21:01	04:33 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	07:30 (E11) 21:03	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	07:30 (E11) 21:05	04:31 21:59
7	08:48 15:56	08:02 16:59	06:55 18:00	06:33 20:05	07:29 (E11) 21:08	04:30 22:00
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	07:29 (E11) 21:10	04:29 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	07:30 (E11) 21:12	04:28 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	07:29 (E11) 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	07:30 (E11) 21:16	04:27 22:04
12	08:44 16:04	07:52 17:10	06:42 18:11	06:20 20:16	07:30 (E11) 21:18	04:27 22:05
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	07:31 (E11) 21:19	04:26 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	07:32 (E11) 21:21	04:26 22:06
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	07:33 (E11) 21:23	04:26 22:07
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	07:34 (E11) 21:25	04:25 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	07:35 (E11) 21:27	04:25 22:08
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	07:39 (E11) 21:29	04:25 22:09
19	08:36 16:18	07:35 17:25	06:23 18:26	06:02 20:30	07:50 (E11) 21:29	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 22:09
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
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
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 17:36	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 21:41	04:26 22:10
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
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
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
29	08:20 16:39		05:57 19:47	05:37 20:51	04:39 21:48	04:28 22:09
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09
31	08:16 16:43		06:51 19:51	05:33 20:55	04:37 21:51	04:29 22:09
Potential sun hours	235	266	366	426	508	528
Total, worst case			834		790	923
Sun reduction		524	0.20	0.41	0.57	0.56
Oper. time red.		0.94	0.94	0.94	0.94	0.94
Wind dir. red.		0.67	0.64	0.65	0.67	0.67
Total reduction		0.13	0.25	0.31	0.36	0.35
Total, real		66	206	175	283	325

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

July			August			September			October			November			December		
1	04:30	05:55 (E10)	05:16	06:00 (E10)	06:17	07:29 (E11)	07:17	07:57 (E12)	07:22	15:21 (E16)	08:24						
	22:09	31	06:26 (E10)	21:28	28	06:28 (E10)	20:14	35	08:04 (E11)	18:53	49	18:07 (E15)	16:36	28	15:49 (E16)	15:45	
2	04:31	05:56 (E10)	05:17	06:02 (E10)	06:19	07:28 (E11)	07:19	07:57 (E12)	07:25	15:21 (E16)	08:26						
	22:08	31	06:27 (E10)	21:26	25	06:27 (E10)	20:11	36	08:04 (E11)	18:51	50	18:07 (E15)	16:34	27	15:48 (E16)	15:44	
3	04:32	05:56 (E10)	05:19	06:03 (E10)	06:21	07:28 (E11)	07:21	07:57 (E12)	07:27	15:22 (E16)	08:27						
	22:08	31	06:27 (E10)	21:24	23	06:26 (E10)	20:09	36	08:04 (E11)	18:48	50	18:07 (E15)	16:31	25	15:47 (E16)	15:43	
4	04:33	05:56 (E10)	05:21	06:05 (E10)	06:23	07:26 (E11)	07:23	07:58 (E12)	07:29	15:23 (E16)	08:29						
	22:07	32	06:28 (E10)	21:21	19	06:24 (E10)	20:06	37	08:03 (E11)	18:45	47	18:07 (E15)	16:29	23	15:46 (E16)	15:42	
5	04:34	05:56 (E10)	05:23	06:06 (E10)	06:25	07:25 (E11)	07:25	07:58 (E12)	07:31	15:24 (E16)	08:31						
	22:06	32	06:28 (E10)	21:19	16	06:22 (E10)	20:03	39	08:04 (E11)	18:43	45	18:06 (E15)	16:27	21	15:45 (E16)	15:42	
6	04:35	05:56 (E10)	05:25	06:09 (E10)	06:27	07:25 (E11)	07:27	08:00 (E12)	07:33	15:26 (E16)	08:32						
	22:06	33	06:29 (E10)	21:17	10	06:19 (E10)	20:01	38	08:03 (E11)	18:40	40	18:05 (E15)	16:25	18	15:44 (E16)	15:41	
7	04:36	05:56 (E10)	05:27	06:29 (E10)	06:29	07:25 (E11)	07:29	08:01 (E12)	07:35	15:28 (E16)	08:34						
	22:05	33	06:29 (E10)	21:15	19	06:29 (E10)	20:03	38	08:03 (E11)	18:38	36	18:04 (E15)	16:23	14	15:42 (E16)	15:40	
8	04:37	05:56 (E10)	05:29	06:31 (E10)	06:31	07:25 (E11)	07:31	08:04 (E12)	07:38	15:31 (E16)	08:35						
	22:04	33	06:29 (E10)	21:13	19	06:29 (E10)	20:01	38	08:03 (E11)	18:35	27	18:03 (E15)	16:21	7	15:38 (E16)	15:40	
9	04:38	05:56 (E10)	05:31	06:33 (E10)	06:33	07:25 (E11)	07:33	17:45 (E15)	07:40		08:36						
	22:03	34	06:30 (E10)	21:11	19	06:30 (E10)	20:03	37	08:02 (E11)	18:32	16	18:01 (E15)	16:19		15:39		
10	04:39	05:55 (E10)	05:33	06:35 (E10)	06:35	07:25 (E11)	07:36	17:47 (E15)	07:42		08:38						
	22:02	35	06:30 (E10)	21:08	19	06:30 (E10)	20:03	37	08:02 (E11)	18:30	12	17:59 (E15)	16:17		15:39		
11	04:41	05:55 (E10)	05:35	06:37 (E10)	06:37	07:25 (E11)	07:38	17:51 (E15)	07:44		08:39						
	22:01	35	06:30 (E10)	21:06	19	06:30 (E10)	20:03	36	08:01 (E11)	18:27	3	17:54 (E15)	16:15		15:38		
12	04:42	05:56 (E10)	05:37	06:39 (E10)	06:39	07:25 (E11)	07:40		07:46		08:40						
	22:00	35	06:31 (E10)	21:04	19	06:31 (E10)	20:03	35	08:00 (E11)	18:25		16:13			15:38		
13	04:43	05:56 (E10)	05:39	06:41 (E10)	06:41	07:26 (E11)	07:42		07:48		08:41						
	21:59	35	06:31 (E10)	21:01	19	06:31 (E10)	20:03	33	07:59 (E11)	18:22		16:11			15:38		
14	04:45	05:55 (E10)	05:41	06:43 (E10)	06:43	07:27 (E11)	07:44		07:50		08:42						
	21:58	36	06:31 (E10)	20:59	19	06:31 (E10)	20:03	30	07:57 (E11)	18:19		16:09			15:38		
15	04:46	05:55 (E10)	05:43	06:45 (E10)	06:45	07:28 (E11)	07:46		07:53		08:43						
	21:56	36	06:31 (E10)	20:57	19	06:31 (E10)	20:03	28	07:56 (E11)	18:17		16:07			15:38		
16	04:48	05:56 (E10)	05:45	06:47 (E10)	06:47	07:29 (E11)	07:48		07:55		08:44						
	21:55	36	06:32 (E10)	20:54	19	06:32 (E10)	20:03	25	07:54 (E11)	18:14		16:06			15:38		
17	04:49	05:55 (E10)	05:47	06:49 (E10)	06:49	07:31 (E11)	07:50		07:57		08:45						
	21:54	37	06:32 (E10)	20:52	19	06:32 (E10)	20:03	20	07:51 (E11)	18:12		16:04			15:38		
18	04:51	05:56 (E10)	05:49	06:51 (E10)	06:51	07:34 (E11)	07:52		16:30 (E16)	07:59	08:46						
	21:52	36	06:32 (E10)	20:49	19	06:32 (E10)	20:03	14	07:48 (E11)	18:09	12	16:42 (E16)	16:02		15:38		
19	04:52	05:56 (E10)	05:51	06:53 (E10)	06:53	07:35 (E11)	07:54		16:27 (E16)	08:01	08:47						
	21:51	36	06:32 (E10)	20:47	19	06:32 (E10)	20:03		18:07	17	16:44 (E16)	16:01			15:38		
20	04:54	05:56 (E10)	05:53	06:55 (E10)	06:55	07:36 (E11)	07:56		16:26 (E16)	08:03	08:48						
	21:49	37	06:33 (E10)	20:44	19	06:33 (E10)	20:03		18:04	21	16:47 (E16)	15:59			15:39		
21	04:56	05:56 (E10)	05:55	06:57 (E10)	06:57	08:11 (E12)	07:59		16:24 (E16)	08:05	08:48						
	21:48	36	06:32 (E10)	20:42	19	06:32 (E10)	20:03	5	08:16 (E12)	18:02	24	16:48 (E16)	15:58		15:39		
22	04:57	05:57 (E10)	05:57	06:59 (E10)	06:59	08:06 (E12)	08:01		16:22 (E16)	08:07	08:49						
	21:46	36	06:33 (E10)	20:39	19	06:33 (E10)	20:03	14	08:20 (E12)	17:59	26	16:48 (E16)	15:56		15:39		
23	04:59	05:56 (E10)	05:59	07:01 (E10)	07:01	08:04 (E12)	08:03		16:22 (E16)	08:09	08:49						
	21:44	36	06:32 (E10)	20:37	19	06:32 (E10)	20:03	18	08:22 (E12)	17:57	27	16:49 (E16)	15:55		15:40		
24	05:01	05:57 (E10)	06:01	07:03 (E10)	07:03	08:02 (E12)	08:05		16:21 (E16)	08:11	08:50						
	21:43	35	06:32 (E10)	20:34	19	06:32 (E10)	20:03	21	08:23 (E12)	17:54	29	16:50 (E16)	15:53		15:40		
25	05:03	05:56 (E10)	06:03	07:05 (E10)	07:05	08:00 (E12)	07:07		15:20 (E16)	08:13							
	21:41	35	06:31 (E10)	20:32	12	07:53 (E11)	19:10	24	08:24 (E12)	16:52	30	15:50 (E16)	15:52		15:41		
26	05:04	05:57 (E10)	06:05	07:07 (E10)	07:07	07:59 (E12)	07:09		15:19 (E16)	08:15	08:50						
	21:39	35	06:32 (E10)	20:29	18	07:56 (E11)	19:07	33	18:01 (E15)	16:50	30	15:49 (E16)	15:51		15:42		
27	05:06	05:58 (E10)	06:07	07:09 (E10)	07:09	07:58 (E12)	07:12		15:20 (E16)	08:17	08:51						
	21:37	34	06:32 (E10)	20:27	22	07:58 (E11)	19:04	40	18:04 (E15)	16:47	30	15:50 (E16)	15:49		15:43		
28	05:08	05:58 (E10)	06:09	07:11 (E10)	07:11	07:58 (E12)	07:14		15:19 (E16)	08:19	08:51						
	21:35	32	06:30 (E10)	20:24	26	08:00 (E11)	19:01	44	18:05 (E15)	16:45	31	15:50 (E16)	15:48		15:44		
29	05:10	05:59 (E10)	06:11	07:13 (E10)	07:13	07:57 (E12)	07:16		15:20 (E16)	08:20	08:51						
	21:34	31	06:30 (E10)	20:22	29	08:01 (E11)	18:59	47	18:06 (E15)	16:43	30	15:50 (E16)	15:47		15:45		
30	05:12	05:59 (E10)	06:13	07:15 (E10)	07:15	07:58 (E12)	07:18		15:20 (E16)	08:22	08:51						
	21:32	31	06:30 (E10)	20:19	31	08:02 (E11)	18:56	48	18:07 (E15)	16:40	30	15:50 (E16)	15:46		15:46		
31	05:14	06:00 (E10)	06:15	07:30 (E11)					07:20		08:51						
	21:30	29	06:29 (E10)	20:16	33	08:03 (E11)			16:38	29	15:49 (E16)				15:47		
Potential sun hours	529		469		385		324		247		216						
Total, worst case	1054		292		886		741		163								
Sun reduction	0.49		0.50		0.43		0.26		0.08								
Oper. time red.	0.94		0.94		0.94		0.94		0.94								
Wind dir. red.	0.67		0.66		0.64		0.65		0.67								
Total reduction	0.31		0.31		0.26		0.16		0.05								
Total, real	327		90		229		118		8								

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January		February		March	April	May		June	
1	08:51		12:48 (E13)	08:15	07:11	06:49		05:32	06:29 (E7)	04:36
	15:48	12	13:00 (E13)	16:45	17:47	19:53		20:55	34 07:03 (E7)	21:53
2	08:50		12:50 (E13)	08:13	07:08	06:46		05:30	06:30 (E7)	04:35
	15:49	9	12:59 (E13)	16:47	17:50	19:55		20:57	33 07:03 (E7)	21:54
3	08:50		12:52 (E13)	08:11	07:06	06:43		05:28	06:30 (E7)	04:34
	15:51	6	12:58 (E13)	16:50	17:52	19:57		21:00	33 07:03 (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	31 07:02 (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	31 07:02 (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	29 07:01 (E7)	21:59
7	08:48			08:03	06:55	06:33		05:19	06:32 (E7)	04:30
	15:56			16:59	18:00	20:05		21:08	28 07:00 (E7)	22:00
8	08:48			08:00	06:53	06:30		05:17	06:33 (E7)	04:29
	15:58			17:01	18:03	20:08		21:10	26 06:59 (E7)	22:01
9	08:47			07:58	06:50	06:27		05:15	06:34 (E7)	04:28
	15:59			17:03	18:05	20:10		21:12	23 06:57 (E7)	22:02
10	08:46			07:56	06:47	06:25		05:13	06:35 (E7)	04:28
	16:01			17:05	18:07	20:12		21:14	21 06:56 (E7)	22:03
11	08:45			07:54	06:45	06:22		05:10	06:37 (E7)	04:27
	16:03			17:08	18:09	20:14		21:16	17 06:54 (E7)	22:04
12	08:44			07:52	06:42	06:20		05:08	06:39 (E7)	04:27
	16:04			17:10	18:11	20:16		21:18	12 06:51 (E7)	22:05
13	08:43			07:49	06:39	06:17		05:06	06:43 (E7)	04:26
	16:06			17:12	18:13	20:18		21:20	4 06:47 (E7)	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	06:46 (E7)	05:01		04:25
	16:12			17:19	18:20	20:24	7 06:53 (E7)	21:25		22:08
17	08:39			07:40	06:29	06:07	06:42 (E7)	04:59		04:25
	16:14			17:21	18:22	20:26	15 06:57 (E7)	21:27		22:08
18	08:37			07:38	06:26	06:04	06:39 (E7)	04:57		04:25
	16:16			17:23	18:24	20:28	20 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	29 07:03 (E7)	21:35		22:10
22	08:32			07:28	06:15	05:54	06:34 (E7)	04:50		04:25
	16:24			17:32	18:32	20:37	30 07:04 (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	32 07:04 (E7)	21:38		22:10
24	08:29			07:23	06:10	05:49	06:32 (E7)	04:47		04:26
	16:28			17:37	18:36	20:41	32 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	34 07:05 (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	35 07:05 (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	35 07:05 (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	35 07:05 (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	35 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		27			423		322			
Sun reduction		0.13			0.50		0.57			
Oper. time red.		0.94			0.94		0.94			
Wind dir. red.		0.64			0.65		0.65			
Total reduction		0.08			0.31		0.35			
Total, real		2			130		113			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	06:48 (E7) 07:03 (E7)	06:17 20:14	07:17 18:54	08:24 16:36
2	04:31 22:09	05:17 21:26	06:47 (E7) 07:05 (E7)	06:19 20:11	07:19 18:51	08:26 16:34
3	04:32 22:08	05:19 21:24	06:45 (E7) 07:07 (E7)	06:21 20:09	07:21 18:48	08:28 16:31
4	04:33 22:07	05:21 21:22	06:44 (E7) 07:08 (E7)	06:23 20:06	07:23 18:46	08:29 16:29
5	04:34 22:07	05:23 21:19	06:42 (E7) 07:08 (E7)	06:25 20:03	07:25 18:43	08:31 16:27
6	04:35 22:06	05:25 21:17	06:42 (E7) 07:09 (E7)	06:27 20:01	07:27 18:40	08:32 16:25
7	04:36 22:05	05:27 21:15	06:41 (E7) 07:10 (E7)	06:29 19:58	07:29 18:38	08:34 16:23
8	04:37 22:04	05:29 21:13	06:40 (E7) 07:11 (E7)	06:31 19:55	07:32 18:35	08:35 16:21
9	04:38 22:03	05:31 21:11	06:40 (E7) 07:12 (E7)	06:33 19:53	07:34 18:32	08:37 16:19
10	04:39 22:02	05:33 21:08	06:38 (E7) 07:11 (E7)	06:35 19:50	07:36 18:30	08:38 16:17
11	04:41 22:01	05:35 21:06	06:38 (E7) 07:12 (E7)	06:37 19:47	07:38 18:27	08:39 16:15
12	04:42 22:00	05:37 21:04	06:38 (E7) 07:12 (E7)	06:39 19:45	07:40 18:25	08:40 16:13
13	04:43 21:59	05:39 21:01	06:38 (E7) 07:12 (E7)	06:41 19:42	07:42 18:22	08:42 16:11
14	04:45 21:58	05:41 20:59	06:38 (E7) 07:12 (E7)	06:43 19:39	07:44 18:19	08:43 16:09
15	04:46 21:57	05:43 20:57	06:38 (E7) 07:12 (E7)	06:45 19:37	07:46 18:17	08:44 16:07
16	04:48 21:55	05:45 20:54	06:38 (E7) 07:12 (E7)	06:47 19:34	07:48 18:14	08:45 16:06
17	04:49 21:54	05:47 20:52	06:37 (E7) 07:11 (E7)	06:49 19:31	07:50 18:12	08:46 16:04
18	04:51 21:52	05:49 20:50	06:37 (E7) 07:10 (E7)	06:51 19:29	07:52 18:09	08:46 16:02
19	04:52 21:51	05:51 20:47	06:37 (E7) 07:10 (E7)	06:53 19:26	07:55 18:07	08:47 16:01
20	04:54 21:49	05:53 20:45	06:38 (E7) 07:09 (E7)	06:55 19:23	07:57 18:04	08:48 15:59
21	04:56 21:48	05:55 20:42	06:38 (E7) 07:08 (E7)	06:57 19:20	08:05 18:02	08:48 15:58
22	04:57 21:46	05:57 20:40	06:39 (E7) 07:07 (E7)	06:59 19:18	08:07 17:59	08:49 15:56
23	04:59 21:45	05:59 20:37	06:40 (E7) 07:06 (E7)	07:01 19:15	08:09 17:57	08:50 15:55
24	05:01 21:43	06:01 20:35	06:41 (E7) 07:04 (E7)	07:03 19:12	08:05 17:55	08:51 15:53
25	05:03 21:41	06:03 20:32	06:43 (E7) 07:02 (E7)	07:05 19:10	08:13 16:52	08:50 15:52
26	05:04 21:39	06:05 20:29	06:44 (E7) 06:59 (E7)	07:07 19:07	08:15 16:50	08:51 15:51
27	05:06 21:38	06:07 20:27	06:49 (E7) 06:54 (E7)	07:09 19:04	08:17 16:47	08:51 15:49
28	05:08 21:36	06:09 20:24		07:11 19:02	08:19 16:45	08:51 15:48
29	05:10 21:34	06:11 20:22		07:13 18:59	08:21 16:43	08:51 15:47
30	05:12 21:32	06:13 20:19		07:15 18:56	08:22 16:40	08:51 15:46
31	05:14 21:30	06:15 20:17			07:20 16:38	08:51 15:47
Potential sun hours	529	469		385	324	216
Total, worst case	9	738				355
Sun reduction	0.49	0.50				0.07
Oper. time red.	0.94	0.94				0.94
Wind dir. red.	0.65	0.65				0.64
Total reduction	0.30	0.31				0.04
Total, real	3	226				15

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

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

Mezares_AB211223

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SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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		14:19 (E13)	07:11	06:49	05:32	04:36
	15:48	18	14:38 (E13)	16:45	40	14:59 (E13)	17:47	19:53	20:55	21:52
2	08:50		14:21 (E13)	08:13		14:20 (E13)	07:08	06:46	05:30	04:35
	15:49	19	14:40 (E13)	16:47	39	14:59 (E13)	17:50	19:55	20:57	21:54
3	08:50		14:20 (E13)	08:11		14:21 (E13)	07:06	06:43	05:28	04:34
	15:51	21	14:41 (E13)	16:50	38	14:59 (E13)	17:52	19:57	20:59	21:55
4	08:50		14:19 (E13)	08:09		14:22 (E13)	07:03	06:41	05:26	04:33
	15:52	22	14:41 (E13)	16:52	37	14:59 (E13)	17:54	19:59	21:02	21:57
5	08:49		14:20 (E13)	08:07		14:23 (E13)	07:00	06:38	05:23	04:32
	15:53	23	14:43 (E13)	16:54	36	14:59 (E13)	17:56	20:01	21:04	21:58
6	08:49		14:19 (E13)	08:05		14:23 (E13)	06:58	06:35	05:21	04:31
	15:55	25	14:44 (E13)	16:56	34	14:57 (E13)	17:58	20:03	21:06	21:59
7	08:48		14:19 (E13)	08:03		14:25 (E13)	06:55	06:33	05:19	04:30
	15:56	26	14:45 (E13)	16:59	32	14:57 (E13)	18:00	20:05	21:08	22:00
8	08:47		14:18 (E13)	08:00		14:27 (E13)	06:53	06:30	05:17	04:29
	15:58	28	14:46 (E13)	17:01	29	14:56 (E13)	18:03	20:07	21:10	22:01
9	08:47		14:18 (E13)	07:58		14:28 (E13)	06:50	06:27	05:15	04:28
	15:59	29	14:47 (E13)	17:03	26	14:54 (E13)	18:05	20:10	21:12	22:02
10	08:46		14:18 (E13)	07:56		14:30 (E13)	06:47	06:25	05:13	04:28
	16:01	31	14:49 (E13)	17:05	22	14:52 (E13)	18:07	20:12	21:14	22:03
11	08:45		14:18 (E13)	07:54		14:33 (E13)	06:45	06:22	05:10	04:27
	16:03	32	14:50 (E13)	17:08	17	14:50 (E13)	18:09	20:14	21:16	22:04
12	08:44		14:17 (E13)	07:52		14:38 (E13)	06:42	06:20	05:08	04:27
	16:04	33	14:50 (E13)	17:10	6	14:44 (E13)	18:11	20:16	21:18	22:05
13	08:43		14:17 (E13)	07:49			06:39	06:17	05:06	04:26
	16:06	34	14:51 (E13)	17:12			18:13	20:18	21:20	22:06
14	08:42		14:17 (E13)	07:47			06:37	06:14	05:04	04:26
	16:08	35	14:52 (E13)	17:14			18:15	20:20	21:22	22:07
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	21:24	22:07
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	21:25	22:08
17	08:39		14:16 (E13)	07:40			06:29	06:07	04:59	04:25
	16:14	38	14:54 (E13)	17:21			18:22	20:26	21:27	22:08
18	08:37		14:17 (E13)	07:38			06:26	06:04	04:57	04:25
	16:16	38	14:55 (E13)	17:23			18:24	20:28	21:29	22:09
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	21:31	22:09
20	08:35		14:17 (E13)	07:33			06:21	05:59	04:53	04:25
	16:20	40	14:57 (E13)	17:28			18:28	20:32	21:33	22:10
21	08:33		14:17 (E13)	07:31			06:18	05:57	04:52	04:25
	16:22	40	14:57 (E13)	17:30			18:30	20:35	21:35	22:10
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	21:36	22:10
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	21:38	22:10
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	21:40	22:10
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	21:42	22:10
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	21:43	22:10
27	08:24		14:18 (E13)	07:16			06:02	05:42	04:42	04:27
	16:34	42	15:00 (E13)	17:43			18:43	20:47	21:45	22:10
28	08:22		14:18 (E13)	07:13			05:59	05:40	04:41	04:28
	16:36	42	15:00 (E13)	17:45			18:45	20:49	21:47	22:10
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		14:19 (E13)				06:54	05:35	04:38	04:29
	16:41	41	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		1057		356				350		
Sun reduction		0.13		0.20				0.50		
Oper. time red.		0.94		0.94				0.94		
Wind dir. red.		0.66		0.66				0.66		
Total reduction		0.08		0.13				0.31		
Total, real		88		45				108		

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:22	13:59 (E13)
	22:09	21:28	20:14	18:54	16:36	23 14:22 (E13)
2	04:31	05:17	06:19	07:19	07:25	13:57 (E13)
	22:08	21:26	20:11	18:51	16:34	26 14:23 (E13)
3	04:32	05:19	06:21	07:21	07:27	13:56 (E13)
	22:08	21:24	20:09	18:48	16:31	30 14:26 (E13)
4	04:33	05:21	06:23	07:23	07:29	13:54 (E13)
	22:07	21:22	20:06	18:46	16:29	32 14:26 (E13)
5	04:34	05:23	06:25	07:25	07:31	13:53 (E13)
	22:07	21:19	20:03	18:43	16:27	34 14:27 (E13)
6	04:35	05:25	06:27	07:27	07:33	13:53 (E13)
	22:06	21:17	20:01	18:40	16:25	35 14:28 (E13)
7	04:36	05:27	06:29	07:29	07:36	13:52 (E13)
	22:05	21:15	19:58	18:38	16:23	37 14:29 (E13)
8	04:37	05:29	06:31	07:32	07:38	13:52 (E13)
	22:04	21:13	19:55	18:35	16:21	38 14:30 (E13)
9	04:38	05:31	06:33	07:34	07:40	13:51 (E13)
	22:03	21:11	19:53	18:32	16:19	39 14:30 (E13)
10	04:39	05:33	06:35	07:36	07:42	13:50 (E13)
	22:02	21:08	19:50	18:30	16:17	40 14:30 (E13)
11	04:41	05:35	06:37	07:38	07:44	13:50 (E13)
	22:01	21:06	19:47	18:27	16:15	41 14:31 (E13)
12	04:42	05:37	06:39	07:40	07:46	13:50 (E13)
	22:00	21:04	19:45	18:25	16:13	41 14:31 (E13)
13	04:43	05:39	06:41	07:42	07:49	13:50 (E13)
	21:59	21:01	19:42	18:22	16:11	42 14:32 (E13)
14	04:45	05:41	06:43	07:44	07:51	13:50 (E13)
	21:58	20:59	8 06:58 (E8)	19:39	16:09	42 14:32 (E13)
15	04:46	05:43	06:45	07:46	07:53	13:50 (E13)
	21:57	20:57	14 07:01 (E8)	19:37	16:08	42 14:32 (E13)
16	04:48	05:45	06:47	07:48	07:55	13:51 (E13)
	21:55	20:54	17 07:02 (E8)	19:34	16:06	42 14:33 (E13)
17	04:49	05:47	06:49	07:50	07:57	13:51 (E13)
	21:54	20:52	20 07:03 (E8)	19:31	16:04	41 14:32 (E13)
18	04:51	05:49	06:51	07:52	07:59	13:51 (E13)
	21:52	20:49	21 07:03 (E8)	19:29	16:02	41 14:32 (E13)
19	04:52	05:51	06:53	07:54	08:01	13:52 (E13)
	21:51	20:47	23 07:04 (E8)	19:26	16:01	41 14:33 (E13)
20	04:54	05:53	06:55	07:57	08:03	13:52 (E13)
	21:49	20:45	23 07:04 (E8)	19:23	15:59	41 14:33 (E13)
21	04:56	05:55	06:57	07:59	08:05	13:52 (E13)
	21:48	20:42	25 07:05 (E8)	19:20	15:58	40 14:32 (E13)
22	04:57	05:57	06:59	08:01	08:07	13:53 (E13)
	21:46	20:40	25 07:05 (E8)	19:18	15:56	40 14:33 (E13)
23	04:59	05:59	07:01	08:03	08:09	13:54 (E13)
	21:45	20:37	25 07:05 (E8)	19:15	15:55	39 14:33 (E13)
24	05:01	06:01	07:03	08:05	08:11	13:54 (E13)
	21:43	20:35	24 07:04 (E8)	19:12	15:53	39 14:33 (E13)
25	05:03	06:03	07:05	08:07	08:13	13:55 (E13)
	21:41	20:32	24 07:04 (E8)	19:10	15:52	37 14:32 (E13)
26	05:04	06:05	07:07	08:09	08:15	13:55 (E13)
	21:39	20:29	23 07:02 (E8)	19:07	15:51	37 14:32 (E13)
27	05:06	06:07	07:09	08:12	08:17	13:57 (E13)
	21:37	20:27	21 07:01 (E8)	19:04	15:49	36 14:33 (E13)
28	05:08	06:09	07:11	08:14	08:19	13:57 (E13)
	21:36	20:24	20 07:00 (E8)	19:02	15:48	35 14:32 (E13)
29	05:10	06:11	07:13	08:16	08:21	13:58 (E13)
	21:34	20:22	17 06:59 (E8)	18:59	15:47	34 14:32 (E13)
30	05:12	06:13	07:15	08:18	08:22	13:59 (E13)
	21:32	20:19	14 06:57 (E8)	18:56	15:46	33 14:32 (E13)
31	05:14	06:15	07:20	08:21	08:25	14:01 (E13)
	21:30	20:17	8 06:54 (E8)	16:38	18 14:19 (E13)	15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		352		27	1118	463
Sun reduction		0.50		0.26	0.08	0.07
Oper. time red.		0.94		0.94	0.94	0.94
Wind dir. red.		0.66		0.66	0.66	0.66
Total reduction		0.31		0.16	0.05	0.04
Total, real		108		4	58	20

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start wind speed: Cut in wind speed from 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	08:20 19:46	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	08:18 19:49	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	08:16 19:51	06:51 19:51	05:31 21:51	04:36 21:51	04:29 21:30	05:13 21:30	06:15 20:16	07:20 16:38	07:20 15:46	08:51 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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												

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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:

26/06/2024 08:57/4.0.540

SHADOW - Calendar

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

Assumptions for shadow calculations

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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:54 (E10)	06:49		05:32		06:25 (E9)	04:36
	15:48	16:45	37 09:43 (E11)	17:47	20 08:14 (E10)	19:53		20:55	41	07:06 (E9)	21:52
2	08:50	08:13	09:07 (E12)	07:08	07:51 (E10)	06:46		05:30		06:25 (E9)	04:35
	15:49	16:47	37 09:44 (E11)	17:50	25 08:16 (E10)	19:55		20:57	42	07:07 (E9)	21:54
3	08:50	08:11	09:08 (E12)	07:05	07:50 (E10)	06:43		05:28		06:24 (E9)	04:34
	15:51	16:50	36 09:44 (E11)	17:52	28 08:18 (E10)	19:57		20:59	43	07:07 (E9)	21:55
4	08:50	08:09	09:09 (E12)	07:03	07:48 (E10)	06:41		05:26		06:24 (E9)	04:33
	15:52	16:52	36 09:45 (E11)	17:54	31 08:19 (E10)	19:59		21:01	43	07:07 (E9)	21:56
5	08:49	08:07	09:09 (E12)	07:00	07:46 (E10)	06:38		05:23		06:24 (E9)	04:32
	15:53	16:54	35 09:44 (E11)	17:56	34 08:20 (E10)	20:01		21:03	43	07:07 (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	33 09:44 (E11)	17:58	36 08:21 (E10)	20:03		21:05	43	07:07 (E9)	21:59
7	08:48	08:02	09:12 (E11)	06:55	07:44 (E10)	06:33		05:19		06:24 (E9)	04:30
	15:56	16:58	32 09:44 (E11)	18:00	38 08:22 (E10)	20:05		21:08	43	07:07 (E9)	22:00
8	08:47	08:00	09:13 (E11)	06:53	07:43 (E10)	06:30		05:17		06:24 (E9)	04:29
	15:58	17:01	31 09:44 (E11)	18:02	39 08:22 (E10)	20:07		21:10	43	07:07 (E9)	22:01
9	08:47	07:58	09:13 (E11)	06:50	07:43 (E10)	06:27		05:15		06:23 (E9)	04:28
	15:59	17:03	30 09:43 (E11)	18:05	40 08:23 (E10)	20:09		21:12	44	07:07 (E9)	22:02
10	08:46	07:56	09:14 (E11)	06:47	07:42 (E10)	06:25		05:12		06:23 (E9)	04:28
	16:01	17:05	29 09:43 (E11)	18:07	41 08:23 (E10)	20:12		21:14	44	07:07 (E9)	22:03
11	08:45	07:54	09:14 (E11)	06:45	07:41 (E10)	06:22		05:10		06:23 (E9)	04:27
	16:03	17:07	27 09:41 (E11)	18:09	41 08:22 (E10)	20:14		21:16	43	07:06 (E9)	22:04
12	08:44	07:52	09:15 (E11)	06:42	07:40 (E10)	06:20		05:08		06:23 (E9)	04:27
	16:04	17:10	25 09:40 (E11)	18:11	42 08:22 (E10)	20:16		21:18	43	07:06 (E9)	22:05
13	08:43	07:49	09:17 (E11)	06:39	07:40 (E10)	06:17		05:06		06:24 (E9)	04:26
	16:06	17:12	22 09:39 (E11)	18:13	42 08:22 (E10)	20:18		21:19	41	07:05 (E9)	22:06
14	08:42	07:47	09:19 (E11)	06:37	07:40 (E10)	06:14		05:04		06:25 (E9)	04:26
	16:08	17:14	18 09:37 (E11)	18:15	42 08:22 (E10)	20:20		21:21	41	07:06 (E9)	22:06
15	08:41	07:45	09:22 (E11)	06:34	07:39 (E10)	06:12		05:02		06:25 (E9)	04:26
	16:10	17:16	13 09:35 (E11)	18:17	42 08:21 (E10)	20:22		21:23	40	07:05 (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	41 08:21 (E10)	20:24		21:25	39	07:04 (E9)	22:08
17	08:39	07:40		06:29	07:40 (E10)	06:07		04:59		06:25 (E9)	04:25
	16:14	17:21		18:22	40 08:20 (E10)	20:26		21:27	38	07:03 (E9)	22:08
18	08:37	09:12 (E12)	07:38	06:26	07:40 (E10)	06:04		04:57		06:26 (E9)	04:25
	16:16	6 09:18 (E12)	17:23	18:24	39 08:19 (E10)	20:28		21:29	37	07:03 (E9)	22:09
19	08:36	09:10 (E12)	07:35	06:23	07:41 (E10)	06:02		04:55		06:26 (E9)	04:25
	16:18	10 09:20 (E12)	17:25	18:26	37 08:18 (E10)	20:30		21:31	36	07:02 (E9)	22:09
20	08:35	09:08 (E12)	07:33	06:21	07:41 (E10)	05:59		04:53		06:28 (E9)	04:25
	16:20	21 09:29 (E11)	17:28	18:28	36 08:17 (E10)	20:32		21:33	34	07:02 (E9)	22:10
21	08:33	09:07 (E12)	07:31	06:18	07:42 (E10)	05:57	06:41 (E9)	04:52		06:28 (E9)	04:25
	16:22	25 09:32 (E11)	17:30	18:30	33 08:15 (E10)	20:34	13 06:54 (E9)	21:35	33	07:01 (E9)	22:10
22	08:32	09:06 (E12)	07:28	06:15	07:43 (E10)	05:54	06:38 (E9)	04:50		06:29 (E9)	04:25
	16:24	28 09:34 (E11)	17:32	18:32	30 08:13 (E10)	20:37	20 06:58 (E9)	21:36	32	07:01 (E9)	22:10
23	08:30	09:06 (E12)	07:26	06:13	07:45 (E10)	05:52	06:35 (E9)	04:48		06:29 (E9)	04:26
	16:26	29 09:35 (E11)	17:34	18:34	26 08:11 (E10)	20:39	24 06:59 (E9)	21:38	30	06:59 (E9)	22:10
24	08:29	09:05 (E12)	07:23	06:10	07:46 (E10)	05:49	06:33 (E9)	04:47		06:31 (E9)	04:26
	16:28	32 09:37 (E11)	17:36	18:36	22 08:08 (E10)	20:41	28 07:01 (E9)	21:40	28	06:59 (E9)	22:10
25	08:27	09:05 (E12)	07:21	06:07	07:49 (E10)	05:47	06:32 (E9)	04:45		06:32 (E9)	04:26
	16:30	33 09:38 (E11)	17:39	18:38	15 08:04 (E10)	20:43	31 07:03 (E9)	21:41	26	06:58 (E9)	22:10
26	08:25	09:06 (E12)	07:18	06:05		05:44	06:30 (E9)	04:44		06:32 (E9)	04:27
	16:32	34 09:40 (E11)	17:41	18:40		20:45	33 07:03 (E9)	21:43	24	06:56 (E9)	22:10
27	08:24	09:06 (E12)	07:16	06:02		05:42	06:29 (E9)	04:42		06:34 (E9)	04:27
	16:34	35 09:41 (E11)	17:43	18:42		20:47	35 07:04 (E9)	21:45	21	06:55 (E9)	22:10
28	08:22	09:06 (E12)	07:13	05:59	07:57 (E10)	05:39	06:28 (E9)	04:41		06:35 (E9)	04:28
	16:36	36 09:42 (E11)	17:45	13 08:10 (E10)	18:45	20:49	37 07:05 (E9)	21:46	19	06:54 (E9)	22:10
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	16:38	36 09:42 (E11)		19:47		20:51	39 07:05 (E9)	21:48	16	06:53 (E9)	22:10
30	08:18	09:05 (E12)		06:54		05:35	06:26 (E9)	04:38		06:39 (E9)	04:29
	16:41	37 09:42 (E11)		19:49		20:53	40 07:06 (E9)	21:49	12	06:51 (E9)	22:09
31	08:16	09:05 (E12)		06:51				04:37		06:42 (E9)	
	16:43	38 09:43 (E11)		19:51				21:51	6	06:48 (E9)	
Potential sun hours	235		266	366		426		508			529
Total, worst case	400		454	860		300		1068			
Sun reduction	0.13		0.20	0.41		0.50		0.57			
Oper. time red.	0.94		0.94	0.94		0.94		0.94			
Wind dir. red.	0.59		0.59	0.63		0.65		0.65			
Total reduction	0.07		0.11	0.24		0.31		0.35			
Total, real	30		51	208		92		372			

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

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	22:09	21:28	42 07:16 (E9)	20:14		18:53	42 09:02 (E10)	16:36	29	09:12 (E11)	15:45
2	04:31	05:17	06:34 (E9)	06:19		07:19	08:20 (E10)	07:25		08:42 (E11)	08:26
	22:08	21:26	43 07:17 (E9)	20:11		18:51	42 09:02 (E10)	16:34	31	09:13 (E11)	15:44
3	04:32	05:19	06:34 (E9)	06:21		07:21	08:20 (E10)	07:27		08:41 (E11)	08:27
	22:08	21:24	43 07:17 (E9)	20:09		18:48	41 09:01 (E10)	16:31	32	09:13 (E11)	15:43
4	04:32	05:21	06:34 (E9)	06:23		07:23	08:19 (E10)	07:29		08:41 (E11)	08:29
	22:07	21:21	43 07:17 (E9)	20:06		18:45	41 09:00 (E10)	16:29	33	09:14 (E11)	15:42
5	04:33	05:23	06:33 (E9)	06:25		07:25	08:20 (E10)	07:31		08:40 (E11)	08:31
	22:06	21:19	43 07:16 (E9)	20:03		18:43	39 08:59 (E10)	16:27	34	09:14 (E11)	15:41
6	04:35	05:25	06:33 (E9)	06:27		07:27	08:20 (E10)	07:33		08:40 (E11)	08:32
	22:06	21:17	44 07:17 (E9)	20:01		18:40	38 08:58 (E10)	16:25	35	09:15 (E11)	15:41
7	04:36	05:27	06:33 (E9)	06:29		07:29	08:20 (E10)	07:35		08:38 (E11)	08:34
	22:05	21:15	44 07:17 (E9)	19:58		18:38	37 08:57 (E10)	16:23	36	09:14 (E11)	15:40
8	04:37	05:29	06:33 (E9)	06:31		07:31	08:21 (E10)	07:38		08:37 (E11)	08:35
	22:04	21:13	44 07:17 (E9)	19:55		18:35	35 08:56 (E10)	16:21	37	09:14 (E11)	15:40
9	04:38	05:31	06:34 (E9)	06:33		07:33	08:21 (E10)	07:40		08:37 (E11)	08:36
	22:03	21:11	43 07:17 (E9)	19:53		18:32	33 08:54 (E10)	16:19	37	09:14 (E11)	15:39
10	04:39	05:33	06:33 (E9)	06:35		07:36	08:23 (E10)	07:42		08:37 (E11)	08:38
	22:02	21:08	42 07:15 (E9)	19:50		18:30	30 08:53 (E10)	16:17	37	09:14 (E11)	15:39
11	04:41	05:35	06:33 (E9)	06:37		07:38	08:25 (E10)	07:44		08:37 (E11)	08:39
	22:01	21:06	42 07:15 (E9)	19:47		18:27	26 08:51 (E10)	16:15	37	09:14 (E11)	15:38
12	04:42	05:37	06:34 (E9)	06:39		07:40	08:26 (E10)	07:46		08:37 (E11)	08:40
	22:00	21:04	41 07:15 (E9)	19:45		18:24	23 08:49 (E10)	16:13	37	09:14 (E11)	15:38
13	04:43	06:49 (E9)	05:39	06:41		07:42	08:29 (E10)	07:48		08:38 (E11)	08:41
	21:59	10 06:59 (E9)	21:01	07:14 (E9)	19:42	18:22	17 08:46 (E10)	16:11	36	09:14 (E11)	15:38
14	04:45	06:46 (E9)	05:41	06:43		07:44	08:33 (E10)	07:51		08:37 (E11)	08:42
	21:58	15 07:01 (E9)	20:59	07:13 (E9)	19:39	18:19	7 08:40 (E10)	16:09	36	09:13 (E11)	15:38
15	04:46	06:45 (E9)	05:43	06:45		07:46		07:53		08:37 (E11)	08:43
	21:56	17 07:02 (E9)	20:57	07:13 (E9)	19:37	18:17		16:07	36	09:13 (E11)	15:38
16	04:48	06:44 (E9)	05:45	06:46		07:48		07:55		08:39 (E11)	08:44
	21:55	20 07:04 (E9)	20:54	07:12 (E9)	19:34	18:14		16:06	34	09:13 (E11)	15:38
17	04:49	06:43 (E9)	05:47	06:46		07:50		07:57		08:39 (E11)	08:45
	21:54	22 07:05 (E9)	20:52	07:09 (E9)	19:31	18:12		16:04	33	09:12 (E11)	15:38
18	04:51	06:42 (E9)	05:49	06:48		07:52		07:59		08:39 (E11)	08:46
	21:52	25 07:07 (E9)	20:49	07:08 (E9)	19:28	14 08:51 (E10)	18:09	16:02	32	09:11 (E11)	15:38
19	04:52	06:41 (E9)	05:51	06:49		07:54	08:33 (E10)	07:54		08:41 (E11)	08:47
	21:51	27 07:08 (E9)	20:47	07:07 (E9)	19:26	21 08:54 (E10)	18:07	16:01	29	09:10 (E11)	15:38
20	04:54	06:40 (E9)	05:53	06:41		07:56	08:31 (E10)	07:56		08:41 (E11)	08:48
	21:49	29 07:09 (E9)	20:44	07:05 (E9)	19:23	25 08:56 (E10)	18:04	15:59	28	09:09 (E11)	15:38
21	04:56	06:39 (E9)	05:55	06:43		07:59	08:29 (E10)	07:59		08:42 (E11)	08:48
	21:48	31 07:10 (E9)	20:42	07:02 (E9)	19:20	29 08:58 (E10)	18:02	15:57	25	09:07 (E11)	15:39
22	04:57	06:39 (E9)	05:57	06:46		08:01	08:27 (E10)	08:01		08:44 (E11)	08:49
	21:46	32 07:11 (E9)	20:39	06:58 (E9)	19:18	32 08:59 (E10)	17:59	15:56	21	09:05 (E11)	15:39
23	04:59	06:38 (E9)	05:59	07:01		08:03	08:25 (E10)	08:03		08:47 (E11)	08:49
	21:44	33 07:11 (E9)	20:37	19:15	35	09:00 (E10)	17:57	15:55	10	08:57 (E11)	15:40
24	05:01	06:38 (E9)	06:01	07:03		08:05	08:24 (E10)	08:05		08:49 (E11)	08:50
	21:43	35 07:13 (E9)	20:34	19:12	37	09:01 (E10)	17:54	15:53	7	08:56 (E11)	15:40
25	05:03	06:36 (E9)	06:03	07:05		08:07	08:23 (E10)	07:07		08:50	
	21:41	37 07:13 (E9)	20:32	19:10	38	09:01 (E10)	16:52	15:52		15:41	
26	05:04	06:36 (E9)	06:05	07:07		08:09	08:22 (E10)	07:09		08:50	
	21:39	38 07:14 (E9)	20:29	19:07	39	09:01 (E10)	16:50	15:51		15:42	
27	05:06	06:36 (E9)	06:07	07:09		08:11	08:21 (E10)	07:12		08:51	
	21:37	39 07:15 (E9)	20:27	19:04	41	09:02 (E10)	16:47	15	09:05 (E11)	15:43	
28	05:08	06:35 (E9)	06:09	07:11		08:13	08:20 (E10)	07:14		08:51	
	21:35	40 07:15 (E9)	20:24	19:01	42	09:02 (E10)	16:45	19	09:07 (E11)	15:48	
29	05:10	06:35 (E9)	06:11	07:13		08:15	08:20 (E10)	07:16		08:51	
	21:34	40 07:15 (E9)	20:22	18:59	42	09:02 (E10)	16:43	23	09:09 (E11)	15:47	
30	05:12	06:35 (E9)	06:13	07:15		08:17	08:20 (E10)	07:18		08:51	
	21:32	41 07:16 (E9)	20:19	18:56	42	09:02 (E10)	16:40	25	09:10 (E11)	15:46	
31	05:14	06:34 (E9)	06:15			07:20	08:43 (E11)			08:51	
	21:30	42 07:16 (E9)	20:16			16:38	09:11 (E11)			15:47	
Potential sun hours	529		469		385	324		247		216	
Total, worst case	573		811		437	567		742			
Sun reduction	0.49		0.50		0.43	0.26		0.08			
Oper. time red.	0.94		0.94		0.94	0.94		0.94			
Wind dir. red.	0.65		0.65		0.63	0.62		0.59			
Total reduction	0.30		0.31		0.25	0.15		0.05			
Total, real	173		248		110	85		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January			February			March			April			May			June		
1	08:51		09:54 (E14)	08:15		08:53 (E15)	07:11		06:49		07:25 (E13)	05:33		04:36				
	15:48	22	10:16 (E14)	16:45	66	10:36 (E14)	17:48		19:53	14	07:39 (E13)	20:55		21:53				
2	08:50		09:55 (E14)	08:13		08:53 (E15)	07:08		06:46		07:21 (E13)	05:30		04:35				
	15:49	23	10:18 (E14)	16:48	66	10:36 (E14)	17:50		19:55	20	07:41 (E13)	20:57		21:54				
3	08:50		09:54 (E14)	08:11		08:54 (E15)	07:06		06:43		07:19 (E13)	05:28		04:34				
	15:51	25	10:19 (E14)	16:50	64	10:36 (E14)	17:52		19:57	25	07:44 (E13)	21:00		21:55				
4	08:50		09:54 (E14)	08:09		08:54 (E15)	07:03		06:41		07:17 (E13)	05:26		04:33				
	15:52	25	10:19 (E14)	16:52	63	10:35 (E14)	17:54		19:59	28	07:45 (E13)	21:02		21:57				
5	08:49		09:54 (E14)	08:07		08:55 (E15)	07:01		06:38		07:15 (E13)	05:23		04:32				
	15:53	27	10:21 (E14)	16:54	61	10:35 (E14)	17:56		20:01	30	07:45 (E13)	21:04		21:58				
6	08:49		09:54 (E14)	08:05		08:54 (E15)	06:58		06:35		07:14 (E13)	05:21		04:31				
	15:55	28	10:22 (E14)	16:56	59	10:33 (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		07:13 (E13)	05:19		04:30				
	15:56	30	10:23 (E14)	16:59	56	10:33 (E14)	18:01		20:05	34	07:47 (E13)	21:08		22:00				
8	08:48		09:53 (E14)	08:01		08:56 (E15)	06:53		06:30		07:12 (E13)	05:17		04:29				
	15:58	31	10:24 (E14)	17:01	52	10:32 (E14)	18:03		20:08	36	07:48 (E13)	21:10		22:01				
9	08:47		09:53 (E14)	07:58		08:57 (E15)	06:50		06:28		07:11 (E13)	05:15		04:29				
	16:00	32	10:25 (E14)	17:03	47	10:30 (E14)	18:05		20:10	36	07:47 (E13)	21:12		22:02				
10	08:46		09:53 (E14)	07:56		08:58 (E15)	06:47		06:25		07:10 (E13)	05:13		04:28				
	16:01	33	10:26 (E14)	17:05	41	10:28 (E14)	18:07		20:12	37	07:47 (E13)	21:14		22:03				
11	08:45		09:53 (E14)	07:54		09:00 (E15)	06:45		06:22		07:10 (E13)	05:11		04:27				
	16:03	34	10:27 (E14)	17:08	33	10:26 (E14)	18:09		20:14	37	07:47 (E13)	21:16		22:04				
12	08:44		09:52 (E14)	07:52		09:03 (E15)	06:42		06:20		07:09 (E13)	05:09		04:27				
	16:05	35	10:27 (E14)	17:10	17	10:21 (E14)	18:11		20:16	38	07:47 (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	38	07:47 (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	37	07:46 (E13)	21:22		22:07				
15	08:41		09:52 (E14)	07:45			06:34		06:12		07:09 (E13)	05:03		04:26				
	16:10	38	10:30 (E14)	17:17			18:18		20:22	37	07:46 (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	36	07:45 (E13)	21:25		22:08				
17	08:39		09:52 (E14)	07:40			06:29		06:07		07:09 (E13)	04:59		04:25				
	16:14	39	10:31 (E14)	17:21			18:22		20:26	36	07:45 (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	34	07:43 (E13)	21:29		22:09				
19	08:36		09:52 (E14)	07:36			06:24		06:02		07:10 (E13)	04:55		04:25				
	16:18	41	10:33 (E14)	17:26			18:26		20:30	33	07:43 (E13)	21:31		22:09				
20	08:35		09:52 (E14)	07:33			06:21		05:59		07:10 (E13)	04:53		04:25				
	16:20	42	10:34 (E14)	17:28			18:28		20:33	31	07:41 (E13)	21:33		22:10				
21	08:33		09:52 (E14)	07:31			06:18		05:57		07:11 (E13)	04:52		04:25				
	16:22	42	10:34 (E14)	17:30			18:30		20:35	29	07:40 (E13)	21:35		22:10				
22	08:32		09:52 (E14)	07:28			06:16		05:54		07:13 (E13)	04:50		04:26				
	16:24	43	10:35 (E14)	17:32			18:32		20:37	26	07:39 (E13)	21:37		22:10				
23	08:30		09:52 (E14)	07:26			06:13		05:52		07:13 (E13)	04:48		04:26				
	16:26	43	10:35 (E14)	17:34			18:34		20:39	23	07:36 (E13)	21:38		22:10				
24	08:29		09:02 (E15)	07:23			06:10		05:49		07:16 (E13)	04:47		04:26				
	16:28	50	10:36 (E14)	17:37			18:36		20:41	18	07:34 (E13)	21:40		22:10				
25	08:27		09:00 (E15)	07:21			06:08		05:47		07:19 (E13)	04:45		04:26				
	16:30	54	10:36 (E14)	17:39			18:38		20:43	12	07:31 (E13)	21:42		22:10				
26	08:26		08:58 (E15)	07:18			06:05		05:44			04:44		04:27				
	16:32	59	10:37 (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	62	10:37 (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	64	10:37 (E14)	17:45			18:45		20:49			21:47		22:10				
29	08:20		08:55 (E15)				06:57		05:37			04:40		04:29				
	16:39	64	10:37 (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	66	10:37 (E14)				19:49		20:53			21:50		22:09				
31	08:17		08:54 (E15)				06:51					04:37						
	16:43	66	10:37 (E14)				19:51					21:51						
Potential sun hours	235			266			366			426			508			529		
Total, worst case	1270			625						757								
Sun reduction	0.13			0.20						0.50								
Oper. time red.	0.94			0.94						0.94								
Wind dir. red.	0.61			0.60						0.66								
Total reduction	0.08			0.11						0.31								
Total, real	97			72						234								

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	08:27 (E15) 15:45	09:35 (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	09:36 (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	09:36 (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	09:37 (E14) 10:08 (E14)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:10 (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	09:40 (E14) 10:08 (E14)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:10 (E13) 18:38	07:30 16:23	08:24 (E15) 15:40	09:40 (E14) 10:07 (E14)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:11 (E13) 18:35	07:32 16:21	08:24 (E15) 15:40	09:42 (E14) 10:08 (E14)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:12 (E13) 18:32	07:34 16:19	08:24 (E15) 15:39	09:42 (E14) 10:07 (E14)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:14 (E13) 18:30	07:36 16:17	08:24 (E15) 15:39	09:44 (E14) 10:07 (E14)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:16 (E13) 18:27	07:44 16:15	08:25 (E15) 15:39	09:44 (E14) 10:07 (E14)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:22 (E13) 18:25	07:46 16:13	08:25 (E15) 15:38	09:46 (E14) 10:07 (E14)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:25 (E13) 18:22	07:49 16:11	08:27 (E15) 15:38	09:47 (E14) 10:07 (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	09:48 (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	09:49 (E14) 10:06 (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	09:50 (E14) 10:06 (E14)
17	04:49 21:54	05:47 20:52	07:30 (E13) 19:31	06:49 18:12	07:57 16:04	08:33 (E15) 15:38	09:51 (E14) 10:07 (E14)
18	04:51 21:52	05:49 20:50	07:23 (E13) 19:29	06:51 18:09	07:59 16:02	08:36 (E15) 15:38	09:52 (E14) 10:07 (E14)
19	04:53 21:51	05:51 20:47	07:21 (E13) 19:26	06:53 18:07	08:01 16:01	09:27 (E14) 15:38	09:52 (E14) 10:06 (E14)
20	04:54 21:49	05:53 20:45	07:19 (E13) 19:23	06:55 18:04	08:03 15:59	09:27 (E14) 15:39	09:53 (E14) 10:07 (E14)
21	04:56 21:48	05:55 20:42	07:17 (E13) 19:21	06:57 18:02	08:05 15:58	09:27 (E14) 15:39	09:54 (E14) 10:08 (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	09:54 (E14) 10:08 (E14)
23	04:59 21:45	05:59 20:37	07:15 (E13) 19:15	07:01 17:57	08:09 15:55	09:29 (E14) 15:40	09:55 (E14) 10:09 (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	09:55 (E14) 10:09 (E14)
25	05:03 21:41	06:03 20:32	07:13 (E13) 19:10	07:05 16:52	08:13 15:52	09:30 (E14) 15:41	09:55 (E14) 10:10 (E14)
26	05:05 21:39	06:05 20:30	07:12 (E13) 19:07	07:07 16:50	08:15 15:51	09:30 (E14) 15:42	09:55 (E14) 10:10 (E14)
27	05:06 21:38	06:07 20:27	07:10 (E13) 19:04	07:09 16:48	08:17 15:49	09:32 (E14) 15:43	09:55 (E14) 10:11 (E14)
28	05:08 21:36	06:09 20:24	07:10 (E13) 19:02	07:11 16:45	08:19 15:48	09:32 (E14) 15:44	09:55 (E14) 10:12 (E14)
29	05:10 21:34	06:11 20:22	07:09 (E13) 18:59	07:13 16:43	08:21 15:47	09:33 (E14) 15:45	09:55 (E14) 10:13 (E14)
30	05:12 21:32	06:13 20:19	07:09 (E13) 18:56	07:15 16:41	08:22 15:46	09:34 (E14) 15:46	09:55 (E14) 10:14 (E14)
31	05:14 21:30	06:15 20:17	07:09 (E13) 18:54	07:20 16:38	08:28 (E15) 09:55 (E14)	08:51 15:47	09:55 (E14) 10:16 (E14)
Potential sun hours	529	469	385	324	247	216	
Total, worst case		434	336	57	1538	641	
Sun reduction		0.50	0.43	0.26	0.08	0.07	
Oper. time red.		0.94	0.94	0.94	0.94	0.94	
Wind dir. red.		0.66	0.66	0.60	0.61	0.61	
Total reduction		0.31	0.26	0.15	0.05	0.04	
Total, real		134	89	8	73	26	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

		January	February	March		April		May		June
1	08:51	08:15	07:11		07:40 (E14)	06:49		05:33	06:21 (E13)	04:36
	15:48	16:45	17:48	12	07:52 (E14)	19:53		20:55	16 06:37 (E13)	21:53
2	08:50	08:13	07:08		07:36 (E14)	06:46		05:30	06:23 (E13)	04:35
	15:50	16:48	17:50	18	07:54 (E14)	19:55		20:58	13 06:36 (E13)	21:54
3	08:50	08:11	07:06		07:34 (E14)	06:43		05:28	06:25 (E13)	04:34
	15:51	16:50	17:52	23	07:57 (E14)	19:57		21:00	8 06:33 (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	26	07:58 (E14)	19:59		21:02		21:57
5	08:49	08:07	07:01		07:31 (E14)	06:38		05:24		04:32
	15:54	16:54	17:56	27	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	30	08:00 (E14)	20:03		21:06		21:59
7	08:48	08:03	06:55		07:29 (E14)	06:33		05:19		04:30
	15:56	16:59	18:01	31	08:00 (E14)	20:06		21:08		22:00
8	08:48	08:01	06:53		07:28 (E14)	06:30		05:17		04:29
	15:58	17:01	18:03	32	08:00 (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	33	08:01 (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	34	08:00 (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	33	08:00 (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	32	07:59 (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	32	07:58 (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	31	07:58 (E14)	20:22		21:24		22:07
16	08:40	07:43	06:32		07:27 (E14)	06:09		05:01		04:26
	16:12	17:19	18:20	30	07:57 (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	27	07:55 (E14)	20:26	5 06:38 (E13)	21:27		22:08
18	08:38	07:38	06:26		07:28 (E14)	06:04	06:30 (E13)	04:57		04:25
	16:16	17:23	18:24	25	07:53 (E14)	20:28	9 06:39 (E13)	21:29		22:09
19	08:36	07:36	06:24		07:30 (E14)	06:02	06:28 (E13)	04:55		04:25
	16:18	17:26	18:26	22	07:52 (E14)	20:31	13 06:41 (E13)	21:31		22:09
20	08:35	07:33	06:21		07:32 (E14)	05:59	06:26 (E13)	04:53		04:25
	16:20	17:28	18:28	17	07:49 (E14)	20:33	16 06:42 (E13)	21:33		22:10
21	08:33	07:31	06:18		07:35 (E14)	05:57	06:23 (E13)	04:52		04:25
	16:22	17:30	18:30	10	07:45 (E14)	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	22 06:43 (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	22 06:41 (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	22 06:41 (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	20 06:40 (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	18 06:39 (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				558	258			37		
Sun reduction				0.41	0.50			0.57		
Oper. time red.				0.94	0.94			0.94		
Wind dir. red.				0.62	0.65			0.65		
Total reduction				0.24	0.31			0.35		
Total, real				135	79			13		

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	33 08:39 (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	34 08:39 (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	33 08:38 (E14)	16:30
5	04:34	05:23	06:25	07:25	08:05 (E14)	07:31
	22:07	21:20	20:03	18:43	32 08:37 (E14)	16:27
6	04:35	05:25	06:27	07:28	08:05 (E14)	07:33
	22:06	21:17	20:01	18:40	31 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	08:07 (E14)	07:40
	22:03	21:11	19:53	18:33	27 08:34 (E14)	16:19
10	04:40	05:33	06:35	07:36	08:08 (E14)	07:42
	22:02	21:08	9 06:43 (E13)	18:30	24 08:32 (E14)	16:17
11	04:41	05:35	06:37	07:38	08:09 (E14)	07:44
	22:01	21:06	13 06:45 (E13)	18:27	21 08:30 (E14)	16:15
12	04:42	05:37	06:39	07:40	08:11 (E14)	07:46
	22:00	21:04	17 06:46 (E13)	18:25	16 08:27 (E14)	16:13
13	04:44	05:39	06:41	07:42	08:15 (E14)	07:49
	21:59	21:02	19 06:47 (E13)	18:22	8 08:23 (E14)	16:11
14	04:45	05:41	06:43	07:44		07:51
	21:58	20:59	21 06:48 (E13)	18:20		16:10
15	04:46	05:43	06:45	07:46		07:53
	21:57	20:57	21 06:48 (E13)	18:17		16:08
16	04:48	05:45	06:47	07:48		07:55
	21:55	20:54	23 06:49 (E13)	18:15		16:06
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	23 06:49 (E13)	18:12		16:04
18	04:51	05:49	06:51	07:52		07:59
	21:52	20:50	23 06:49 (E13)	18:09		16:03
19	04:53	05:51	06:53	07:55		08:01
	21:51	20:47	23 06:48 (E13)	18:07		16:01
20	04:54	05:53	06:55	07:57		08:03
	21:49	20:45	23 06:48 (E13)	18:04		15:59
21	04:56	05:55	06:57	07:59		08:05
	21:48	20:42	21 06:47 (E13)	18:02		15:58
22	04:58	05:57	06:59	08:01	08:22 (E14)	08:07
	21:46	20:40	18 06:46 (E13)	18:00	08:29 (E14)	15:56
23	04:59	05:59	07:01	08:18	08:18 (E14)	08:09
	21:45	20:37	15 06:45 (E13)	17:57	08:33 (E14)	15:55
24	05:01	06:01	07:03	08:15	08:15 (E14)	08:11
	21:43	20:35	12 06:44 (E13)	17:55	08:35 (E14)	15:53
25	05:03	06:03	07:05	08:13	08:13 (E14)	08:13
	21:41	20:32	9 06:43 (E13)	17:52	08:36 (E14)	15:52
26	05:05	06:05	07:07	08:11	08:11 (E14)	08:15
	21:39	20:30	4 06:40 (E13)	17:50	08:38 (E14)	15:51
27	05:06	06:07	07:09	08:10	08:10 (E14)	08:17
	21:38	20:27	19:04	17:48	08:38 (E14)	15:50
28	05:08	06:09	07:11	08:08	08:08 (E14)	08:19
	21:36	20:24	19:02	17:45	08:39 (E14)	15:48
29	05:10	06:11	07:13	08:07	08:07 (E14)	08:21
	21:34	20:22	18:59	17:43	08:39 (E14)	15:47
30	05:12	06:13	07:15	08:07	08:07 (E14)	08:22
	21:32	20:19	18:56	17:41	08:39 (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		294	215		351	
Sun reduction		0.50	0.43		0.26	
Oper. time red.		0.94	0.94		0.94	
Wind dir. red.		0.65	0.62		0.62	
Total reduction		0.30	0.25		0.15	
Total, real		90	54		53	

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	07:38 (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	08:16 (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	05:30 21:54	04:35 22:09	04:31 21:26	05:18 20:11	06:19 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	05:28 21:55	04:34 22:08	04:32 21:24	05:20 20:09	06:21 18:48	08:13 (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	05:26 21:57	04:33 22:07	04:33 21:22	05:22 20:06	06:23 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	05:24 21:58	04:32 22:07	04:34 21:20	05:24 20:04	06:25 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) 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	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) 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	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) 20:08	06:30 21:10	05:17 22:01	04:29 22:04	05:29 21:13	06:31 19:56	06:31 18:35	08:10 (E14) 16:21	07:38 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	07:35 (E14) 20:10	06:28 21:12	05:15 22:02	04:28 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) 20:12	06:25 21:14	05:13 22:03	04:28 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	07:35 (E14) 20:14	06:22 21:16	05:11 22:04	04:27 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) 20:16	06:20 21:18	05:09 22:05	04:27 22:00	05:37 21:04	06:39 19:45	07:40 18:25	08:11 (E14) 16:13	07:46 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	07:38 (E14) 20:18	06:17 21:20	05:07 22:06	04:27 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	07:39 (E14) 20:20	06:15 21:22	05:05 22:07	04:26 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	07:44 (E14) 20:22	06:12 21:24	05:03 22:07	04:26 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	07:50 (E14) 20:24	06:09 21:26	05:01 22:08	04:26 21:55	05:45 20:54	06:47 19:34	07:48 18:15	08:18 (E14) 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	05:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	08:21 (E14) 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	05:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	08:22 (E14) 16:03	07:59 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	05:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:23 (E14) 16:01	08:01 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	06:01 20:33	04:53 21:33	05:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:24 (E14) 15:59	08:03 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	06:00 20:35	04:52 21:35	05:25 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:25 (E14) 15:58	08:05 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	06:00 20:37	04:50 21:37	05:25 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:26 (E14) 15:56	08:07 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	06:00 20:39	04:48 21:38	05:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:27 (E14) 15:55	08:09 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	06:00 20:41	04:47 21:40	05:25 22:10	04:58 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:28 (E14) 15:53	08:11 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	06:00 20:43	04:45 21:42	05:25 22:10	04:57 21:41	06:03 20:32	07:05 19:10	08:07 17:52	08:29 (E14) 15:52	08:13 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	06:00 20:45	04:44 21:43	05:25 22:10	04:58 21:39	06:05 20:30	07:07 19:07	08:09 17:50	08:30 (E14) 15:51	08:15 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	06:00 20:47	04:42 21:45	05:25 22:10	04:58 21:38	06:07 20:27	07:09 19:04	08:11 17:48	08:31 (E14) 15:50	08:17 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	06:00 20:49	04:41 21:47	05:25 22:10	04:58 21:36	06:09 20:24	07:11 19:02	08:13 17:45	08:32 (E14) 15:48	08:19 15:44
29	08:20 16:39	07:11 17:47	05:57 19:47	06:00 20:51	04:40 21:48	05:25 22:10	04:59 21:34	06:11 20:22	07:13 19:00	08:15 17:43	08:33 (E14) 15:47	08:21 15:45
30	08:19 16:41	07:03 17:54	05:54 19:49	06:00 20:53	04:38 21:50	05:25 22:09	04:59 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:34 (E14) 15:46	08:22 15:46
31	08:17 16:43	07:01 17:51	05:52 19:51	06:00 20:52	04:37 21:51	05:25 22:09	04:58 21:30	06:15 20:17	07:17 18:58	08:19 17:40	08:35 (E14) 15:47	08:23 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		60	358						28	393		
Sun reduction		0.20	0.41						0.43	0.26		
Oper. time red.		0.94	0.94						0.94	0.94		
Wind dir. red.		0.62	0.62						0.62	0.62		
Total reduction		0.12	0.24						0.25	0.15		
Total, real		7	87						7	60		

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	04:32 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	26	07:57 (E14) 08:23 (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	07:57 (E14) 08:22 (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	07:57 (E14) 08:21 (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	22	07:58 (E14) 08:20 (E14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	24	07:20 (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	26	07:19 (E14) 07:45 (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	4	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	26	07:19 (E14) 07:45 (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	25	07:19 (E14) 07:44 (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	22	07:20 (E14) 07:42 (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	19	07:21 (E14) 07:40 (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	16	07:22 (E14) 07:38 (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	12	07:24 (E14) 07:36 (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 16:01			08:01 15:38	08:47 15:37
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 15:59			08:03 15:39	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 15:58			08:05 15:38	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 15:56			08:07 15:38	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	08:03 15:55			08:09 15:40	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	08:05 15:53			08:11 15:41	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	08:08 (E14) 08:17 (E14)	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	08:05 (E14) 08:20 (E14)	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	08:03 (E14) 08:21 (E14)	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	08:01 (E14) 08:22 (E14)	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	08:00 (E14) 08:23 (E14)	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	07:59 (E14) 08:23 (E14)	07:18 16:41			08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		05:37 21:51	04:37 21:51		05:14 21:30	06:15 20:17			07:20 16:38			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				322						110		219				
Sun reduction				0.41						0.43		0.26				
Oper. time red.				0.94						0.94		0.94				
Wind dir. red.				0.62						0.62		0.62				
Total reduction				0.24						0.25		0.15				
Total, real				77						27		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)
	Minutes with flicker		

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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) 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	07:43 (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	07:44 (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	07:43 (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	07:43 (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	07:44 (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	07:44 (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	07:45 (E14) 19:59	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	07:47 (E14) 19:59	06:28 21:10	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	07:48 (E14) 19:59	06:25 21:12	05:13 22:03	04:40 22:02	04:40 21:08	05:33 19:50	06:35 18:30	07:36 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	07:51 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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 18:15	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	05:52 21:38	04:48 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	07:58 (E14) 19:59	05:49 21:40	04:47 22:10	04:59 21:43	04:59 20:35	06:01 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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	05:44 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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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
30	08:19 16:41	07:11 17:46	05:54 18:47	07:58 (E14) 19:59	05:35 21:48	04:38 22:10	05:12 21:32	05:12 20:19	06:13 18:56	07:15 17:41	08:18 15:46	08:51 15:46
31	08:17 16:43	07:11 17:46	05:52 18:47	07:58 (E14) 19:59	05:33 21:48	04:37 22:10	05:14 21:30	05:14 20:17	06:15 18:56	07:20 17:41	08:20 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case		140	248									
Sun reduction		0.20	0.41									
Oper. time red.		0.94	0.94									
Wind dir. red.		0.63	0.63									
Total reduction		0.12	0.24									
Total, real		17	60									

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	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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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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Total, worst case												
Sun reduction												
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Total reduction												
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Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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Shadow receptor: Lauri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (49)

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Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:29	07:53 18:09	07:59 16:03	08:46 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
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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
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Table layout: For each day in each month the following matrix apply

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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) 09:55 (E11)	07:11 17:47	07:59 (E10) 08:35 (E10)	06:49 19:53		05:32 20:55		06:31 (E9) 07:17 (E9)	04:36 21:52
2	08:50 15:49	08:13 16:47	09:17 (E12) 09:55 (E11)	07:08 17:50	07:58 (E10) 08:35 (E10)	06:46 19:55		05:30 20:57	46	06:31 (E9) 07:17 (E9)	04:35 21:54
3	08:50 15:51	08:11 16:50	09:18 (E12) 09:55 (E11)	07:05 17:52	07:57 (E10) 08:37 (E10)	06:43 19:57		05:28 20:59	46	06:31 (E9) 07:17 (E9)	04:34 21:55
4	08:50 15:52	08:09 16:52	09:20 (E12) 09:55 (E11)	07:03 17:54	07:56 (E10) 08:37 (E10)	06:41 19:59		05:26 21:01	46	06:31 (E9) 07:17 (E9)	04:33 21:56
5	08:49 15:53	08:07 16:54	09:23 (E11) 09:54 (E11)	07:00 17:56	07:55 (E10) 08:37 (E10)	06:38 20:01		05:23 21:03	46	06:31 (E9) 07:17 (E9)	04:32 21:58
6	08:49 15:55	08:05 16:56	09:24 (E11) 09:53 (E11)	06:58 17:58	07:55 (E10) 08:37 (E10)	06:35 20:03		05:21 21:05	46	06:31 (E9) 07:17 (E9)	04:31 21:59
7	08:48 15:56	08:02 16:58	09:25 (E11) 09:53 (E11)	06:55 18:00	07:54 (E10) 08:37 (E10)	06:33 20:05		05:19 21:08	46	06:31 (E9) 07:17 (E9)	04:30 22:00
8	08:47 15:58	08:00 17:01	09:26 (E11) 09:52 (E11)	06:53 18:02	07:54 (E10) 08:37 (E10)	06:30 20:07		05:17 21:10	45	06:31 (E9) 07:16 (E9)	04:29 22:01
9	08:47 15:59	07:58 17:03	09:27 (E11) 09:51 (E11)	06:50 18:05	07:54 (E10) 08:37 (E10)	06:27 20:09		05:15 21:12	45	06:31 (E9) 07:16 (E9)	04:28 22:02
10	08:46 16:01	07:56 17:05	09:29 (E11) 09:49 (E11)	06:47 18:07	07:53 (E10) 08:36 (E10)	06:25 20:12		05:12 21:14	45	06:31 (E9) 07:16 (E9)	04:28 22:03
11	08:45 16:03	07:54 17:07	09:30 (E11) 09:47 (E11)	06:45 18:09	07:53 (E10) 08:36 (E10)	06:22 20:14		05:10 21:16	44	06:31 (E9) 07:15 (E9)	04:27 22:04
12	08:44 16:04	07:52 17:10	09:34 (E11) 09:44 (E11)	06:42 18:11	07:53 (E10) 08:35 (E10)	06:20 20:16		05:08 21:18	43	06:31 (E9) 07:14 (E9)	04:27 22:05
13	08:43 16:06	09:19 (E12) 09:23 (E12)	07:49 17:12	06:39 18:13	07:54 (E10) 08:35 (E10)	06:17 20:18		05:06 21:19	43	06:31 (E9) 07:14 (E9)	04:26 22:06
14	08:42 16:08	09:18 (E12) 09:38 (E11)	07:47 17:14	06:37 18:15	07:54 (E10) 08:33 (E10)	06:14 20:20		05:04 21:21	41	06:33 (E9) 07:14 (E9)	04:26 22:06
15	08:41 16:10	09:16 (E12) 09:40 (E11)	07:45 17:16	06:34 18:17	07:54 (E10) 08:32 (E10)	06:12 20:22		05:02 21:23	40	06:33 (E9) 07:13 (E9)	04:26 22:07
16	08:40 16:12	09:15 (E12) 09:42 (E11)	07:42 17:19	06:31 18:19	07:55 (E10) 08:31 (E10)	06:09 20:24		05:00 21:25	39	06:33 (E9) 07:12 (E9)	04:25 22:08
17	08:39 16:14	09:13 (E12) 09:44 (E11)	07:40 17:21	06:29 18:22	07:56 (E10) 08:30 (E10)	06:07 20:26		04:59 21:27	38	06:33 (E9) 07:11 (E9)	04:25 22:08
18	08:37 16:16	09:13 (E12) 09:46 (E11)	07:38 17:23	06:26 18:24	07:56 (E10) 08:28 (E10)	06:04 20:28	06:51 (E9)	04:57 21:29	36	06:35 (E9) 07:11 (E9)	04:25 22:09
19	08:36 16:18	09:12 (E12) 09:47 (E11)	07:35 17:25	06:23 18:26	07:58 (E10) 08:26 (E10)	06:02 20:30	06:47 (E9)	04:55 21:31	35	06:35 (E9) 07:10 (E9)	04:25 22:09
20	08:35 16:20	09:12 (E12) 09:47 (E11)	07:33 17:28	06:21 18:28	08:00 (E10) 08:23 (E10)	05:59 20:32	06:44 (E9)	04:53 21:33	34	06:36 (E9) 07:10 (E9)	04:25 22:10
21	08:33 16:22	09:13 (E12) 09:49 (E11)	07:31 17:30	06:18 18:30	08:02 (E10) 08:20 (E10)	05:57 20:34	06:42 (E9)	04:51 21:35	31	06:37 (E9) 07:08 (E9)	04:25 22:10
22	08:32 16:24	09:12 (E12) 09:50 (E11)	07:28 17:32	06:15 18:32	08:06 (E10) 08:14 (E10)	05:54 20:37	06:40 (E9)	04:50 21:36	30	06:38 (E9) 07:08 (E9)	04:25 22:10
23	08:30 16:26	09:12 (E12) 09:51 (E11)	07:26 17:34	06:13 18:34	05:52 20:39	05:52 20:39	06:38 (E9)	04:48 21:38	27	06:39 (E9) 07:06 (E9)	04:26 22:10
24	08:29 16:28	09:12 (E12) 09:51 (E11)	07:23 17:36	06:10 18:36	05:49 20:41	05:49 20:41	06:37 (E9)	04:47 21:40	25	06:40 (E9) 07:05 (E9)	04:26 22:10
25	08:27 16:30	09:12 (E12) 09:52 (E11)	07:21 17:39	06:07 18:38	05:47 20:43	05:47 20:43	06:36 (E9)	04:45 21:41	22	06:42 (E9) 07:04 (E9)	04:26 22:10
26	08:25 16:32	09:13 (E12) 09:53 (E11)	07:18 17:41	06:05 18:40	05:44 20:45	05:44 20:45	06:35 (E9)	04:44 21:43	19	06:43 (E9) 07:02 (E9)	04:27 22:10
27	08:24 16:34	09:13 (E12) 09:54 (E11)	07:16 17:43	06:02 18:42	05:42 20:47	05:42 20:47	06:34 (E9)	04:42 21:45	16	06:45 (E9) 07:01 (E9)	04:27 22:10
28	08:22 16:36	09:14 (E12) 09:54 (E11)	07:13 17:45	05:59 18:45	05:39 20:49	05:39 20:49	06:34 (E9)	04:41 21:46	12	06:47 (E9) 06:59 (E9)	04:28 22:10
29	08:20 16:38	09:14 (E12) 09:55 (E11)		06:57 19:47	05:37 20:51	05:37 20:51	06:32 (E9)	04:39 21:48	4	06:51 (E9) 06:55 (E9)	04:28 22:10
30	08:18 16:41	09:14 (E12) 09:54 (E11)		06:54 19:49	05:35 20:53	05:35 20:53	06:32 (E9)	04:38 21:49			04:29 22:09
31	08:16 16:43	09:15 (E12) 09:54 (E11)		06:51 19:51				04:37 21:51			
Potential sun hours	235	266		366		426		508			529
Total, worst case	638	476		792		437		1036			
Sun reduction	0.13	0.20		0.41		0.50		0.57			
Oper. time red.	0.94	0.94		0.94		0.94		0.94			
Wind dir. red.	0.60	0.61		0.63		0.65		0.65			
Total reduction	0.07	0.11		0.24		0.31		0.35			
Total, real	48	55		192		135		362			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

July		August		September		October		November		December	
1	04:30		05:16	06:41 (E9)	06:17		07:17	08:33 (E10)	07:22	08:58 (E11)	08:24
	22:09		21:28	44 07:25 (E9)	20:14		18:53	41 09:14 (E10)	16:36	21 09:19 (E11)	15:45
2	04:31		05:17	06:41 (E9)	06:19		07:19	08:32 (E10)	07:25		08:56 (E11) 08:26
	22:08		21:26	44 07:25 (E9)	20:11		18:51	43 09:15 (E10)	16:34	24 09:20 (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	45 07:26 (E9)	20:09		18:48	42 09:14 (E10)	16:31	26 09:21 (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	45 07:26 (E9)	20:06		18:45	43 09:14 (E10)	16:29	28 09:23 (E11)	15:42
5	04:33		05:23	06:40 (E9)	06:25		07:25	08:31 (E10)	07:31		08:53 (E11) 08:31
	22:06		21:19	46 07:26 (E9)	20:03		18:43	43 09:14 (E10)	16:27	30 09:23 (E11)	15:41
6	04:35		05:25	06:40 (E9)	06:27		07:27	08:30 (E10)	07:33		08:53 (E12) 08:32
	22:06		21:17	46 07:26 (E9)	20:01		18:40	43 09:13 (E10)	16:25	31 09:24 (E11)	15:41
7	04:36		05:27	06:40 (E9)	06:29		07:29	08:30 (E10)	07:35		08:50 (E12) 08:34
	22:05		21:15	46 07:26 (E9)	19:58		18:38	43 09:13 (E10)	16:23	35 09:25 (E11)	15:40
8	04:37		05:29	06:40 (E9)	06:31		07:31	08:30 (E10)	07:38		08:48 (E12) 08:35
	22:04		21:13	46 07:26 (E9)	19:55		18:35	42 09:12 (E10)	16:21	37 09:25 (E11)	15:40
9	04:38		05:31	06:40 (E9)	06:33		07:33	08:30 (E10)	07:40		08:47 (E12) 08:36
	22:03		21:11	46 07:26 (E9)	19:53		18:32	41 09:11 (E10)	16:19	39 09:26 (E11)	15:39
10	04:39		05:33	06:40 (E9)	06:35		07:36	08:31 (E10)	07:42		08:46 (E12) 08:38
	22:02		21:08	45 07:25 (E9)	19:50		18:30	40 09:11 (E10)	16:17	39 09:25 (E11)	15:39
11	04:41		05:35	06:40 (E9)	06:37		07:38	08:31 (E10)	07:44		08:46 (E12) 08:39
	22:01		21:06	45 07:25 (E9)	19:47		18:27	39 09:10 (E10)	16:15	40 09:26 (E11)	15:38
12	04:42		05:37	06:40 (E9)	06:39		07:40	08:32 (E10)	07:46		08:46 (E12) 08:40
	22:00		21:04	45 07:25 (E9)	19:45		18:24	37 09:09 (E10)	16:13	40 09:26 (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	45 07:25 (E9)	19:42		18:22	35 09:07 (E10)	16:11	41 09:27 (E11)	15:38
14	04:45		05:41	06:41 (E9)	06:43		07:44	08:33 (E10)	07:51		08:45 (E12) 08:42
	21:58		20:59	43 07:24 (E9)	19:39		18:19	33 09:06 (E10)	16:09	41 09:26 (E11)	15:38
15	04:46	06:57 (E9)	05:43	06:41 (E9)	06:45		07:46	08:34 (E10)	07:53		08:45 (E12) 08:43
	21:56	9 07:06 (E9)	20:57	43 07:24 (E9)	19:36		18:17	30 09:04 (E10)	16:07	41 09:26 (E11)	15:38
16	04:48	06:55 (E9)	05:45	06:42 (E9)	06:47		07:48	08:37 (E10)	07:55		08:46 (E12) 08:44
	21:55	14 07:09 (E9)	20:54	41 07:23 (E9)	19:34		18:14	26 09:03 (E10)	16:06	40 09:26 (E11)	15:38
17	04:49	06:53 (E9)	05:47	06:41 (E9)	06:49		07:50	08:38 (E10)	07:57		08:46 (E12) 08:45
	21:54	18 07:11 (E9)	20:52	40 07:21 (E9)	19:31		18:12	22 09:00 (E10)	16:04	40 09:26 (E11)	15:38
18	04:51	06:52 (E9)	05:49	06:42 (E9)	06:51		07:52	08:41 (E10)	07:59		08:46 (E12) 08:46
	21:52	21 07:13 (E9)	20:49	38 07:20 (E9)	19:28		18:09	16 08:57 (E10)	16:02	39 09:25 (E11)	15:38
19	04:52	06:51 (E9)	05:51	06:43 (E9)	06:53		07:54		08:01		08:47 (E12) 08:47
	21:51	23 07:14 (E9)	20:47	36 07:19 (E9)	19:26		18:07		16:01	39 09:26 (E11)	15:38
20	04:54	06:50 (E9)	05:53	06:44 (E9)	06:55		07:56		08:03		08:47 (E12) 08:48
	21:49	26 07:16 (E9)	20:44	34 07:18 (E9)	19:23		18:04		15:59	38 09:25 (E11)	15:38
21	04:56	06:48 (E9)	05:55	06:45 (E9)	06:57		07:59		08:05		08:48 (E12) 08:48
	21:48	29 07:17 (E9)	20:42	31 07:16 (E9)	19:20		18:02		15:57	36 09:24 (E11)	15:39
22	04:57	06:48 (E9)	05:57	06:47 (E9)	06:59	08:48 (E10)	08:01		08:07		08:48 (E12) 08:49
	21:46	30 07:18 (E9)	20:39	28 07:15 (E9)	19:18	15 09:03 (E10)	17:59		15:56	35 09:23 (E11)	15:39
23	04:59	06:47 (E9)	05:59	06:49 (E9)	07:01	08:44 (E10)	08:03		08:09		08:50 (E12) 08:49
	21:44	32 07:19 (E9)	20:37	23 07:12 (E9)	19:15	22 09:06 (E10)	17:57		15:55	34 09:24 (E11)	15:40
24	05:01	06:46 (E9)	06:01	06:51 (E9)	07:03	08:42 (E10)	08:05		08:11		08:50 (E12) 08:50
	21:43	34 07:20 (E9)	20:34	19 07:10 (E9)	19:12	26 09:08 (E10)	17:54		15:53	33 09:23 (E11)	15:40
25	05:03	06:45 (E9)	06:03	06:55 (E9)	07:05	08:40 (E10)	07:07		08:13		08:51 (E12) 08:50
	21:41	35 07:20 (E9)	20:32	9 07:04 (E9)	19:10	30 09:10 (E10)	16:52		15:52	31 09:22 (E11)	15:41
26	05:04	06:45 (E9)	06:05		07:07	08:38 (E10)	07:09		08:15		08:53 (E12) 08:50
	21:39	37 07:22 (E9)	20:29		19:07	33 09:11 (E10)	16:50		15:51	28 09:21 (E11)	15:42
27	05:06	06:44 (E9)	06:07		07:09	08:36 (E10)	07:12		08:17		08:55 (E12) 08:51
	21:37	39 07:23 (E9)	20:27		19:04	36 09:12 (E10)	16:47		15:49	24 09:19 (E11)	15:43
28	05:08	06:43 (E9)	06:09		07:11	08:35 (E10)	07:14		08:19		08:57 (E12) 08:51
	21:35	40 07:23 (E9)	20:24		19:01	38 09:13 (E10)	16:45		15:48	17 09:17 (E11)	15:44
29	05:10	06:43 (E9)	06:11		07:13	08:34 (E10)	07:16		08:20		09:00 (E12) 08:51
	21:34	41 07:24 (E9)	20:22		18:59	39 09:13 (E10)	16:43		15:47	4 09:04 (E12)	15:44
30	05:12	06:43 (E9)	06:13		07:15	08:34 (E10)	07:18	09:03 (E11)	08:22		08:51
	21:32	41 07:24 (E9)	20:19		18:56	40 09:14 (E10)	16:40	11 09:14 (E11)	15:46		15:45
31	05:14	06:42 (E9)	06:15				07:20	08:59 (E11)			08:51
	21:30	42 07:24 (E9)	20:16				16:38	18 09:17 (E11)			15:47
Potential sun hours	529		469		385		324		247		216
Total, worst case	511		973		279		688		951		
Sun reduction	0.49		0.50		0.43		0.26		0.08		
Oper. time red.	0.94		0.94		0.94		0.94		0.94		
Wind dir. red.	0.65		0.65		0.63		0.62		0.60		
Total reduction	0.30		0.31		0.25		0.15		0.05		
Total, real	155		298		70		105		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start wind speed: Cut in wind speed 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	08:54 (E13) 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	08:50 (E13) 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	08:49 (E13) 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	08:47 (E13) 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	08:47 (E13) 15:42
6	08:49 15:55	08:05 16:56	09:16 (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	08:46 (E13) 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	08:45 (E13) 15:40
8	08:48 15:58	08:01 17:01	09:18 (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	08:45 (E13) 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	08:44 (E13) 15:39
10	08:46 16:01	07:56 17:05	09:25 (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	08:45 (E13) 15:39
11	08:45 16:03	07:54 17:08	09:30 (E13) 18:07	06:45 20:12	06:22 21:14	04:27 22:03	04:41 22:02	05:35 21:08	06:37 19:50	07:38 18:30	07:44 16:17	08:44 (E13) 15:39
12	08:44 16:05	07:52 17:10	09:30 (E13) 18:07	06:42 20:12	06:20 21:16	04:27 22:04	04:42 22:01	05:37 21:06	06:39 19:47	07:40 18:27	07:46 16:15	08:44 (E13) 15:38
13	08:43 16:06	07:50 17:12	09:31 (E13) 18:08	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	08:45 (E13) 15:38
14	08:42 16:08	07:47 17:14	09:32 (E13) 18:09	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	08:44 (E13) 15:38
15	08:41 16:10	07:45 17:17	09:34 (E13) 18:10	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 (E13) 15:38
16	08:40 16:12	07:43 17:19	09:35 (E13) 18:11	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	08:46 (E13) 15:38
17	08:39 16:14	07:40 17:21	09:36 (E13) 18:12	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 (E13) 15:38
18	08:38 16:16	07:38 17:23	09:37 (E13) 18:13	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 (E13) 15:38
19	08:36 16:18	07:36 17:26	09:38 (E13) 18:14	06:24 20:30	06:02 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:48 (E13) 15:38
20	08:35 16:20	07:33 17:28	09:39 (E13) 18:15	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 (E13) 15:39
21	08:33 16:22	07:31 17:30	09:40 (E13) 18:16	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 (E13) 15:39
22	08:32 16:24	07:28 17:32	09:41 (E13) 18:17	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	08:51 (E13) 15:39
23	08:30 16:26	07:26 17:34	09:42 (E13) 18:18	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	08:52 (E13) 15:40
24	08:29 16:28	07:23 17:37	09:43 (E13) 18:19	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	08:53 (E13) 15:41
25	08:27 16:30	07:21 17:39	09:44 (E13) 18:20	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	08:55 (E13) 15:41
26	08:26 16:32	07:18 17:41	09:45 (E13) 18:21	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	08:59 (E13) 15:42
27	08:24 16:34	07:16 17:43	09:46 (E13) 18:22	06:02 20:45	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	09:00 (E13) 15:43
28	08:22 16:36	07:13 17:45	09:47 (E13) 18:23	05:59 20:46	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	09:01 (E13) 15:44
29	08:20 16:39	07:09 17:48	09:48 (E13) 18:24	05:57 20:47	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	09:02 (E13) 15:45
30	08:19 16:41	07:07 17:51	09:49 (E13) 18:25	05:54 20:48	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	09:03 (E13) 15:46
31	08:17 16:43	07:05 17:53	09:50 (E13) 18:26	05:51 20:51	05:37 21:51	04:31 22:10	05:14 21:30	06:15 20:17	07:17 18:48	08:19 17:38	08:23 15:47	09:04 (E13) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	356	211										
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.94	0.94									0.94	
Wind dir. red.	0.59	0.59									0.59	
Total reduction	0.07	0.11									0.05	
Total, real	26	24									26	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:26	04:25 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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

		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	5	07:14 (E14) 07:19 (E14)	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28		06:17 20:14	19	07:01 (E14) 07:20 (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	10	07:11 (E14) 07:21 (E14)	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26		06:19 20:11	20	07:00 (E14) 07:20 (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	13	08:11 (E14) 07:22 (E14)	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24		06:21 20:09	21	06:59 (E14) 07:20 (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	17	07:06 (E14) 07:23 (E14)	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22		06:23 20:06	21	06:59 (E14) 07:20 (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	20	07:03 (E14) 07:23 (E14)	05:24 21:04	04:32 21:58	04:34 22:07	05:24 21:20		06:25 20:04	22	06:58 (E14) 07:20 (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	22	07:02 (E14) 07:24 (E14)	05:21 21:06	04:31 21:59	04:35 22:06	05:26 21:17		06:27 20:01	22	06:58 (E14) 07:20 (E14)	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	22	07:01 (E14) 07:23 (E14)	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15		06:29 19:58	20	06:59 (E14) 07:19 (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	21	07:02 (E14) 07:23 (E14)	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13		06:31 19:56	17	07:00 (E14) 07:17 (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	21	07:01 (E14) 07:22 (E14)	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11		06:33 19:53	14	07:02 (E14) 07:16 (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	20	07:01 (E14) 07:21 (E14)	05:13 21:14	04:28 22:03	04:40 22:02	05:33 21:08		06:35 19:50	10	07:04 (E14) 07:14 (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	19	07:02 (E14) 07:21 (E14)	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06		06:37 19:48	6	07:06 (E14) 07:12 (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	17	07:02 (E14) 07:19 (E14)	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04		06:39 19:45			07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	14	07:04 (E14) 07:18 (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 17:15	06:37 18:16	06:15 20:20	10	07:05 (E14) 07:15 (E14)	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59		06:43 19:39			07:44 18:20	07:51 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22			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 20:54		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 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43			04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32		07:05 19:10			08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45			04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30		07:07 19:07			08:09 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47			04:42 21:45	04:28 22:10	05:07 21:38	06:07 20:27		07:09 19:04			08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49			04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24		07:11 19:02			08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 17:47	05:37 20:51			04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:06 (E14) 07:16 (E14)	07:13 18:59			07:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 17:49	05:35 20:53			04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:03 (E14) 07:18 (E14)	07:15 18:56			07:18 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 17:51				04:37 21:51		05:14 21:30	06:15 20:17	07:02 (E14) 07:19 (E14)	08:51 18:56			07:20 17:38	08:51 15:47	
Potential sun hours	235	266	366	426			508	528	529	469		385			324	247	216
Total, worst case				231							42	192					
Sun reduction				0.50							0.50	0.43					
Oper. time red.				0.94							0.94	0.94					
Wind dir. red.				0.66							0.66	0.66					
Total reduction				0.31							0.31	0.26					
Total, real				72							13	51					

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	13:55 (E13)	07:11	06:49			05:32	04:36
	15:48	36	14:21 (E13)	16:45	36	14:31 (E13)	17:47	19:53	20:55	21:53
2	08:50	13:45 (E13)	08:13	13:56 (E13)	07:08	06:46			05:30	04:35
	15:49	37	14:22 (E13)	16:47	34	14:30 (E13)	17:50	19:55	20:57	21:54
3	08:50	13:45 (E13)	08:11	13:58 (E13)	07:06	06:43			05:28	04:34
	15:51	37	14:22 (E13)	16:50	31	14:29 (E13)	17:52	19:57	20:59	21:55
4	08:50	13:45 (E13)	08:09	13:59 (E13)	07:03	06:41			05:26	04:33
	15:52	37	14:22 (E13)	16:52	29	14:28 (E13)	17:54	19:59	21:02	21:57
5	08:49	13:46 (E13)	08:07	14:01 (E13)	07:00	06:38			05:23	04:32
	15:53	38	14:24 (E13)	16:54	26	14:27 (E13)	17:56	20:01	21:04	21:58
6	08:49	13:46 (E13)	08:05	14:03 (E13)	06:58	06:35			05:21	04:31
	15:55	38	14:24 (E13)	16:56	22	14:25 (E13)	17:58	20:03	21:06	21:59
7	08:48	13:46 (E13)	08:03	14:06 (E13)	06:55	06:33			05:19	04:30
	15:56	39	14:25 (E13)	16:59	16	14:22 (E13)	18:00	20:05	21:08	22:00
8	08:47	13:46 (E13)	08:00	14:13 (E13)	06:53	06:30			05:17	04:29
	15:58	40	14:26 (E13)	17:01	4	14:17 (E13)	18:03	20:07	21:10	22:01
9	08:47	13:46 (E13)	07:58		06:50	06:27			05:15	04:28
	15:59	40	14:26 (E13)	17:03		18:05	20:10	2	06:56 (E8)	21:12
10	08:46	13:46 (E13)	07:56		06:47	06:25			05:13	04:28
	16:01	41	14:27 (E13)	17:05		18:07	20:12	10	07:00 (E8)	21:14
11	08:45	13:46 (E13)	07:54		06:45	06:22			05:10	04:27
	16:03	42	14:28 (E13)	17:08		18:09	20:14	14	07:02 (E8)	21:16
12	08:44	13:46 (E13)	07:52		06:42	06:20			05:08	04:27
	16:04	42	14:28 (E13)	17:10		18:11	20:16	18	07:03 (E8)	21:18
13	08:43	13:46 (E13)	07:49		06:39	06:17			05:06	04:26
	16:06	43	14:29 (E13)	17:12		18:13	20:18	20	07:04 (E8)	21:20
14	08:42	13:47 (E13)	07:47		06:37	06:14			05:04	04:26
	16:08	42	14:29 (E13)	17:14		18:15	20:20	22	07:04 (E8)	21:22
15	08:41	13:46 (E13)	07:45		06:34	06:12			05:02	04:26
	16:10	43	14:29 (E13)	17:17		18:17	20:22	23	07:05 (E8)	21:24
16	08:40	13:47 (E13)	07:43		06:31	06:09			05:01	04:25
	16:12	43	14:30 (E13)	17:19		18:20	20:24	23	07:04 (E8)	21:25
17	08:39	13:47 (E13)	07:40		06:29	06:07			04:59	04:25
	16:14	43	14:30 (E13)	17:21		18:22	20:26	24	07:05 (E8)	21:27
18	08:37	13:48 (E13)	07:38		06:26	06:04			04:57	04:25
	16:16	43	14:31 (E13)	17:23		18:24	20:28	23	07:04 (E8)	21:29
19	08:36	13:47 (E13)	07:35		06:23	06:02			04:55	04:25
	16:18	44	14:31 (E13)	17:25		18:26	20:30	22	07:03 (E8)	21:31
20	08:35	13:48 (E13)	07:33		06:21	05:59			04:53	04:25
	16:20	44	14:32 (E13)	17:28		18:28	20:32	21	07:02 (E8)	21:33
21	08:33	13:48 (E13)	07:31		06:18	05:57			04:52	04:25
	16:22	44	14:32 (E13)	17:30		18:30	20:35	20	07:02 (E8)	21:35
22	08:32	13:49 (E13)	07:28		06:15	05:54			04:50	04:25
	16:24	43	14:32 (E13)	17:32		18:32	20:37	18	07:01 (E8)	21:36
23	08:30	13:49 (E13)	07:26		06:13	05:52			04:48	04:26
	16:26	43	14:32 (E13)	17:34		18:34	20:39	16	06:59 (E8)	21:38
24	08:29	13:49 (E13)	07:23		06:10	05:49			04:47	04:26
	16:28	43	14:32 (E13)	17:37		18:36	20:41	12	06:57 (E8)	21:40
25	08:27	13:50 (E13)	07:21		06:07	05:47			04:45	04:26
	16:30	43	14:33 (E13)	17:39		18:38	20:43	4	06:53 (E8)	21:42
26	08:25	13:51 (E13)	07:18		06:05	05:44			04:44	04:27
	16:32	42	14:33 (E13)	17:41		18:40	20:45		21:43	22:10
27	08:24	13:51 (E13)	07:16		06:02	05:42			04:42	04:27
	16:34	42	14:33 (E13)	17:43		18:43	20:47		21:45	22:10
28	08:22	13:52 (E13)	07:13		05:59	05:40			04:41	04:28
	16:36	41	14:33 (E13)	17:45		18:45	20:49		21:47	22:10
29	08:20	13:53 (E13)			06:57	05:37			04:39	04:28
	16:39	40	14:33 (E13)			19:47	20:51		21:48	22:10
30	08:18	13:54 (E13)			06:54	05:35			04:38	04:29
	16:41	38	14:32 (E13)			19:49	20:53		21:50	22:09
31	08:17	13:54 (E13)			06:51				04:37	
	16:43	37	14:31 (E13)			19:51			21:51	
Potential sun hours	235		266		366	426		508	529	
Total, worst case	1268		198			292				
Sun reduction	0.13		0.20			0.50				
Oper. time red.	0.94		0.94			0.94				
Wind dir. red.	0.66		0.66			0.66				
Total reduction	0.08		0.12			0.31				
Total, real	105		25			90				

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	06:52 (E8)	07:21	07:27
	22:08	21:24	20:09	2 06:54 (E8)	18:48	16:31
4	04:33	05:21	06:23	07:23	07:29	13:35 (E13)
	22:07	21:22	20:06	18:46	16:29	17 13:52 (E13)
5	04:34	05:23	06:25	07:25	07:31	13:32 (E13)
	22:07	21:19	20:03	18:43	16:27	22 13:54 (E13)
6	04:35	05:25	06:27	07:27	07:33	13:31 (E13)
	22:06	21:17	20:01	18:40	16:25	26 13:57 (E13)
7	04:36	05:27	06:29	07:29	07:36	13:29 (E13)
	22:05	21:15	19:58	18:38	16:23	29 13:58 (E13)
8	04:37	05:29	06:31	07:32	07:38	13:28 (E13)
	22:04	21:13	19:55	18:35	16:21	32 14:00 (E13)
9	04:38	05:31	06:33	07:34	07:40	13:27 (E13)
	22:03	21:11	19:53	18:32	16:19	34 14:01 (E13)
10	04:39	05:33	06:35	07:36	07:42	13:26 (E13)
	22:02	21:08	19:50	18:30	16:17	36 14:02 (E13)
11	04:41	05:35	06:37	07:38	07:44	13:25 (E13)
	22:01	21:06	19:47	18:27	16:15	38 14:03 (E13)
12	04:42	05:37	06:39	07:40	07:46	13:24 (E13)
	22:00	21:04	19:45	18:25	16:13	39 14:03 (E13)
13	04:43	05:39	06:41	07:42	07:49	13:25 (E13)
	21:59	21:01	19:42	18:22	16:11	40 14:05 (E13)
14	04:45	05:41	06:43	07:44	07:51	13:24 (E13)
	21:58	20:59	19:39	18:19	16:09	41 14:05 (E13)
15	04:46	05:43	06:45	07:46	07:53	13:23 (E13)
	21:57	20:57	19:37	18:17	16:08	42 14:05 (E13)
16	04:48	05:45	06:47	07:48	07:55	13:24 (E13)
	21:55	20:54	19:34	18:14	16:06	42 14:06 (E13)
17	04:49	05:47	06:49	07:50	07:57	13:23 (E13)
	21:54	20:52	19:31	18:12	16:04	43 14:06 (E13)
18	04:51	05:49	06:53 (E8)	07:52	07:59	13:23 (E13)
	21:52	20:49	7 07:00 (E8)	18:09	16:02	43 14:06 (E13)
19	04:52	05:51	06:50 (E8)	07:54	08:01	13:24 (E13)
	21:51	20:47	13 07:03 (E8)	18:07	16:01	43 14:07 (E13)
20	04:54	05:53	06:49 (E8)	07:57	08:03	13:24 (E13)
	21:49	20:45	15 07:04 (E8)	18:04	15:59	43 14:07 (E13)
21	04:56	05:55	06:47 (E8)	07:59	08:05	13:23 (E13)
	21:48	20:42	19 07:06 (E8)	18:02	15:58	44 14:07 (E13)
22	04:57	05:57	06:46 (E8)	08:01	08:07	13:24 (E13)
	21:46	20:40	20 07:06 (E8)	17:59	15:56	44 14:08 (E13)
23	04:59	05:59	06:45 (E8)	08:03	08:09	13:24 (E13)
	21:45	20:37	22 07:07 (E8)	17:57	15:55	44 14:08 (E13)
24	05:01	06:01	06:45 (E8)	08:05	08:11	13:25 (E13)
	21:43	20:35	22 07:07 (E8)	17:55	15:53	43 14:08 (E13)
25	05:03	06:03	06:44 (E8)	07:07	08:13	13:25 (E13)
	21:41	20:32	23 07:07 (E8)	16:52	15:52	43 14:08 (E13)
26	05:04	06:05	06:43 (E8)	07:09	08:15	13:25 (E13)
	21:39	20:29	23 07:06 (E8)	16:50	15:51	43 14:08 (E13)
27	05:06	06:07	06:43 (E8)	07:12	08:17	13:26 (E13)
	21:37	20:27	23 07:06 (E8)	16:47	15:49	44 14:10 (E13)
28	05:08	06:09	06:43 (E8)	07:14	08:19	13:27 (E13)
	21:36	20:24	23 07:06 (E8)	16:45	15:48	43 14:10 (E13)
29	05:10	06:11	06:43 (E8)	07:16	08:21	13:27 (E13)
	21:34	20:22	22 07:05 (E8)	16:43	15:47	43 14:10 (E13)
30	05:12	06:13	06:44 (E8)	07:18	08:22	13:28 (E13)
	21:32	20:19	20 07:04 (E8)	16:40	15:46	42 14:10 (E13)
31	05:14	06:15	06:45 (E8)	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		270	26		1050	1107
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.94	0.94		0.94	0.94
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.31	0.26		0.05	0.04
Total, real		83	7		54	48

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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		14:10 (E13)	07:11		06:49				05:32		04:36			
	15:48	24	14:33 (E13)	16:45	42	14:52 (E13)	17:47		19:53				20:55		21:52			
2	08:50		14:10 (E13)	08:13		14:11 (E13)	07:08		06:46				05:30		04:35			
	15:49	24	14:34 (E13)	16:47	41	14:52 (E13)	17:50		19:55				20:57		21:54			
3	08:50		14:09 (E13)	08:11		14:11 (E13)	07:06		06:43				05:28		04:34			
	15:51	26	14:35 (E13)	16:50	41	14:52 (E13)	17:52		19:57				20:59		21:55			
4	08:50		14:09 (E13)	08:09		14:12 (E13)	07:03		06:41				05:26		04:33			
	15:52	26	14:35 (E13)	16:52	40	14:52 (E13)	17:54		19:59				21:02		21:57			
5	08:49		14:09 (E13)	08:07		14:14 (E13)	07:00		06:38				05:23		04:32			
	15:53	28	14:37 (E13)	16:54	37	14:51 (E13)	17:56		20:01				21:04		21:58			
6	08:49		14:09 (E13)	08:05		14:14 (E13)	06:58		06:35				05:21		04:31			
	15:55	29	14:38 (E13)	16:56	36	14:50 (E13)	17:58		20:03				21:06		21:59			
7	08:48		14:08 (E13)	08:03		14:15 (E13)	06:55		06:33				05:19		04:30			
	15:56	31	14:39 (E13)	16:59	34	14:49 (E13)	18:00		20:05				21:08		22:00			
8	08:47		14:08 (E13)	08:00		14:17 (E13)	06:53		06:30				05:17		04:29			
	15:58	32	14:40 (E13)	17:01	32	14:49 (E13)	18:03		20:07				21:10		22:01			
9	08:47		14:08 (E13)	07:58		14:18 (E13)	06:50		06:27				05:15		04:28			
	15:59	33	14:41 (E13)	17:03	29	14:47 (E13)	18:05		20:10				21:12		22:02			
10	08:46		14:08 (E13)	07:56		14:20 (E13)	06:47		06:25				05:13		04:28			
	16:01	34	14:42 (E13)	17:05	25	14:45 (E13)	18:07		20:12				21:14		22:03			
11	08:45		14:08 (E13)	07:54		14:23 (E13)	06:45		06:22				05:10		04:27			
	16:03	35	14:43 (E13)	17:08	21	14:44 (E13)	18:09		20:14				21:16		22:04			
12	08:44		14:07 (E13)	07:52		14:26 (E13)	06:42		06:20				05:08		04:27			
	16:04	36	14:43 (E13)	17:10	14	14:40 (E13)	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	37	14:44 (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	37	14:45 (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		06:36 (E8)		04:59		04:25			
	16:14	40	14:47 (E13)	17:21			18:22		20:26	21	06:57 (E8)		21:27		22:08			
18	08:37		14:07 (E13)	07:38			06:26		06:04		06:34 (E8)		04:57		04:25			
	16:16	41	14:48 (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	24	06:58 (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		14:07 (E13)	07:31			06:18		05:57		06:33 (E8)		04:52		04:25			
	16:22	43	14:50 (E13)	17:30			18:30		20:35	24	06:57 (E8)		21:35		22:10			
22	08:32		14:07 (E13)	07:28			06:15		05:54		06:34 (E8)		04:50		04:25			
	16:24	44	14:51 (E13)	17:32			18:32		20:37	23	06:57 (E8)		21:36		22:10			
23	08:30		14:07 (E13)	07:26			06:13		05:52		06:33 (E8)		04:48		04:26			
	16:26	44	14:51 (E13)	17:34			18:34		20:39	23	06:56 (E8)		21:38		22:10			
24	08:29		14:07 (E13)	07:23			06:10		05:49		06:34 (E8)		04:47		04:26			
	16:28	44	14:51 (E13)	17:37			18:36		20:41	22	06:56 (E8)		21:40		22:10			
25	08:27		14:08 (E13)	07:21			06:07		05:47		06:35 (E8)		04:45		04:26			
	16:30	44	14:52 (E13)	17:39			18:38		20:43	20	06:55 (E8)		21:42		22:10			
26	08:25		14:08 (E13)	07:18			06:05		05:44		06:35 (E8)		04:44		04:27			
	16:32	45	14:53 (E13)	17:41			18:40		20:45	18	06:53 (E8)		21:43		22:10			
27	08:24		14:08 (E13)	07:16			06:02		05:42		06:36 (E8)		04:42		04:27			
	16:34	45	14:53 (E13)	17:43			18:43		20:47	16	06:52 (E8)		21:45		22:10			
28	08:22		14:09 (E13)	07:13			05:59		05:40		06:38 (E8)		04:41		04:28			
	16:36	44	14:53 (E13)	17:45			18:45		20:49	12	06:50 (E8)		21:47		22:10			
29	08:20		14:09 (E13)				06:57		05:37		06:40 (E8)		04:39		04:28			
	16:39	44	14:53 (E13)				19:47		20:51	8	06:48 (E8)		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		14:09 (E13)				06:51						04:37					
	16:43	43	14:52 (E13)				19:51						21:51					
Potential sun hours	235			266			366		426				508		529			
Total, worst case		1159			392					320								
Sun reduction		0.13			0.20					0.50								
Oper. time red.		0.94			0.94					0.94								
Wind dir. red.		0.66			0.66					0.65								
Total reduction		0.08			0.13					0.31								
Total, real		96			49					99								

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	13:49 (E13) 14:15 (E13)	08:24 15:45	13:50 (E13) 14:25 (E13)
2	04:31 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	13:47 (E13) 14:17 (E13)	08:26 15:44	13:51 (E13) 14:25 (E13)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	13:46 (E13) 14:19 (E13)	08:27 15:43	13:51 (E13) 14:24 (E13)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	13:45 (E13) 14:19 (E13)	08:29 15:42	13:52 (E13) 14:24 (E13)
5	04:34 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	13:43 (E13) 14:20 (E13)	08:31 15:42	13:54 (E13) 14:24 (E13)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	13:43 (E13) 14:21 (E13)	08:32 15:41	13:55 (E13) 14:24 (E13)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	13:42 (E13) 14:22 (E13)	08:34 15:40	13:55 (E13) 14:23 (E13)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	13:42 (E13) 14:23 (E13)	08:35 15:40	13:57 (E13) 14:24 (E13)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	13:41 (E13) 14:23 (E13)	08:37 15:39	13:57 (E13) 14:23 (E13)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	13:41 (E13) 14:23 (E13)	08:38 15:39	13:59 (E13) 14:23 (E13)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	13:41 (E13) 14:24 (E13)	08:39 15:38	13:59 (E13) 14:23 (E13)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	13:40 (E13) 14:24 (E13)	08:40 15:38	14:01 (E13) 14:23 (E13)
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	13:41 (E13) 14:25 (E13)	08:41 15:38	14:02 (E13) 14:23 (E13)
14	04:45 21:58	05:41 20:59	06:47 (E8) 19:39	06:43 18:19	07:51 16:09	13:41 (E13) 14:25 (E13)	08:43 15:38	14:03 (E13) 14:23 (E13)
15	04:46 21:57	05:43 20:57	06:45 (E8) 19:37	06:45 18:17	07:53 16:08	13:40 (E13) 14:25 (E13)	08:44 15:38	14:04 (E13) 14:23 (E13)
16	04:48 21:55	05:45 20:54	06:43 (E8) 19:34	06:47 18:14	07:55 16:06	13:41 (E13) 14:26 (E13)	08:45 15:38	14:04 (E13) 14:23 (E13)
17	04:49 21:54	05:47 20:52	06:41 (E8) 19:31	06:49 18:12	07:57 16:04	13:41 (E13) 14:25 (E13)	08:45 15:38	14:05 (E13) 14:23 (E13)
18	04:51 21:52	05:49 20:49	06:40 (E8) 19:29	06:51 18:09	07:59 16:02	13:41 (E13) 14:25 (E13)	08:46 15:38	14:06 (E13) 14:23 (E13)
19	04:52 21:51	05:51 20:47	06:39 (E8) 19:26	06:53 18:07	08:01 16:01	13:42 (E13) 14:26 (E13)	08:47 15:38	14:06 (E13) 14:22 (E13)
20	04:54 21:49	05:53 20:45	06:39 (E8) 19:23	06:55 18:04	08:03 15:59	13:42 (E13) 14:26 (E13)	08:48 15:39	14:07 (E13) 14:23 (E13)
21	04:56 21:48	05:55 20:42	06:38 (E8) 19:20	06:57 18:02	08:05 15:58	13:42 (E13) 14:25 (E13)	08:48 15:39	14:08 (E13) 14:24 (E13)
22	04:57 21:46	05:57 20:40	06:38 (E8) 19:18	06:59 17:59	08:07 15:56	13:44 (E13) 14:26 (E13)	08:49 15:39	14:08 (E13) 14:24 (E13)
23	04:59 21:45	05:59 20:37	06:38 (E8) 19:15	07:01 17:57	08:09 15:55	13:44 (E13) 14:26 (E13)	08:49 15:40	14:09 (E13) 14:25 (E13)
24	05:01 21:43	06:01 20:35	06:38 (E8) 19:12	07:03 17:55	08:11 15:53	13:44 (E13) 14:26 (E13)	08:50 15:40	14:09 (E13) 14:25 (E13)
25	05:03 21:41	06:03 20:32	06:38 (E8) 19:10	07:05 16:52	08:13 15:52	13:45 (E13) 14:25 (E13)	08:50 15:41	14:09 (E13) 14:26 (E13)
26	05:04 21:39	06:05 20:29	06:38 (E8) 19:07	07:07 16:50	08:15 15:51	13:45 (E13) 14:25 (E13)	08:51 15:42	14:09 (E13) 14:26 (E13)
27	05:06 21:37	06:07 20:27	06:38 (E8) 19:04	07:09 16:47	08:17 15:49	13:47 (E13) 14:26 (E13)	08:51 15:43	14:09 (E13) 14:27 (E13)
28	05:08 21:36	06:09 20:24	06:39 (E8) 19:02	07:11 16:45	08:19 15:48	13:48 (E13) 14:26 (E13)	08:51 15:44	14:09 (E13) 14:28 (E13)
29	05:10 21:34	06:11 20:22	06:41 (E8) 18:59	07:13 16:43	08:21 15:47	13:48 (E13) 14:25 (E13)	08:51 15:45	14:10 (E13) 14:29 (E13)
30	05:12 21:32	06:13 20:19	06:43 (E8) 18:56	07:15 16:40	08:22 15:46	13:54 (E13) 14:25 (E13)	08:51 15:46	14:10 (E13) 14:30 (E13)
31	05:14 21:30	06:15 20:17		07:20 16:38	08:24 15:47	13:51 (E13) 14:13 (E13)	08:51 15:47	14:10 (E13) 14:32 (E13)
Potential sun hours	529	469	385	324	247		216	
Total, worst case						1203		686
Sun reduction		0.50		0.26		0.08		0.07
Oper. time red.		0.94		0.94		0.94		0.94
Wind dir. red.		0.65		0.66		0.66		0.66
Total reduction		0.31		0.16		0.05		0.04
Total, real		100		6		62		30

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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		07:11		15:32 (E15)	06:49		05:32				04:36		20:27 (E13)
	15:48	44	13:23 (E16)	16:45		17:47	25	15:57 (E15)	19:53		20:55				21:52	30	20:57 (E13)
2	08:50		12:39 (E16)	08:13		07:08		15:34 (E15)	06:46		05:30				04:35		20:26 (E13)
	15:49	44	13:23 (E16)	16:47	13	15:51 (E15)	20	15:54 (E15)	19:55		20:57				21:54	32	20:58 (E13)
3	08:50		12:40 (E16)	08:11		07:06		15:38 (E15)	06:43		05:28				04:34		20:26 (E13)
	15:51	44	13:24 (E16)	16:50	19	15:54 (E15)	13	15:51 (E15)	19:57		20:59				21:55	32	20:58 (E13)
4	08:50		12:40 (E16)	08:09		07:03			06:41		05:26				04:33		20:25 (E13)
	15:52	44	13:24 (E16)	16:52	24	15:57 (E15)			19:59		21:01				21:56	34	20:59 (E13)
5	08:49		12:40 (E16)	08:07		07:00			06:38		05:23				04:32		20:26 (E13)
	15:53	44	13:24 (E16)	16:54	27	15:58 (E15)			20:01		21:04				21:58	34	21:00 (E13)
6	08:49		12:41 (E16)	08:05		06:58			06:35		05:21				04:31		20:25 (E13)
	15:55	45	13:26 (E16)	16:56	30	16:00 (E15)			20:03		21:06				21:59	35	21:00 (E13)
7	08:48		12:41 (E16)	08:03		06:55			06:33		05:19				04:30		20:25 (E13)
	15:56	45	13:26 (E16)	16:59	32	16:01 (E15)			20:05		21:08				22:00	35	21:00 (E13)
8	08:47		12:42 (E16)	08:00		06:53			06:30		05:17				04:29		20:26 (E13)
	15:58	44	13:26 (E16)	17:01	35	16:03 (E15)			20:07		21:10				22:01	35	21:01 (E13)
9	08:47		12:42 (E16)	07:58		06:50			06:27		05:15				04:29		20:25 (E13)
	15:59	44	13:26 (E16)	17:03	36	16:03 (E15)			20:10		21:12				22:02	36	21:01 (E13)
10	08:46		12:43 (E16)	07:56		06:47			06:25		05:13				04:28		20:26 (E13)
	16:01	44	13:27 (E16)	17:05	38	16:04 (E15)			20:12		21:14				22:03	36	21:02 (E13)
11	08:45		12:44 (E16)	07:54		06:45		17:26 (E14)	06:22		05:10				04:27		20:25 (E13)
	16:03	43	13:27 (E16)	17:08	39	16:04 (E15)	12	17:38 (E14)	20:14		21:16				22:04	37	21:02 (E13)
12	08:44		12:43 (E16)	07:52		06:42		17:24 (E14)	06:20		05:08				04:27		20:25 (E13)
	16:04	44	13:27 (E16)	17:10	40	16:05 (E15)	17	17:41 (E14)	20:16		21:18				22:05	38	21:03 (E13)
13	08:43		12:44 (E16)	07:49		06:39		17:22 (E14)	06:17		05:06				04:26		20:26 (E13)
	16:06	43	13:27 (E16)	17:12	41	16:06 (E15)	20	17:42 (E14)	20:18		21:20				22:06	37	21:03 (E13)
14	08:42		12:45 (E16)	07:47		06:37		17:20 (E14)	06:14		05:04				04:26		20:26 (E13)
	16:08	43	13:28 (E16)	17:14	42	16:06 (E15)	23	17:43 (E14)	20:20		21:21				22:06	38	21:04 (E13)
15	08:41		12:45 (E16)	07:45		06:34		17:19 (E14)	06:12		05:03				04:26		20:25 (E13)
	16:10	42	13:27 (E16)	17:17	43	16:07 (E15)	24	17:43 (E14)	20:22		21:23				22:07	38	21:03 (E13)
16	08:40		12:46 (E16)	07:42		06:31		17:18 (E14)	06:09		05:01				04:25		20:26 (E13)
	16:12	42	13:28 (E16)	17:19	44	16:07 (E15)	26	17:44 (E14)	20:24		21:25				22:08	38	21:04 (E13)
17	08:39		12:47 (E16)	07:40		06:29		17:17 (E14)	06:07		04:59				04:25		20:26 (E13)
	16:14	40	13:27 (E16)	17:21	43	16:07 (E15)	27	17:44 (E14)	20:26		21:27				22:08	38	21:04 (E13)
18	08:37		12:48 (E16)	07:38		06:26		17:17 (E14)	06:04		04:57				04:25		20:26 (E13)
	16:16	40	13:28 (E16)	17:23	44	16:07 (E15)	26	17:43 (E14)	20:28		21:29				22:09	38	21:04 (E13)
19	08:36		12:48 (E16)	07:35		06:23		17:17 (E14)	06:02		04:55				04:25		20:26 (E13)
	16:18	39	13:27 (E16)	17:25	43	16:07 (E15)	27	17:44 (E14)	20:30		21:31				22:09	38	21:04 (E13)
20	08:35		12:49 (E16)	07:33		06:21		17:17 (E14)	05:59		04:53				04:25		20:26 (E13)
	16:20	38	13:27 (E16)	17:28	42	16:06 (E15)	26	17:43 (E14)	20:32		21:33				22:10	39	21:05 (E13)
21	08:33		12:50 (E16)	07:31		06:18		17:16 (E14)	05:57		04:52				04:25		20:27 (E13)
	16:22	37	13:27 (E16)	17:30	42	16:06 (E15)	26	17:42 (E14)	20:35		21:35				22:10	39	21:06 (E13)
22	08:32		12:51 (E16)	07:28		06:15		17:17 (E14)	05:54		04:50				04:25		20:27 (E13)
	16:24	35	13:26 (E16)	17:32	41	16:05 (E15)	25	17:42 (E14)	20:37		21:36				22:10	39	21:06 (E13)
23	08:30		12:52 (E16)	07:26		06:13		17:18 (E14)	05:52		04:48				04:26		20:27 (E13)
	16:26	34	13:26 (E16)	17:34	40	16:05 (E15)	22	17:40 (E14)	20:39		21:38	9	20:37 (E13)		04:26		20:27 (E13)
24	08:29		12:53 (E16)	07:23		06:10		17:18 (E14)	05:49		04:47		20:46 (E13)		22:10	38	21:05 (E13)
	16:28	32	13:25 (E16)	17:37	38	16:04 (E15)	21	17:39 (E14)	20:41		21:40	15	20:33 (E13)		04:26		20:27 (E13)
25	08:27		12:55 (E16)	07:21		06:07		17:19 (E14)	05:47		04:45		20:48 (E13)		22:10	38	21:05 (E13)
	16:30	29	13:24 (E16)	17:39	37	16:03 (E15)	17	17:36 (E14)	20:43		21:42	19	20:51 (E13)		04:26		20:28 (E13)
26	08:25		12:57 (E16)	07:18		06:05		17:22 (E14)	05:44		04:44		20:52 (E13)		22:10	38	21:06 (E13)
	16:32	26	13:23 (E16)	17:41	35	16:02 (E15)	13	17:35 (E14)	20:45		21:43	21	20:31 (E13)		04:27		20:28 (E13)
27	08:24		12:59 (E16)	07:16		06:02			05:42		04:42		20:52 (E13)		22:10	38	21:06 (E13)
	16:34	23	13:22 (E16)	17:43	33	16:01 (E15)			20:47		21:45	24	20:29 (E13)		04:27		20:28 (E13)
28	08:22		13:02 (E16)	07:13		05:59			05:40		04:41		20:53 (E13)		22:10	38	21:06 (E13)
	16:36	18	13:20 (E16)	17:45	30	16:00 (E15)			20:49		21:46	25	20:31 (E13)		04:28		20:28 (E13)
29	08:20		13:06 (E16)			06:57			05:37		04:40		20:54 (E13)		22:10	38	21:06 (E13)
	16:39	11	13:17 (E16)			19:47			20:51		21:48	27	20:28 (E13)		04:29		20:29 (E13)
30	08:18					06:54			05:35		04:38		20:55 (E13)		22:10	37	21:06 (E13)
	16:41					19:49			20:53		21:49	28	20:51 (E13)		04:29		20:30 (E13)
31	08:16					06:51					04:37		20:56 (E13)		22:09	37	21:07 (E13)
	16:43					19:51					21:51	30	20:27 (E13)				
Potential sun hours	235			266		366			426		508				528		
Total, worst case		1101			971		410				198					1098	
Sun reduction		0.13			0.20		0.41				0.57					0.56	
Oper. time red.		0.94			0.94		0.94				0.94					0.94	
Wind dir. red.		0.64			0.66		0.66				0.62					0.62	
Total reduction		0.08			0.13		0.25				0.33					0.33	
Total, real		88			122		104				65					357	

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	July			August		September		October		November		December					
1	04:30		20:29 (E13)	05:16		06:17		07:17	18:02 (E14)	07:22		14:56 (E15)	08:24	12:26 (E16)			
	22:09	37	21:06 (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		14:56 (E15)	08:26	12:25 (E16)			
	22:08	36	21:06 (E13)	21:26		20:11		18:51	14	18:18 (E14)	16:34	36	15:32 (E15)	15:44	44	13:09 (E16)	
3	04:32		20:30 (E13)	05:19		06:21		07:21	18:07 (E14)	07:27		14:58 (E15)	08:27	12:25 (E16)			
	22:08	37	21:07 (E13)	21:24		20:09		18:48	8	18:15 (E14)	16:32	34	15:32 (E15)	15:43	45	13:10 (E16)	
4	04:33		20:31 (E13)	05:21		06:23		07:23		07:29		14:59 (E15)	08:29	12:26 (E16)			
	22:07	36	21:07 (E13)	21:21		20:06		18:46		16:29	32	15:31 (E15)	15:42	44	13:10 (E16)		
5	04:34		20:31 (E13)	05:23		06:25		07:25		07:31		15:00 (E15)	08:31	12:27 (E16)			
	22:07	36	21:07 (E13)	21:19		20:03		18:43		16:27	29	15:29 (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	12:27 (E16)			
	22:06	35	21:07 (E13)	21:17		20:01		18:40		16:25	26	15:28 (E15)	15:41	45	13:12 (E16)		
7	04:36		20:32 (E13)	05:27		06:29		07:29		07:35		15:03 (E15)	08:34	12:27 (E16)			
	22:05	35	21:07 (E13)	21:15		19:58		18:38		16:23	23	15:26 (E15)	15:40	44	13:11 (E16)		
8	04:37		20:33 (E13)	05:29		06:31		07:31		07:38		15:06 (E15)	08:35	12:28 (E16)			
	22:04	33	21:06 (E13)	21:13		19:55		18:35		16:21	18	15:24 (E15)	15:40	44	13:12 (E16)		
9	04:38		20:33 (E13)	05:31		06:33		07:34		07:40		15:09 (E15)	08:36	12:28 (E16)			
	22:03	33	21:06 (E13)	21:11		19:53		18:32		16:19	12	15:21 (E15)	15:39	44	13:12 (E16)		
10	04:39		20:33 (E13)	05:33		06:35		07:36	16:16 (E15)	07:42			08:38	12:29 (E16)			
	22:02	33	21:06 (E13)	21:08		19:50		18:30	6	16:22 (E15)	16:17		15:39	44	13:13 (E16)		
11	04:41		20:34 (E13)	05:35		06:37		07:38		16:10 (E15)	07:44		08:39	12:29 (E16)			
	22:01	31	21:05 (E13)	21:06		19:47		18:27	17	16:27 (E15)	16:15		15:38	44	13:13 (E16)		
12	04:42		20:35 (E13)	05:37		06:39		07:40		16:07 (E15)	07:46		08:40	12:29 (E16)			
	22:00	31	21:06 (E13)	21:04		19:45		18:25	22	16:29 (E15)	16:13		15:38	44	13:13 (E16)		
13	04:43		20:36 (E13)	05:39		06:41		07:42		16:04 (E15)	07:48	12:37 (E16)	08:41	12:30 (E16)			
	21:59	29	21:05 (E13)	21:01		19:42		18:22	27	16:31 (E15)	16:11	12	12:49 (E16)	15:38	45	13:15 (E16)	
14	04:45		20:36 (E13)	05:41		06:43		07:44		16:02 (E15)	07:51		08:42	12:30 (E16)			
	21:58	28	21:04 (E13)	20:59		19:39		18:19	30	16:32 (E15)	16:09	18	12:52 (E16)	15:38	45	13:15 (E16)	
15	04:46		20:37 (E13)	05:43		06:45		07:46		16:01 (E15)	07:53		08:44	12:31 (E16)			
	21:56	26	21:03 (E13)	20:57		19:37		18:17	33	16:34 (E15)	16:08	23	12:54 (E16)	15:38	44	13:15 (E16)	
16	04:48		20:38 (E13)	05:45		06:47		07:48		15:59 (E15)	07:55		08:44	12:31 (E16)			
	21:55	25	21:03 (E13)	20:54		19:34		18:14	36	16:35 (E15)	16:06	26	12:56 (E16)	15:38	45	13:16 (E16)	
17	04:49		20:39 (E13)	05:47		06:49	18:11 (E14)	07:50		15:58 (E15)	07:57		12:29 (E16)	08:45	12:32 (E16)		
	21:54	23	21:02 (E13)	20:52		19:31	11	18:22 (E14)	18:12	37	16:35 (E15)	16:04	29	12:58 (E16)	15:38	44	13:16 (E16)
18	04:51		20:41 (E13)	05:49		06:51		07:52		15:56 (E15)	07:59		12:27 (E16)	08:46	12:32 (E16)		
	21:52	20	21:01 (E13)	20:49		19:28	17	18:25 (E14)	18:09	40	16:36 (E15)	16:02	32	12:59 (E16)	15:38	45	13:17 (E16)
19	04:52		20:42 (E13)	05:51		06:53		07:54		15:55 (E15)	08:01		12:27 (E16)	08:47	12:32 (E16)		
	21:51	17	20:59 (E13)	20:47		19:26	20	18:26 (E14)	18:07	41	16:36 (E15)	16:01	34	13:01 (E16)	15:38	44	13:16 (E16)
20	04:54		20:45 (E13)	05:53		06:55		07:57		15:55 (E15)	08:03		12:26 (E16)	08:48	12:33 (E16)		
	21:49	13	20:58 (E13)	20:44		19:23	22	18:26 (E14)	18:04	42	16:37 (E15)	15:59	35	13:01 (E16)	15:39	44	13:17 (E16)
21	04:56		20:48 (E13)	05:55		06:57		07:59		15:54 (E15)	08:05		12:26 (E16)	08:48	12:33 (E16)		
	21:48	6	20:54 (E13)	20:42		19:20	24	18:26 (E14)	18:02	43	16:37 (E15)	15:58	36	13:02 (E16)	15:39	44	13:17 (E16)
22	04:57			05:57		06:59		08:01		15:54 (E15)	08:07		12:26 (E16)	08:49	12:34 (E16)		
	21:46			20:40		19:18	26	18:27 (E14)	17:59	43	16:37 (E15)	15:56	38	13:04 (E16)	15:39	44	13:18 (E16)
23	04:59			05:59		07:01		08:03		15:54 (E15)	08:09		12:25 (E16)	08:49	12:34 (E16)		
	21:44			20:37		19:15	27	18:27 (E14)	17:57	43	16:37 (E15)	15:55	39	13:04 (E16)	15:40	44	13:18 (E16)
24	05:01			06:01		07:03		08:05		15:54 (E15)	08:11		12:25 (E16)	08:50	12:35 (E16)		
	21:43			20:34		19:12	27	18:27 (E14)	17:55	43	16:37 (E15)	15:53	40	13:05 (E16)	15:41	44	13:19 (E16)
25	05:03			06:03		07:05		07:07		14:53 (E15)	08:13		12:25 (E16)	08:50	12:35 (E16)		
	21:41			20:32		19:10	27	18:26 (E14)	16:52	43	15:36 (E15)	15:52	40	13:05 (E16)	15:41	45	13:20 (E16)
26	05:04			06:05		07:07		07:09		14:54 (E15)	08:15		12:24 (E16)	08:50	12:36 (E16)		
	21:39			20:29		19:07	27	18:26 (E14)	16:50	43	15:37 (E15)	15:51	42	13:06 (E16)	15:42	44	13:20 (E16)
27	05:06			06:07		07:09		07:12		14:54 (E15)	08:17		12:24 (E16)	08:51	12:36 (E16)		
	21:37			20:27		19:04	26	18:25 (E14)	16:47	42	15:36 (E15)	15:49	42	13:06 (E16)	15:43	44	13:20 (E16)
28	05:08			06:09		07:11		07:14		14:53 (E15)	08:19		12:25 (E16)	08:51	12:37 (E16)		
	21:36			20:24		19:02	25	18:24 (E14)	16:45	42	15:35 (E15)	15:48	43	13:08 (E16)	15:44	44	13:21 (E16)
29	05:10			06:11		07:13		07:16		14:54 (E15)	08:20		12:25 (E16)	08:51	12:37 (E16)		
	21:34			20:22		18:59	23	18:24 (E14)	16:43	42	15:36 (E15)	15:47	43	13:08 (E16)	15:45	45	13:22 (E16)
30	05:12			06:13		07:15		07:18		14:54 (E15)	08:22		12:25 (E16)	08:51	12:38 (E16)		
	21:32			20:19		18:56	22	18:23 (E14)	16:40	41	15:35 (E15)	15:46	44	13:09 (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		600				324		836		864			1371				
Sun reduction		0.49				0.43		0.26		0.08			0.07				
Oper. time red.		0.94				0.94		0.94		0.94			0.94				
Wind dir. red.		0.62				0.66		0.66		0.64			0.64				
Total reduction		0.29				0.26		0.16		0.05			0.04				
Total, real		172				85		135		43			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 & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
26/06/2024 08:57/4.0.540

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
425 448 518 446 469 751 755 902 1,169 1,037 801 535 8,256
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	09:04 (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) 17:50	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) 17:52	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 (E13) 15:43
4	08:50 15:52	08:09 16:52	09:01 (E13) 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	08:28 (E13) 15:42
5	08:49 15:53	08:07 16:54	09:00 (E13) 17:56	06:38 20:01	05:23 21:04	04:32 21:58	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:29 (E13) 15:42
6	08:49 15:55	08:05 16:56	08:59 (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	08:30 (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	08:31 (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	08:33 (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	08:37 (E13) 15:38
12	08:44 16:05	07:52 17:10	08:57 (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	08:39 (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	08:44 (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	08:57 (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	08:57 (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	08:58 (E13) 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	07:55 18:07	08:01 16:01	08:47 (E13) 15:38
20	08:35 16:20	07:33 17:28	08:58 (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 16:04	08:48 (E13) 15:39
22	08:32 16:24	07:28 17:32	09:00 (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	08:08 16:04	08:49 (E13) 15:39
23	08:30 16:26	07:26 17:34	09:02 (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 16:06	08:50 (E13) 15:40
24	08:29 16:28	07:23 17:37	09:03 (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 16:06	08:51 (E13) 15:41
25	08:27 16:30	07:21 17:39	09:05 (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	09:08 (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 16:06	08:51 (E13) 15:42
27	08:24 16:34	07:16 17:43	09:23 (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 16:06	08:51 (E13) 15:43
28	08:22 16:36	07:13 17:45	09:23 (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 16:06	08:51 (E13) 15:44
29	08:20 16:39	07:11 17:48	09:23 (E13) 18:48	05:37 20:51	04:38 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 16:06	08:51 (E13) 15:45
30	08:18 16:41	07:08 17:55	09:23 (E13) 18:54	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 16:06	08:51 (E13) 15:46
31	08:17 16:43	07:06 17:58	09:23 (E13) 18:58	05:31 20:51	04:37 21:51	04:27 22:10	05:14 21:30	06:15 20:17	07:16 18:58	08:18 17:41	08:23 16:06	08:51 (E13) 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	42	877								563	370	
Sun reduction	0.13	0.20								0.26	0.08	
Oper. time red.	0.94	0.94								0.94	0.94	
Wind dir. red.	0.59	0.59								0.59	0.59	
Total reduction	0.07	0.11								0.14	0.05	
Total, real	3	98								81	17	

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first 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:
26/06/2024 08:57/4.0.540

SHADOW - Calendar

Shadow receptor: Muiž nieki (kad. apz. 76860010011) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (191)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
425 448 518 446 469 751 755 902 1,169 1,037 801 535 8,256

Idle 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	15:30 (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	22	15:52 (E1)	17:47	19:53	20:55	21:52	22:09	21:28	20:14	18:53	16:35
2	08:50	08:12	15:31 (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	21	15:52 (E1)	17:49	19:55	20:57	21:54	22:08	21:25	20:11	18:50	16:33
3	08:50	08:10	15:32 (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	19	15:51 (E1)	17:51	19:57	20:59	21:55	22:08	21:23	20:08	18:48	16:31
4	08:49	08:08	15:33 (E1)	07:03	06:40	05:25	04:32	04:32	05:21	06:23	07:23	07:29	15:08 (E1)
	15:51	16:51	18	15:51 (E1)	17:54	19:59	21:01	21:56	22:07	21:21	20:06	18:45	16:29
5	08:49	08:06	15:34 (E1)	07:00	06:38	05:23	04:31	04:33	05:23	06:25	07:25	07:31	15:05 (E1)
	15:53	16:54	15	15:49 (E1)	17:56	20:01	21:03	21:58	22:06	21:19	20:03	18:42	16:27
6	08:49	08:04	15:36 (E1)	06:57	06:35	05:21	04:30	04:34	05:25	06:27	07:27	07:33	15:04 (E1)
	15:54	16:56	12	15:48 (E1)	17:58	20:03	21:05	21:59	22:06	21:17	20:00	18:40	16:25
7	08:48	08:02	15:39 (E1)	06:55	06:32	05:18	04:29	04:35	05:27	06:29	07:29	07:35	15:03 (E1)
	15:56	16:58	7	15:46 (E1)	18:00	20:05	21:07	22:00	22:05	21:15	19:58	18:37	16:22
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)
	15:57	17:00		18:02	20:07	21:09	22:01	22:04	21:13	19:55	18:35	16:20	15:21 (E1)
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)
	15:59	17:03		18:04	20:09	21:11	22:02	22:03	21:10	19:52	18:32	16:18	15:22 (E1)
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)
	16:00	17:05		18:06	20:11	21:13	22:03	22:02	21:08	19:50	18:29	16:16	15:23 (E1)
11	08:45	07:54		06:44	06:22	05:10	04:27	04:40	05:35	06:37	07:37	07:44	15:01 (E1)
	16:02	17:07		18:09	20:13	21:15	22:04	22:01	21:06	19:47	18:27	16:14	15:24 (E1)
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)
	16:04	17:09		18:11	20:15	21:17	22:05	22:00	21:03	19:44	18:24	16:13	15:23 (E1)
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)
	16:06	17:12		18:13	20:18	21:19	22:06	21:59	21:01	19:42	18:22	16:11	15:23 (E1)
14	08:42	07:47		06:36	06:14	05:04	04:25	04:44	05:41	06:43	07:44	07:50	15:01 (E1)
	16:07	17:14		18:15	20:20	21:21	22:06	21:58	20:59	19:39	18:19	16:09	15:24 (E1)
15	08:41	07:45		06:34	06:11	05:02	04:25	04:46	05:43	06:45	07:46	07:52	15:01 (E1)
	16:09	17:16		18:17	20:22	21:23	22:07	21:56	20:56	19:36	18:16	16:07	15:24 (E1)
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)
	16:11	17:18		18:19	20:24	21:25	22:08	21:55	20:54	19:34	18:14	16:05	15:24 (E1)
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)
	16:13	17:21		18:21	20:26	21:27	22:08	21:54	20:52	19:31	18:11	16:03	15:23 (E1)
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)
	16:15	17:23		18:23	20:28	21:29	22:09	21:52	20:49	19:28	18:09	16:02	15:23 (E1)
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)
	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
20	08:34	15:32 (E1)	07:33	06:20	05:59	04:53	04:25	04:53	05:53	06:55	07:56	08:03	15:05 (E1)
	16:19	8	15:40 (E1)	17:27	18:28	20:32	21:33	22:09	21:49	20:44	19:23	18:04	15:59
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)
	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
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	15:08 (E1)
	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
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)
	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
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	15:16 (E1)
	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
25	08:27	15:29 (E1)	07:20	06:07	05:46	04:45	04:26	05:02	06:03	07:05	08:07	08:13	15:15 (E1)
	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
26	08:25	15:29 (E1)	07:18	06:04	05:44	04:43	04:26	05:04	06:05	07:07	08:09	08:15	15:16 (E1)
	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
27	08:24	15:29 (E1)	07:15	06:02	05:41	04:42	04:27	05:06	06:07	07:09	08:11	08:17	15:17 (E1)
	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
28	08:22	15:29 (E1)	07:13	05:59	05:39	04:40	04:27	05:08	06:09	07:11	08:13	08:19	15:20 (E1)
	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
29	08:20	15:29 (E1)		06:56	05:37	04:39	04:28	05:09	06:11	07:13	08:15	08:20	15:44
	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	08:17	08:22	15:45
	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		15:46
	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	529	469	385	324	247	216
Total, worst case	232	114										352	
Sun reduction	0.13	0.20										0.08	
Oper. time red.	0.94	0.94										0.94	
Wind dir. red.	0.65	0.65										0.65	
Total reduction	0.08	0.12										0.05	
Total, real	19	14										18	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30			07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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
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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
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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
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31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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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
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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 15:49	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
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
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Table layout: For each day in each month the following matrix apply

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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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) []

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Operational time

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

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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
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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
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Total, worst case												
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Oper. time red.												
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Total reduction												
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Table layout: For each day in each month the following matrix apply

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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:

26/06/2024 08:57/4.0.540

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
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Operational time

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

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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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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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) []

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

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8	08:48 15:58	08:01 17:01	06:53 18:03	06:30 20:08	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10	05:15 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:33	07:40 16:19	08:37 15:39
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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30			07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
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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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	07:11 17:48	06:49 19:53	05:33 20:56	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14	07:17 18:54	07:23 16:36	08:24 15:45
2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	04:35 21:53	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:23 16:36	08:24 15:45	
2	08:51 15:49	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:09	05:17 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44	
3	08:50 15:50	08:11 16:49	07:06 17:52	06:43 19:57	05:28 21:00	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:31	08:28 15:43	
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:02	04:32 21:57	04:32 22:07	05:21 21:22	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42	
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41	
6	08:49 15:54	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41	
7	08:48 15:56	08:03 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:36 16:23	08:34 15:40	
8	08:48 15:57	08:00 17:01	06:53 18:02	06:30 20:07	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39	
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:10	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	08:37 15:39	
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:27 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:38	
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38	
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38	
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38	
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	08:43 15:37	
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:24	04:25 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:07	08:44 15:37	
16	08:40 16:11	07:43 17:19	06:31 18:19	06:09 20:24	05:00 21:26	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:37	
17	08:39 16:13	07:40 17:21	06:29 18:22	06:07 20:26	04:58 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38	5 11:19 (E5)
18	08:38 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38	6 11:25 (E5)
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38	7 11:26 (E5)
20	08:35 16:19	07:33 17:28	06:21 18:28	05:59 20:33	04:53 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:38	8 11:27 (E5)
21	08:33 16:21	07:31 17:30	06:18 18:30	05:56 20:35	04:51 21:35	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:49 15:39	8 11:28 (E5)
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39	8 11:28 (E5)
23	08:30 16:25	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:50 15:40	8 11:29 (E5)
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	8 11:29 (E5)
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	6 11:28 (E5)
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	5 11:28 (E5)
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:38	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49	08:51 15:42	3 11:27 (E5)
28	08:22 16:36	07:13 17:45	05:59 18:45	05:39 20:49	04:41 21:47	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43	
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:44	
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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													72
Sun reduction													0.07
Oper. time red.													0.94
Wind dir. red.													0.62
Total reduction													0.04
Total, real													3

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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
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27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:37	06:07 20:27	07:09 19:04	08:12 17:47	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	08:14 17:45	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:34	06:11 20:22	07:13 18:59	08:16 17:43	08:20 15:47	08:51 15:45
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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
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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 20:16	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
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15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:26 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:52 16:07	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:07	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:54 16:06	08:44 15:38
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21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:52 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
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27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:50 15:43
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Total, worst case												
Sun reduction												
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Total reduction												
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Table layout: For each day in each month the following matrix apply

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:38
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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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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30			07:21 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	16:35 (E13) 19:57	06:43 20:59	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	16:37 (E13) 19:59	06:41 21:01	04:33 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	16:47 (E13) 20:01	19:59 21:04	21:01 21:56
6	08:49 15:55	08:05 16:56	08:36 (E10) 17:58	06:58 20:03	06:35 21:06	04:31 21:59
7	08:48 15:56	08:03 16:58	08:32 (E10) 18:00	06:55 20:05	06:33 21:08	04:30 22:00
8	08:47 15:58	08:00 17:01	08:31 (E10) 18:03	06:53 18:03	06:30 20:07	04:29 22:10
9	08:47 15:59	07:58 17:03	08:29 (E10) 18:05	06:50 18:05	06:27 20:10	04:28 22:12
10	08:46 16:01	07:56 17:05	08:28 (E10) 18:07	06:47 18:07	06:25 20:12	04:28 22:14
11	08:45 16:03	07:54 17:07	08:27 (E10) 18:09	06:45 18:09	06:22 20:14	04:27 22:16
12	08:44 16:04	07:52 17:10	08:26 (E10) 18:11	06:42 18:11	06:20 20:16	04:27 22:18
13	08:43 16:06	07:49 17:12	08:27 (E10) 18:13	06:39 18:13	06:17 20:18	04:26 22:20
14	08:42 16:08	07:47 17:14	08:26 (E10) 18:15	06:37 18:15	06:14 20:20	04:26 22:22
15	08:41 16:10	07:45 17:16	08:26 (E10) 18:17	06:34 18:17	06:12 20:22	04:26 22:24
16	08:40 16:12	07:42 17:19	08:26 (E10) 18:19	06:31 18:19	06:09 20:24	04:25 22:26
17	08:39 16:14	07:40 17:21	08:26 (E10) 18:22	06:29 18:22	06:07 20:26	04:25 22:28
18	08:37 16:16	07:38 17:23	08:26 (E10) 18:24	06:26 18:24	06:04 20:28	04:25 22:30
19	08:36 16:18	07:35 17:25	08:27 (E10) 18:26	06:23 18:26	06:02 20:30	04:25 22:32
20	08:35 16:20	07:33 17:28	08:28 (E10) 18:28	06:21 18:28	05:59 20:32	04:25 22:34
21	08:33 16:22	07:31 17:30	08:30 (E10) 18:30	06:18 18:30	05:57 20:35	04:25 22:36
22	08:32 16:24	07:28 17:32	08:31 (E10) 18:32	06:15 18:32	05:54 20:37	04:25 22:38
23	08:30 16:26	07:26 17:34	08:35 (E10) 18:34	06:13 18:34	05:52 20:39	04:26 22:40
24	08:29 16:28	07:23 17:36	16:31 (E13) 18:36	06:10 18:36	05:49 20:41	04:26 22:42
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26	08:25 16:32	07:18 17:41	16:31 (E13) 18:40	06:05 18:40	05:44 20:45	04:27 22:46
27	08:24 16:34	07:16 17:43	16:31 (E13) 18:42	06:02 18:42	05:42 20:47	04:27 22:48
28	08:22 16:36	07:13 17:45	16:32 (E13) 18:45	05:59 18:45	05:39 20:49	04:28 22:50
29	08:20 16:38		16:54 (E13) 19:47	18:45 19:47	05:37 20:51	04:28 22:10
30	08:18 16:41		19:49	19:49	20:51 21:48	22:10 22:10
31	08:16 16:43		19:51	19:51	21:50 21:51	22:09 22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case		582	424		3	928
Sun reduction		0.20	0.41		0.57	0.56
Oper. time red.		0.94	0.94		0.94	0.94
Wind dir. red.		0.64	0.63		0.67	0.67
Total reduction		0.12	0.24		0.36	0.35
Total, real		71	103		1	328

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

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

26/06/2024 08:57/4.0.540

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

July		August		September		October		November		December	
1	04:30	05:36 (E8)	05:16	06:17		07:17	07:53 (E9)	07:22	07:58 (E10)	08:24	
	22:09	32 06:08 (E8)	21:28	20:14		18:53	25 08:18 (E9)	16:36	20 08:18 (E10)	15:45	
2	04:31	05:37 (E8)	05:17	06:19		07:19	07:54 (E9)	07:25	07:58 (E10)	08:26	
	22:08	31 06:08 (E8)	21:26	20:11		18:51	23 08:17 (E9)	16:34	18 08:16 (E10)	15:44	
3	04:32	05:38 (E8)	05:19	06:21		07:21	07:54 (E9)	07:27	08:00 (E10)	08:27	
	22:08	30 06:08 (E8)	21:24	20:09		18:48	21 08:15 (E9)	16:31	15 08:15 (E10)	15:43	
4	04:32	05:39 (E8)	05:21	06:23		07:23	07:55 (E9)	07:29	08:02 (E10)	08:29	
	22:07	29 06:08 (E8)	21:22	20:06		18:45	18 08:13 (E9)	16:29	11 08:13 (E10)	15:42	
5	04:33	05:40 (E8)	05:23	06:25		07:25	07:57 (E9)	07:31		08:31	
	22:07	28 06:08 (E8)	21:19	20:03		18:43	14 08:11 (E9)	16:27		15:41	
6	04:35	05:41 (E8)	05:25	06:27		07:27	08:01 (E9)	07:33		08:32	
	22:06	26 06:07 (E8)	21:17	20:01		18:40	5 08:06 (E9)	16:25		15:41	
7	04:36	05:42 (E8)	05:27	06:29		07:29		07:35		08:34	
	22:05	24 06:06 (E8)	21:15	19:58		18:38		16:23		15:40	
8	04:37	05:43 (E8)	05:29	06:31		07:31		07:38		08:35	
	22:04	23 06:06 (E8)	21:13	19:55		18:35		16:21		15:40	
9	04:38	05:44 (E8)	05:31	06:33		07:34	17:14 (E13)	07:40		08:36	
	22:03	20 06:04 (E8)	21:11	19:53		18:32	5 17:19 (E13)	16:19		15:39	
10	04:39	05:45 (E8)	05:33	06:35		07:36	17:10 (E13)	07:42		08:38	
	22:02	18 06:03 (E8)	21:08	19:50		18:30	13 17:23 (E13)	16:17		15:39	
11	04:41	05:47 (E8)	05:35	06:37		07:38	17:08 (E13)	07:44		08:39	
	22:01	14 06:01 (E8)	21:06	19:47		18:27	17 17:25 (E13)	16:15		15:38	
12	04:42	05:50 (E8)	05:37	06:39		07:40	17:06 (E13)	07:46		08:40	
	22:00	8 05:58 (E8)	21:04	19:45		18:25	20 17:26 (E13)	16:13		15:38	
13	04:43		05:39	06:41		07:42	17:05 (E13)	07:48		08:41	
	21:59		21:01	19:42		18:22	21 17:26 (E13)	16:11		15:38	
14	04:45		05:41	06:43		07:44	17:03 (E13)	07:51		08:43	
	21:58		20:59	19:39		18:19	24 17:27 (E13)	16:09		15:38	
15	04:46		05:43	06:45		07:46	17:02 (E13)	07:53		08:44	
	21:56		20:57	19:37		18:17	25 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	17:02 (E13)	07:57		08:45	
	21:54		20:52	19:31		18:12	25 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	09:04 (E10)	08:01		08:47	
	21:51		20:47	19:26	2	08:10 (E9)	32 17:26 (E13)	16:01		15:38	
20	04:54		05:53	06:55		07:57	09:02 (E10)	08:03		08:48	
	21:49		20:44	19:23	13	08:15 (E9)	37 17:26 (E13)	15:59		15:38	
21	04:56		05:55	06:57		07:59	08:59 (E10)	08:05		08:48	
	21:48		20:42	19:20	17	08:17 (E9)	40 17:25 (E13)	15:57		15:39	
22	04:57		05:57	06:59		08:01	08:58 (E10)	08:07		08:49	
	21:46		20:40	19:18	20	08:18 (E9)	40 17:23 (E13)	15:56		15:39	
23	04:59		05:59	07:01		07:56 (E9)	08:58 (E10)	08:09		08:49	
	21:44		20:37	19:15	23	08:19 (E9)	39 17:23 (E13)	15:55		15:40	
24	05:01		06:01	07:03		07:55 (E9)	08:57 (E10)	08:11		08:50	
	21:43		20:34	19:12	24	08:19 (E9)	36 17:21 (E13)	15:53		15:40	
25	05:03		06:03	07:05		07:54 (E9)	07:56 (E10)	08:13		08:50	
	21:41		20:32	19:10	26	08:20 (E9)	32 16:18 (E13)	15:52		15:41	
26	05:04		06:05	07:07		07:53 (E9)	07:56 (E10)	08:15		08:50	
	21:39		20:29	19:07	27	08:20 (E9)	24 08:20 (E10)	15:51		15:42	
27	05:06		06:07	07:09		07:53 (E9)	07:56 (E10)	08:17		08:51	
	21:37		20:27	19:04	26	08:19 (E9)	24 08:20 (E10)	15:49		15:43	
28	05:08		06:09	07:11		07:52 (E9)	07:55 (E10)	08:19		08:51	
	21:36		20:24	19:02	27	08:19 (E9)	24 08:19 (E10)	15:48		15:44	
29	05:10		06:11	07:13		07:53 (E9)	07:56 (E10)	08:21		08:51	
	21:34		20:22	18:59	27	08:20 (E9)	24 08:20 (E10)	15:47		15:44	
30	05:12		06:13	07:15		07:53 (E9)	07:56 (E10)	08:22		08:51	
	21:32		20:19	18:56	26	08:19 (E9)	23 08:19 (E10)	15:46		15:45	
31	05:14		06:15			07:20	07:56 (E10)			08:51	
	21:30		20:16			16:38	22 08:18 (E10)			15:47	
Potential sun hours	529		469	385		324		247		216	
Total, worst case		283		258		702		64			
Sun reduction		0.49		0.43		0.26		0.08			
Oper. time red.		0.94		0.94		0.94		0.94			
Wind dir. red.		0.67		0.62		0.64		0.62			
Total reduction		0.31		0.25		0.16		0.05			
Total, real		88		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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26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	16:31 (E13) 19:53	06:49 20:55	04:36 21:52
2	08:50 15:49	08:13 16:47	07:08 17:50	16:32 (E13) 19:55	06:46 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	16:34 (E13) 19:57	06:43 20:59	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	16:37 (E13) 19:59	06:41 21:01	04:33 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	16:44 (E13) 20:01	06:38 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	08:35 (E10) 17:58	06:35 20:03	05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:58	08:32 (E10) 18:00	06:33 20:05	05:19 21:08	04:30 22:00
8	08:47 15:58	08:00 17:01	08:30 (E10) 18:03	07:21 (E9) 20:07	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) 20:10	06:27 21:12	04:28 22:02
10	08:46 16:01	07:56 17:05	08:28 (E10) 18:07	07:17 (E9) 20:12	06:25 21:14	04:28 22:03
11	08:45 16:03	07:54 17:07	08:26 (E10) 18:09	07:15 (E9) 20:14	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) 20:16	06:20 21:18	04:27 22:05
13	08:43 16:06	07:49 17:12	08:26 (E10) 18:13	07:14 (E9) 20:18	06:17 21:20	04:26 22:06
14	08:42 16:08	07:47 17:14	08:26 (E10) 18:15	07:13 (E9) 20:20	06:14 21:22	04:26 22:07
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Potential sun hours	235	266	366	426	508	529
Total, worst case		597	402		65	1098
Sun reduction		0.20	0.41		0.57	0.56
Oper. time red.		0.94	0.94		0.94	0.94
Wind dir. red.		0.64	0.63		0.67	0.67
Total reduction		0.12	0.24		0.36	0.35
Total, real		73	98		23	388

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

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

	July			August		September			October			November			December	
1	04:30		05:37 (E8)	05:16		06:17			07:17		07:54 (E9)	07:22		07:57 (E10)	08:24	
	22:09	37	06:14 (E8)	21:28		20:14			18:53	24	08:18 (E9)	16:36	20	08:17 (E10)	15:45	
2	04:31		05:38 (E8)	05:17		06:19			07:19		07:54 (E9)	07:25		07:58 (E10)	08:26	
	22:08	36	06:14 (E8)	21:26		20:11			18:51	23	08:17 (E9)	16:34	18	08:16 (E10)	15:44	
3	04:32		05:38 (E8)	05:19		06:21			07:21		07:54 (E9)	07:27		08:00 (E10)	08:27	
	22:08	36	06:14 (E8)	21:24		20:09			18:48	22	08:16 (E9)	16:31	15	08:15 (E10)	15:43	
4	04:32		05:39 (E8)	05:21		06:23			07:23		07:55 (E9)	07:29		08:02 (E10)	08:29	
	22:07	35	06:14 (E8)	21:22		20:06			18:45	19	08:14 (E9)	16:29	10	08:12 (E10)	15:42	
5	04:33		05:40 (E8)	05:23		06:25			07:25		07:57 (E9)	07:31			08:31	
	22:07	34	06:14 (E8)	21:19		20:03			18:43	15	08:12 (E9)	16:27			15:41	
6	04:35		05:40 (E8)	05:25		06:27			07:27		08:00 (E9)	07:33			08:32	
	22:06	34	06:14 (E8)	21:17		20:01			18:40	8	08:08 (E9)	16:25			15:41	
7	04:36		05:41 (E8)	05:27		06:29			07:29			07:35			08:34	
	22:05	32	06:13 (E8)	21:15		19:58			18:38			16:23			15:40	
8	04:37		05:42 (E8)	05:29		06:31			07:31			07:38			08:35	
	22:04	31	06:13 (E8)	21:13		19:55			18:35			16:21			15:40	
9	04:38		05:43 (E8)	05:31		06:33			07:34			07:40			08:36	
	22:03	29	06:12 (E8)	21:11		19:53			18:32			16:19			15:39	
10	04:39		05:44 (E8)	05:33		06:35			07:36		17:10 (E13)	07:42			08:38	
	22:02	27	06:11 (E8)	21:08		19:50			18:30	10	17:20 (E13)	16:17			15:39	
11	04:41		05:45 (E8)	05:35		06:37			07:38		17:07 (E13)	07:44			08:39	
	22:01	25	06:10 (E8)	21:06		19:47			18:27	15	17:22 (E13)	16:15			15:38	
12	04:42		05:46 (E8)	05:37		06:39			07:40		17:05 (E13)	07:46			08:40	
	22:00	23	06:09 (E8)	21:04		19:45			18:25	19	17:24 (E13)	16:13			15:38	
13	04:43		05:48 (E8)	05:39		06:41			07:42		17:03 (E13)	07:48			08:41	
	21:59	20	06:08 (E8)	21:01		19:42			18:22	21	17:24 (E13)	16:11			15:38	
14	04:45		05:50 (E8)	05:41		06:43			07:44		17:02 (E13)	07:51			08:43	
	21:58	16	06:06 (E8)	20:59		19:39			18:19	23	17:25 (E13)	16:09			15:38	
15	04:46		05:52 (E8)	05:43		06:45			07:46		17:02 (E13)	07:53			08:44	
	21:56	12	06:04 (E8)	20:57		19:37			18:17	24	17:26 (E13)	16:07			15:38	
16	04:48		05:58 (E8)	05:45		06:47			07:48		17:01 (E13)	07:55			08:45	
	21:55	1	05:59 (E8)	20:54		19:34			18:14	25	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	24	17:25 (E13)	16:04			15:38	
18	04:51			05:49		06:51			07:52		17:00 (E13)	07:59			08:46	
	21:52			20:49		19:28			18:09	25	17:25 (E13)	16:02			15:38	
19	04:52			05:51		06:53			07:54		09:04 (E10)	08:01			08:47	
	21:51			20:47		19:26			18:07	31	17:24 (E13)	16:01			15:38	
20	04:54			05:53		06:55	08:04 (E9)		07:57		09:02 (E10)	08:03			08:48	
	21:49			20:45		19:23	10	08:14 (E9)	18:04	37	17:25 (E13)	15:59			15:38	
21	04:56			05:55		06:57	08:01 (E9)		07:59		08:59 (E10)	08:05			08:48	
	21:48			20:42		19:20	15	08:16 (E9)	18:02	40	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	19	08:18 (E9)	17:59	40	17:22 (E13)	15:56			15:39	
23	04:59			05:59		07:01	07:57 (E9)		08:03		08:57 (E10)	08:09			08:49	
	21:44			20:37		19:15	22	08:19 (E9)	17:57	41	17:22 (E13)	15:55			15:40	
24	05:01			06:01		07:03	07:56 (E9)		08:05		08:56 (E10)	08:11			08:50	
	21:43			20:34		19:12	23	08:19 (E9)	17:54	39	17:20 (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	25	08:20 (E9)	16:52	36	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	26	08:20 (E9)	16:50	29	16:15 (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	27	08:20 (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	24	08:19 (E10)	15:48			15:44	
29	05:10			06:11		07:13	07:54 (E9)		07:16		07:56 (E10)	08:21			08:51	
	21:34			20:22		18:59	26	08:20 (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		428				245			704			63				
Sun reduction		0.49				0.43			0.26			0.08				
Oper. time red.		0.94				0.94			0.94			0.94				
Wind dir. red.		0.67				0.62			0.64			0.62				
Total reduction		0.31				0.25			0.16			0.05				
Total, real		134				61			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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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:

26/06/2024 08:57/4.0.540

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

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2	08:51 15:49	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:08	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
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30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:10	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:41	08:23 15:46	08:51 15:46
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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
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19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:50	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:32	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:47 15:38
21	08:33 16:22	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:09	04:56 21:47	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:31 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:48 15:39
23	08:30 16:26	07:25 17:34	06:13 18:34	05:51 20:38	04:48 21:38	04:26 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:40	04:47 21:39	04:26 22:10	05:01 21:42	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:49 15:40
25	08:27 16:30	07:20 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10	05:03 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:44 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	08:23 16:34	07:15 17:43	06:02 18:42	05:42 20:47	04:42 21:44	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:16 15:49	08:50 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:09	05:08 21:35	06:09 20:24	07:11 19:01	07:13 16:45	08:18 15:48	08:50 15:44
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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
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27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:28 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
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31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:51 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:49 19:53	05:32 20:55	04:36 21:52	04:30 22:08	05:16 21:27	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:12 16:47	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:53	04:31 22:08	05:18 21:25	06:19 20:11	07:19 18:51	07:24 16:34	08:25 15:44
3	08:50 15:51	08:10 16:50	07:05 17:52	06:43 19:57	05:28 20:59	04:34 21:55	04:32 22:07	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
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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
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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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	23 07:03 (E14) 07:26 (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	24 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	25 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	07:07 (E14) 07:28 (E14)	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06	25 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	25 07:01 (E14) 07:26 (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	24 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) 07:29 (E14)	05:19 21:08	04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58	24 07:00 (E14) 07:24 (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	22 07:01 (E14) 07:23 (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	22 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	19 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) 07:27 (E14)	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	16 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) 07:26 (E14)	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	12 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) 07:25 (E14)	05:07 21:20	04:27 22:06	04:44 21:59	05:39 21:02	06:41 19:42	6 07:14 (E14)	07:42 16:11	07:49 15:38	08:42 15:38
14	08:42 16:08	07:47 17:15	06:37 18:16		06:15 20:20	07:05 (E14) 07:23 (E14)	05:05 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:14 (E14)	07:44 16:10	07:51 15:38	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18		06:12 20:22	07:07 (E14) 07:21 (E14)	05:03 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 19:37	07:14 (E14)	07:46 16:08	07:53 15:38	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20		06:09 20:24	07:09 (E14) 07:18 (E14)	05:01 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:14 (E14)	07:48 16:06	07:55 15:38	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22		06:07 20:26	07:10 (E14) 21:27	05:00 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:14 (E14)	07:50 16:04	07:57 15:38	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24		06:04 20:28	07:11 (E14) 21:29	04:59 21:29	04:26 22:09	04:50 21:52	05:49 20:50	06:51 19:29	07:14 (E14)	07:53 16:03	08:01 15:38	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26		06:02 20:31	07:12 (E14) 21:31	04:57 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:14 (E14)	07:55 16:01	08:07 15:38	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28		05:59 20:33	07:13 (E14) 21:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:14 (E14)	07:57 15:59	08:03 15:39	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30		05:57 20:35	07:14 (E14) 21:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:14 (E14)	07:59 15:58	08:05 15:39	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32		05:54 20:37	07:15 (E14) 21:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	07:14 (E14)	08:01 15:56	08:07 15:40	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34		05:52 20:39	07:16 (E14) 21:39	04:49 21:39	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	07:14 (E14)	08:03 15:55	08:09 15:40	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 20:41	07:17 (E14) 21:40	05:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:12	07:14 (E14)	08:05 15:53	08:11 15:41	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	07:18 (E14) 21:42	05:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:14 (E14)	08:07 15:52	08:13 15:41	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41		05:45 20:45	07:19 (E14) 21:43	05:43 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 19:07	07:14 (E14)	08:10 15:51	08:15 15:42	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 20:47	07:20 (E14) 21:45	05:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	9 07:12 (E14) 07:21 (E14)	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	07:21 (E14) 21:47	05:40 21:47	04:28 22:10	05:08 21:36	06:09 20:24	14 07:08 (E14) 07:22 (E14)	07:11 19:02	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47		05:37 20:51	07:22 (E14) 21:48	05:37 21:48	04:29 22:10	05:10 21:34	06:11 20:22	18 07:06 (E14) 07:24 (E14)	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:10 17:49	05:54 18:49		05:35 20:53	07:23 (E14) 21:50	05:35 21:50	04:29 22:10	05:12 21:32	06:13 20:19	20 07:05 (E14) 07:25 (E14)	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:08 17:51	05:52 18:51	5 07:17 (E14) 07:22 (E14)	05:33 20:55	07:24 (E14) 21:51	05:33 21:51	04:29 22:10	05:14 21:30	06:15 20:17	22 07:04 (E14) 07:26 (E14)	07:15 18:57	07:20 16:38	08:23 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385	324		247	216	
Total, worst case				5	318	0.50				83	245		0.43		
Sun reduction				0.41	0.50					0.50			0.43		
Oper. time red.				0.94	0.94					0.94	0.94		0.94		
Wind dir. red.				0.66	0.66					0.66	0.66		0.66		
Total reduction				0.26	0.31					0.31	0.26		0.26		
Total, real				1	99					26	65				

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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		14:11 (E13)	07:11		06:49				05:32		04:36			
	15:48	31	14:32 (E13)	16:45	32	14:43 (E13)	17:47		19:53				20:55		21:53			
2	08:50		14:02 (E13)	08:13		14:13 (E13)	07:08		06:46				05:30		04:35			
	15:49	32	14:34 (E13)	16:47	29	14:42 (E13)	17:50		19:55				20:57		21:54			
3	08:50		14:02 (E13)	08:11		14:15 (E13)	07:06		06:43				05:28		04:34			
	15:51	32	14:34 (E13)	16:50	26	14:41 (E13)	17:52		19:57				20:59		21:55			
4	08:50		14:01 (E13)	08:09		14:17 (E13)	07:03		06:41				05:26		04:33			
	15:52	33	14:34 (E13)	16:52	23	14:40 (E13)	17:54		19:59				21:02		21:57			
5	08:49		14:02 (E13)	08:07		14:19 (E13)	07:00		06:38				05:23		04:32			
	15:53	34	14:36 (E13)	16:54	19	14:38 (E13)	17:56		20:01				21:04		21:58			
6	08:49		14:02 (E13)	08:05		14:22 (E13)	06:58		06:35				05:21		04:31			
	15:55	34	14:36 (E13)	16:56	12	14:34 (E13)	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		06:55 (E8)	05:17		22:01			
9	08:47		14:02 (E13)	07:58			06:50		06:27			06:53 (E8)	05:15		04:28			
	15:59	36	14:38 (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			06:51 (E8)	05:13		04:28			
	16:01	36	14:39 (E13)	17:05			18:07		20:12	18		07:09 (E8)	21:14		22:03			
11	08:45		14:03 (E13)	07:54			06:45		06:22			06:50 (E8)	05:10		04:27			
	16:03	37	14:40 (E13)	17:08			18:09		20:14	20		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	24		07:11 (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		14:03 (E13)	07:43			06:31		06:09			06:46 (E8)	05:01		04:25			
	16:12	40	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	25		07:11 (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	22		07:09 (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	19		07:07 (E8)	21:35		22:10			
22	08:32		14:05 (E13)	07:28			06:15		05:54			06:49 (E8)	04:50		04:25			
	16:24	40	14:45 (E13)	17:32			18:32		20:37	16		07:05 (E8)	21:36		22:10			
23	08:30		14:05 (E13)	07:26			06:13		05:52			06:50 (E8)	04:48		04:26			
	16:26	40	14:45 (E13)	17:34			18:34		20:39	13		07:03 (E8)	21:38		22:10			
24	08:29		14:05 (E13)	07:23			06:10		05:49			06:53 (E8)	04:47		04:26			
	16:28	40	14:45 (E13)	17:37			18:36		20:41	6		06:59 (E8)	21:40		22:10			
25	08:27		14:07 (E13)	07:21			06:07		05:47				04:45		04:26			
	16:30	39	14:46 (E13)	17:39			18:38		20:43				21:42		22:10			
26	08:25		14:07 (E13)	07:18			06:05		05:44				04:44		04:27			
	16:32	39	14:46 (E13)	17:41			18:40		20:45				21:43		22:10			
27	08:24		14:08 (E13)	07:16			06:02		05:42				04:42		04:27			
	16:34	37	14:45 (E13)	17:43			18:43		20:47				21:45		22:10			
28	08:22		14:08 (E13)	07:13			05:59		05:39				04:41		04:28			
	16:36	37	14:45 (E13)	17:45			18:45		20:49				21:47		22:10			
29	08:20		14:09 (E13)				06:57		05:37				04:39		04:28			
	16:39	36	14:45 (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	35	14:45 (E13)				19:49		20:53				21:50		22:09			
31	08:17		14:10 (E13)				06:51						04:37					
	16:43	33	14:43 (E13)				19:51						21:51					
Potential sun hours	235			266			366		426				508		529			
Total, worst case		1146			141				324									
Sun reduction		0.13			0.20				0.50									
Oper. time red.		0.94			0.94				0.94									
Wind dir. red.		0.66			0.66				0.66									
Total reduction		0.08			0.13				0.31									
Total, real		95			18				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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	July	August	September	October	November	December
1	04:30	05:16	06:17	06:49 (E8)	07:17	07:23
	22:09	21:28	20:14	20	07:09 (E8)	18:54
2	04:31	05:17	06:19	06:50 (E8)	07:19	07:25
	22:08	21:26	20:11	18	07:08 (E8)	18:51
3	04:32	05:19	06:21	06:51 (E8)	07:21	07:27
	22:08	21:24	20:09	15	07:06 (E8)	18:48
4	04:33	05:21	06:23	06:53 (E8)	07:23	07:29
	22:07	21:22	20:06	10	07:03 (E8)	18:46
5	04:34	05:23	06:25	07:25	07:31	13:51 (E13)
	22:07	21:19	20:03	18:43	16:27	14
6	04:35	05:25	06:27	07:27	07:33	13:49 (E13)
	22:06	21:17	20:01	18:40	16:25	19
7	04:36	05:27	06:29	07:29	07:36	13:46 (E13)
	22:05	21:15	19:58	18:38	16:23	24
8	04:37	05:29	06:31	07:32	07:38	13:45 (E13)
	22:04	21:13	19:55	18:35	16:21	27
9	04:38	05:31	06:33	07:34	07:40	13:44 (E13)
	22:03	21:11	19:53	18:32	16:19	29
10	04:39	05:33	06:35	07:36	07:42	13:42 (E13)
	22:02	21:08	19:50	18:30	16:17	32
11	04:41	05:35	06:37	07:38	07:44	13:42 (E13)
	22:01	21:06	19:47	18:27	16:15	33
12	04:42	05:37	06:39	07:40	07:46	13:41 (E13)
	22:00	21:04	19:45	18:25	16:13	35
13	04:43	05:39	06:41	07:42	07:49	13:41 (E13)
	21:59	21:01	19:42	18:22	16:11	36
14	04:45	05:41	06:43	07:44	07:51	13:40 (E13)
	21:58	20:59	19:39	18:19	16:09	37
15	04:46	05:43	06:45	07:46	07:53	13:40 (E13)
	21:57	20:57	19:37	18:17	16:08	37
16	04:48	05:45	06:47	07:48	07:55	13:40 (E13)
	21:55	20:54	19:34	18:14	16:06	39
17	04:49	05:47	06:49	07:50	07:57	13:40 (E13)
	21:54	20:52	19:31	18:12	16:04	39
18	04:51	05:49	06:51	07:52	07:59	13:39 (E13)
	21:52	20:49	19:29	18:09	16:02	40
19	04:52	05:51	06:53	07:54	08:01	13:40 (E13)
	21:51	20:47	8	07:06 (E8)	19:26	18:07
20	04:54	05:53	06:55	07:57	08:03	13:40 (E13)
	21:49	20:45	14	07:09 (E8)	19:23	18:04
21	04:56	05:55	06:57	07:59	08:05	13:40 (E13)
	21:48	20:42	16	07:10 (E8)	19:20	18:02
22	04:57	05:57	06:59	08:01	08:07	13:41 (E13)
	21:46	20:40	19	07:11 (E8)	19:18	17:59
23	04:59	05:59	07:01	08:03	08:09	13:41 (E13)
	21:45	20:37	21	07:12 (E8)	19:15	17:57
24	05:01	06:01	07:03	08:05	08:11	13:41 (E13)
	21:43	20:35	23	07:13 (E8)	19:12	17:55
25	05:03	06:03	07:05	08:07	08:13	13:41 (E13)
	21:41	20:32	23	07:13 (E8)	19:10	16:52
26	05:04	06:05	07:07	08:09	08:15	13:41 (E13)
	21:39	20:29	24	07:12 (E8)	19:07	16:50
27	05:06	06:07	07:09	08:11	08:17	13:43 (E13)
	21:37	20:27	24	07:12 (E8)	19:04	16:47
28	05:08	06:09	07:11	08:13	08:19	13:43 (E13)
	21:36	20:24	24	07:12 (E8)	19:02	16:45
29	05:10	06:11	07:13	08:15	08:21	13:44 (E13)
	21:34	20:22	24	07:12 (E8)	18:59	16:43
30	05:12	06:13	07:15	08:17	08:22	13:44 (E13)
	21:32	20:19	23	07:11 (E8)	18:56	16:40
31	05:14	06:15	07:17	08:19	08:25	13:44 (E13)
	21:30	20:17	22	07:10 (E8)	18:54	16:38
Potential sun hours	529	469	385	324	247	216
Total, worst case		265	63		915	954
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.94	0.94		0.94	0.94
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.31	0.26		0.05	0.04
Total, real		82	17		47	42

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
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Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
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Oper. time red.												
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Table layout: For each day in each month the following matrix apply

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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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) []

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Operational time

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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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11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:28 22:04	04:41 22:01	05:35 21:06	06:37 19:48	07:38 18:27	07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	08:40 15:39
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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	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
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Total, worst case												
Sun reduction												
Oper. time red.												
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Total reduction												
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Table layout: For each day in each month the following matrix apply

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	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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

	January	February	March	April	May	June	July	August	September	October	November	December
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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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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
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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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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	09:18 (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	09:20 (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	09:22 (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	09:24 (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	09:32 (E13) 17:58	06:55 20:03	06:33 21:06	04:30 21:59	04:36 22:06	05:27 21:17	06:29 20:01	07:30 18:40	07:36 16:25	08:34 15:41
8	08:48 15:58	08:01 17:01	09:32 (E13) 17:58	06:53 20:06	06:30 21:08	04:29 22:00	04:37 22:05	05:29 21:15	06:31 20:01	07:32 18:38	07:38 16:23	08:35 15:40
9	08:47 15:59	07:58 17:03	09:32 (E13) 17:58	06:50 20:10	06:28 21:12	04:29 22:02	04:38 22:03	05:31 21:11	06:33 20:03	07:34 18:32	07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:05	09:32 (E13) 17:58	06:47 20:12	06:25 21:14	04:28 22:03	04:39 22:02	05:33 21:09	06:35 20:03	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	09:32 (E13) 17:58	06:45 20:14	06:22 21:16	04:27 22:04	04:41 22:01	05:35 21:06	06:37 20:03	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:05	07:52 17:10	09:32 (E13) 17:58	06:42 20:16	06:20 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 20:03	07:40 18:25	07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	09:32 (E13) 17:58	06:40 20:18	06:17 21:20	04:26 22:06	04:43 21:59	05:39 21:02	06:41 20:03	07:42 18:22	07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	09:32 (E13) 17:58	06:37 20:20	06:15 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 20:03	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	09:32 (E13) 17:58	06:34 20:22	06:12 21:24	04:26 22:07	04:46 21:57	05:43 20:57	06:45 20:03	07:46 18:17	07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	09:32 (E13) 17:58	06:32 20:24	06:09 21:26	04:25 22:08	04:48 21:55	05:45 20:54	06:47 20:03	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	09:32 (E13) 17:58	06:29 20:26	06:07 21:27	04:25 22:09	04:49 21:54	05:47 20:52	06:49 20:03	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	09:32 (E13) 17:58	06:26 20:28	06:04 21:29	04:25 22:09	04:51 21:53	05:49 20:50	06:51 20:03	07:52 18:09	07:59 16:02	08:47 15:38
19	08:36 16:18	07:36 17:26	09:32 (E13) 17:58	06:24 20:31	06:02 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 20:03	07:55 18:07	08:01 16:01	08:48 15:38
20	08:35 16:20	07:33 17:28	09:32 (E13) 17:58	06:21 20:33	05:59 21:33	04:25 22:10	04:54 21:50	05:53 20:45	06:55 20:03	07:57 18:04	08:03 15:59	08:49 15:39
21	08:33 16:22	07:31 17:30	09:32 (E13) 17:58	06:18 20:35	05:57 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 20:03	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	09:32 (E13) 17:58	06:16 20:37	05:54 21:37	04:25 22:10	04:57 21:46	05:57 20:40	06:59 20:03	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	09:32 (E13) 17:58	06:13 20:39	05:52 21:38	04:26 22:10	04:59 21:45	05:59 20:37	07:01 20:03	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	09:32 (E13) 17:58	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	08:51 15:41
25	08:27 16:30	07:21 17:39	09:32 (E13) 17:58	06:08 20:43	05:47 21:42	04:26 22:10	05:03 21:41	06:03 20:32	07:05 20:03	08:05 17:52	08:13 15:52	08:53 15:41
26	08:26 16:32	07:18 17:41	09:32 (E13) 17:58	06:05 20:44	05:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	07:07 20:03	08:07 17:50	08:15 15:51	08:55 15:42
27	08:24 16:34	07:16 17:43	09:32 (E13) 17:58	06:02 20:42	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	08:57 15:43
28	08:22 16:36	07:13 17:45	09:32 (E13) 17:58	05:59 20:40	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	08:59 15:44
29	08:20 16:39	07:13 17:45	09:32 (E13) 17:58	05:57 20:40	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	07:13 17:45	09:32 (E13) 17:58	05:54 20:40	05:35 21:48	04:30 22:10	05:12 21:32	06:13 20:19	07:15 20:03	08:17 17:46	08:22 15:46	08:51 15:46
31	08:17 16:43	07:13 17:45	09:32 (E13) 17:58	05:51 20:40	05:32 21:48	04:30 22:10	05:14 21:30	06:15 20:17	07:16 20:03	08:18 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	387	103									496	
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.94	0.94									0.94	
Wind dir. red.	0.59	0.59									0.59	
Total reduction	0.07	0.11									0.05	
Total, real	29	12									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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	29	07:59 (E14) 08:28 (E14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	2	07:35 (E14) 19:55	06:46 20:58	05:30 21:54	04:35 22:09	05:18 21:26	06:19 20:11		07:19 18:51	29	07:59 (E14) 08:28 (E14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52	11	07:32 (E14) 19:57	06:44 21:00	05:28 21:55	04:34 22:08	05:20 21:24	06:21 20:09		07:21 18:48	28	07:59 (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) 19:59	06:41 21:02	05:26 21:57	04:33 22:07	05:22 21:22	06:23 20:06		07:23 18:46	29	07:58 (E14) 08:27 (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) 20:01	06:38 21:04	05:24 21:58	04:32 22:07	05:24 21:20	06:25 20:04		07:25 18:43	28	07:58 (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) 20:03	06:36 21:06	05:21 21:59	04:31 22:06	05:25 21:17	06:27 20:01		07:28 18:40	26	07:59 (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	25	07:23 (E14) 20:06	06:33 21:08	05:19 22:00	04:30 22:05	05:27 21:15	06:29 19:58		07:30 18:38	25	07:59 (E14) 08:24 (E14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	27	07:22 (E14) 20:08	06:30 21:10	05:17 22:01	04:29 22:04	05:29 21:13	06:31 19:56		07:32 18:35	22	08:00 (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	29	07:21 (E14) 20:10	06:28 21:12	05:15 22:02	04:29 22:03	05:31 21:11	06:33 19:53		07:34 18:33	18	08:03 (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	28	07:21 (E14) 20:12	06:25 21:14	05:13 22:03	04:28 22:02	05:33 21:08	06:35 19:50		07:36 18:30	14	08:05 (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) 20:14	06:22 21:16	05:11 22:04	04:27 22:01	05:35 21:06	06:37 19:48		07:38 18:27	9	08:07 (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) 20:16	06:20 21:18	05:09 22:05	04:27 22:00	05:37 21:04	06:39 19:45		07:40 18:25		08:07 (E14) 16:13	07:46 15:38	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	28	07:20 (E14) 20:18	06:17 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 17:14	06:37 18:15	27	07:20 (E14) 20:20	06:15 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	26	07:21 (E14) 20:22	06:12 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	25	07:21 (E14) 20:24	06:09 21:26	05:01 22:08	04:26 21:55	05:45 20:54	06:47 19:34		07:48 18:15		07:55 16:06	08:45 15:38	
17	08:39 16:14	07:40 17:21	06:29 18:22	22	07:22 (E14) 20:26	06:07 21:27	04:59 22:08	04:25 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	19	07:23 (E14) 20:28	06:04 21:29	04:57 22:09	04:25 21:52	05:49 20:50	06:51 19:29		07:52 18:09		07:59 16:03	08:46 15:38	
19	08:36 16:18	07:36 17:26	06:24 18:26	15	07:25 (E14) 20:31	06:02 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 15:38	
20	08:35 16:20	07:33 17:28	06:21 18:28	8	07:28 (E14) 20:33	05:59 21:33	04:54 22:10	04:25 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 21:35	04:52 22:10	04:25 21:48	04:56 20:42	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 21:37	04:50 22:10	04:26 21:46	04:58 20:40	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 21:38	04:48 22:10	04:26 21:45	04:59 20:37	05:59 20:37	07:01 19:15	08:15 (E14) 08:18 (E14)	08:03 17:57		08:09 17:55	08:50 15:40	
24	08:29 16:28	07:23 17:37	06:10 18:36		05:49 21:40	04:47 22:10	04:26 21:43	05:01 20:35	06:01 20:35	07:03 19:12	08:10 (E14) 08:23 (E14)	08:05 17:55	13	08:11 17:55	08:50 15:41	
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 21:42	04:45 22:10	04:27 21:41	05:03 20:32	06:03 20:32	07:05 19:10	08:07 (E14) 08:25 (E14)	07:07 16:52	18	08:13 17:52	08:50 15:41	
26	08:26 16:32	07:18 17:41	06:05 18:41		05:45 21:43	04:44 22:10	04:27 21:39	05:05 20:30	06:05 20:30	07:07 19:07	08:05 (E14) 08:26 (E14)	07:10 16:50	21	08:15 17:51	08:51 15:42	
27	08:24 16:34	07:16 17:43	06:02 18:43		05:42 21:45	04:42 22:10	04:28 21:38	05:06 20:27	06:07 20:27	07:09 19:04	08:03 (E14) 08:27 (E14)	07:12 16:48	24	08:17 17:50	08:51 15:43	
28	08:22 16:37	07:13 17:45	06:00 18:45		05:40 21:47	04:41 22:10	04:28 21:36	05:08 20:24	06:09 20:24	07:11 19:02	08:02 (E14) 08:28 (E14)	07:14 16:45	26	08:19 17:48	08:51 15:44	
29	08:20 16:39		06:57 19:47		05:37 21:48	04:40 22:10	04:29 21:34	05:10 20:22	06:11 20:22	07:13 18:59	08:01 (E14) 08:28 (E14)	07:16 16:43	27	08:21 17:47	08:51 15:45	
30	08:19 16:41		06:54 19:49		05:35 21:50	04:38 22:09	04:29 21:32	05:12 20:19	06:13 20:19	07:15 18:56	08:00 (E14) 08:28 (E14)	07:18 16:41	28	08:22 17:46	08:51 15:46	
31	08:17 16:43		06:52 19:51		05:33 21:51	04:37 22:10	04:30 21:30	05:14 20:17	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			410							160		257				
Sun reduction			0.41							0.43		0.26				
Oper. time red.			0.94							0.94		0.94				
Wind dir. red.			0.62							0.62		0.62				
Total reduction			0.24							0.25		0.15				
Total, real			99							40		39				

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

SHADOW - Calendar

Shadow receptor: Seglini - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (79)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	27	07:52 (E14) 08:19 (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	27	07:52 (E14) 08:19 (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	26	07:52 (E14) 08:18 (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	24	07:52 (E14) 08:16 (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	21	07:54 (E14) 08:15 (E14)	07:31 16:27	08:31 15:42
6	08:49 15:55	08:05 16:57	06:58 17:58	10	07:24 (E14) 07:34 (E14)	06:36 20:03	05:21 21:06	04:31 21:59	05:25 22:06	06:27 21:17		07:28 18:40	17	07:56 (E14) 08:13 (E14)	07:33 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	06:55 18:01	15	07:21 (E14) 07:36 (E14)	06:33 20:06	05:19 21:08	04:30 22:00	05:27 22:05	06:29 21:15		07:30 18:38	13	07:58 (E14) 08:11 (E14)	07:36 16:23	08:34 15:40
8	08:48 15:58	08:01 17:01	06:53 18:03	19	07:18 (E14) 07:37 (E14)	06:30 20:08	05:17 21:10	04:29 22:01	05:29 22:04	06:31 21:13		07:32 18:35	7	08:00 (E14) 08:07 (E14)	07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	23	07:16 (E14) 07:39 (E14)	06:28 20:10	05:15 21:12	04:29 22:02	05:31 22:03	06:33 21:11		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	25	07:14 (E14) 07:39 (E14)	06:25 20:12	05:13 21:14	04:28 22:03	05:33 22:02	06:35 21:08		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	26	07:13 (E14) 07:39 (E14)	06:22 20:14	05:11 21:16	04:27 22:01	05:35 22:01	06:37 21:06		07:38 18:27			07:44 16:15	08:39 15:39
12	08:44 16:05	07:52 17:10	06:42 18:11	27	07:13 (E14) 07:40 (E14)	06:20 20:16	05:09 21:18	04:27 22:05	05:37 22:00	06:39 21:04		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	28	07:12 (E14) 07:40 (E14)	06:17 20:18	05:07 21:20	04:27 22:06	05:39 21:59	06:41 21:02		07:42 18:22			07:49 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:16	29	07:11 (E14) 07:40 (E14)	06:15 20:20	05:05 21:22	04:26 22:07	05:41 21:58	06:43 20:59		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	28	07:12 (E14) 07:40 (E14)	06:12 20:22	05:03 21:24	04:26 22:07	05:43 21:57	06:45 20:57		07:46 18:17			07:53 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	27	07:12 (E14) 07:39 (E14)	06:09 20:24	05:01 21:26	04:26 22:08	05:45 21:55	06:47 20:54		07:48 18:15			07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	27	07:11 (E14) 07:38 (E14)	06:07 20:26	04:59 21:27	04:25 22:08	05:49 21:54	06:49 20:52		07:50 18:12			07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	25	07:12 (E14) 07:37 (E14)	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:52	06:51 20:50		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	23	07:13 (E14) 07:36 (E14)	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:51	06:53 20:47		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	21	07:13 (E14) 07:34 (E14)	05:59 20:33	04:54 21:33	04:25 22:10	05:53 21:49	06:55 20:45		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	18	07:14 (E14) 07:32 (E14)	05:57 20:35	04:52 21:35	04:25 22:10	05:55 21:48	06:57 20:42	08:04 (E14) 08:15 (E14)	07:59 18:02	11	08:01 (E14) 08:17 (E14)	08:05 17:57	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	13	07:17 (E14) 07:30 (E14)	05:54 20:37	04:50 21:37	04:26 22:10	05:57 21:46	06:59 20:40	08:01 (E14) 08:17 (E14)	08:01 18:00	16	07:59 (E14) 08:19 (E14)	08:07 17:57	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	07:59 (E14) 08:19 (E14)	08:03 17:57	20	08:03 (E14) 08:21 (E14)	08:09 17:55	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	07:57 (E14) 08:20 (E14)	08:05 17:55	23	07:57 (E14) 08:20 (E14)	08:11 17:55	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39		05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:56 (E14) 08:20 (E14)	07:07 16:52	24	07:54 (E14) 08:20 (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	07:54 (E14) 08:21 (E14)	07:10 16:50	27	07:54 (E14) 08:21 (E14)	08:15 17:55	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	07:54 (E14) 08:21 (E14)	07:12 16:48	27	07:54 (E14) 08:21 (E14)	08:17 17:50	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	07:53 (E14) 08:21 (E14)	07:14 16:45	28	07:53 (E14) 08:21 (E14)	08:19 16:45	08:51 15:44
29	08:20 16:39		06:57 19:47		05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:52 (E14) 08:20 (E14)	07:16 16:43	28	07:52 (E14) 08:20 (E14)	08:21 17:18	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	07:52 (E14) 08:20 (E14)	07:18 16:41	28	07:52 (E14) 08:20 (E14)	08:22 16:41	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			07:20 16:38			08:23 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385		324		247	216	
Total, worst case			384							232		162				
Sun reduction			0.41							0.43		0.26				
Oper. time red.			0.94							0.94		0.94				
Wind dir. red.			0.62							0.62		0.62				
Total reduction			0.24							0.25		0.15				
Total, real			92							58		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	12	07:47 (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			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	8	07:10 (E14) 07:18 (E14)	06:20 20:16	05:09 21:18	04:27 22:00	05:37 21:04	06:39 19:45	5	07:57 (E14) 08:02 (E14)			07:46 16:13	08:40 15:38
13	08:43 16:06	07:50 17:12	06:40 18:13	16	07:05 (E14) 07:21 (E14)	06:17 20:18	05:07 21:20	04:27 22:06	05:39 21:59	06:41 19:42	14	07:52 (E14) 08:06 (E14)			07:42 16:11	08:42 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	20	07:03 (E14) 07:23 (E14)	06:15 20:20	05:05 21:22	04:26 22:07	05:41 21:58	06:43 19:39	19	07:49 (E14) 08:08 (E14)			07:44 16:10	08:43 15:38
15	08:41 16:10	07:45 17:17	06:34 18:18	24	07:01 (E14) 07:25 (E14)	06:12 20:22	05:03 21:24	04:26 22:07	05:43 21:57	06:45 19:37	23	07:47 (E14) 08:10 (E14)			07:46 16:08	08:44 15:38
16	08:40 16:12	07:43 17:19	06:32 18:20	25	07:00 (E14) 07:25 (E14)	06:09 20:24	05:01 21:25	04:26 22:08	05:45 21:55	06:47 19:34	25	07:46 (E14) 08:11 (E14)			07:48 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	28	06:58 (E14) 07:26 (E14)	06:07 20:26	04:59 21:27	04:25 22:08	05:47 21:54	06:49 19:31	27	07:44 (E14) 08:11 (E14)			07:50 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	29	06:57 (E14) 07:26 (E14)	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:52	06:51 19:29	29	07:43 (E14) 08:12 (E14)			07:52 16:03	08:47 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	30	06:57 (E14) 07:27 (E14)	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:51	06:53 19:26	30	07:42 (E14) 08:12 (E14)			07:55 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	30	06:56 (E14) 07:26 (E14)	05:59 20:33	04:54 21:33	04:25 22:10	05:53 20:45	06:55 19:23	30	07:42 (E14) 08:12 (E14)			07:57 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	31	06:55 (E14) 07:26 (E14)	05:57 20:35	04:52 21:35	04:25 22:10	05:55 20:42	06:57 19:21	31	07:41 (E14) 08:12 (E14)			07:59 15:58	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	05:57 20:40	06:59 19:18	31	07:41 (E14) 08:12 (E14)			08:01 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	31	06:55 (E14) 07:26 (E14)	05:52 20:39	04:48 21:38	04:26 22:10	05:59 20:37	07:01 19:15	31	07:40 (E14) 08:11 (E14)			08:03 15:55	08:49 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	30	06:55 (E14) 07:25 (E14)	05:49 20:41	04:47 21:40	04:26 22:10	06:01 20:35	07:03 19:12	31	07:40 (E14) 08:11 (E14)			08:05 15:53	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	06:03 20:32	07:05 19:10	30	07:40 (E14) 08:10 (E14)			08:11 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	27	06:56 (E14) 07:23 (E14)	05:45 20:45	04:44 21:43	04:27 22:10	06:05 20:30	07:07 19:07	28	07:41 (E14) 08:09 (E14)			08:12 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	25	06:56 (E14) 07:21 (E14)	05:42 20:47	04:42 21:45	04:28 22:10	06:06 20:27	07:09 19:04	27	07:41 (E14) 08:08 (E14)			08:13 15:50	08:50 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	23	06:57 (E14) 07:20 (E14)	05:40 20:49	04:41 21:47	04:28 22:10	06:09 20:24	07:11 19:02	24	07:42 (E14) 08:06 (E14)			08:14 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	20	07:58 (E14) 08:18 (E14)	05:37 20:51	04:40 21:48	04:29 22:10	06:11 20:22	07:13 18:59	21	07:43 (E14) 08:04 (E14)			07:16 16:43	08:51 15:45
30	08:19 16:41		06:54 19:49	15	08:00 (E14) 08:15 (E14)	05:35 20:53	04:38 21:50	04:29 22:09	06:13 20:19	07:15 18:56	18	07:44 (E14) 08:02 (E14)			07:18 16:41	08:51 15:46
31	08:17 16:43		06:52 19:51	7	08:04 (E14) 08:11 (E14)	05:37 20:51	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			479							474		12				
Sun reduction			0.41							0.43		0.26				
Oper. time red.			0.94							0.94		0.94				
Wind dir. red.			0.63							0.63		0.63				
Total reduction			0.25							0.25		0.15				
Total, real			118							121		2				

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January			February			March	April	May	June
1	08:51		10:01 (E13)	08:15		10:02 (E13)	07:11	06:49	05:33	04:36
	15:48	23	10:24 (E13)	16:45	41	10:43 (E13)	17:48	19:53	20:55	21:53
2	08:50		10:01 (E13)	08:13		10:02 (E13)	07:08	06:46	05:30	04:35
	15:49	25	10:26 (E13)	16:47	41	10:43 (E13)	17:50	19:55	20:57	21:54
3	08:50		10:00 (E13)	08:11		10:03 (E13)	07:06	06:43	05:28	04:34
	15:51	27	10:27 (E13)	16:50	40	10:43 (E13)	17:52	19:57	21:00	21:55
4	08:50		10:00 (E13)	08:09		10:04 (E13)	07:03	06:41	05:26	04:33
	15:52	27	10:27 (E13)	16:52	38	10:42 (E13)	17:54	19:59	21:02	21:57
5	08:49		10:01 (E13)	08:07		10:05 (E13)	07:00	06:38	05:23	04:32
	15:53	28	10:29 (E13)	16:54	37	10:42 (E13)	17:56	20:01	21:04	21:58
6	08:49		10:00 (E13)	08:05		10:06 (E13)	06:58	06:35	05:21	04:31
	15:55	30	10:30 (E13)	16:56	34	10:40 (E13)	17:58	20:03	21:06	21:59
7	08:48		10:00 (E13)	08:03		10:07 (E13)	06:55	06:33	05:19	04:30
	15:56	31	10:31 (E13)	16:59	33	10:40 (E13)	18:00	20:05	21:08	22:00
8	08:48		10:00 (E13)	08:01		10:09 (E13)	06:53	06:30	05:17	04:29
	15:58	31	10:31 (E13)	17:01	30	10:39 (E13)	18:03	20:08	21:10	22:01
9	08:47		10:00 (E13)	07:58		10:10 (E13)	06:50	06:28	05:15	04:29
	15:59	32	10:32 (E13)	17:03	26	10:36 (E13)	18:05	20:10	21:12	22:02
10	08:46		10:00 (E13)	07:56		10:12 (E13)	06:47	06:25	05:13	04:28
	16:01	33	10:33 (E13)	17:05	23	10:35 (E13)	18:07	20:12	21:14	22:03
11	08:45		10:00 (E13)	07:54		10:15 (E13)	06:45	06:22	05:11	04:27
	16:03	35	10:35 (E13)	17:08	17	10:32 (E13)	18:09	20:14	21:16	22:04
12	08:44		10:00 (E13)	07:52		10:20 (E13)	06:42	06:20	05:08	04:27
	16:04	36	10:36 (E13)	17:10	6	10:26 (E13)	18:11	20:16	21:18	22:05
13	08:43		09:59 (E13)	07:49			06:40	06:17	05:06	04:26
	16:06	37	10:36 (E13)	17:12			18:13	20:18	21:20	22:06
14	08:42		09:59 (E13)	07:47			06:37	06:14	05:04	04:26
	16:08	38	10:37 (E13)	17:14			18:15	20:20	21:22	22:07
15	08:41		09:59 (E13)	07:45			06:34	06:12	05:03	04:26
	16:10	38	10:37 (E13)	17:17			18:18	20:22	21:24	22:07
16	08:40		09:59 (E13)	07:43			06:32	06:09	05:01	04:25
	16:12	39	10:38 (E13)	17:19			18:20	20:24	21:25	22:08
17	08:39		09:59 (E13)	07:40			06:29	06:07	04:59	04:25
	16:14	41	10:40 (E13)	17:21			18:22	20:26	21:27	22:08
18	08:37		09:59 (E13)	07:38			06:26	06:04	04:57	04:25
	16:16	41	10:40 (E13)	17:23			18:24	20:28	21:29	22:09
19	08:36		09:59 (E13)	07:36			06:24	06:02	04:55	04:25
	16:18	41	10:40 (E13)	17:26			18:26	20:30	21:31	22:09
20	08:35		09:59 (E13)	07:33			06:21	05:59	04:53	04:25
	16:20	42	10:41 (E13)	17:28			18:28	20:33	21:33	22:10
21	08:33		09:59 (E13)	07:31			06:18	05:57	04:52	04:25
	16:22	43	10:42 (E13)	17:30			18:30	20:35	21:35	22:10
22	08:32		09:59 (E13)	07:28			06:16	05:54	04:50	04:25
	16:24	43	10:42 (E13)	17:32			18:32	20:37	21:37	22:10
23	08:30		09:59 (E13)	07:26			06:13	05:52	04:48	04:26
	16:26	43	10:42 (E13)	17:34			18:34	20:39	21:38	22:10
24	08:29		10:00 (E13)	07:23			06:10	05:49	04:47	04:26
	16:28	43	10:43 (E13)	17:37			18:36	20:41	21:40	22:10
25	08:27		10:00 (E13)	07:21			06:07	05:47	04:45	04:26
	16:30	44	10:44 (E13)	17:39			18:38	20:43	21:42	22:10
26	08:26		10:00 (E13)	07:18			06:05	05:44	04:44	04:27
	16:32	44	10:44 (E13)	17:41			18:41	20:45	21:43	22:10
27	08:24		10:00 (E13)	07:16			06:02	05:42	04:42	04:27
	16:34	44	10:44 (E13)	17:43			18:43	20:47	21:45	22:10
28	08:22		10:01 (E13)	07:13			05:59	05:40	04:41	04:28
	16:36	43	10:44 (E13)	17:45			18:45	20:49	21:47	22:10
29	08:20		10:01 (E13)				06:57	05:37	04:40	04:29
	16:39	43	10:44 (E13)				19:47	20:51	21:48	22:10
30	08:18		10:01 (E13)				06:54	05:35	04:38	04:29
	16:41	43	10:44 (E13)				19:49	20:53	21:50	22:09
31	08:17		10:02 (E13)				06:51		04:37	
	16:43	42	10:44 (E13)				19:51		21:51	
Potential sun hours	235			266			366	426	508	529
Total, worst case		1150		366						
Sun reduction		0.13		0.20						
Oper. time red.		0.94		0.94						
Wind dir. red.		0.61		0.61						
Total reduction		0.08		0.12						
Total, real		88		42						

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	09:41 (E13) 10:05 (E13)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	09:39 (E13) 10:06 (E13)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	09:38 (E13) 10:08 (E13)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	09:37 (E13) 10:09 (E13)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	09:35 (E13) 10:10 (E13)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	09:35 (E13) 10:12 (E13)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	09:34 (E13) 10:12 (E13)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	09:34 (E13) 10:13 (E13)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	09:33 (E13) 10:14 (E13)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:33 (E13) 10:15 (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) 10:15 (E13)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	09:32 (E13) 10:15 (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) 10:16 (E13)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	09:32 (E13) 10:16 (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) 10:16 (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) 10:17 (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) 10:17 (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) 10:17 (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) 10:17 (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	09:36 (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) 10:17 (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	09:39 (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	09:41 (E13) 10:17 (E13)
31	05:14 21:30	06:15 20:17		08:20 16:38	09:43 (E13) 10:01 (E13)	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case				27	1174	698
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.94	0.94	0.94
Wind dir. red.				0.61	0.61	0.61
Total reduction				0.15	0.05	0.04
Total, real				4	56	28

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January			February			March	April	May	June
1	08:51		10:04 (E13)	08:15		10:05 (E13)	07:11	06:49	05:33	04:36
	15:48	25	10:29 (E13)	16:45	43	10:48 (E13)	17:48	19:53	20:55	21:53
2	08:50		10:04 (E13)	08:13		10:06 (E13)	07:08	06:46	05:30	04:35
	15:49	27	10:31 (E13)	16:47	42	10:48 (E13)	17:50	19:55	20:57	21:54
3	08:50		10:04 (E13)	08:11		10:06 (E13)	07:06	06:43	05:28	04:34
	15:51	27	10:31 (E13)	16:50	42	10:48 (E13)	17:52	19:57	21:00	21:55
4	08:50		10:03 (E13)	08:09		10:07 (E13)	07:03	06:41	05:26	04:33
	15:52	29	10:32 (E13)	16:52	41	10:48 (E13)	17:54	19:59	21:02	21:57
5	08:49		10:04 (E13)	08:07		10:08 (E13)	07:00	06:38	05:23	04:32
	15:53	30	10:34 (E13)	16:54	39	10:47 (E13)	17:56	20:01	21:04	21:58
6	08:49		10:04 (E13)	08:05		10:08 (E13)	06:58	06:35	05:21	04:31
	15:55	31	10:35 (E13)	16:56	38	10:46 (E13)	17:58	20:03	21:06	21:59
7	08:48		10:03 (E13)	08:03		10:10 (E13)	06:55	06:33	05:19	04:30
	15:56	32	10:35 (E13)	16:59	35	10:45 (E13)	18:00	20:05	21:08	22:00
8	08:48		10:03 (E13)	08:01		10:11 (E13)	06:53	06:30	05:17	04:29
	15:58	33	10:36 (E13)	17:01	33	10:44 (E13)	18:03	20:08	21:10	22:01
9	08:47		10:03 (E13)	07:58		10:12 (E13)	06:50	06:28	05:15	04:29
	15:59	34	10:37 (E13)	17:03	30	10:42 (E13)	18:05	20:10	21:12	22:02
10	08:46		10:03 (E13)	07:56		10:14 (E13)	06:47	06:25	05:13	04:28
	16:01	35	10:38 (E13)	17:05	27	10:41 (E13)	18:07	20:12	21:14	22:03
11	08:45		10:03 (E13)	07:54		10:17 (E13)	06:45	06:22	05:11	04:27
	16:03	36	10:39 (E13)	17:08	22	10:39 (E13)	18:09	20:14	21:16	22:04
12	08:44		10:03 (E13)	07:52		10:19 (E13)	06:42	06:20	05:08	04:27
	16:04	38	10:41 (E13)	17:10	17	10:36 (E13)	18:11	20:16	21:18	22:05
13	08:43		10:02 (E13)	07:49		10:25 (E13)	06:40	06:17	05:06	04:26
	16:06	39	10:41 (E13)	17:12	5	10:30 (E13)	18:13	20:18	21:20	22:06
14	08:42		10:03 (E13)	07:47			06:37	06:14	05:04	04:26
	16:08	39	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	42	10:45 (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	43	10:45 (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		10:03 (E13)	07:31			06:18	05:57	04:52	04:25
	16:22	44	10:47 (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	45	10:47 (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	46	10:49 (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	46	10:49 (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	45	10:49 (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	45	10:49 (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	45	10:49 (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	44	10:49 (E13)				19:49	20:53	21:50	22:09
31	08:17		10:05 (E13)				06:51		04:37	
	16:43	44	10:49 (E13)				19:51		21:51	
Potential sun hours	235			266			366	426	508	529
Total, worst case		1201			414					
Sun reduction		0.13			0.20					
Oper. time red.		0.94			0.94					
Wind dir. red.		0.61			0.61					
Total reduction		0.08			0.12					
Total, real		92			48					

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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) 10:11 (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) 10:12 (E13)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	09:41 (E13) 10:14 (E13)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	09:39 (E13) 10:15 (E13)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	09:38 (E13) 10:16 (E13)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	09:38 (E13) 10:17 (E13)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	09:37 (E13) 10:18 (E13)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	09:37 (E13) 10:19 (E13)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	09:36 (E13) 10:19 (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) 10:20 (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) 10:20 (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) 10:20 (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) 10:21 (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) 10:21 (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) 10:21 (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) 10:22 (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) 10:22 (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) 10:22 (E13)
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	09:38 (E13) 10:22 (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) 10:22 (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	09:43 (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	07:17 16:38	08:20 10:08 (E13)	08:23 15:47	09:45 (E13) 10:29 (E13)
Potential sun hours	529	469	385	324	247	216
Total, worst case				50	1236	758
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.94	0.94	0.94
Wind dir. red.				0.61	0.61	0.61
Total reduction				0.15	0.05	0.04
Total, real				7	59	31

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January			February			March	April	May	June
1	08:51		10:08 (E13)	08:15		10:12 (E13)	07:11	06:49	05:33	04:36
	15:48	30	10:38 (E13)	16:45	42	10:54 (E13)	17:48	19:53	20:55	21:53
2	08:50		10:08 (E13)	08:13		10:13 (E13)	07:08	06:46	05:30	04:35
	15:49	32	10:40 (E13)	16:47	41	10:54 (E13)	17:50	19:55	20:57	21:54
3	08:50		10:08 (E13)	08:11		10:14 (E13)	07:06	06:43	05:28	04:34
	15:51	32	10:40 (E13)	16:50	39	10:53 (E13)	17:52	19:57	21:00	21:55
4	08:50		10:08 (E13)	08:09		10:15 (E13)	07:03	06:41	05:26	04:33
	15:52	33	10:41 (E13)	16:52	38	10:53 (E13)	17:54	19:59	21:02	21:57
5	08:49		10:08 (E13)	08:07		10:16 (E13)	07:00	06:38	05:23	04:32
	15:53	34	10:42 (E13)	16:54	36	10:52 (E13)	17:56	20:01	21:04	21:58
6	08:49		10:08 (E13)	08:05		10:17 (E13)	06:58	06:35	05:21	04:31
	15:55	35	10:43 (E13)	16:56	33	10:50 (E13)	17:58	20:03	21:06	21:59
7	08:48		10:08 (E13)	08:03		10:18 (E13)	06:55	06:33	05:19	04:30
	15:56	36	10:44 (E13)	16:59	31	10:49 (E13)	18:00	20:05	21:08	22:00
8	08:48		10:08 (E13)	08:01		10:20 (E13)	06:53	06:30	05:17	04:29
	15:58	36	10:44 (E13)	17:01	28	10:48 (E13)	18:03	20:08	21:10	22:01
9	08:47		10:08 (E13)	07:58		10:21 (E13)	06:50	06:28	05:15	04:28
	15:59	37	10:45 (E13)	17:03	25	10:46 (E13)	18:05	20:10	21:12	22:02
10	08:46		10:08 (E13)	07:56		10:24 (E13)	06:47	06:25	05:13	04:28
	16:01	38	10:46 (E13)	17:05	19	10:43 (E13)	18:07	20:12	21:14	22:03
11	08:45		10:08 (E13)	07:54		10:29 (E13)	06:45	06:22	05:11	04:27
	16:03	39	10:47 (E13)	17:08	11	10:40 (E13)	18:09	20:14	21:16	22:04
12	08:44		10:08 (E13)	07:52			06:42	06:20	05:08	04:27
	16:04	40	10:48 (E13)	17:10			18:11	20:16	21:18	22:05
13	08:43		10:08 (E13)	07:49			06:40	06:17	05:06	04:26
	16:06	40	10:48 (E13)	17:12			18:13	20:18	21:20	22:06
14	08:42		10:08 (E13)	07:47			06:37	06:14	05:04	04:26
	16:08	41	10:49 (E13)	17:14			18:15	20:20	21:22	22:07
15	08:41		10:07 (E13)	07:45			06:34	06:12	05:03	04:26
	16:10	42	10:49 (E13)	17:17			18:18	20:22	21:24	22:07
16	08:40		10:08 (E13)	07:43			06:32	06:09	05:01	04:25
	16:12	42	10:50 (E13)	17:19			18:20	20:24	21:25	22:08
17	08:39		10:09 (E13)	07:40			06:29	06:07	04:59	04:25
	16:14	43	10:52 (E13)	17:21			18:22	20:26	21:27	22:08
18	08:37		10:08 (E13)	07:38			06:26	06:04	04:57	04:25
	16:16	44	10:52 (E13)	17:23			18:24	20:28	21:29	22:09
19	08:36		10:08 (E13)	07:35			06:24	06:02	04:55	04:25
	16:18	44	10:52 (E13)	17:26			18:26	20:30	21:31	22:09
20	08:35		10:09 (E13)	07:33			06:21	05:59	04:53	04:25
	16:20	44	10:53 (E13)	17:28			18:28	20:33	21:33	22:10
21	08:33		10:09 (E13)	07:31			06:18	05:57	04:52	04:25
	16:22	44	10:53 (E13)	17:30			18:30	20:35	21:35	22:10
22	08:32		10:08 (E13)	07:28			06:16	05:54	04:50	04:25
	16:24	45	10:53 (E13)	17:32			18:32	20:37	21:37	22:10
23	08:30		10:08 (E13)	07:26			06:13	05:52	04:48	04:26
	16:26	46	10:54 (E13)	17:34			18:34	20:39	21:38	22:10
24	08:29		10:10 (E13)	07:23			06:10	05:49	04:47	04:26
	16:28	45	10:55 (E13)	17:37			18:36	20:41	21:40	22:10
25	08:27		10:10 (E13)	07:21			06:07	05:47	04:45	04:26
	16:30	45	10:55 (E13)	17:39			18:38	20:43	21:42	22:10
26	08:26		10:10 (E13)	07:18			06:05	05:44	04:44	04:27
	16:32	45	10:55 (E13)	17:41			18:41	20:45	21:43	22:10
27	08:24		10:10 (E13)	07:16			06:02	05:42	04:42	04:27
	16:34	45	10:55 (E13)	17:43			18:43	20:47	21:45	22:10
28	08:22		10:11 (E13)	07:13			05:59	05:40	04:41	04:28
	16:36	44	10:55 (E13)	17:45			18:45	20:49	21:47	22:10
29	08:20		10:11 (E13)				06:57	05:37	04:40	04:29
	16:39	44	10:55 (E13)				19:47	20:51	21:48	22:10
30	08:18		10:12 (E13)				06:54	05:35	04:38	04:29
	16:41	43	10:55 (E13)				19:49	20:53	21:50	22:09
31	08:17		10:12 (E13)				06:51		04:37	
	16:43	43	10:55 (E13)				19:51		21:51	
Potential sun hours	235			266			366	426	508	529
Total, worst case		1251			343					
Sun reduction		0.13			0.20					
Oper. time red.		0.94			0.94					
Wind dir. red.		0.61			0.61					
Total reduction		0.08			0.12					
Total, real		96			40					

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	09:53 (E13) 10:14 (E13)
2	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	09:51 (E13) 10:16 (E13)
3	04:32 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 16:32	09:50 (E13) 10:18 (E13)
4	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	09:48 (E13) 10:19 (E13)
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	09:46 (E13) 10:20 (E13)
6	04:35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	09:46 (E13) 10:22 (E13)
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	07:36 16:23	09:45 (E13) 10:23 (E13)
8	04:37 22:04	05:29 21:13	06:31 19:55	07:32 18:35	07:38 16:21	09:45 (E13) 10:24 (E13)
9	04:38 22:03	05:31 21:11	06:33 19:53	07:34 18:32	07:40 16:19	09:44 (E13) 10:24 (E13)
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	09:44 (E13) 10:26 (E13)
11	04:41 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	09:43 (E13) 10:26 (E13)
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 18:25	07:46 16:13	09:42 (E13) 10:26 (E13)
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	09:43 (E13) 10:27 (E13)
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:51 16:09	09:43 (E13) 10:27 (E13)
15	04:46 21:57	05:43 20:57	06:45 19:37	07:46 18:17	07:53 16:08	09:42 (E13) 10:27 (E13)
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	09:43 (E13) 10:28 (E13)
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	09:43 (E13) 10:28 (E13)
18	04:51 21:52	05:49 20:50	06:51 19:29	07:52 18:09	07:59 16:02	09:44 (E13) 10:29 (E13)
19	04:52 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	09:43 (E13) 10:29 (E13)
20	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	09:43 (E13) 10:28 (E13)
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:58	09:44 (E13) 10:28 (E13)
22	04:57 21:46	05:57 20:40	06:59 19:18	08:01 17:59	08:07 15:56	09:45 (E13) 10:29 (E13)
23	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	09:45 (E13) 10:29 (E13)
24	05:01 21:43	06:01 20:35	07:03 19:12	08:05 17:55	08:11 15:53	09:45 (E13) 10:29 (E13)
25	05:03 21:41	06:03 20:32	07:05 19:10	08:07 16:52	08:13 15:52	09:46 (E13) 10:29 (E13)
26	05:04 21:39	06:05 20:30	07:07 19:07	08:10 16:50	08:15 15:51	09:46 (E13) 10:29 (E13)
27	05:06 21:38	06:07 20:27	07:09 19:04	08:12 16:47	08:17 15:49	09:48 (E13) 10:29 (E13)
28	05:08 21:36	06:09 20:24	07:11 19:02	08:14 16:45	08:19 15:48	09:48 (E13) 10:29 (E13)
29	05:10 21:34	06:11 20:22	07:13 18:59	08:16 16:43	08:21 15:47	09:49 (E13) 10:29 (E13)
30	05:12 21:32	06:13 20:19	07:15 18:56	08:18 16:40	08:22 15:46	09:49 (E13) 10:29 (E13)
31	05:14 21:30	06:15 20:17		08:20 16:38	09:56 (E13) 10:09 (E13)	
Potential sun hours	529	469	385	324	247	216
Total, worst case				13	1204	932
Sun reduction				0.26	0.08	0.07
Oper. time red.				0.94	0.94	0.94
Wind dir. red.				0.61	0.61	0.61
Total reduction				0.15	0.05	0.04
Total, real				2	57	38

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 16:45	09:14 (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	09:14 (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 19:54	06:38 20:51	04:32 21:04	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:31 16:27	08:42 (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	09:13 (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	08:46 (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	08:47 (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	08:49 (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	08:50 (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	08:51 (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	08:53 (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	08:55 (E13) 15:38
18	08:37 16:16	07:38 17:23	09:15 (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	08:58 (E13) 15:38
19	08:36 16:18	07:36 17:26	09:17 (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	09:02 (E13) 15:38
20	08:35 16:20	07:33 17:28	09:18 (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 16:04	09:09 (E13) 15:38
21	08:33 16:22	07:31 17:30	09:20 (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	09:11 (E13) 15:38
22	08:32 16:24	07:28 17:32	09:21 (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 16:01	09:12 (E13) 15:38
23	08:30 16:26	07:26 17:34	09:24 (E13) 18:34	06:13 20:39	05:52 21:38	04:48 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 16:02	09:14 (E13) 15:38
24	08:29 16:28	07:24 17:37	09:24 (E13) 18:37	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 16:02	09:15 (E13) 15:38
25	08:27 16:30	07:21 17:39	09:25 (E13) 18:41	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 16:02	09:16 (E13) 15:38
26	08:26 16:32	07:19 17:41	09:26 (E13) 18:44	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 16:02	09:17 (E13) 15:38
27	08:24 16:34	07:16 17:43	09:27 (E13) 18:47	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 16:02	09:18 (E13) 15:38
28	08:22 16:36	07:13 17:45	09:28 (E13) 18:49	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 16:02	09:19 (E13) 15:38
29	08:20 16:39	07:11 17:48	09:29 (E13) 18:51	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 16:02	09:20 (E13) 15:38
30	08:18 16:41	07:03 17:51	09:30 (E13) 18:53	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 16:02	09:21 (E13) 15:38
31	08:17 16:43	07:01 17:55	09:31 (E13) 18:55	05:51 20:55	05:31 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:20 18:56	08:23 17:41	08:29 16:02	09:22 (E13) 15:38
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	217	852								465	618	
Sun reduction	0.13	0.20								0.26	0.08	
Oper. time red.	0.94	0.94								0.94	0.94	
Wind dir. red.	0.59	0.59								0.59	0.59	
Total reduction	0.07	0.11								0.14	0.05	
Total, real	16	96								67	28	

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first 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:
26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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
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29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:09	05:10 21:33	06:11 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
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31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:30	06:15 20:16		07:20 16:38		08:50 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start wind speed: Cut in wind 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
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19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:26 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:26 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	05:00 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:37	05:50 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	07:03 19:13	08:05 17:55	08:11 15:54	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:46 21:42	04:27 22:10	05:03 21:41	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:42
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:06 20:30	07:07 19:07	07:10 16:50	08:15 15:51	08:51 15:42
27	08:24 16:35	07:16 17:43	06:02 18:43	05:42 20:47	04:43 21:45	04:28 22:10	05:07 21:38	06:08 20:27	07:09 19:04	07:12 16:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:46	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:10 20:24	07:11 19:02	07:14 16:45	08:19 15:49	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:12 20:22	07:13 18:59	07:16 16:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:39 21:50	04:30 22:09	05:12 21:32	06:14 20:19	07:15 18:56	07:18 16:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	19 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	17 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	13 16:27
6	08:49 15:55	08:05 16:56	08:34 (E13) 9 08:43 (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	7 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	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	16:38
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	16:19
10	08:46 16:01	07:56 17:05	08:27 (E13) 21 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	16:17
11	08:45 16:03	07:54 17:08	08:29 (E13) 22 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	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	16:13
13	08:43 16:06	07:50 17:12	08:28 (E13) 24 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	16:11
14	08:42 16:08	07:47 17:14	08:27 (E13) 25 08:52 (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	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	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	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	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	16:02
19	08:36 16:18	07:36 17:26	08:29 (E13) 21 08:50 (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
20	08:35 16:20	07:33 17:28	08:29 (E13) 20 08:49 (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
21	08:33 16:22	07:31 17:30	08:31 (E13) 17 08:48 (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
22	08:32 16:24	07:28 17:32	08:33 (E13) 12 08:45 (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
23	08:30 16:26	07:26 17:34	08:37 (E13) 4 08:41 (E13)	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
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
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	08:05 16:52	08:13
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	08:07 16:50	08:15
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
28	08:22 16:36	07:13 17:45		05:59 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:02	08:19 16:45	08:21
29	08:20 16:39			05:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:21 16:43	08:21
30	08:19 16:41			05:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:21 16:41	08:22
31	08:17 16:43			05:51 19:51	05:37 21:51	04:37 21:51	05:14 21:30	06:15 20:17	07:16 20:17	08:21 16:38	08:21 (E13) 23 08:21 (E13)	08:22
Potential sun hours	235	266		366	426	508	529	529	469	385	324	247
Total, worst case		344								273		78
Sun reduction		0.20								0.26		0.08
Oper. time red.		0.94								0.94		0.94
Wind dir. red.		0.61								0.61		0.61
Total reduction		0.12								0.15		0.05
Total, real		40								41		4

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Mezares_AB211223

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
26/06/2024 08:57/4.0.540

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start wind speed: 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 10:22 (E13) 17:48	07:11 10:56 (E13) 17:48	06:49 19:53 20:55	05:33 21:53 22:09	04:30 21:28 21:28	05:16 20:14 18:54	06:17 20:14 16:36	07:17 20:14 16:36	07:23 20:14 16:36	08:24 15:45 39
2	08:50 15:49 34	10:13 (E13) 10:47 (E13) 16:47	08:13 10:23 (E13) 17:50	07:08 10:55 (E13) 17:50	06:46 19:55 20:57	05:30 21:55 20:57	04:31 21:54 22:09	05:18 21:26 20:11	06:19 20:11 18:51	07:19 20:11 16:34	07:25 20:11 16:34	08:26 15:44 39
3	08:50 15:51 34	10:13 (E13) 10:47 (E13) 16:50	08:11 10:24 (E13) 17:52	07:06 10:54 (E13) 17:52	06:43 19:57 21:00	05:28 21:55 22:08	04:34 21:55 22:08	05:19 21:24 20:09	06:21 20:09 18:48	07:21 20:09 16:32	07:27 20:09 16:32	08:28 15:43 39
4	08:50 15:52 36	10:12 (E13) 10:48 (E13) 16:52	08:09 10:26 (E13) 17:54	07:03 10:53 (E13) 17:54	06:41 19:59 21:02	05:26 21:57 22:07	04:33 21:57 22:07	05:21 21:22 20:06	06:23 20:06 18:46	07:23 20:06 16:29	07:29 20:06 16:29	08:29 15:42 38
5	08:49 15:53 36	10:13 (E13) 10:49 (E13) 16:54	08:07 10:28 (E13) 17:56	07:00 10:52 (E13) 17:56	06:38 19:58 21:04	05:23 21:58 22:07	04:34 21:58 22:07	05:23 21:20 20:03	06:25 20:03 18:43	07:25 20:03 16:27	07:31 20:03 16:27	08:31 15:42 37
6	08:49 15:55 37	10:13 (E13) 10:50 (E13) 16:56	08:05 10:30 (E13) 17:58	07:05 10:58 (E13) 17:58	06:35 20:03 21:06	05:21 21:59 22:06	04:31 21:59 22:06	05:25 21:17 20:01	06:27 20:01 18:40	07:27 20:01 16:25	07:33 20:01 16:25	08:32 15:41 37
7	08:48 15:56 37	10:13 (E13) 10:50 (E13) 16:59	08:03 10:34 (E13) 17:58	07:03 10:58 (E13) 17:58	06:33 20:05 21:08	05:19 22:00 22:05	04:30 22:00 22:05	05:27 21:15 20:01	06:29 20:01 18:38	07:30 20:01 16:23	07:36 20:01 16:23	08:34 15:40 36
8	08:48 15:58 38	10:13 (E13) 10:51 (E13) 17:01	08:01 10:31 (E13) 17:01	07:01 10:51 (E13) 17:01	06:30 19:58 21:10	05:17 21:58 22:01	04:37 21:58 22:01	05:29 21:13 20:01	06:31 20:01 18:35	07:32 20:01 16:21	07:38 20:01 16:21	08:35 15:40 36
9	08:47 15:59 39	10:13 (E13) 10:52 (E13) 17:03	07:58 10:32 (E13) 17:03	07:03 10:52 (E13) 17:03	06:28 19:58 21:12	05:15 21:58 22:02	04:38 21:58 22:02	05:31 21:11 20:01	06:33 20:01 18:32	07:34 20:01 16:19	07:40 20:01 16:19	08:37 15:39 35
10	08:46 16:01 39	10:13 (E13) 10:52 (E13) 17:05	07:56 10:33 (E13) 17:05	07:05 10:53 (E13) 17:05	06:25 19:58 21:14	05:13 21:58 22:03	04:39 21:58 22:03	05:33 21:08 20:01	06:35 20:01 18:30	07:36 20:01 16:17	07:42 20:01 16:17	08:38 15:39 34
11	08:45 16:03 39	10:14 (E13) 10:53 (E13) 17:08	07:54 10:34 (E13) 17:08	07:08 10:54 (E13) 17:08	06:22 19:59 21:16	05:11 21:59 22:04	04:41 22:04 22:01	05:35 21:06 20:01	06:37 20:01 18:27	07:38 20:01 16:15	07:44 20:01 16:15	08:39 15:38 34
12	08:44 16:04 40	10:14 (E13) 10:54 (E13) 17:10	07:52 10:34 (E13) 17:10	07:10 10:54 (E13) 17:10	06:20 19:58 21:18	05:08 22:00 22:05	04:42 22:00 22:05	05:37 21:04 20:01	06:39 20:01 18:25	07:40 20:01 16:13	07:46 20:01 16:13	08:40 15:38 33
13	08:43 16:06 40	10:14 (E13) 10:54 (E13) 17:12	07:49 10:35 (E13) 17:12	07:12 10:55 (E13) 17:12	06:17 19:57 21:20	05:06 22:00 22:06	04:43 22:00 22:06	05:39 21:02 20:01	06:41 20:01 18:42	07:42 20:01 16:11	07:49 20:01 16:11	08:42 15:38 33
14	08:42 16:08 41	10:14 (E13) 10:55 (E13) 17:14	07:47 10:36 (E13) 17:14	07:14 10:56 (E13) 17:14	06:14 19:56 21:22	05:04 22:00 22:07	04:45 22:00 22:07	05:41 20:59 20:59	06:43 20:01 18:19	07:44 20:01 16:09	07:51 20:01 16:09	08:43 15:38 32
15	08:41 16:10 41	10:14 (E13) 10:55 (E13) 17:17	07:45 10:37 (E13) 17:17	07:17 10:58 (E13) 17:17	06:12 19:56 21:24	05:03 22:00 22:07	04:46 22:00 22:07	05:43 20:57 20:57	06:45 20:01 18:17	07:46 20:01 16:08	07:53 20:01 16:08	08:44 15:38 32
16	08:40 16:12 42	10:14 (E13) 10:56 (E13) 17:19	07:43 10:38 (E13) 17:19	07:19 10:59 (E13) 17:19	06:10 19:55 21:25	05:01 22:00 22:08	04:48 22:00 22:08	05:45 20:54 20:54	06:47 20:01 18:14	07:48 20:01 16:06	07:55 20:01 16:06	08:45 15:38 31
17	08:39 16:14 42	10:15 (E13) 10:57 (E13) 17:21	07:40 10:39 (E13) 17:21	07:21 10:59 (E13) 17:21	06:09 19:54 21:27	05:01 22:00 22:08	04:49 22:00 22:08	05:47 20:52 20:52	06:49 20:01 18:12	07:50 20:01 16:04	07:57 20:01 16:04	08:46 15:38 31
18	08:37 16:16 42	10:15 (E13) 10:57 (E13) 17:23	07:38 10:40 (E13) 17:23	07:23 10:59 (E13) 17:23	06:04 19:53 21:29	04:57 22:00 22:09	04:51 22:00 22:09	05:49 20:50 20:50	06:51 20:01 18:09	07:52 20:01 16:02	07:59 20:01 16:02	08:46 15:38 31
19	08:36 16:18 42	10:15 (E13) 10:57 (E13) 17:26	07:36 10:41 (E13) 17:26	07:26 10:59 (E13) 17:26	06:02 19:52 21:31	04:55 22:00 22:09	04:52 22:00 22:09	05:51 20:47 20:47	06:53 20:01 18:07	07:55 20:01 16:01	08:01 20:01 16:01	08:47 15:38 31
20	08:35 16:20 42	10:16 (E13) 10:58 (E13) 17:28	07:33 10:42 (E13) 17:28	07:28 10:59 (E13) 17:28	06:01 19:51 21:33	04:53 22:00 22:10	04:54 22:00 22:10	05:53 20:45 20:45	06:55 20:01 18:04	07:57 20:01 15:59	08:03 20:01 15:59	08:48 15:39 31
21	08:33 16:22 42	10:16 (E13) 10:58 (E13) 17:30	07:31 10:43 (E13) 17:30	07:31 10:59 (E13) 17:30	06:01 19:51 21:35	04:53 22:00 22:10	04:56 22:00 22:10	05:55 20:42 20:42	06:57 20:01 18:02	07:59 20:01 15:58	08:05 20:01 15:58	08:48 15:39 30
22	08:32 16:24 42	10:16 (E13) 10:58 (E13) 17:32	07:28 10:44 (E13) 17:32	07:32 10:59 (E13) 17:32	06:01 19:51 21:37	04:50 22:00 22:10	04:57 22:00 22:10	05:57 20:39 20:39	06:59 20:01 17:59	08:01 20:01 15:56	08:07 20:01 15:56	08:49 15:39 30
23	08:30 16:26 42	10:16 (E13) 10:58 (E13) 17:34	07:26 10:45 (E13) 17:34	07:34 10:59 (E13) 17:34	06:01 19:51 21:38	04:48 22:00 22:10	04:59 22:00 22:10	05:59 20:37 20:37	07:01 20:01 17:57	08:09 20:01 15:55	08:15 20:01 15:55	08:50 15:40 30
24	08:29 16:28 42	10:17 (E13) 10:59 (E13) 17:37	07:23 10:46 (E13) 17:37	07:37 10:59 (E13) 17:37	06:01 19:51 21:40	04:47 22:00 22:10	05:01 22:00 22:10	06:01 20:35 20:35	07:03 20:01 17:55	08:11 20:01 15:53	08:17 20:01 15:53	08:51 15:41 31
25	08:27 16:30 42	10:17 (E13) 10:59 (E13) 17:39	07:21 10:47 (E13) 17:39	07:39 10:59 (E13) 17:39	06:01 19:51 21:42	04:45 22:00 22:10	05:03 22:00 22:10	06:03 20:32 20:32	07:05 20:01 17:52	08:13 20:01 15:52	08:19 20:01 15:52	08:50 15:41 31
26	08:26 16:32 41	10:18 (E13) 10:59 (E13) 17:41	07:18 10:48 (E13) 17:41	07:41 10:59 (E13) 17:41	06:05 19:51 21:43	04:44 22:00 22:10	05:04 22:00 22:10	06:05 20:30 20:30	07:07 20:01 17:50	08:15 20:01 15:51	08:21 20:01 15:51	08:51 15:42 31
27	08:24 16:34 41	10:18 (E13) 10:59 (E13) 17:43	07:16 10:49 (E13) 17:43	07:43 10:59 (E13) 17:43	06:02 19:51 21:45	04:42 22:00 22:10	05:06 22:00 22:10	06:07 20:27 20:27	07:09 20:01 17:47	08:17 20:01 15:49	08:23 20:01 15:49	08:51 15:43 31
28	08:22 16:36 39	10:19 (E13) 10:58 (E13) 17:45	07:13 10:50 (E13) 17:45	07:45 10:58 (E13) 17:45	06:01 19:51 21:47	04:41 22:00 22:10	05:08 22:00 22:10	06:09 20:24 20:24	07:11 20:01 17:42	08:19 20:01 15:48	08:25 20:01 15:48	08:51 15:44 32
29	08:20 16:39 38	10:20 (E13) 10:58 (E13) 17:47	07:11 10:50 (E13) 17:47	07:47 10:58 (E13) 17:47	06:01 19:51 21:48	04:40 22:00 22:10	05:10 22:00 22:10	06:11 20:22 20:22	07:13 20:01 18:59	08:21 20:01 15:47	08:27 20:01 15:47	08:51 15:45 32
30	08:18 16:41 37	10:21 (E13) 10:58 (E13) 17:49	07:09 10:50 (E13) 17:49	07:49 10:58 (E13) 17:49	06:01 19:51 21:50	04:38 22:00 22:09	05:12 22:00 22:09	06:13 20:19 20:19	07:15 20:01 18:56	08:22 20:01 15:46	08:28 20:01 15:46	08:51 15:46 32
31	08:17 16:43 35	10:22 (E13) 10:57 (E13) 17:51	07:08 10:51 (E13) 17:51	07:51 10:57 (E13) 17:51	06:01 19:51 21:51	04:37 22:00 22:10	05:14 22:00 22:10	06:15 20:17 20:17	07:20 20:01 16:38	08:29 20:01 15:47	08:35 20:01 15:47	08:51 15:47 33
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	1216	177								996		1033
Sun reduction	0.13	0.20								0.08		0.07
Oper. time red.	0.94	0.94								0.94		0.94
Wind dir. red.	0.61	0.61								0.61		0.61
Total reduction	0.08	0.12								0.05		0.04
Total, real	93	21								47		42

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start 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		09:42 (E13)	08:13	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26	09:26 (E13)
	15:49	23	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	27 09:53 (E13)
3	08:50		09:42 (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	23	10:05 (E13)	16:50	17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:32	15:43	28 09:54 (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	09:31 (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	23 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	08:39	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	11 09:28 (E13) 09:39 (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	08:40	09:33 (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	16 09:41 (E13)	15:38 21 09:54 (E13)
13	08:43		09:43 (E13)	07:50	06:40	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:49	08:42	09:33 (E13)
	16:06	29	10:12 (E13)	17:12	18:13	20:18	21:20	22:06	21:59	21:02	19:42	18:22	16:11	19 09:44 (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	08:43	09:34 (E13)
	16:08	30	10:13 (E13)	17:14	18:15	20:20	21:22	22:07	21:58	20:59	19:39	18:20	16:09	22 09:45 (E13)	15:38 20 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	08:44	09:35 (E13)
	16:10	30	10:14 (E13)	17:17	18:18	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:08	24 09:47 (E13)	15:38 19 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	08:45	09:35 (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	25 09:47 (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	08:46	09:36 (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	27 09:48 (E13)	15:38 19 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	08:46	09:37 (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	27 09:49 (E13)	15:38 18 09:55 (E13)
19	08:36		09:44 (E13)	07:36	06:24	06:02	04:55	04:25	04:52	05:51	06:53	07:55	08:01	08:47	09:38 (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	28 09:49 (E13)	15:38 18 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	08:48	09:38 (E13)
	16:20	30	10:15 (E13)	17:28	18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:04	15:59	29 09:50 (E13)	15:39 18 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	08:49	09:39 (E13)
	16:22	29	10:15 (E13)	17:30	18:30	20:35	21:35	22:10	21:48	20:42	19:20	18:02	15:58	29 09:50 (E13)	15:39 17 09:56 (E13)
22	08:32		09:46 (E13)	07:28	06:16	05:54	04:50	04:25	04:57	05:57	06:59	08:01	08:07	08:49	09:39 (E13)
	16:24	29	10:15 (E13)	17:32	18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56	30 09:51 (E13)	15:39 17 09:56 (E13)
23	08:30		09:46 (E13)	07:26	06:13	05:52	04:48	04:26	04:59	05:59	07:01	08:03	08:09	08:49	09:40 (E13)
	16:26	28	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 18 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	08:50	09:40 (E13)
	16:28	27	10:15 (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 18 09:58 (E13)
25	08:27		09:48 (E13)	07:21	06:07	05:47	04:45	04:26	05:03	06:03	07:05	08:07	08:13	08:50	09:40 (E13)
	16:30	27	10:15 (E13)	17:39	18:38	20:43	21:42	22:10	21:41	20:32	19:10	16:52	15:52	30 09:51 (E13)	15:41 18 09:58 (E13)
26	08:26		09:49 (E13)	07:18	06:05	05:44	04:44	04:27	05:04	06:05	07:07	08:09	08:15	08:51	09:40 (E13)
	16:32	25	10:14 (E13)	17:41	18:41	20:45	21:43	22:10	21:39	20:30	19:07	16:50	15:51	29 09:52 (E13)	15:42 19 09:59 (E13)
27	08:24		09:50 (E13)	07:16	06:02	05:42	04:42	04:27	05:06	06:07	07:09	08:12	08:17	08:51	09:40 (E13)
	16:34	24	10:14 (E13)	17:43	18:43	20:47	21:45	22:10	21:38	20:27	19:04	16:47	15:49	30 09:53 (E13)	15:43 19 09:59 (E13)
28	08:22		09:51 (E13)	07:13	05:59	05:40	04:41	04:28	05:08	06:09	07:11	08:14	08:19	08:51	09:40 (E13)
	16:36	22	10:13 (E13)	17:45	18:45	20:49	21:47	22:10	21:36	20:24	19:02	16:45	15:48	30 09:53 (E13)	15:44 20 10:00 (E13)
29	08:20		09:53 (E13)		06:57	05:37	04:40	04:29	05:10	06:11	07:13	08:16	08:21	08:51	09:41 (E13)
	16:39	19	10:12 (E13)		19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	29 09:53 (E13)	15:45 20 10:01 (E13)
30	08:19		09:55 (E13)		06:54	05:35	04:38	04:29	05:12	06:13	07:15	08:18	08:22	08:51	09:41 (E13)
	16:41	15	10:10 (E13)		19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:41	15:46	29 09:53 (E13)	15:46 21 10:02 (E13)
31	08:17		09:57 (E13)		06:51		04:37		05:14			07:20		08:51	09:42 (E13)
	16:43	11	10:08 (E13)		19:51		21:51		21:30		20:17	16:38		15:47	21 10:03 (E13)
Potential sun hours	235			266	366	426	508	529	529	469	385	324	247	216	
Total, worst case		801											524		663
Sun reduction		0.13											0.08		0.07
Oper. time red.		0.94											0.94		0.94
Wind dir. red.		0.61											0.61		0.61
Total reduction		0.08											0.05		0.04
Total, real		61											25		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)
	Minutes with flicker		

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start 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	44 11:21 (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	44	11:35 (E5)	16:52	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:45	16:29	15:42	44 11:21 (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	44	11:36 (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		10:52 (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	44	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	44 11:22 (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	44	11:37 (E5)	17:01	18:02	20:07	21:10	22:01	22:04	21:13	19:55	18:35	16:21	15:39	44 11:23 (E5)
9	08:47		10:53 (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	44	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	44	11:38 (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	8 10:49 (E5)	10:39 10:40 (E5)
	16:02	43	11:38 (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		10:55 (E5)	07:52	06:42	06:19	05:08	04:26	04:42	05:37	06:39	07:40	07:46	10:43 (E5)	10:38 10:40 (E5)
	16:04	44	11:39 (E5)	17:10	18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:24	16:13	15:38	44 11:25 (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	10:43 (E5)	10:38 10:40 (E5)
	16:06	43	11:38 (E5)	17:12	18:13	20:18	21:20	22:06	21:59	21:01	19:42	18:22	16:11	15:38	43 11:25 (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	10:41 (E5)	10:38 10:40 (E5)
	16:08	43	11:39 (E5)	17:14	18:15	20:20	21:22	22:07	21:58	20:59	19:39	18:19	16:09	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	10:39 (E5)	10:38 10:40 (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	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	10:39 (E5)	10:38 10:40 (E5)
	16:12	42	11:39 (E5)	17:19	18:19	20:24	21:25	22:08	21:55	20:54	19:34	18:14	16:06	15:37	43 11:26 (E5)
17	08:39		10:58 (E5)	07:40	06:29	06:07	04:58	04:25	04:49	05:47	06:49	07:50	07:57	10:38 (E5)	10:38 10:40 (E5)
	16:13	41	11:39 (E5)	17:21	18:22	20:26	21:27	22:09	21:54	20:52	19:31	18:12	16:04	15:38	42 11:26 (E5)
18	08:37		10:58 (E5)	07:38	06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:52	07:59	10:38 (E5)	10:38 10:40 (E5)
	16:15	41	11:39 (E5)	17:23	18:24	20:28	21:29	22:09	21:52	20:49	19:28	18:09	16:02	15:38	43 11:27 (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	10:37 (E5)	10:38 10:40 (E5)
	16:17	40	11:39 (E5)	17:25	18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:00	15:38	42 11:27 (E5)
20	08:35		11:00 (E5)	07:33	06:21	05:59	04:53	04:25	04:54	05:53	06:55	07:57	08:03	10:36 (E5)	10:38 10:40 (E5)
	16:19	39	11:39 (E5)	17:28	18:28	20:32	21:33	22:10	21:49	20:45	19:23	18:04	15:59	15:38	42 11:27 (E5)
21	08:33		11:00 (E5)	07:31	06:18	05:56	04:51	04:25	04:55	05:55	06:57	07:59	08:05	10:35 (E5)	10:38 10:40 (E5)
	16:21	39	11:39 (E5)	17:30	18:30	20:35	21:35	22:10	21:48	20:42	19:20	18:02	15:57	15:39	42 11:28 (E5)
22	08:32		11:01 (E5)	07:28	06:15	05:54	04:50	04:25	04:57	05:57	06:59	08:01	08:07	10:36 (E5)	10:38 10:40 (E5)
	16:23	37	11:38 (E5)	17:32	18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56	15:39	42 11:28 (E5)
23	08:30		11:02 (E5)	07:26	06:13	05:51	04:48	04:25	04:59	05:59	07:01	08:03	08:09	10:36 (E5)	10:38 10:40 (E5)
	16:26	36	11:38 (E5)	17:34	18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:54	15:40	42 11:29 (E5)
24	08:29		11:04 (E5)	07:23	06:10	05:49	04:46	04:26	05:01	06:01	07:03	08:05	08:11	10:35 (E5)	10:38 10:40 (E5)
	16:28	34	11:38 (E5)	17:36	18:36	20:41	21:40	22:10	21:43	20:35	19:12	17:54	15:53	15:40	42 11:29 (E5)
25	08:27		11:05 (E5)	07:21	06:07	05:47	04:45	04:26	05:02	06:03	07:05	07:07	08:13	10:35 (E5)	10:38 10:40 (E5)
	16:30	32	11:37 (E5)	17:39	18:38	20:43	21:42	22:10	21:41	20:32	19:10	16:52	15:52	15:41	43 11:30 (E5)
26	08:26		11:06 (E5)	07:18	06:05	05:44	04:43	04:26	05:04	06:05	07:07	07:09	08:15	10:36 (E5)	10:38 10:40 (E5)
	16:32	30	11:36 (E5)	17:41	18:40	20:45	21:43	22:10	21:39	20:29	19:07	16:50	15:50	15:42	43 11:30 (E5)
27	08:24		11:07 (E5)	07:16	06:02	05:42	04:42	04:27	05:06	06:07	07:09	07:12	08:17	10:36 (E5)	10:38 10:40 (E5)
	16:34	28	11:35 (E5)	17:43	18:42	20:47	21:45	22:10	21:38	20:27	19:04	16:47	15:49	15:42	42 11:30 (E5)
28	08:22		11:09 (E5)	07:13	05:59	05:39	04:41	04:28	05:08	06:09	07:11	07:14	08:19	10:36 (E5)	10:38 10:40 (E5)
	16:36	25	11:34 (E5)	17:45	18:45	20:49	21:47	22:10	21:36	20:24	19:01	16:45	15:48	15:43	43 11:31 (E5)
29	08:20		11:11 (E5)		06:57	05:37	04:39	04:28	05:10	06:11	07:13	07:16	08:21	10:36 (E5)	10:38 10:40 (E5)
	16:38	21	11:32 (E5)		19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	15:44	43 11:32 (E5)
30	08:18		11:14 (E5)		06:54	05:35	04:38	04:29	05:12	06:13	07:15	07:18	08:22	10:36 (E5)	10:38 10:40 (E5)
	16:41	16	11:30 (E5)		19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:40	15:46	15:45	43 11:32 (E5)
31	08:17		11:19 (E5)		06:51		04:37		05:13	06:15		07:20		10:35 (E5)	10:38 10:40 (E5)
	16:43	6	11:25 (E5)		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		1158											682		1330
Sun reduction		0.13											0.08		0.07
Oper. time red.		0.94											0.94		0.94
Wind dir. red.		0.60											0.60		0.60
Total reduction		0.08											0.05		0.04
Total, real		87											32		53

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	06:48 (E14) 07:02 (E14)	07:17 18:54	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:08	05:18 21:26	06:19 20:11	06:51 (E14) 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	06:54 (E14) 07:04 (E14)	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	06:51 (E14) 07:07 (E14)	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	06:50 (E14) 07:08 (E14)	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	06:48 (E14) 07:10 (E14)	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	06:47 (E14) 07:10 (E14)	06:51 19:29	07:52 18:09	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:46 (E14) 07:10 (E14)	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 21:49	05:53 20:45	06:45 (E14) 07:11 (E14)	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	06:44 (E14) 07:11 (E14)	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	06:44 (E14) 07:11 (E14)	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	06:44 (E14) 07:11 (E14)	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10	05:01 21:43	06:01 20:35	06:43 (E14) 07:11 (E14)	07:03 19:12	08:05 17:55	08:11 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	05:47 20:43	04:45 21:42	04:27 22:10	05:03 21:41	06:03 20:32	06:43 (E14) 07:11 (E14)	07:05 19:10	08:07 17:52	08:13 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 22:10	05:05 21:39	06:05 20:30	06:43 (E14) 07:10 (E14)	07:07 19:07	08:10 17:50	08:15 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 22:10	05:06 21:38	06:07 20:27	06:44 (E14) 07:10 (E14)	07:09 19:04	08:12 17:48	08:17 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:08 21:36	06:09 20:24	06:43 (E14) 07:08 (E14)	07:11 19:02	08:14 17:46	08:19 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:10 21:34	06:11 20:22	06:44 (E14) 07:07 (E14)	07:13 18:59	08:16 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	06:45 (E14) 07:06 (E14)	07:15 18:56	08:18 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51	05:33 20:53	04:37 21:51	04:27 21:51	05:14 21:30	06:15 20:17	06:46 (E14) 07:04 (E14)	07:15 18:56	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				431					21				
Sun reduction				0.50					0.43				
Oper. time red.				0.94					0.94				
Wind dir. red.				0.66					0.66				
Total reduction				0.31					0.26				
Total, real				133				128	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	30	10:21 (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	30	10:22 (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	31	10:24 (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		07:24 (E13)	06:30	05:17		04:29	
	15:58	32	10:25 (E14)	17:01		18:03		9	07:33 (E13)	20:08	21:10	22:01	
9	08:47		09:54 (E14)	07:58		06:50			07:21 (E13)	06:28	05:15	04:29	
	16:00	31	10:25 (E14)	17:03		18:05		16	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	32	10:26 (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			07:16 (E13)	06:22	05:11	04:27	
	16:03	31	10:26 (E14)	17:08		18:09		23	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	32	10:27 (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			07:14 (E13)	06:17	05:07	04:26	
	16:06	32	10:27 (E14)	17:12		18:13		27	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		30	07:42 (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	31	10:28 (E14)	17:17		18:18		30	07:42 (E13)	20:22	21:24	22:07	
16	08:40		09:56 (E14)	07:43		06:32			07:11 (E13)	06:09	05:01	04:26	
	16:12	32	10:28 (E14)	17:19		18:20		31	07:42 (E13)	20:24	21:26	22:08	
17	08:39		09:57 (E14)	07:40		06:29			07:11 (E13)	06:07	04:59	04:25	
	16:14	31	10:28 (E14)	17:21		18:22		31	07:42 (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	30	10:28 (E14)	17:23		18:24		31	07:41 (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	30	10:28 (E14)	17:26		18:26		30	07:41 (E13)	20:31	21:31	22:09	
20	08:35		09:59 (E14)	07:33		06:21			07:10 (E13)	05:59	04:53	04:25	
	16:20	29	10:28 (E14)	17:28		18:28		30	07:40 (E13)	20:33	21:33	22:10	
21	08:33		10:00 (E14)	07:31		06:18			07:10 (E13)	05:57	04:52	04:25	
	16:22	28	10:28 (E14)	17:30		18:30		29	07:39 (E13)	20:35	21:35	22:10	
22	08:32		10:00 (E14)	07:28		06:16			07:12 (E13)	05:54	04:50	04:26	
	16:24	27	10:27 (E14)	17:32		18:32		27	07:39 (E13)	20:37	21:37	22:10	
23	08:30		10:01 (E14)	07:26		06:13			07:12 (E13)	05:52	04:48	04:26	
	16:26	26	10:27 (E14)	17:34		18:34		25	07:37 (E13)	20:39	21:38	22:10	
24	08:29		10:03 (E14)	07:23		06:10			07:12 (E13)	05:49	04:47	04:26	
	16:28	24	10:27 (E14)	17:37		18:36		23	07:35 (E13)	20:41	21:40	22:10	
25	08:27		10:04 (E14)	07:21		06:08			07:14 (E13)	05:47	04:45	04:26	
	16:30	22	10:26 (E14)	17:39		18:38		20	07:34 (E13)	20:43	21:42	22:10	
26	08:26		10:05 (E14)	07:18		06:05			07:16 (E13)	05:44	04:44	04:27	
	16:32	20	10:25 (E14)	17:41		18:41		15	07:31 (E13)	20:45	21:43	22:10	
27	08:24		10:07 (E14)	07:16		06:02			07:20 (E13)	05:42	04:42	04:27	
	16:34	16	10:23 (E14)	17:43		18:43		6	07:26 (E13)	20:47	21:45	22:10	
28	08:22		10:10 (E14)	07:13		05:59				05:40	04:41	04:28	
	16:37	11	10:21 (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		790				479							
Sun reduction		0.13				0.41							
Oper. time red.		0.94				0.94							
Wind dir. red.		0.61				0.62							
Total reduction		0.08				0.24							
Total, real		61				115							

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:54 (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	07:57 (E13) 16:29	08:29 15:42
5	04:34 22:07	05:23 21:20	06:25 20:03	07:25 18:43	07:59 (E13) 16:27	08:31 15:42
6	04:35 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:30 18:38	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 15:47	08:51 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case			377	104	452	901
Sun reduction			0.43	0.26	0.08	0.07
Oper. time red.			0.94	0.94	0.94	0.94
Wind dir. red.			0.62	0.62	0.61	0.61
Total reduction			0.25	0.15	0.05	0.04
Total, real			94	16	22	37

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

SHADOW - Calendar

Shadow receptor: Tudalinas - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (42)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	20	06:39 (E7)	21:53		
2	08:50		10:51 (E13)	08:13		07:08		06:46					05:30		06:19 (E7)	04:35		
	15:49	33	11:24 (E13)	16:47		17:50		19:55					20:57	19	06:38 (E7)	21:54		
3	08:50		10:51 (E13)	08:11		07:06		06:43					05:28		06:20 (E7)	04:34		
	15:51	33	11:24 (E13)	16:50		17:52		19:57					21:00	17	06:37 (E7)	21:55		
4	08:50		10:51 (E13)	08:09		07:03		06:41					05:26		06:22 (E7)	04:33		
	15:52	33	11:24 (E13)	16:52		17:54		19:59					21:02	13	06:35 (E7)	21:57		
5	08:49		10:52 (E13)	08:07		07:00		06:38					05:23		06:24 (E7)	04:32		
	15:53	33	11:25 (E13)	16:54		17:56		20:01					21:04	9	06:33 (E7)	21:58		
6	08:49		10:53 (E13)	08:05		06:58		06:35					05:21			04:31		
	15:55	32	11:25 (E13)	16:56		17:58		20:03					21:06			21:59		
7	08:48		10:53 (E13)	08:03		06:55		06:33					05:19			04:30		
	15:56	32	11:25 (E13)	16:59		18:00		20:05					21:08			22:00		
8	08:48		10:54 (E13)	08:01		06:53		06:30					05:17			04:29		
	15:58	31	11:25 (E13)	17:01		18:03		20:08					21:10			22:01		
9	08:47		10:55 (E13)	07:58		06:50		06:28					05:15			04:28		
	15:59	30	11:25 (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	29	11:25 (E13)	17:05		18:07		20:12					21:14			22:03		
11	08:45		10:57 (E13)	07:54		06:45		06:22					05:10			04:27		
	16:03	28	11:25 (E13)	17:08		18:09		20:14					21:16			22:04		
12	08:44		10:58 (E13)	07:52		06:42		06:20					05:08			04:27		
	16:04	27	11:25 (E13)	17:10		18:11		20:16					21:18			22:05		
13	08:43		10:58 (E13)	07:50		06:40		06:17					05:06			04:26		
	16:06	26	11:24 (E13)	17:12		18:13		20:18					21:20			22:06		
14	08:42		11:00 (E13)	07:47		06:37		06:14					05:04			04:26		
	16:08	24	11:24 (E13)	17:14		18:15		20:20					21:22			22:07		
15	08:41		11:01 (E13)	07:45		06:34		06:12					05:02			04:26		
	16:10	23	11:24 (E13)	17:17		18:18		20:22					21:24			22:07		
16	08:40		11:02 (E13)	07:43		06:32		06:09					05:01			04:25		
	16:12	21	11:23 (E13)	17:19		18:20		20:24					21:25			22:08		
17	08:39		11:04 (E13)	07:40		06:29		06:07					04:59			04:25		
	16:14	18	11:22 (E13)	17:21		18:22		20:26					21:27			22:08		
18	08:37		11:06 (E13)	07:38		06:26		06:04					04:57			04:25		
	16:16	15	11:21 (E13)	17:23		18:24		20:28					21:29			22:09		
19	08:36		11:08 (E13)	07:36		06:24		06:02				06:28 (E7)	04:55			04:25		
	16:18	10	11:18 (E13)	17:25		18:26		20:30	8	06:36 (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	20	06:41 (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	23	06:42 (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	23	06:41 (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	23	06:41 (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	23	06:41 (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	23	06:41 (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		511						236			78							
Sun reduction		0.13						0.50			0.57							
Oper. time red.		0.94						0.94			0.94							
Wind dir. red.		0.60						0.65			0.65							
Total reduction		0.08						0.31			0.35							
Total, real		38						72			27							

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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 (E13)
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 (E13)
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 (E13)
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 (E13)
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 (E13)
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 (E13)
7	04:36 22:05	05:27 21:15	06:36 (E7) 06:40 (E7)	06:29 19:58	07:30 18:38	08:34 15:40 (E13)
8	04:37 22:04	05:29 21:13	06:32 (E7) 06:43 (E7)	06:31 19:55	07:32 18:35	08:35 15:40 (E13)
9	04:38 22:03	05:31 21:11	06:31 (E7) 06:45 (E7)	06:33 19:53	07:34 18:32	08:37 15:39 (E13)
10	04:39 22:02	05:33 21:08	06:29 (E7) 06:47 (E7)	06:35 19:50	07:36 18:30	08:38 15:39 (E13)
11	04:41 22:01	05:35 21:06	06:28 (E7) 06:47 (E7)	06:37 19:47	07:38 18:27	08:39 15:38 (E13)
12	04:42 22:00	05:37 21:04	06:27 (E7) 06:47 (E7)	06:39 19:45	07:40 18:25	08:40 15:38 (E13)
13	04:43 21:59	05:39 21:02	06:26 (E7) 06:48 (E7)	06:41 19:42	07:42 18:22	08:42 15:38 (E13)
14	04:45 21:58	05:41 20:59	06:26 (E7) 06:48 (E7)	06:43 19:39	07:44 18:19	08:43 15:38 (E13)
15	04:46 21:57	05:43 20:57	06:26 (E7) 06:48 (E7)	06:45 19:37	07:46 18:17	08:44 15:38 (E13)
16	04:48 21:55	05:45 20:54	06:25 (E7) 06:49 (E7)	06:47 19:34	07:48 18:14	08:45 15:38 (E13)
17	04:49 21:54	05:47 20:52	06:25 (E7) 06:48 (E7)	06:49 19:31	07:50 18:12	08:46 15:38 (E13)
18	04:51 21:52	05:49 20:50	06:24 (E7) 06:47 (E7)	06:51 19:29	07:52 18:09	08:46 15:38 (E13)
19	04:52 21:51	05:51 20:47	06:25 (E7) 06:47 (E7)	06:53 19:26	07:55 18:07	08:47 15:38 (E13)
20	04:54 21:49	05:53 20:45	06:25 (E7) 06:46 (E7)	06:55 19:23	07:57 18:04	08:48 15:39 (E13)
21	04:56 21:48	05:55 20:42	06:26 (E7) 06:45 (E7)	06:57 19:20	07:59 18:02	08:49 15:39 (E13)
22	04:57 21:46	05:57 20:40	06:28 (E7) 06:44 (E7)	06:59 19:18	08:01 17:59	08:49 15:39 (E13)
23	04:59 21:45	05:59 20:37	06:30 (E7) 06:42 (E7)	07:01 19:15	08:03 17:57	08:50 15:40 (E13)
24	05:01 21:43	06:01 20:35	06:32 (E7) 06:40 (E7)	07:03 19:12	08:05 17:55	08:50 15:41 (E13)
25	05:03 21:41	06:03 20:32		07:05 19:10	08:13 17:52	08:50 15:41 (E13)
26	05:04 21:39	06:05 20:30		07:07 19:07	08:15 17:50	08:51 15:42 (E13)
27	05:06 21:38	06:07 20:27		07:09 19:04	08:17 17:47	08:51 15:43 (E13)
28	05:08 21:36	06:09 20:24		07:11 19:02	08:19 17:45	08:51 15:44 (E13)
29	05:10 21:34	06:11 20:22		07:13 18:59	08:21 17:43	08:51 15:45 (E13)
30	05:12 21:32	06:13 20:19		07:15 18:56	08:22 17:40	08:51 15:46 (E13)
31	05:14 21:30	06:15 20:17		07:20 16:38		08:51 15:47 (E13)
Potential sun hours	529	469	385	324	247	216
Total, worst case		320			165	1033
Sun reduction		0.50			0.08	0.07
Oper. time red.		0.94			0.94	0.94
Wind dir. red.		0.65			0.60	0.60
Total reduction		0.31			0.05	0.04
Total, real		98			8	41

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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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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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start wind 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
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20	08:35 16:19	07:33 17:27	06:20 18:28	05:59 20:32	04:53 21:33	04:24 22:10	04:53 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48 33	10:10 (E13) 08:15 15:45 35	10:19 (E13) 07:11 15:53 20:55	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 18:54	06:17 20:14 16:36	07:17 18:54 16:36	07:23 16:36 15:45	08:24 15:45 15:45
2	08:50 15:49 33	10:11 (E13) 08:13 15:44 33	10:20 (E13) 07:08 15:53 20:57	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 18:51	06:19 20:11 16:34	07:19 18:51 16:34	07:25 16:34 15:44	08:26 15:44 15:44
3	08:50 15:51 34	10:11 (E13) 08:11 15:45 30	10:22 (E13) 07:06 15:52 21:00	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 18:48	06:21 20:09 16:32	07:21 18:48 16:32	07:27 15:43 15:43	08:28 15:43 15:43
4	08:50 15:52 35	10:10 (E13) 08:09 15:45 28	10:23 (E13) 07:03 15:51 21:02	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 18:46	06:23 20:06 16:29	07:23 18:46 16:29	07:29 15:42 15:42	08:29 15:42 15:42
5	08:49 15:53 35	10:11 (E13) 08:07 15:46 25	10:25 (E13) 07:00 15:50 21:01	06:38 19:56 21:01	05:23 21:58 22:07	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 15:42 15:42	08:31 15:42 15:42
6	08:49 15:55 36	10:11 (E13) 08:05 15:47 20	10:27 (E13) 06:58 15:55 21:06	06:35 19:57 21:06	05:21 21:59 22:06	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 15:41 15:41	08:32 15:41 15:41
7	08:48 15:56 37	10:11 (E13) 08:03 15:48 15	10:30 (E13) 06:55 15:45 18:00	06:33 19:59 21:08	05:19 21:58 22:00	04:30 21:58 22:05	04:36 21:15 20:03	05:27 21:15 19:58	06:29 20:03 16:23	07:30 18:48 16:23	07:36 15:40 15:40	08:34 15:40 15:40
8	08:48 15:58 37	10:11 (E13) 08:01 15:48 17	10:31 (E13) 06:53 15:45 18:03	06:30 19:57 21:10	05:17 21:57 22:01	04:30 21:57 22:04	04:37 21:29 21:13	05:29 21:29 19:55	06:31 20:03 16:21	07:32 18:48 16:21	07:38 15:39 15:39	08:35 15:39 15:39
9	08:47 15:59 38	10:11 (E13) 07:58 15:49 18	10:32 (E13) 06:50 15:45 18:05	06:28 19:56 21:10	05:15 21:56 22:02	04:38 21:56 22:03	04:38 21:11 20:03	05:31 21:11 19:53	06:33 20:03 16:19	07:34 18:48 16:19	07:40 15:38 15:38	08:37 15:38 15:38
10	08:46 16:01 38	10:12 (E13) 07:56 15:50 19	10:33 (E13) 06:47 15:45 18:07	06:25 19:55 21:12	05:13 21:54 22:03	04:39 21:54 22:02	04:39 21:08 20:03	05:33 21:08 19:50	06:35 20:03 16:17	07:36 18:48 16:17	07:42 15:37 15:37	08:38 15:37 15:37
11	08:45 16:03 39	10:12 (E13) 07:54 15:51 20	10:34 (E13) 06:45 15:45 18:09	06:22 19:54 21:16	05:11 21:53 22:04	04:41 21:53 22:01	04:41 21:06 20:03	05:35 21:06 19:47	06:37 20:03 16:15	07:38 18:48 16:15	07:44 15:36 15:36	08:39 15:36 15:36
12	08:44 16:04 40	10:12 (E13) 07:52 15:52 21	10:35 (E13) 06:42 15:45 18:11	06:20 19:53 21:18	05:08 21:52 22:05	04:42 21:52 22:00	04:42 21:04 20:04	05:37 21:04 19:45	06:39 20:04 16:13	07:40 18:48 16:13	07:46 15:35 15:35	08:40 15:35 15:35
13	08:43 16:06 40	10:12 (E13) 07:49 15:52 22	10:36 (E13) 06:40 15:45 18:13	06:17 19:51 21:20	05:06 21:51 22:06	04:43 21:51 22:02	04:43 21:02 20:05	05:39 21:02 19:42	06:41 20:05 16:11	07:42 18:48 16:11	07:49 15:34 15:34	08:42 15:34 15:34
14	08:42 16:08 40	10:12 (E13) 07:47 15:52 23	10:37 (E13) 06:37 15:45 18:15	06:14 19:50 21:22	05:04 21:50 22:07	04:44 21:50 22:07	04:45 21:02 20:06	05:41 21:02 19:39	06:43 20:06 16:09	07:44 18:48 16:09	07:51 15:33 15:33	08:43 15:33 15:33
15	08:41 16:10 40	10:12 (E13) 07:45 15:52 24	10:38 (E13) 06:34 15:45 18:18	06:12 19:49 21:24	05:03 21:49 22:07	04:46 21:49 22:07	04:46 21:02 20:07	05:43 21:02 19:37	06:45 20:07 16:08	07:46 18:48 16:08	07:53 15:32 15:32	08:44 15:32 15:32
16	08:40 16:12 41	10:12 (E13) 07:43 15:53 25	10:39 (E13) 06:32 15:45 18:20	06:09 19:48 21:25	05:01 21:48 22:08	04:48 21:48 22:08	04:48 21:02 20:08	05:45 21:02 19:34	06:47 20:08 16:06	07:48 18:48 16:06	07:55 15:31 15:31	08:45 15:31 15:31
17	08:39 16:14 41	10:13 (E13) 07:40 15:54 26	10:40 (E13) 06:29 15:45 18:22	06:07 19:47 21:26	04:59 21:47 22:08	04:49 21:47 22:08	04:49 21:02 20:09	05:47 21:02 19:31	06:49 20:09 16:04	07:50 18:48 16:04	07:57 15:30 15:30	08:46 15:30 15:30
18	08:37 16:16 41	10:13 (E13) 07:38 15:54 27	10:41 (E13) 06:26 15:45 18:24	06:04 19:46 21:29	04:57 21:46 22:09	04:51 21:46 22:09	04:51 21:02 20:10	05:49 21:02 19:29	06:51 20:10 16:02	07:52 18:48 16:02	07:59 15:29 15:29	08:46 15:29 15:29
19	08:36 16:18 43	10:13 (E13) 07:36 15:55 28	10:42 (E13) 06:24 15:45 18:26	06:02 19:45 21:31	04:55 21:45 22:09	04:52 21:45 22:09	04:52 21:02 20:11	05:51 21:02 19:26	06:53 20:11 16:01	07:55 18:48 16:01	08:01 15:28 15:28	08:47 15:28 15:28
20	08:35 16:20 43	10:13 (E13) 07:33 15:56 29	10:43 (E13) 06:21 15:45 18:28	06:01 19:44 21:33	04:53 21:44 22:10	04:54 21:44 22:10	04:54 21:02 20:12	05:53 21:02 19:23	06:55 20:12 16:04	07:57 18:48 16:04	08:03 15:27 15:27	08:48 15:27 15:27
21	08:33 16:22 43	10:13 (E13) 07:31 15:56 30	10:44 (E13) 06:18 15:45 18:30	06:00 19:43 21:35	04:52 21:43 22:10	04:56 21:43 22:10	04:56 21:02 20:14	05:55 21:02 19:20	06:57 20:14 16:02	07:59 18:48 16:02	08:05 15:26 15:26	08:48 15:26 15:26
22	08:32 16:24 43	10:13 (E13) 07:28 15:56 31	10:45 (E13) 06:16 15:45 18:32	06:00 19:42 21:37	04:50 21:42 22:10	04:57 21:42 22:10	04:57 21:02 20:16	05:57 21:02 19:18	06:59 20:16 16:01	08:01 18:48 16:01	08:07 15:25 15:25	08:49 15:25 15:25
23	08:30 16:26 42	10:14 (E13) 07:26 15:56 32	10:46 (E13) 06:13 15:45 18:34	06:00 19:41 21:38	04:48 21:41 22:10	04:59 21:41 22:10	04:59 21:02 20:17	05:59 21:02 19:15	07:01 20:17 16:01	08:03 18:48 16:01	08:09 15:24 15:24	08:50 15:24 15:24
24	08:29 16:28 42	10:15 (E13) 07:23 15:57 33	10:47 (E13) 06:10 15:45 18:36	06:00 19:40 21:40	04:47 21:40 22:10	04:59 21:40 22:10	04:59 21:02 20:18	06:01 21:02 19:12	07:03 20:18 16:01	08:05 18:48 16:01	08:11 15:23 15:23	08:51 15:23 15:23
25	08:27 16:30 42	10:15 (E13) 07:21 15:57 34	10:48 (E13) 06:07 15:45 18:38	06:00 19:39 21:42	04:45 21:39 22:10	04:59 21:39 22:10	04:59 21:02 20:19	06:03 21:02 19:10	07:05 20:19 16:01	08:07 18:48 16:01	08:13 15:22 15:22	08:51 15:22 15:22
26	08:26 16:32 40	10:16 (E13) 07:18 15:56 35	10:49 (E13) 06:05 15:45 18:41	06:00 19:38 21:45	04:44 21:38 22:10	04:59 21:38 22:10	04:59 21:02 20:20	06:05 21:02 19:07	07:07 20:20 16:01	08:09 18:48 16:01	08:15 15:21 15:21	08:51 15:21 15:21
27	08:24 16:34 40	10:16 (E13) 07:16 15:56 36	10:50 (E13) 06:02 15:45 18:43	06:00 19:37 21:47	04:42 21:37 22:10	04:59 21:37 22:10	04:59 21:02 20:21	06:07 21:02 19:04	07:09 20:21 16:01	08:11 18:48 16:01	08:17 15:20 15:20	08:51 15:20 15:20
28	08:22 16:36 39	10:17 (E13) 07:13 15:56 37	10:51 (E13) 06:00 15:45 18:45	06:00 19:36 21:49	04:41 21:36 22:10	04:59 21:36 22:10	04:59 21:02 20:22	06:09 21:02 19:02	07:11 20:22 16:01	08:13 18:48 16:01	08:19 15:19 15:19	08:51 15:19 15:19
29	08:20 16:39 39	10:17 (E13) 07:11 15:56 38	10:52 (E13) 06:00 15:45 18:47	06:00 19:35 21:51	04:40 21:35 22:10	04:59 21:35 22:10	04:59 21:02 20:23	06:11 21:02 18:59	07:13 20:23 16:01	08:15 18:48 16:01	08:21 15:18 15:18	08:51 15:18 15:18
30	08:18 16:41 38	10:18 (E13) 07:09 15:56 39	10:53 (E13) 06:00 15:45 18:49	06:00 19:34 21:53	04:38 21:34 22:10	04:59 21:34 22:10	04:59 21:02 20:24	06:13 21:02 18:56	07:15 20:24 16:01	08:17 18:48 16:01	08:22 15:17 15:17	08:51 15:17 15:17
31	08:17 16:43 36	10:19 (E13) 07:07 15:56 40	10:54 (E13) 06:00 15:45 18:51	06:00 19:33 21:55	04:37 21:33 22:10	04:59 21:33 22:10	04:59 21:02 20:25	06:15 21:02 18:56	07:17 20:25 16:01	08:19 18:48 16:01	08:24 15:16 15:16	08:51 15:16 15:16
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case	1208	186									1011	1003
Sun reduction	0.13	0.20									0.08	0.07
Oper. time red.	0.94	0.94									0.94	0.94
Wind dir. red.	0.61	0.61									0.61	0.61
Total reduction	0.08	0.12									0.05	0.04
Total, real	93	22									48	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

January		February		March		April		May		June	
1	08:51 15:48	13:48 (E15) 13:56 (E15)	08:15 16:45	07:11 17:47	16:00 (E13) 16:39 (E13)	06:49 19:53	05:32 20:55			04:36 21:52	05:41 (E8) 06:09 (E8)
2	08:50 15:49	13:50 (E15) 13:55 (E15)	08:13 16:47	07:08 17:50	16:00 (E13) 16:38 (E13)	06:46 19:55	05:30 20:57			04:35 21:54	05:42 (E8) 06:08 (E8)
3	08:50 15:51		08:11 16:50	07:06 17:52	16:01 (E13) 16:38 (E13)	06:43 19:57	05:28 20:59			04:34 21:55	05:42 (E8) 06:08 (E8)
4	08:50 15:52		08:09 16:52	07:03 17:54	16:01 (E13) 16:37 (E13)	06:41 19:59	05:26 21:01			04:33 21:56	05:42 (E8) 06:08 (E8)
5	08:49 15:53		08:07 16:54	07:00 17:56	16:01 (E13) 16:36 (E13)	06:38 20:01	05:23 21:04			04:32 21:58	05:43 (E8) 06:08 (E8)
6	08:49 15:55		08:05 16:56	06:58 17:58	16:02 (E13) 16:36 (E13)	06:35 20:03	05:21 21:06			04:31 21:59	05:44 (E8) 06:08 (E8)
7	08:48 15:56		08:03 16:59	06:55 18:00	16:03 (E13) 16:34 (E13)	06:33 20:05	05:19 21:08			04:30 22:00	05:44 (E8) 06:07 (E8)
8	08:47 15:58		08:00 17:01	06:53 18:03	16:04 (E13) 16:32 (E13)	06:30 20:07	05:17 21:10			04:29 22:01	05:45 (E8) 06:08 (E8)
9	08:47 15:59		07:58 17:03	06:50 18:05	16:06 (E13) 16:31 (E13)	06:27 20:10	05:15 21:12	05:49 (E8) 06:00 (E8)		04:28 22:02	05:45 (E8) 06:07 (E8)
10	08:46 16:01		07:56 17:05	06:47 18:07	16:08 (E13) 16:28 (E13)	06:25 20:12	05:13 21:14	05:46 (E8) 06:02 (E8)		04:28 22:03	05:46 (E8) 06:08 (E8)
11	08:45 16:03		07:54 17:08	06:45 18:09	16:10 (E13) 16:25 (E13)	06:22 20:14	05:10 21:16	05:45 (E8) 06:03 (E8)		04:27 22:04	05:46 (E8) 06:07 (E8)
12	08:44 16:04		07:52 17:10	06:42 18:11		06:20 20:16	05:08 21:18	05:43 (E8) 06:04 (E8)		04:27 22:05	05:47 (E8) 06:07 (E8)
13	08:43 16:06		07:49 17:12	06:39 18:13		06:17 20:18	05:06 21:20	05:42 (E8) 06:05 (E8)		04:26 22:06	05:47 (E8) 06:07 (E8)
14	08:42 16:08		07:47 17:14	06:37 18:15		06:14 20:20	05:04 21:22	05:42 (E8) 06:06 (E8)		04:26 22:07	05:47 (E8) 06:06 (E8)
15	08:41 16:10		07:45 17:17	16:14 (E13) 16:28 (E13)	06:34 18:17	06:12 20:22	05:02 21:23	05:41 (E8) 06:07 (E8)		04:26 22:07	05:48 (E8) 06:07 (E8)
16	08:40 16:12		07:43 17:19	16:10 (E13) 16:30 (E13)	06:31 18:20	06:09 20:24	05:01 21:25	05:40 (E8) 06:07 (E8)		04:25 22:08	05:48 (E8) 06:07 (E8)
17	08:39 16:14		07:40 17:21	16:09 (E13) 16:33 (E13)	06:29 18:22	06:07 20:26	04:59 21:27	05:40 (E8) 06:08 (E8)		04:25 22:08	05:49 (E8) 06:07 (E8)
18	08:37 16:16		07:38 17:23	16:06 (E13) 16:34 (E13)	06:26 18:24	06:04 20:28	04:57 21:29	05:40 (E8) 06:08 (E8)		04:25 22:09	05:49 (E8) 06:07 (E8)
19	08:36 16:18		07:35 17:25	16:06 (E13) 16:36 (E13)	06:23 18:26	06:02 20:30	04:55 21:31	05:39 (E8) 06:08 (E8)		04:25 22:09	05:49 (E8) 06:07 (E8)
20	08:35 16:20		07:33 17:28	16:04 (E13) 16:36 (E13)	06:21 18:28	05:59 20:32	04:53 21:33	05:39 (E8) 06:09 (E8)		04:25 22:10	05:49 (E8) 06:07 (E8)
21	08:33 16:22		07:31 17:30	16:03 (E13) 16:38 (E13)	06:18 18:30	05:57 20:35	04:52 21:35	05:39 (E8) 06:08 (E8)		04:25 22:10	05:51 (E8) 06:08 (E8)
22	08:32 16:24		07:28 17:32	16:02 (E13) 16:38 (E13)	06:15 18:32	05:54 20:37	04:50 21:36	05:39 (E8) 06:09 (E8)		04:25 22:10	05:51 (E8) 06:08 (E8)
23	08:30 16:26		07:26 17:34	16:02 (E13) 16:39 (E13)	06:13 18:34	05:52 20:39	04:48 21:38	05:39 (E8) 06:09 (E8)		04:26 22:10	05:50 (E8) 06:08 (E8)
24	08:29 16:28		07:23 17:36	16:01 (E13) 16:39 (E13)	06:10 18:36	05:49 20:41	04:47 21:40	05:39 (E8) 06:09 (E8)		04:26 22:10	05:50 (E8) 06:08 (E8)
25	08:27 16:30		07:21 17:39	16:00 (E13) 16:39 (E13)	06:07 18:38	05:47 20:43	04:45 21:42	05:39 (E8) 06:09 (E8)		04:26 22:10	05:51 (E8) 06:09 (E8)
26	08:25 16:32		07:18 17:41	16:00 (E13) 16:40 (E13)	06:05 18:40	05:44 20:45	04:44 21:43	05:40 (E8) 06:10 (E8)		04:27 22:10	05:50 (E8) 06:09 (E8)
27	08:24 16:34		07:16 17:43	16:00 (E13) 16:39 (E13)	06:02 18:43	05:42 20:47	04:42 21:45	05:39 (E8) 06:09 (E8)		04:27 22:10	05:51 (E8) 06:10 (E8)
28	08:22 16:36		07:13 17:45	16:00 (E13) 16:40 (E13)	05:59 18:45	05:39 20:49	04:41 21:46	05:40 (E8) 06:09 (E8)		04:28 22:10	05:50 (E8) 06:10 (E8)
29	08:20 16:39				06:57 19:47	05:37 20:51	04:39 21:48	05:40 (E8) 06:09 (E8)		04:28 22:10	05:51 (E8) 06:10 (E8)
30	08:18 16:41				06:54 19:49	05:35 20:53	04:38 21:50	05:41 (E8) 06:09 (E8)		04:29 22:09	05:51 (E8) 06:11 (E8)
31	08:17 16:43				06:51 19:51		04:37 21:51	05:41 (E8) 06:09 (E8)			
Potential sun hours	235		266		366	426	508			529	
Total, worst case		13		452				604			620
Sun reduction		0.13		0.20				0.57			0.56
Oper. time red.		0.94		0.94				0.94			0.94
Wind dir. red.		0.65		0.67				0.67			0.67
Total reduction		0.08		0.13				0.36			0.35
Total, real		1		58				217			219

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

July		August		September		October		November		December	
1	04:30	05:50 (E8)	05:16	05:54 (E8)	06:17	07:17		07:22	08:24		
	22:09	21	06:11 (E8)	21:28	20	06:14 (E8)	20:14	18:54	16:36	15:45	
2	04:31	05:50 (E8)	05:17	05:55 (E8)	06:19	07:19		16:51 (E13)	07:25	08:26	
	22:08	22	06:12 (E8)	21:26	18	06:13 (E8)	20:11	18:51	11	17:02 (E13)	16:34
3	04:32	05:50 (E8)	05:19	05:57 (E8)	06:21	07:21		16:47 (E13)	07:27	08:27	
	22:08	22	06:12 (E8)	21:24	14	06:11 (E8)	20:09	18:48	18	17:05 (E13)	16:31
4	04:33	05:50 (E8)	05:21	06:00 (E8)	06:23	07:23		16:44 (E13)	07:29	08:29	
	22:07	23	06:13 (E8)	21:22	9	06:09 (E8)	20:06	18:46	23	17:07 (E13)	16:29
5	04:34	05:50 (E8)	05:23			06:25	07:25	16:42 (E13)	07:31	08:31	
	22:07	24	06:14 (E8)	21:19		20:03	18:43	27	17:09 (E13)	16:27	15:42
6	04:35	05:50 (E8)	05:25			06:27	07:27	16:40 (E13)	07:33	08:32	
	22:06	24	06:14 (E8)	21:17		20:01	18:40	30	17:10 (E13)	16:25	15:41
7	04:36	05:50 (E8)	05:27			06:29	07:29	16:38 (E13)	07:36	08:34	
	22:05	25	06:15 (E8)	21:15		19:58	18:38	32	17:10 (E13)	16:23	15:40
8	04:37	05:50 (E8)	05:29			06:31	07:31	16:36 (E13)	07:38	08:35	
	22:04	25	06:15 (E8)	21:13		19:55	18:35	35	17:11 (E13)	16:21	15:40
9	04:38	05:50 (E8)	05:31			06:33	07:34	16:35 (E13)	07:40	08:36	
	22:03	25	06:15 (E8)	21:11		19:53	18:32	36	17:11 (E13)	16:19	15:39
10	04:39	05:49 (E8)	05:33			06:35	07:36	16:35 (E13)	07:42	08:38	13:40 (E15)
	22:02	27	06:16 (E8)	21:08		19:50	18:30	37	17:12 (E13)	16:17	15:39
11	04:41	05:49 (E8)	05:35			06:37	07:38	16:34 (E13)	07:44	08:39	13:39 (E15)
	22:01	27	06:16 (E8)	21:06		19:47	18:27	38	17:12 (E13)	16:15	15:38
12	04:42	05:50 (E8)	05:37			06:39	07:40	16:33 (E13)	07:46	08:40	13:38 (E15)
	22:00	27	06:17 (E8)	21:04		19:45	18:25	39	17:12 (E13)	16:13	15:38
13	04:43	05:49 (E8)	05:39			06:41	07:42	16:33 (E13)	07:48	08:41	13:38 (E15)
	21:59	28	06:17 (E8)	21:01		19:42	18:22	39	17:12 (E13)	16:11	15:38
14	04:45	05:49 (E8)	05:41			06:43	07:44	16:32 (E13)	07:51	08:43	13:38 (E15)
	21:58	28	06:17 (E8)	20:59		19:39	18:19	40	17:12 (E13)	16:09	15:38
15	04:46	05:48 (E8)	05:43			06:45	07:46	16:33 (E13)	07:53	08:44	13:38 (E15)
	21:56	29	06:17 (E8)	20:57		19:37	18:17	39	17:12 (E13)	16:07	15:38
16	04:48	05:49 (E8)	05:45			06:47	07:48	16:33 (E13)	07:55	08:45	13:38 (E15)
	21:55	29	06:18 (E8)	20:54		19:34	18:14	39	17:12 (E13)	16:06	15:38
17	04:49	05:49 (E8)	05:47			06:49	07:50	16:32 (E13)	07:57	08:45	13:38 (E15)
	21:54	29	06:18 (E8)	20:52		19:31	18:12	39	17:11 (E13)	16:04	15:38
18	04:51	05:49 (E8)	05:49			06:51	07:52	16:32 (E13)	07:59	08:46	13:39 (E15)
	21:52	30	06:19 (E8)	20:49		19:28	18:09	38	17:10 (E13)	16:02	15:38
19	04:52	05:49 (E8)	05:51			06:53	07:54	16:32 (E13)	08:01	08:47	13:38 (E15)
	21:51	30	06:19 (E8)	20:47		19:26	18:07	37	17:09 (E13)	16:01	15:38
20	04:54	05:49 (E8)	05:53			06:55	07:57	16:34 (E13)	08:03	08:48	13:39 (E15)
	21:49	30	06:19 (E8)	20:45		19:23	18:04	35	17:09 (E13)	15:59	15:39
21	04:56	05:49 (E8)	05:55			06:57	07:59	16:34 (E13)	08:05	08:48	13:40 (E15)
	21:48	30	06:19 (E8)	20:42		19:20	18:02	34	17:08 (E13)	15:58	15:39
22	04:57	05:50 (E8)	05:57			06:59	08:01	16:34 (E13)	08:07	08:49	13:40 (E15)
	21:46	29	06:19 (E8)	20:40		19:18	17:59	32	17:06 (E13)	15:56	15:39
23	04:59	05:49 (E8)	05:59			07:01	08:03	16:36 (E13)	08:09	08:49	13:40 (E15)
	21:44	30	06:19 (E8)	20:37		19:15	17:57	30	17:06 (E13)	15:55	15:40
24	05:01	05:50 (E8)	06:01			07:03	08:05	16:37 (E13)	08:11	08:50	13:41 (E15)
	21:43	29	06:19 (E8)	20:35		19:12	17:55	27	17:04 (E13)	15:53	15:40
25	05:03	05:49 (E8)	06:03			07:05	07:07	15:38 (E13)	08:13	08:50	13:42 (E15)
	21:41	29	06:18 (E8)	20:32		19:10	16:52	24	16:02 (E13)	15:52	15:41
26	05:04	05:50 (E8)	06:05			07:07	07:09	15:41 (E13)	08:15	08:50	13:42 (E15)
	21:39	28	06:18 (E8)	20:29		19:07	16:50	19	16:00 (E13)	15:51	15:42
27	05:06	05:51 (E8)	06:07			07:09	07:12	15:44 (E13)	08:17	08:51	13:43 (E15)
	21:37	27	06:18 (E8)	20:27		19:04	16:47	12	15:56 (E13)	15:49	15:43
28	05:08	05:51 (E8)	06:09			07:11	07:14		08:19	08:51	13:44 (E15)
	21:36	26	06:17 (E8)	20:24		19:02	16:45		15:48	15:44	13:47 (E15)
29	05:10	05:52 (E8)	06:11			07:13	07:16		08:21	08:51	13:45 (E15)
	21:34	25	06:17 (E8)	20:22		18:59	16:43		15:47	15:45	12
30	05:12	05:52 (E8)	06:13			07:15	07:18		08:22	08:51	13:46 (E15)
	21:32	24	06:16 (E8)	20:19		18:56	16:40		15:46	11	13:57 (E15)
31	05:14	05:54 (E8)	06:15				07:20		08:51		13:46 (E15)
	21:30	22	06:16 (E8)	20:17			16:38		15:47	10	13:56 (E15)
Potential sun hours	529		469			385	324		247		216
Total, worst case		824		61				810			275
Sun reduction		0.49		0.50				0.26			0.07
Oper. time red.		0.94		0.94				0.94			0.94
Wind dir. red.		0.67		0.67				0.67			0.65
Total reduction		0.31		0.31				0.16			0.04
Total, real		257		19				133			12

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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	16:15 (E1) 16:47 (E1) 16:15 (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) 16:15 (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) 16:17 (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) 16:17 (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) 16:18 (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	17:02 (E1) 16:27
6	15:54 08:48	16:56 08:02	17:58 06:55	16:41 (E1) 16:21 (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	17:15 (E1) 16:25
7	15:56 08:47	16:58 08:00	18:00 06:52	16:40 (E1) 16:23 (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	17:17 (E1) 16:23
8	15:57 08:46	17:00 07:58	18:02 06:50	16:37 (E1) 16:28 (E1)	20:07 06:27	21:09 05:14	22:01 04:28	22:04 04:38	21:13 05:31	19:55 06:33	18:35 07:33	17:18 (E1) 16:20
9	15:59 08:46	17:03 07:56	18:04 06:47	16:31 (E1) 16:24	20:09 06:24	21:11 05:12	22:02 04:27	22:03 04:39	21:10 05:33	19:52 06:35	18:32 07:35	17:19 (E1) 16:50 (E1)
10	16:01 08:45	17:05 07:54	18:06 06:44	16:28 (E1) 16:22	20:09 06:22	21:13 05:10	22:03 04:27	22:02 04:40	21:08 05:35	19:50 06:37	18:29 07:37	17:19 (E1) 16:49 (E1)
11	16:02 08:44	17:07 07:51	18:09 06:42	16:23 (E1) 16:11	20:13 06:19	21:15 05:08	22:04 04:26	22:01 04:41	21:06 05:37	19:47 06:39	18:27 07:39	17:21 (E1) 16:49 (E1)
12	16:04 08:43	17:09 07:49	18:11 06:39	16:18 (E1) 16:13	20:15 06:17	21:17 05:06	22:05 04:26	22:00 04:43	21:03 05:39	19:44 06:41	18:24 07:42	17:20 (E1) 16:48 (E1)
13	16:06 08:42	17:12 07:47	18:13 06:36	16:14 (E1) 16:10	20:18 06:14	21:19 05:04	22:06 04:25	21:59 04:44	21:01 05:41	19:42 06:43	18:22 07:44	17:20 (E1) 16:47 (E1)
14	16:08 08:41	17:14 07:45	18:15 06:34	16:11 (E1) 16:11	20:20 06:11	21:21 05:02	22:06 04:25	21:58 04:46	20:59 05:43	19:39 06:45	18:19 07:46	17:19 (E1) 16:47 (E1)
15	16:09 08:40	17:16 07:42	18:17 06:31	16:09 (E1) 16:38 (E1)	20:22 06:09	21:23 05:00	22:07 04:25	21:56 04:47	20:56 05:45	19:36 06:47	18:16 07:48	17:20 (E1) 16:46 (E1)
16	16:11 08:38	17:18 07:40	18:19 06:28	16:08 (E1) 16:24 (E1)	20:24 06:06	21:25 04:58	22:08 04:25	21:55 04:49	20:54 05:47	19:34 06:49	18:14 07:50	17:19 (E1) 16:47 (E1)
17	16:13 08:37	17:21 07:38	18:21 06:26	16:07 (E1) 16:21 (E1)	20:26 06:04	21:27 04:56	22:08 04:25	21:54 04:50	20:52 05:49	19:31 06:51	18:11 07:52	17:20 (E1) 16:47 (E1)
18	16:15 08:36	17:23 07:35	18:23 06:23	16:06 (E1) 16:20 (E1)	20:28 06:01	21:29 04:55	22:09 04:25	21:52 04:52	20:49 05:51	19:28 06:53	18:09 07:54	17:19 (E1) 16:47 (E1)
19	16:17 08:34	17:25 07:33	18:25 06:20	16:05 (E1) 16:19 (E1)	20:30 05:59	21:31 04:53	22:09 04:25	21:51 04:54	20:47 05:53	19:25 06:55	18:06 07:56	17:18 (E1) 16:47 (E1)
20	16:19 08:33	17:27 07:30	18:28 06:18	16:04 (E1) 16:17 (E1)	20:32 05:56	21:33 04:51	22:09 04:25	21:49 04:55	20:44 05:55	19:23 06:57	18:04 07:58	17:17 (E1) 16:49 (E1)
21	16:21 08:32	17:29 07:28	18:30 06:15	16:03 (E1) 16:17 (E1)	20:34 05:54	21:34 04:49	22:10 04:25	21:48 04:57	20:42 05:57	19:20 06:59	18:01 08:01	17:17 (E1) 16:49 (E1)
22	16:23 08:30	17:32 07:25	18:32 06:12	16:02 (E1) 16:16 (E1)	20:36 05:51	21:36 04:48	22:10 04:25	21:46 04:59	20:39 05:59	19:17 07:01	17:59 08:03	17:15 (E1) 16:50 (E1)
23	16:25 08:28	17:34 07:23	18:34 06:10	16:01 (E1) 16:16 (E1)	20:38 05:49	21:38 04:46	22:10 04:25	21:44 05:00	20:37 06:01	19:15 07:03	17:57 08:05	17:14 (E1) 16:52 (E1)
24	16:27 08:27	17:36 07:20	18:36 06:07	16:00 (E1) 16:15 (E1)	20:41 05:46	21:40 04:45	22:10 04:26	21:43 05:02	20:34 06:03	19:12 07:05	17:54 07:07	17:13 (E1) 15:54 (E1)
25	16:29 08:25	17:38 07:18	18:38 06:04	16:00 (E1) 16:15 (E1)	20:43 05:44	21:41 04:43	22:10 04:26	21:41 05:04	20:32 06:05	19:09 07:07	16:52 07:09	16:10 (E1) 15:57 (E1)
26	16:32 08:23	17:40 07:15	18:40 06:02	16:00 (E1) 16:15 (E1)	20:45 05:41	21:43 04:42	22:10 04:27	21:39 05:06	20:29 06:07	19:07 07:09	16:49 07:11	16:06 (E1) 15:50
27	16:34 08:22	17:43 07:13	18:42 05:59	16:00 (E1) 16:14 (E1)	20:47 05:39	21:45 04:40	22:10 04:27	21:37 05:08	20:27 06:09	19:04 07:11	16:47 07:13	15:49 15:48
28	16:36 08:20	17:45 07:06	18:44 05:56	16:00 (E1) 16:16 (E1)	20:49 05:37	21:46 04:39	22:10 04:28	21:35 05:09	20:24 06:11	19:01 07:13	16:45 07:16	15:48 15:47
29	16:38 08:18	17:46 07:04	19:46 06:54	16:00 (E1) 16:15 (E1)	20:51 05:34	21:48 04:38	22:09 04:29	21:33 05:11	20:21 06:13	18:59 07:15	16:42 07:18	15:47 15:45
30	16:40 08:16	17:48 07:02	19:48 06:51	16:00 (E1) 16:16 (E1)	20:53 05:31	21:49 04:36	22:09 04:25	21:31 05:13	20:19 06:15	18:56 07:20	16:40 07:20	15:45 15:43
31	16:42 Potential sun hours	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction		356	206							573		
Oper. time red.		0.20	0.41							0.26		
Wind dir. red.		0.94	0.94							0.94		
Wind dir. red.		0.67	0.67							0.67		
Total reduction		0.13	0.26							0.16		
Total, real		45	54							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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:45 (E9) 20:55	04:36 21:52
2	08:50 15:49	08:13 16:47	07:08 17:50	16:16 (E13) 19:55	07:48 (E9) 20:57	04:35 21:54
3	08:50 15:51	08:11 16:50	07:06 17:52	16:17 (E13) 19:57	05:28 20:59	04:34 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	16:17 (E13) 19:59	05:26 21:01	04:33 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	16:17 (E13) 20:01	05:23 21:04	04:32 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	16:18 (E13) 20:03	05:21 21:06	04:31 21:59
7	08:48 15:56	08:03 16:59	06:55 18:00	16:18 (E13) 20:05	05:19 21:08	04:30 22:00
8	08:47 15:58	08:00 17:01	06:53 18:03	16:19 (E13) 20:07	05:17 21:10	04:29 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	16:21 (E13) 20:10	05:15 21:12	04:28 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	16:22 (E13) 20:12	05:13 21:14	04:28 22:03
11	08:45 16:03	07:54 17:08	06:45 18:09	16:24 (E13) 20:14	05:10 21:16	04:27 22:04
12	08:44 16:04	07:52 17:10	06:42 18:11	16:29 (E13) 20:16	05:08 21:18	04:27 22:05
13	08:43 16:06	07:49 17:12	06:39 18:13	16:36 (E13) 20:18	05:06 21:20	04:26 22:06
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
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
16	08:40 16:12	07:42 17:19	06:31 18:20	06:09 20:24	05:01 21:25	04:25 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08
18	08:37 16:16	07:38 17:23	16:30 (E13) 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 16:18	07:35 17:25	16:27 (E13) 18:26	06:02 20:30	04:55 21:31	04:25 22:09
20	08:35 16:20	07:33 17:28	16:24 (E13) 18:28	06:01 20:32	04:53 21:33	04:25 22:10
21	08:33 16:22	07:31 17:30	16:23 (E13) 18:30	06:00 20:35	04:52 21:35	04:25 22:10
22	08:32 16:24	07:28 17:32	16:21 (E13) 18:32	05:59 20:37	04:50 21:36	04:25 22:10
23	08:30 16:26	07:26 17:34	16:21 (E13) 18:34	05:58 20:39	04:48 21:38	04:26 22:10
24	08:29 16:28	07:23 17:36	16:19 (E13) 18:36	05:57 20:41	04:47 21:40	04:26 22:10
25	08:27 16:30	07:21 17:39	16:18 (E13) 18:38	05:56 20:43	04:45 21:42	04:26 22:10
26	08:25 16:32	07:18 17:41	16:18 (E13) 18:40	05:55 20:45	04:44 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	16:17 (E13) 18:43	05:54 20:47	04:42 21:45	04:27 22:10
28	08:22 16:36	07:13 17:45	16:17 (E13) 18:45	05:53 20:49	04:41 21:46	04:28 22:10
29	08:20 16:39	07:11 17:47	16:15 (E13) 18:47	05:52 20:51	04:39 21:48	04:28 22:10
30	08:18 16:41	07:09 17:49	16:14 (E13) 18:49	05:51 20:53	04:38 21:50	04:29 22:09
31	08:17 16:43	07:08 17:51	16:13 (E13) 18:51	05:50 20:55	04:37 21:51	04:29 22:09
Potential sun hours	235	266	366	426	508	529
Total, worst case		291	540	3	438	1000
Sun reduction		0.20	0.41	0.50	0.57	0.56
Oper. time red.		0.94	0.94	0.94	0.94	0.94
Wind dir. red.		0.67	0.66	0.65	0.67	0.67
Total reduction		0.13	0.26	0.30	0.36	0.35
Total, real		37	138	1	157	354

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	July	August	September	October	November	December
1	04:30 22:09	05:36 (E8) 06:09 (E8)	05:16 21:28	06:17 20:14	07:17 18:54	07:22 16:36
2	04:31 22:08	05:36 (E8) 06:10 (E8)	05:17 21:26	06:19 20:11	07:19 18:51	17:04 (E13) 17:18 (E13)
3	04:32 22:08	05:37 (E8) 06:10 (E8)	05:19 21:24	06:21 20:09	07:21 18:48	17:01 (E13) 17:20 (E13)
4	04:33 22:07	05:37 (E8) 06:10 (E8)	05:21 21:22	06:23 20:06	07:23 18:46	16:58 (E13) 17:22 (E13)
5	04:34 22:07	05:37 (E8) 06:11 (E8)	05:23 21:19	06:25 20:03	07:25 18:43	16:56 (E13) 17:23 (E13)
6	04:35 22:06	05:37 (E8) 06:11 (E8)	05:25 21:17	06:27 20:01	07:27 18:40	16:55 (E13) 17:23 (E13)
7	04:36 22:05	05:38 (E8) 06:11 (E8)	05:27 21:15	06:29 19:58	07:29 18:38	16:53 (E13) 17:24 (E13)
8	04:37 22:04	05:38 (E8) 06:11 (E8)	05:29 21:13	06:31 19:55	07:31 18:35	16:52 (E13) 17:24 (E13)
9	04:38 22:03	05:38 (E8) 06:11 (E8)	05:31 21:11	06:33 19:53	07:34 18:32	16:51 (E13) 17:24 (E13)
10	04:39 22:02	05:38 (E8) 06:11 (E8)	05:33 21:08	06:35 19:50	07:36 18:30	16:51 (E13) 17:25 (E13)
11	04:41 22:01	05:38 (E8) 06:11 (E8)	05:35 21:06	06:37 19:47	07:38 18:27	16:51 (E13) 17:25 (E13)
12	04:42 22:00	05:39 (E8) 06:12 (E8)	05:37 21:04	06:39 19:45	07:33 (E9) 07:44 (E9)	07:40 16:50 (E13)
13	04:43 21:59	05:39 (E8) 06:12 (E8)	05:39 21:01	06:41 19:42	07:31 (E9) 07:46 (E9)	07:42 16:50 (E13)
14	04:45 21:58	05:39 (E8) 06:11 (E8)	05:41 20:59	06:43 19:39	07:29 (E9) 07:47 (E9)	07:44 16:49 (E13)
15	04:46 21:56	05:39 (E8) 06:11 (E8)	05:43 20:57	06:45 19:37	07:28 (E9) 07:47 (E9)	07:46 16:50 (E13)
16	04:48 21:55	05:40 (E8) 06:11 (E8)	05:45 20:54	06:47 19:34	07:27 (E9) 07:48 (E9)	07:48 16:50 (E13)
17	04:49 21:54	05:40 (E8) 06:11 (E8)	05:47 20:52	06:49 19:31	07:27 (E9) 07:48 (E9)	07:50 16:50 (E13)
18	04:51 21:52	05:41 (E8) 06:11 (E8)	05:49 20:49	06:51 19:28	07:26 (E9) 07:48 (E9)	07:52 16:51 (E13)
19	04:52 21:51	05:41 (E8) 06:10 (E8)	05:51 20:47	06:53 19:26	07:26 (E9) 07:47 (E9)	07:54 16:51 (E13)
20	04:54 21:49	05:42 (E8) 06:11 (E8)	05:53 20:45	06:55 19:23	07:25 (E9) 07:45 (E9)	07:57 16:53 (E13)
21	04:56 21:48	05:42 (E8) 06:10 (E8)	05:55 20:42	06:57 19:20	07:25 (E9) 07:44 (E9)	07:59 16:54 (E13)
22	04:57 21:46	05:43 (E8) 06:10 (E8)	05:57 20:40	06:59 19:18	07:27 (E9) 07:43 (E9)	08:01 16:55 (E13)
23	04:59 21:44	05:43 (E8) 06:08 (E8)	05:59 20:37	07:01 19:15	07:29 (E9) 07:41 (E9)	08:03 16:58 (E13)
24	05:01 21:43	05:45 (E8) 06:08 (E8)	06:01 20:35	07:03 19:12	07:31 (E9) 07:39 (E9)	08:05 17:03 (E13)
25	05:03 21:41	05:45 (E8) 06:06 (E8)	06:03 20:32	07:05 19:10	07:07 16:52	08:13 15:52
26	05:04 21:39	05:47 (E8) 06:05 (E8)	06:05 20:29	07:07 19:07	07:09 16:50	08:15 15:51
27	05:06 21:37	05:49 (E8) 06:04 (E8)	06:07 20:27	07:09 19:04	07:12 16:47	08:17 15:49
28	05:08 21:36	05:50 (E8) 06:01 (E8)	06:09 20:24	07:11 19:02	07:14 16:45	08:19 15:48
29	05:10 21:34	06:11 20:22	07:13 18:59	07:16 16:43	07:16 16:43	08:21 15:47
30	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	07:18 16:40	08:22 15:46
31	05:14 21:30	06:15 20:16	07:17 18:54	07:20 16:38	07:20 16:38	08:21 15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case	814		223	627		
Sun reduction	0.49		0.43	0.26		
Oper. time red.	0.94		0.94	0.94		
Wind dir. red.	0.67		0.65	0.67		
Total reduction	0.31		0.26	0.16		
Total, real	254		58	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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
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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
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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
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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
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31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start wind 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
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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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31	08:17 16:43		06:52 19:51		04:37 21:51		05:14 21:30	06:16 20:17		07:20 16:38		08:51 15:47
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	04:30 24	05:20 (E14) 21:28	06:17 20:14	07:17 18:54	07:23 16:36
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	05:30 20:57	04:35 21:54	05:14 (E14) 22:08	04:31 23	05:20 (E14) 21:26	06:19 20:11	07:19 18:51	07:25 16:34
3	08:50 15:51	08:11 16:50	07:06 17:52	06:44 19:57	05:28 21:00	04:34 21:55	05:15 (E14) 22:08	04:32 24	05:20 (E14) 21:24	06:21 20:09	07:21 18:48	07:27 16:32
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:02	04:33 21:57	05:15 (E14) 22:07	04:33 24	05:20 (E14) 21:22	06:23 20:06	07:23 18:46	07:29 16:30
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01	05:24 21:04	04:32 21:58	05:15 (E14) 22:07	04:34 24	05:20 (E14) 21:19	06:25 20:03	07:25 18:43	07:31 16:27
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	05:21 21:06	04:31 21:59	05:14 (E14) 22:06	04:35 23	05:21 (E14) 21:17	06:27 20:01	07:28 18:40	07:33 16:25
7	08:48 15:57	08:03 16:59	06:55 18:01	06:33 20:06	05:19 21:08	04:30 22:00	05:15 (E14) 22:05	04:36 24	05:21 (E14) 21:15	06:29 19:58	07:30 18:38	07:36 16:23
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	05:15 (E14) 22:04	04:37 24	05:21 (E14) 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	06:28 20:10	05:15 21:12	04:29 22:02	05:16 (E14) 22:03	04:38 24	05:21 (E14) 21:11	06:33 19:53	07:34 18:33	07:40 16:19
10	08:46 16:01	07:56 17:06	06:48 18:07	06:25 20:12	05:13 21:14	04:28 22:03	05:15 (E14) 22:02	04:40 23	05:21 (E14) 21:08	06:35 19:50	07:36 18:30	07:42 16:17
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	04:41 23	05:22 (E14) 21:06	06:37 19:47	07:38 18:27	07:44 16:15
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16	05:09 21:18	04:27 22:05	05:16 (E14) 22:00	04:42 23	05:22 (E14) 21:04	06:39 19:45	07:40 18:25	07:46 16:13
13	08:43 16:07	07:50 17:12	06:40 18:13	06:17 20:18	05:07 21:20	04:27 22:06	05:16 (E14) 21:59	04:44 22	05:23 (E14) 21:02	06:41 19:42	07:42 18:22	07:49 16:11
14	08:42 16:08	07:47 17:15	06:37 18:16	06:15 20:20	05:05 21:22	04:26 22:07	05:17 (E14) 21:58	04:45 21	05:23 (E14) 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	06:12 20:22	05:03 21:24	04:26 22:07	05:17 (E14) 21:57	04:47 21	05:24 (E14) 20:57	06:45 19:37	07:46 18:17	07:53 16:08
16	08:40 16:12	07:43 17:19	06:32 18:20	06:10 20:24	05:01 21:25	04:26 22:08	05:17 (E14) 21:55	04:48 20	05:24 (E14) 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	06:07 20:26	04:59 21:27	04:26 22:08	05:17 (E14) 21:54	04:50 18	05:26 (E14) 20:52	06:49 19:31	07:50 18:12	07:57 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	05:17 (E14) 21:52	04:51 16	05:27 (E14) 20:50	06:51 19:29	07:52 18:10	07:59 16:03
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	04:53 14	05:28 (E14) 20:47	06:53 19:26	07:55 18:07	08:01 16:01
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	05:18 (E14) 21:49	04:54 12	05:30 (E14) 20:45	06:55 19:23	07:57 18:05	08:03 15:59
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	05:18 (E14) 21:48	04:56 9	05:31 (E14) 20:42	06:57 19:21	07:59 18:02	08:05 15:58
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 22:10	05:18 (E14) 21:46	04:58 6	05:33 (E14) 20:40	06:59 19:18	08:01 18:00	08:07 15:56
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	04:59 2	05:35 (E14) 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	05:19 (E14) 21:43	05:01 23	05:37 (E14) 20:35	07:03 19:12	08:05 17:55	08:11 15:54
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 23	05:38 (E14) 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	05:45 20:45	04:44 21:43	04:27 22:10	05:19 (E14) 21:39	05:05 24	05:39 (E14) 20:30	07:07 19:07	08:07 16:50	08:15 15:51
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 23	05:40 (E14) 20:27	07:09 19:04	08:12 16:48	08:17 15:50
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 22:10	05:20 (E14) 21:36	05:08 23	05:41 (E14) 20:24	07:11 19:02	08:14 16:45	08:19 15:48
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 22:10	05:19 (E14) 21:34	05:10 24	05:42 (E14) 20:22	07:13 18:59	08:16 16:43	08:21 15:47
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 23	05:43 (E14) 20:19	07:15 18:56	08:18 16:41	08:22 15:46
31	08:17 16:43		06:52 19:51	05:33 20:51	04:37 21:51	04:37 22:05	05:14 (E14) 21:30	05:14 22	05:44 (E14) 20:17	07:16 18:56	08:19 16:41	08:23 15:47
Potential sun hours	235	266	366	426	508	528	529	444	469	384	324	216
Total, worst case					174	698		0.49				
Sun reduction					0.57	0.56		0.94				
Oper. time red.					0.94	0.94		0.67				
Wind dir. red.					0.67	0.67		0.31				
Total reduction					0.36	0.35		0.138				
Total, real					62	247						

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:37 (E15) 07:52 (E15)	05:33 20:55	06:36 (E14) 07:16 (E14)	04:36 21:53	05:13 (E13) 05:36 (E13)
2	08:50 15:50	08:13 16:48	07:08 17:50	06:46 19:55	07:39 (E15) 07:49 (E15)	05:30 20:57	06:37 (E14) 07:15 (E14)	04:35 21:54	05:13 (E13) 05:36 (E13)
3	08:50 15:51	08:11 16:50	07:06 17:52	06:43 19:57		05:28 21:00	06:37 (E14) 07:15 (E14)	04:34 21:55	05:13 (E13) 05:36 (E13)
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59		05:26 21:02	06:38 (E14) 07:14 (E14)	04:33 21:57	05:14 (E13) 05:37 (E13)
5	08:49 15:54	08:07 16:54	07:01 17:56	06:38 20:01		05:24 21:04	06:38 (E14) 07:13 (E14)	04:32 21:58	05:14 (E13) 05:37 (E13)
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03		05:21 21:06	06:39 (E14) 07:13 (E14)	04:31 21:59	05:14 (E13) 05:37 (E13)
7	08:48 15:56	08:03 16:59	06:55 18:01	06:33 20:06		05:19 21:08	06:39 (E14) 07:12 (E14)	04:30 22:00	05:15 (E13) 05:38 (E13)
8	08:47 15:58	08:01 17:01	06:53 18:03	06:30 20:08		05:17 21:10	06:40 (E14) 07:11 (E14)	04:29 22:01	05:15 (E13) 05:38 (E13)
9	08:47 16:00	07:58 17:03	06:50 18:05	06:28 20:10		05:15 21:12	06:41 (E14) 07:09 (E14)	04:29 22:02	05:14 (E13) 05:37 (E13)
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12		05:13 21:14	06:42 (E14) 07:08 (E14)	04:28 22:03	05:15 (E13) 05:38 (E13)
11	08:45 16:03	07:54 17:08	06:45 18:09	06:22 20:14		05:11 21:16	06:43 (E14) 07:06 (E14)	04:27 22:04	05:16 (E13) 05:38 (E13)
12	08:44 16:05	07:52 17:10	06:42 18:11	06:20 20:16		05:09 21:18	06:45 (E14) 07:04 (E14)	04:27 22:05	05:15 (E13) 05:38 (E13)
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	06:58 (E14) 07:03 (E14)	05:07 21:20	06:48 (E14) 07:03 (E14)	04:27 22:06	05:16 (E13) 05:38 (E13)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	06:52 (E14) 07:08 (E14)	05:05 21:22	06:51 (E14) 06:59 (E14)	04:26 22:07	05:16 (E13) 05:39 (E13)
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	06:49 (E14) 07:11 (E14)	05:03 21:24		04:26 22:07	05:17 (E13) 05:39 (E13)
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	06:46 (E14) 07:12 (E14)	05:01 21:25		04:26 22:08	05:16 (E13) 05:38 (E13)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	06:45 (E14) 07:14 (E14)	04:59 21:27		04:25 22:08	05:17 (E13) 05:39 (E13)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	06:43 (E14) 07:14 (E14)	04:57 21:29		04:25 22:09	05:17 (E13) 05:39 (E13)
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	06:42 (E14) 07:15 (E14)	04:55 21:31		04:25 22:09	05:17 (E13) 05:39 (E13)
20	08:35 16:20	07:33 17:28	06:21 18:28	06:01 20:33	06:41 (E14) 07:17 (E14)	04:54 21:33	05:25 (E13) 05:27 (E13)	04:25 22:10	05:18 (E13) 05:40 (E13)
21	08:33 16:22	07:31 17:30	06:18 18:30	06:00 20:35	06:40 (E14) 07:16 (E14)	04:52 21:35	05:24 (E13) 05:29 (E13)	04:25 22:10	05:18 (E13) 05:40 (E13)
22	08:32 16:24	07:28 17:32	06:16 18:32	06:00 20:37	06:39 (E14) 07:17 (E14)	04:50 21:36	05:22 (E13) 05:30 (E13)	04:26 22:10	05:18 (E13) 05:40 (E13)
23	08:30 16:26	07:26 17:34	06:13 18:34	06:00 20:39	06:38 (E14) 07:17 (E14)	04:48 21:38	05:21 (E13) 05:32 (E13)	04:26 22:10	05:18 (E13) 05:40 (E13)
24	08:29 16:28	07:23 17:37	06:10 18:36	06:00 20:41	06:38 (E14) 07:17 (E14)	04:47 21:40	05:19 (E13) 05:32 (E13)	04:26 22:10	05:19 (E13) 05:41 (E13)
25	08:27 16:30	07:21 17:39	06:08 18:39	06:00 20:43	06:38 (E14) 07:18 (E14)	04:45 21:42	05:18 (E13) 05:33 (E13)	04:27 22:10	05:19 (E13) 05:41 (E13)
26	08:26 16:32	07:18 17:41	06:05 18:41	06:35 (E15) 06:58 (E15)	06:37 (E14) 07:17 (E14)	04:44 21:43	05:17 (E13) 05:34 (E13)	04:27 22:10	05:19 (E13) 05:41 (E13)
27	08:24 16:34	07:16 17:43	06:02 18:43	06:35 (E15) 06:58 (E15)	06:37 (E14) 07:17 (E14)	04:42 21:45	05:16 (E13) 05:35 (E13)	04:28 22:10	05:19 (E13) 05:41 (E13)
28	08:22 16:37	07:13 17:45	06:00 18:45	06:35 (E15) 06:58 (E15)	06:37 (E14) 07:17 (E14)	04:41 21:47	05:14 (E13) 05:35 (E13)	04:28 22:10	05:20 (E13) 05:42 (E13)
29	08:20 16:39		06:57 19:47	07:35 (E15) 07:57 (E15)	06:37 (E14) 07:17 (E14)	04:40 21:48	05:13 (E13) 05:35 (E13)	04:29 22:10	05:19 (E13) 05:42 (E13)
30	08:18 16:41		06:54 19:49	07:35 (E15) 07:55 (E15)	06:37 (E14) 07:17 (E14)	04:38 21:50	05:13 (E13) 05:35 (E13)	04:29 22:09	05:20 (E13) 05:42 (E13)
31	08:17 16:43		06:51 19:51	07:37 (E15) 07:54 (E15)		04:37 21:51	05:13 (E13) 05:36 (E13)		
Potential sun hours	235	266	366	426	508	528			
Total, worst case			229	615	582	673			
Sun reduction			0.41	0.50	0.57	0.56			
Oper. time red.			0.94	0.94	0.94	0.94			
Wind dir. red.			0.65	0.66	0.66	0.67			
Total reduction			0.25	0.31	0.35	0.35			
Total, real			58	190	206	238			

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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		06:54 (E14)	06:17		07:17	07:23	08:24	
	22:09	23	05:43 (E13)	21:28	21	07:15 (E14)	20:14		18:54	16:36	15:45	
2	04:31		05:19 (E13)	05:18		06:53 (E14)	06:19		07:19	07:25	08:26	
	22:08	23	05:42 (E13)	21:26	24	07:17 (E14)	20:11		18:51	16:34	15:44	
3	04:32		05:20 (E13)	05:20		06:52 (E14)	06:21		07:21	07:27	08:28	
	22:08	23	05:43 (E13)	21:24	27	07:19 (E14)	20:09		18:48	16:32	15:43	
4	04:33		05:20 (E13)	05:22		06:51 (E14)	06:23		07:23	07:29	08:29	
	22:07	23	05:43 (E13)	21:22	29	07:20 (E14)	20:06		18:46	16:30	15:43	
5	04:34		05:20 (E13)	05:24		06:50 (E14)	06:25		07:25	07:31	08:31	
	22:07	23	05:43 (E13)	21:19	31	07:21 (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	32	07:21 (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	24	05:44 (E13)	21:15	34	07:22 (E14)	19:58		18:38	16:23	15:40	
8	04:37		05:21 (E13)	05:29		06:47 (E14)	06:31		07:32	07:38	08:35	
	22:04	23	05:44 (E13)	21:13	36	07:23 (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	23	05:44 (E13)	21:11	37	07:24 (E14)	19:53		18:33	16:19	15:39	
10	04:40		05:21 (E13)	05:33		06:46 (E14)	06:35		07:36	07:42	08:38	
	22:02	23	05:44 (E13)	21:08	38	07:24 (E14)	19:50	9	07:42 (E15)	18:30	16:17	
11	04:41		05:22 (E13)	05:35		06:46 (E14)	06:37		07:30 (E15)	07:38	07:44	
	22:01	23	05:45 (E13)	21:06	39	07:25 (E14)	19:47	14	07:44 (E15)	18:27	16:15	
12	04:42		05:22 (E13)	05:37		06:45 (E14)	06:39		07:28 (E15)	07:40	07:46	
	22:00	22	05:44 (E13)	21:04	39	07:24 (E14)	19:45	18	07:46 (E15)	18:25	16:13	
13	04:44		05:22 (E13)	05:39		06:44 (E14)	06:41		07:27 (E15)	07:42	07:49	
	21:59	22	05:44 (E13)	21:02	40	07:24 (E14)	19:42	19	07:46 (E15)	18:22	16:11	
14	04:45		05:22 (E13)	05:41		06:44 (E14)	06:43		07:26 (E15)	07:44	07:51	
	21:58	22	05:44 (E13)	20:59	40	07:24 (E14)	19:39	21	07:47 (E15)	18:20	16:10	
15	04:46		05:23 (E13)	05:43		06:44 (E14)	06:45		07:25 (E15)	07:46	07:53	
	21:57	21	05:44 (E13)	20:57	41	07:25 (E14)	19:37	22	07:47 (E15)	18:17	16:08	
16	04:48		05:24 (E13)	05:45		06:44 (E14)	06:47		07:24 (E15)	07:48	07:55	
	21:55	20	05:44 (E13)	20:54	41	07:25 (E14)	19:34	23	07:47 (E15)	18:15	16:06	
17	04:49		05:25 (E13)	05:47		06:44 (E14)	06:49		07:24 (E15)	07:50	07:57	
	21:54	18	05:43 (E13)	20:52	40	07:24 (E14)	19:31	23	07:47 (E15)	18:12	16:04	
18	04:51		05:27 (E13)	05:49		06:44 (E14)	06:51		07:24 (E15)	07:52	07:59	
	21:52	16	05:43 (E13)	20:50	40	07:24 (E14)	19:29	22	07:46 (E15)	18:09	16:03	
19	04:53		05:28 (E13)	05:51		06:43 (E14)	06:53		07:24 (E15)	07:55	08:01	
	21:51	14	05:42 (E13)	20:47	40	07:23 (E14)	19:26	22	07:46 (E15)	18:07	16:01	
20	04:54		05:30 (E13)	05:53		06:44 (E14)	06:55		07:24 (E15)	07:57	08:03	
	21:49	12	05:42 (E13)	20:45	38	07:22 (E14)	19:23	21	07:45 (E15)	18:04	15:59	
21	04:56		05:31 (E13)	05:55		06:44 (E14)	06:57		07:26 (E15)	07:59	08:05	
	21:48	10	05:41 (E13)	20:42	38	07:22 (E14)	19:21	17	07:43 (E15)	18:02	15:58	
22	04:58		05:33 (E13)	05:57		06:45 (E14)	06:59		07:28 (E15)	08:01	08:07	
	21:46	7	05:40 (E13)	20:40	36	07:21 (E14)	19:18	14	07:42 (E15)	18:00	15:56	
23	04:59		05:34 (E13)	05:59		06:45 (E14)	07:01		07:30 (E15)	08:03	08:09	
	21:45	4	05:38 (E13)	20:37	35	07:20 (E14)	19:15	9	07:39 (E15)	17:57	15:55	
24	05:01			06:01		06:46 (E14)	07:03		07:32 (E15)	08:05	08:11	
	21:43			20:35	33	07:19 (E14)	19:12	3	07:35 (E15)	17:55	15:53	
25	05:03			06:03		06:47 (E14)	07:05			07:07	08:13	
	21:41			20:32	31	07:18 (E14)	19:10			16:52	15:52	
26	05:05			06:05		06:48 (E14)	07:07			07:10	08:15	
	21:39			20:30	28	07:16 (E14)	19:07			16:50	15:51	
27	05:06			06:07		06:49 (E14)	07:09			07:12	08:17	
	21:38			20:27	26	07:15 (E14)	19:04			16:48	15:50	
28	05:08			06:09		06:50 (E14)	07:11			07:14	08:19	
	21:36			20:24	21	07:11 (E14)	19:02			16:45	15:48	
29	05:10			06:11		06:53 (E14)	07:13			07:16	08:21	
	21:34			20:22	15	07:08 (E14)	18:59			16:43	15:47	
30	05:12		07:00 (E14)	06:13		06:58 (E14)	07:15			07:18	08:22	
	21:32	11	07:11 (E14)	20:19	5	07:03 (E14)	18:56			16:41	15:46	
31	05:14		06:57 (E14)	06:15						07:20		
	21:30	17	07:14 (E14)	20:17						16:38	15:47	
Potential sun hours	529			469			385		324	247	216	
Total, worst case		470			975		257					
Sun reduction		0.49			0.50		0.43					
Oper. time red.		0.94			0.94		0.94					
Wind dir. red.		0.67			0.66		0.65					
Total reduction		0.31			0.31		0.26					
Total, real		146			300		67					

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start wind speed: Cut in wind speed 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	05:33 21:53	04:36 22:09	04:30 21:28	05:16 20:14	06:17 18:54	07:17 16:36	08:24 15:45
2	08:51 15:49	08:13 16:47	09:04 (E13) 17:50	07:08 19:55	06:46 20:58	05:30 21:54	04:31 22:09	05:18 21:26	06:19 20:11	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	09:05 (E13) 17:52	07:06 19:57	06:43 21:00	05:28 21:55	04:34 22:08	05:20 21:24	06:21 20:09	07:21 18:48	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	09:06 (E13) 17:54	07:03 19:59	06:41 21:02	05:26 21:57	04:33 22:07	05:21 21:22	06:23 20:06	07:23 18:46	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	09:07 (E13) 17:56	07:01 20:01	06:38 21:04	05:23 21:58	04:32 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	05:21 21:59	04:31 22:06	05:25 21:17	06:27 20:01	07:28 18:40	07:34 16:25	08:32 15:41
7	08:48 15:56	08:03 16:59	09:09 (E13) 18:01	06:55 20:06	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	08:34 15:40
8	08:48 15:58	08:01 17:01	09:11 (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 19:56	07:32 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	09:14 (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	08:37 15:39
10	08:46 16:01	07:56 17:05	09:19 (E13) 18:07	06:47 20:12	06:25 21:14	05:13 22:03	04:39 22:02	05:33 21:09	06:35 19:50	07:36 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	09:20 (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	08:39 15:38
12	08:44 16:05	07:52 17:10	09:21 (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	08:40 15:38
13	08:43 16:06	07:50 17:12	09:22 (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	08:42 15:38
14	08:42 16:08	07:47 17:14	09:23 (E13) 18:15	06:37 20:20	06:15 21:22	05:05 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 18:20	07:51 16:09	08:43 15:38
15	08:41 16:10	07:45 17:17	09:24 (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	08:44 15:38
16	08:40 16:12	07:43 17:19	09:25 (E13) 18:20	06:32 20:24	06:09 21:26	05:01 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	09:26 (E13) 18:22	06:29 20:26	06:07 21:27	04:59 22:09	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	09:27 (E13) 18:24	06:26 20:28	06:04 21:29	04:57 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	09:28 (E13) 18:26	06:24 20:31	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	08:47 15:38
20	08:35 16:20	07:33 17:28	09:29 (E13) 18:28	06:21 20:33	05:59 21:33	04:53 22:10	04:54 21:50	05:53 20:45	06:55 19:23	07:57 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	09:30 (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 19:21	07:59 18:02	08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	09:31 (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 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	09:32 (E13) 18:34	06:13 20:39	05:52 21:38	04:48 22:10	04:59 21:45	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	09:33 (E13) 18:36	06:10 20:41	05:49 21:40	04:47 22:10	04:59 21:43	05:59 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	09:34 (E13) 18:38	06:08 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 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	09:35 (E13) 18:41	06:05 20:45	05:44 21:43	04:44 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	09:36 (E13) 18:43	06:02 20:47	05:42 21:45	04:42 22:10	05:06 21:38	06:07 20:27	07:09 19:04	08:11 17:47	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	09:37 (E13) 18:45	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 15:48	08:51 15:44
29	08:20 16:39	07:09 17:48	09:38 (E13) 18:47	05:57 20:51	05:37 21:48	04:40 22:10	05:10 21:34	06:11 20:22	07:13 18:59	08:15 17:43	08:21 15:47	08:51 15:45
30	08:19 16:41	07:04 17:51	09:39 (E13) 18:49	05:54 20:53	05:35 21:50	04:38 22:09	05:12 21:32	06:13 20:19	07:15 18:56	08:17 17:41	08:22 15:46	08:51 15:46
31	08:17 16:43	07:04 17:52	09:40 (E13) 18:51	05:51 20:51	05:37 21:51	04:37 22:10	05:14 21:30	06:15 20:17	07:17 18:58	08:19 17:40	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	242	164										
Sun reduction	0.13	0.20									0.08	
Oper. time red.	0.94	0.94									0.94	
Wind dir. red.	0.59	0.59									0.59	
Total reduction	0.07	0.11									0.05	
Total, real	18	18									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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	13:58 (E13)	07:11	06:49			05:32	04:36
	15:48	36	14:22 (E13)	16:45	33	14:31 (E13)	17:47	19:53	20:55	21:53
2	08:50	13:47 (E13)	08:13	14:00 (E13)	07:08	06:46			05:30	04:35
	15:49	36	14:23 (E13)	16:47	30	14:30 (E13)	17:50	19:55	20:57	21:54
3	08:50	13:47 (E13)	08:11	14:02 (E13)	07:06	06:43			05:28	04:34
	15:51	37	14:24 (E13)	16:50	27	14:29 (E13)	17:52	19:57	20:59	21:55
4	08:50	13:47 (E13)	08:09	14:04 (E13)	07:03	06:41			05:26	04:33
	15:52	37	14:24 (E13)	16:52	23	14:27 (E13)	17:54	19:59	21:02	21:57
5	08:49	13:48 (E13)	08:07	14:07 (E13)	07:00	06:38			05:23	04:32
	15:53	37	14:25 (E13)	16:54	19	14:26 (E13)	17:56	20:01	21:04	21:58
6	08:49	13:48 (E13)	08:05	14:10 (E13)	06:58	06:35			05:21	04:31
	15:55	38	14:26 (E13)	16:56	12	14:22 (E13)	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	5	07:00 (E8)	21:10
9	08:47	13:48 (E13)	07:58		06:50	06:27			06:53 (E8)	05:15
	15:59	40	14:28 (E13)	17:03		18:05	20:10	11	07:04 (E8)	21:12
10	08:46	13:48 (E13)	07:56		06:47	06:25			06:50 (E8)	05:13
	16:01	41	14:29 (E13)	17:05		18:07	20:12	15	07:05 (E8)	21:14
11	08:45	13:49 (E13)	07:54		06:45	06:22			06:48 (E8)	05:10
	16:03	40	14:29 (E13)	17:08		18:09	20:14	19	07:07 (E8)	21:16
12	08:44	13:48 (E13)	07:52		06:42	06:20			06:46 (E8)	05:08
	16:04	41	14:29 (E13)	17:10		18:11	20:16	21	07:07 (E8)	21:18
13	08:43	13:48 (E13)	07:49		06:39	06:17			06:46 (E8)	05:06
	16:06	42	14:30 (E13)	17:12		18:13	20:18	22	07:08 (E8)	21:20
14	08:42	13:49 (E13)	07:47		06:37	06:14			06:45 (E8)	05:04
	16:08	42	14:31 (E13)	17:14		18:15	20:20	23	07:08 (E8)	21:22
15	08:41	13:49 (E13)	07:45		06:34	06:12			06:45 (E8)	05:02
	16:10	42	14:31 (E13)	17:17		18:17	20:22	23	07:08 (E8)	21:24
16	08:40	13:49 (E13)	07:43		06:31	06:09			06:44 (E8)	05:01
	16:12	43	14:32 (E13)	17:19		18:20	20:24	23	07:07 (E8)	21:25
17	08:39	13:49 (E13)	07:40		06:29	06:07			06:44 (E8)	04:59
	16:14	43	14:32 (E13)	17:21		18:22	20:26	23	07:07 (E8)	21:27
18	08:37	13:50 (E13)	07:38		06:26	06:04			06:44 (E8)	04:57
	16:16	43	14:33 (E13)	17:23		18:24	20:28	22	07:06 (E8)	21:29
19	08:36	13:50 (E13)	07:35		06:23	06:02			06:44 (E8)	04:55
	16:18	42	14:32 (E13)	17:25		18:26	20:30	22	07:06 (E8)	21:31
20	08:35	13:51 (E13)	07:33		06:21	05:59			06:44 (E8)	04:53
	16:20	42	14:33 (E13)	17:28		18:28	20:32	20	07:04 (E8)	21:33
21	08:33	13:51 (E13)	07:31		06:18	05:57			06:46 (E8)	04:52
	16:22	42	14:33 (E13)	17:30		18:30	20:35	18	07:04 (E8)	21:35
22	08:32	13:51 (E13)	07:28		06:15	05:54			06:47 (E8)	04:50
	16:24	42	14:33 (E13)	17:32		18:32	20:37	15	07:02 (E8)	21:36
23	08:30	13:51 (E13)	07:26		06:13	05:52			06:48 (E8)	04:48
	16:26	42	14:33 (E13)	17:34		18:34	20:39	11	06:59 (E8)	21:38
24	08:29	13:52 (E13)	07:23		06:10	05:49			06:52 (E8)	04:47
	16:28	41	14:33 (E13)	17:37		18:36	20:41	3	06:55 (E8)	21:40
25	08:27	13:53 (E13)	07:21		06:07	05:47				04:45
	16:30	41	14:34 (E13)	17:39		18:38	20:43			21:42
26	08:25	13:54 (E13)	07:18		06:05	05:44			04:44	04:27
	16:32	40	14:34 (E13)	17:41		18:40	20:45			21:43
27	08:24	13:54 (E13)	07:16		06:02	05:42			04:42	04:27
	16:34	40	14:34 (E13)	17:43		18:43	20:47			21:45
28	08:22	13:55 (E13)	07:13		05:59	05:40			04:41	04:28
	16:36	38	14:33 (E13)	17:45		18:45	20:49			21:47
29	08:20	13:56 (E13)			06:57	05:37			04:39	04:28
	16:39	37	14:33 (E13)			19:47	20:51			21:48
30	08:18	13:57 (E13)			06:54	05:35			04:38	04:29
	16:41	36	14:33 (E13)			19:49	20:53			21:50
31	08:17	13:57 (E13)			06:51				04:37	
	16:43	34	14:31 (E13)			19:51			21:51	
Potential sun hours	235		266		366	426		508	529	
Total, worst case	1233		144			296				
Sun reduction	0.13		0.20			0.50				
Oper. time red.	0.94		0.94			0.94				
Wind dir. red.	0.66		0.66			0.66				
Total reduction	0.08		0.12			0.31				
Total, real	102		18			92				

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	19:06 (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	19:04 (E8)	18:51	16:34
3	04:32	05:19	06:21	06:51 (E8)	07:21	07:27
	22:08	21:24	20:09	19:02 (E8)	18:48	16:31
4	04:33	05:21	06:23	06:53 (E8)	07:23	07:29
	22:07	21:22	20:06	19:58 (E8)	18:46	16:29
5	04:34	05:23	06:25	07:25	07:31	13:39 (E13)
	22:07	21:19	20:03	18:43	16:27	13:52 (E13)
6	04:35	05:25	06:27	07:27	07:33	13:36 (E13)
	22:06	21:17	20:01	18:40	16:25	20 13:56 (E13)
7	04:36	05:27	06:29	07:29	07:36	13:33 (E13)
	22:05	21:15	19:58	18:38	16:23	24 13:57 (E13)
8	04:37	05:29	06:31	07:32	07:38	13:32 (E13)
	22:04	21:13	19:55	18:35	16:21	28 14:00 (E13)
9	04:38	05:31	06:33	07:34	07:40	13:31 (E13)
	22:03	21:11	19:53	18:32	16:19	30 14:01 (E13)
10	04:39	05:33	06:35	07:36	07:42	13:29 (E13)
	22:02	21:08	19:50	18:30	16:17	32 14:01 (E13)
11	04:41	05:35	06:37	07:38	07:44	13:29 (E13)
	22:01	21:06	19:47	18:27	16:15	34 14:03 (E13)
12	04:42	05:37	06:39	07:40	07:46	13:28 (E13)
	22:00	21:04	19:45	18:25	16:13	36 14:04 (E13)
13	04:43	05:39	06:41	07:42	07:49	13:28 (E13)
	21:59	21:01	19:42	18:22	16:11	37 14:05 (E13)
14	04:45	05:41	06:43	07:44	07:51	13:27 (E13)
	21:58	20:59	19:39	18:19	16:09	38 14:05 (E13)
15	04:46	05:43	06:45	07:46	07:53	13:26 (E13)
	21:57	20:57	19:37	18:17	16:08	40 14:06 (E13)
16	04:48	05:45	06:47	07:48	07:55	13:27 (E13)
	21:55	20:54	19:34	18:14	16:06	40 14:07 (E13)
17	04:49	05:47	06:49	07:50	07:57	13:26 (E13)
	21:54	20:52	19:31	18:12	16:04	41 14:07 (E13)
18	04:51	05:49	06:51	07:52	07:59	13:26 (E13)
	21:52	20:49	19:29	18:09	16:02	41 14:07 (E13)
19	04:52	05:51	06:53	07:54	08:01	13:26 (E13)
	21:51	20:47	19:26	18:07	16:01	42 14:08 (E13)
20	04:54	05:53	06:55	07:57	08:03	13:26 (E13)
	21:49	20:45	19:23	18:04	15:59	42 14:08 (E13)
21	04:56	05:55	06:57	07:59	08:05	13:26 (E13)
	21:48	20:42	19:20	18:02	15:58	42 14:08 (E13)
22	04:57	05:57	06:59	08:01	08:07	13:27 (E13)
	21:46	20:40	19:18	17:59	15:56	42 14:09 (E13)
23	04:59	05:59	07:01	08:03	08:09	13:27 (E13)
	21:45	20:37	19:15	17:57	15:55	43 14:10 (E13)
24	05:01	06:01	07:03	08:05	08:11	13:27 (E13)
	21:43	20:35	19:12	17:55	15:53	43 14:10 (E13)
25	05:03	06:03	07:05	07:07	08:13	13:27 (E13)
	21:41	20:32	19:10	16:52	15:52	43 14:10 (E13)
26	05:04	06:05	07:07	07:09	08:15	13:27 (E13)
	21:39	20:29	19:07	16:50	15:51	43 14:10 (E13)
27	05:06	06:07	07:09	07:12	08:17	13:29 (E13)
	21:37	20:27	19:04	16:47	15:49	42 14:11 (E13)
28	05:08	06:09	07:11	07:14	08:19	13:29 (E13)
	21:36	20:24	19:02	16:45	15:48	42 14:11 (E13)
29	05:10	06:11	07:13	07:16	08:21	13:30 (E13)
	21:34	20:22	18:59	16:43	15:47	41 14:11 (E13)
30	05:12	06:13	07:15	07:18	08:22	13:30 (E13)
	21:32	20:19	18:56	16:40	15:46	41 14:11 (E13)
31	05:14	06:15	07:17	07:20		08:51
	21:30	20:17	18:53	16:38		15:47
Potential sun hours	529	469	385	324	247	216
Total, worst case		250	50		960	1101
Sun reduction		0.50	0.43		0.08	0.07
Oper. time red.		0.94	0.94		0.94	0.94
Wind dir. red.		0.66	0.66		0.66	0.66
Total reduction		0.31	0.26		0.05	0.04
Total, real		77	13		49	48

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

SHADOW - Calendar

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:47	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	24 06:25 (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	24 06:25 (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	24 06:25 (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	22 06:24 (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	20 06:23 (E13) 22:01
9	08:47	07:58	06:50	06:28	05:15	06:03 (E13) 04:29
	16:00	17:03	18:05	20:10	21:12	19 06:22 (E13) 22:02
10	08:46	07:56	06:48	06:25	05:13	06:04 (E13) 04:28
	16:01	17:05	18:07	20:12	21:14	16 06:20 (E13) 22:03
11	08:45	07:54	06:45	06:22	05:11	06:05 (E13) 04:27
	16:03	17:08	18:09	20:14	21:16	14 06:19 (E13) 22:04
12	08:44	07:52	06:42	06:20	05:09	06:07 (E13) 04:27
	16:05	17:10	18:11	20:16	21:18	10 06:17 (E13) 22:05
13	08:43	07:50	06:40	06:17	05:07	04:27
	16:06	17:12	18:13	20:18	21:20	22:06
14	08:42	07:47	06:37	06:15	05:05	04:26
	16:08	17:14	18:15	20:20	21:22	22:07
15	08:41	07:45	06:34	06:12	05:03	04:26
	16:10	17:17	18:18	20:22	21:24	22:07
16	08:40	07:43	06:32	06:09	05:01	04:26
	16:12	17:19	18:20	20:24	21:25	22:08
17	08:39	07:40	06:29	06:07	04:59	04:25
	16:14	17:21	18:22	20:26	21:27	22:08
18	08:37	07:38	06:26	06:04	04:57	04:25
	16:16	17:23	18:24	20:28	21:29	22:09
19	08:36	07:36	06:24	06:02	04:55	04:25
	16:18	17:26	18:26	20:31	21:31	22:09
20	08:35	07:33	06:21	05:59	04:53	04:25
	16:20	17:28	18:28	20:33	21:33	22:10
21	08:33	07:31	06:18	05:57	04:52	04:25
	16:22	17:30	18:30	20:35	21:35	22:10
22	08:32	07:28	06:16	05:54	04:50	04:26
	16:24	17:32	18:32	20:37	21:37	22:10
23	08:30	07:26	06:13	05:52	04:48	04:26
	16:26	17:34	18:34	20:39	21:38	22:10
24	08:29	07:23	06:10	05:49	06:16 (E13) 04:47	04:26
	16:28	17:37	18:36	20:41	2 06:18 (E13) 21:40	22:10
25	08:27	07:21	06:08	05:47	06:14 (E13) 04:45	04:27
	16:30	17:39	18:39	20:43	7 06:21 (E13) 21:42	22:10
26	08:26	07:18	06:05	05:44	06:11 (E13) 04:44	04:27
	16:32	17:41	18:41	20:45	11 06:22 (E13) 21:43	22:10
27	08:24	07:16	06:02	05:42	06:09 (E13) 04:42	04:27
	16:34	17:43	18:43	20:47	14 06:23 (E13) 21:45	22:10
28	08:22	07:13	06:00	05:40	06:07 (E13) 04:41	04:28
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29	08:20		06:57	05:37	06:05 (E13) 04:40	04:29
	16:39		19:47	23 08:29 (E14) 20:51	20 06:25 (E13) 21:48	22:10
30	08:18		06:54	08:07 (E14) 05:35	06:03 (E13) 04:38	04:29
	16:41		19:49	20 08:27 (E14) 20:53	22 06:25 (E13) 21:50	22:09
31	08:17		06:51	08:11 (E14)	04:37	
	16:43		19:51	13 08:24 (E14)	21:51	
Potential sun hours	235	266	366	426	508	528
Total, worst case			621	93	239	
Sun reduction			0.41	0.50	0.57	
Oper. time red.			0.94	0.94	0.94	
Wind dir. red.			0.63	0.66	0.66	
Total reduction			0.24	0.31	0.35	
Total, real			151	29	85	

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

July		August		September		October		November		December	
1	04:30	05:16	06:17 (E13)	06:17		07:17	07:51 (E14)	07:23	08:24		
	22:09	21:28	11 06:28 (E13)	20:14		18:54	23 08:14 (E14)	16:36	15:45		
2	04:31	05:18	06:15 (E13)	06:19		07:19	07:52 (E14)	07:25	08:26		
	22:08	21:26	15 06:30 (E13)	20:11		18:51	20 08:12 (E14)	16:34	15:44		
3	04:32	05:20	06:14 (E13)	06:21		07:21	07:55 (E14)	07:27	08:28		
	22:08	21:24	17 06:31 (E13)	20:09		18:48	14 08:09 (E14)	16:32	15:43		
4	04:33	05:22	06:13 (E13)	06:23		07:23		07:29	08:29		
	22:07	21:22	19 06:32 (E13)	20:06		18:46		16:30	15:43		
5	04:34	05:24	06:13 (E13)	06:25		07:25		07:31	08:31		
	22:07	21:20	20 06:33 (E13)	20:03		18:43		16:27	15:42		
6	04:35	05:25	06:11 (E13)	06:27		07:28		07:33	08:32		
	22:06	21:17	22 06:33 (E13)	20:01		18:40		16:25	15:41		
7	04:36	05:27	06:11 (E13)	06:29		07:30		07:36	08:34		
	22:05	21:15	22 06:33 (E13)	19:58		18:38		16:23	15:40		
8	04:37	05:29	06:11 (E13)	06:31		07:32		07:38	08:35		
	22:04	21:13	23 06:34 (E13)	19:56		18:35		16:21	15:40		
9	04:38	05:31	06:11 (E13)	06:33		07:34		07:40	08:37		
	22:03	21:11	23 06:34 (E13)	19:53		18:33		16:19	15:39		
10	04:40	05:33	06:11 (E13)	06:35		07:36		07:42	08:38		
	22:02	21:08	23 06:34 (E13)	19:50		18:30		16:17	15:39		
11	04:41	05:35	06:11 (E13)	06:37		07:38		07:44	08:39		
	22:01	21:06	23 06:34 (E13)	19:47		18:27		16:15	15:39		
12	04:42	05:37	06:10 (E13)	06:39	08:02 (E14)	07:40		07:46	08:40		
	22:00	21:04	23 06:33 (E13)	19:45	13 08:15 (E14)	18:25		16:13	15:38		
13	04:44	05:39	06:11 (E13)	06:41	07:59 (E14)	07:42		07:49	08:42		
	21:59	21:02	21 06:32 (E13)	19:42	19 08:18 (E14)	18:22		16:11	15:38		
14	04:45	05:41	06:13 (E13)	06:43	07:57 (E14)	07:44		07:51	08:43		
	21:58	20:59	19 06:32 (E13)	19:39	22 08:19 (E14)	18:20		16:10	15:38		
15	04:46	05:43	06:15 (E13)	06:45	07:55 (E14)	07:46		07:53	08:44		
	21:57	20:57	16 06:31 (E13)	19:37	26 08:21 (E14)	18:17		16:08	15:38		
16	04:48	05:45	06:17 (E13)	06:47	07:53 (E14)	07:48		07:55	08:45		
	21:55	20:54	13 06:30 (E13)	19:34	29 08:22 (E14)	18:15		16:06	15:38		
17	04:49	05:47	06:19 (E13)	06:49	07:52 (E14)	07:50		07:57	08:46		
	21:54	20:52	10 06:29 (E13)	19:31	31 08:23 (E14)	18:12		16:04	15:38		
18	04:51	05:49	06:21 (E13)	06:51	07:51 (E14)	07:52		07:59	08:46		
	21:52	20:50	6 06:27 (E13)	19:29	32 08:23 (E14)	18:09		16:03	15:38		
19	04:53	05:51		06:53	07:50 (E14)	07:55		08:01	08:47		
	21:51	20:47		19:26	33 08:23 (E14)	18:07		16:01	15:38		
20	04:54	05:53		06:55	07:49 (E14)	07:57		08:03	08:48		
	21:49	20:45		19:23	34 08:23 (E14)	18:04		15:59	15:39		
21	04:56	05:55		06:57	07:49 (E14)	07:59		08:05	08:48		
	21:48	20:42		19:21	34 08:23 (E14)	18:02		15:58	15:39		
22	04:58	05:57		06:59	07:48 (E14)	08:01		08:07	08:49		
	21:46	20:40		19:18	35 08:23 (E14)	18:00		15:56	15:40		
23	04:59	05:59		07:01	07:48 (E14)	08:03		08:09	08:50		
	21:45	20:37		19:15	35 08:23 (E14)	17:57		15:55	15:40		
24	05:01	06:01		07:03	07:47 (E14)	08:05		08:11	08:50		
	21:43	20:35		19:12	35 08:22 (E14)	17:55		15:53	15:41		
25	05:03	06:03		07:05	07:47 (E14)	07:07		08:13	08:50		
	21:41	20:32		19:10	35 08:22 (E14)	16:52		15:52	15:41		
26	05:05	06:05		07:07	07:47 (E14)	07:10		08:15	08:51		
	21:39	20:30		19:07	34 08:21 (E14)	16:50		15:51	15:42		
27	05:06	06:07		07:09	07:48 (E14)	07:12		08:17	08:51		
	21:38	20:27		19:04	32 08:20 (E14)	16:48		15:50	15:43		
28	05:08	06:09		07:11	07:48 (E14)	07:14		08:19	08:51		
	21:36	20:24		19:02	31 08:19 (E14)	16:45		15:48	15:44		
29	05:10	06:11		07:13	07:49 (E14)	07:16		08:21	08:51		
	21:34	20:22		18:59	29 08:18 (E14)	16:43		15:47	15:45		
30	05:12	06:13		07:15	07:49 (E14)	07:18		08:22	08:51		
	21:32	20:19		18:56	27 08:16 (E14)	16:41		15:46	15:46		
31	05:14	06:20 (E13)	06:15			07:20			08:51		
	21:30	6 06:26 (E13)	20:17			16:38			15:47		
Potential sun hours	529		469		385	324		247	216		
Total, worst case		6	326		566		57				
Sun reduction	0.49		0.50		0.43		0.26				
Oper. time red.	0.94		0.94		0.94		0.94				
Wind dir. red.	0.66		0.66		0.63		0.63				
Total reduction	0.31		0.31		0.25		0.15				
Total, real	2		101		143		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	23	07:50 (E14) 08:13 (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	10	07:56 (E14) 08:06 (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 21:08	05:19 22:00	04:30 22:05	05:27 21:15	06:29 19:58		07:30 18:38	3	07:58 (E14) 08:01 (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 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	17	07:16 (E14) 07:33 (E14)	06:28 21:10	05:15 21:12	04:29 22:02	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	21	07:13 (E14) 07:34 (E14)	06:25 21:12	05:13 21:14	04:28 22:03	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	25	07:10 (E14) 07:35 (E14)	06:22 21:14	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	26	07:10 (E14) 07:36 (E14)	06:20 21:16	05:09 21:18	04:27 22:05	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	27	07:09 (E14) 07:36 (E14)	06:17 21:20	05:07 21:22	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	28	07:08 (E14) 07:36 (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	28	07:08 (E14) 07:36 (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	28	07:08 (E14) 07:36 (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	28	07:07 (E14) 07:35 (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	27	07:07 (E14) 07:34 (E14)	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:52	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	07:08 (E14) 07:33 (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			08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	23	07:09 (E14) 07:32 (E14)	05:59 20:33	04:54 21:33	04:25 22:10	05:53 20:45	06:55 19:23	12	07:57 18:04	08:00 (E14) 08:12 (E14)		08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	21	07:09 (E14) 07:30 (E14)	05:57 20:35	04:52 21:35	04:25 22:10	05:55 20:42	06:57 19:21	17	07:59 18:02	07:57 (E14) 08:14 (E14)		08:05 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	18	07:11 (E14) 07:29 (E14)	05:54 20:37	04:50 21:37	04:26 22:10	05:57 20:40	06:59 19:18	20	07:59 18:00	07:55 (E14) 08:15 (E14)		08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	13	07:13 (E14) 07:26 (E14)	05:52 20:39	04:48 21:38	04:26 22:10	05:59 20:37	07:01 19:15	22	07:54 18:03	07:57 (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	3	07:17 (E14) 07:20 (E14)	05:49 20:41	04:47 21:40	04:26 22:10	06:01 20:35	07:03 19:12	25	07:52 18:05	07:51 (E14) 08:17 (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	04:47 22:10	05:03 21:41	06:03 20:32	07:05 19:10	26	07:51 18:07	07:52 (E14) 08:17 (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	07:50 18:17	07:51 (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	07:50 18:17	07:52 (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	28	07:49 18:17	07:49 (E14) 08:17 (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	28	07:16 18:17	07:49 (E14) 08:17 (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	28	07:18 18:16	07:49 (E14) 08:16 (E14)		08:22 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51		04:37 21:51	04:37 21:51		05:14 21:30	06:15 20:17		27	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				379						259		121				
Sun reduction				0.41						0.43		0.26				
Oper. time red.				0.94						0.94		0.94				
Wind dir. red.				0.62						0.62		0.62				
Total reduction				0.24						0.25		0.15				
Total, real				91						65		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	07:47 (E14) 08:11 (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	5	07:18 (E14) 07:23 (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			07:38 16:21	08:35 15:40
9	08:47 16:00	07:58 17:03	06:50 18:05	11	07:16 (E14) 07:27 (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			07:40 16:19	08:37 15:39
10	08:46 16:01	07:56 17:06	06:48 18:07	16	07:13 (E14) 07:29 (E14)	06:25 20:12	05:13 21:14	04:28 22:03	05:33 21:08	06:35 19:50		07:36 18:30			07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	20	07:10 (E14) 07:30 (E14)	06:22 20:14	05:11 21:16	04:27 22:02	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	23	07:08 (E14) 07:31 (E14)	06:20 20:16	05:09 21:18	04:27 22:05	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	07:07 (E14) 07:32 (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	27	07:05 (E14) 07:32 (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	27	07:05 (E14) 07:05 (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	27	07:05 (E14) 07:32 (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	07:04 (E14) 07:31 (E14)	06:07 20:26	04:59 21:27	04:25 22:08	05:49 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	27	07:04 (E14) 07:31 (E14)	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:52	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	27	07:04 (E14) 07:31 (E14)	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:51	06:53 19:26	12	07:55 (E14) 08:09 (E14)			08:01 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	25	07:04 (E14) 07:29 (E14)	05:59 20:33	04:54 21:33	04:25 22:10	05:53 21:49	06:55 19:23	17	07:54 (E14) 08:11 (E14)			08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	23	07:05 (E14) 07:28 (E14)	05:57 20:35	04:52 21:35	04:25 22:10	05:55 21:48	06:57 19:21	20	07:52 (E14) 08:12 (E14)			07:59 15:58	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	21	07:06 (E14) 07:27 (E14)	05:54 20:37	04:50 21:37	04:26 22:10	05:57 21:46	06:59 19:18	22	07:51 (E14) 08:13 (E14)			08:01 15:56	08:49 15:40
23	08:30 16:26	07:26 17:34	06:13 18:34	18	07:07 (E14) 07:25 (E14)	05:52 20:39	04:48 21:38	04:26 22:10	05:59 21:45	07:01 19:15	25	07:49 (E14) 08:14 (E14)			08:03 15:55	08:50 15:40
24	08:29 16:28	07:23 17:37	06:10 18:36	13	07:09 (E14) 07:22 (E14)	05:49 20:41	04:47 21:40	04:26 22:10	06:01 21:43	07:03 19:12	26	07:03 (E14) 08:14 (E14)			08:05 15:53	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	3	07:14 (E14) 07:17 (E14)	05:47 20:43	04:45 21:42	04:27 22:10	06:03 21:41	07:05 19:10	26	07:05 (E14) 08:14 (E14)			07:07 15:52	08:50 15:41
26	08:26 16:32	07:18 17:41	06:05 18:41			05:45 20:44	04:44 21:43	04:27 22:10	06:05 21:39	07:07 19:07	27	07:07 (E14) 08:14 (E14)			07:10 15:51	08:51 15:42
27	08:24 16:34	07:16 17:43	06:02 18:43			05:42 20:47	04:42 21:45	04:28 22:10	06:06 21:38	07:09 19:04	27	07:12 (E14) 08:14 (E14)			07:12 15:50	08:51 15:43
28	08:22 16:37	07:13 17:45	06:00 18:45			05:40 20:49	04:41 21:47	04:28 22:10	06:09 21:36	07:11 19:02	27	07:14 (E14) 08:13 (E14)			07:14 15:48	08:51 15:44
29	08:20 16:39		06:57 19:47			05:37 20:51	04:40 21:48	04:29 22:10	06:11 21:34	07:13 19:02	27	07:16 (E14) 08:13 (E14)			07:16 15:47	08:51 15:45
30	08:19 16:41		06:54 19:49			05:35 21:50	04:38 21:50	04:29 22:09	06:13 21:32	07:15 18:56	26	07:18 (E14) 08:12 (E14)			07:18 15:46	08:51 15:46
31	08:17 16:43		06:52 19:51			04:37 21:51			06:15 21:30			07:20 16:38			07:20 15:47	08:51 15:47
Potential sun hours	235	266	366		426	508	528	529	469	385		324		247	216	
Total, worst case			365							282		86				
Sun reduction			0.41							0.43		0.26				
Oper. time red.			0.94							0.94		0.94				
Wind dir. red.			0.63							0.63		0.63				
Total reduction			0.24							0.25		0.15				
Total, real			88							71		13				

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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		09:44 (E14)	07:11			06:49	05:33	04:36
	15:48	19	09:54 (E14)	16:45	21	10:05 (E14)	17:48			19:53	20:55	21:53
2	08:50		09:36 (E14)	08:13		09:46 (E14)	07:08			06:46	05:30	04:35
	15:49	20	09:56 (E14)	16:48	17	10:03 (E14)	17:50			19:55	20:58	21:54
3	08:50		09:35 (E14)	08:11		09:49 (E14)	07:06			06:43	05:28	04:34
	15:51	21	09:56 (E14)	16:50	12	10:01 (E14)	17:52			19:57	21:00	21:55
4	08:50		09:35 (E14)	08:09		09:55 (E14)	07:03			06:41	05:26	04:33
	15:52	22	09:57 (E14)	16:52	1	09:56 (E14)	17:54			19:59	21:02	21:57
5	08:49		09:36 (E14)	08:07			07:01			06:38	05:23	04:32
	15:53	22	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		09:36 (E14)	07:52			06:42			06:20	05:09	04:27
	16:05	28	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		07:04 (E13)	06:15	05:05	04:26
	16:08	30	10:05 (E14)	17:14			18:15	12	07:16 (E13)	20:20	21:22	22:07
15	08:41		09:36 (E14)	07:45			06:34		07:02 (E13)	06:12	05:03	04:26
	16:10	30	10:06 (E14)	17:17			18:18	17	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		06:58 (E13)	06:07	04:59	04:25
	16:14	31	10:07 (E14)	17:21			18:22	23	07:21 (E13)	20:26	21:27	22:08
18	08:38		09:36 (E14)	07:38			06:26		06:56 (E13)	06:04	04:57	04:25
	16:16	31	10:07 (E14)	17:23			18:24	26	07:22 (E13)	20:28	21:29	22:09
19	08:36		09:36 (E14)	07:36			06:24		06:56 (E13)	06:02	04:55	04:25
	16:18	31	10:07 (E14)	17:26			18:26	27	07:23 (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	33	10:09 (E14)	17:28			18:28	29	07:23 (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	32	10:09 (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		06:54 (E13)	05:54	04:50	04:26
	16:24	32	10:09 (E14)	17:32			18:32	29	07:23 (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	32	10:09 (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		06:53 (E13)	05:49	04:47	04:26
	16:28	31	10:09 (E14)	17:37			18:36	29	07:22 (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	29	07:22 (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	30	10:09 (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	29	10:09 (E14)	17:43			18:43	26	07:19 (E13)	20:47	21:45	22:10
28	08:22		09:40 (E14)	07:13			05:59		06:55 (E13)	05:40	04:41	04:28
	16:37	29	10:09 (E14)	17:45			18:45	23	07:18 (E13)	20:49	21:47	22:10
29	08:20		09:41 (E14)				06:57		07:55 (E13)	05:37	04:40	04:29
	16:39	27	10:08 (E14)				19:47	21	08:16 (E13)	20:51	21:48	22:10
30	08:19		09:42 (E14)				06:54		07:56 (E13)	05:35	04:38	04:29
	16:41	26	10:08 (E14)				19:49	18	08:14 (E13)	20:53	21:50	22:09
31	08:17		09:44 (E14)				06:51		07:59 (E13)		04:37	
	16:43	23	10:07 (E14)				19:51	13	08:12 (E13)		21:51	
Potential sun hours	235			266			366			426	508	529
Total, worst case	855			51			428					
Sun reduction	0.13			0.20			0.41					
Oper. time red.	0.94			0.94			0.94					
Wind dir. red.	0.61			0.61			0.64					
Total reduction	0.08			0.12			0.25					
Total, real	65			6			105					

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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 27
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 22
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 22
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 20
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 19
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 18
13	04:43 21:59	05:39 21:02	06:41 19:42	07:42 18:22	07:49 16:11	08:42 15:38 17
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 15
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 15
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 14
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 13
19	04:53 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38 12
20	04:54 21:49	05:53 20:45	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:39 12
21	04:56 21:48	05:55 20:42	06:57 19:21	07:58 18:02	08:05 15:58	08:49 15:39 12
22	04:58 21:46	05:57 20:40	06:59 19:18	07:59 18:00	08:07 15:56	08:49 15:40 12
23	04:59 21:45	05:59 20:37	07:01 19:15	08:00 17:57	08:09 15:55	08:50 15:40 12
24	05:01 21:43	06:01 20:35	07:03 19:12	08:01 17:55	08:11 15:53	08:50 15:41 12
25	05:03 21:41	06:03 20:32	07:05 19:10	08:03 17:52	08:13 15:52	08:50 15:41 13
26	05:05 21:39	06:05 20:30	07:07 19:07	08:04 17:50	08:15 15:51	08:51 15:42 13
27	05:06 21:38	06:07 20:27	07:09 19:04	08:05 17:48	08:17 15:49	08:51 15:43 14
28	05:08 21:36	06:09 20:24	07:11 19:02	08:06 17:46	08:19 15:48	08:51 15:44 15
29	05:10 21:34	06:11 20:22	07:13 18:59	08:07 17:44	08:21 15:47	08:51 15:45 16
30	05:12 21:32	06:13 20:19	07:15 18:56	08:08 17:42	08:22 15:46	08:51 15:46 16
31	05:14 21:30	06:15 20:17		08:09 17:40		08:51 15:47 17
Potential sun hours	529	469	385	324	247	216
Total, worst case			439		651	546
Sun reduction			0.43		0.08	0.07
Oper. time red.			0.94		0.94	0.94
Wind dir. red.			0.64		0.61	0.61
Total reduction			0.26		0.05	0.04
Total, real			112		31	22

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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 06:27 (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 06:27 (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 06:28 (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 06:28 (E14)
6	08:49 15:55	08:05 16:57	06:58 17:58	06:36 20:03	07:05 (E15) 21:06	04:31 06:28 (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 06:28 (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 06:28 (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 06:27 (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 06:28 (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 06:28 (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 06:28 (E14)
13	08:43 16:06	07:50 17:12	06:40 18:13	06:17 20:18	07:05 (E15) 21:20	04:27 06:28 (E14)
14	08:42 16:08	07:47 17:14	06:37 18:15	06:15 20:20	07:06 (E15) 21:22	04:26 06:28 (E14)
15	08:41 16:10	07:45 17:17	06:34 18:18	06:12 20:22	07:09 (E15) 21:24	04:26 06:29 (E14)
16	08:40 16:12	07:43 17:19	06:32 18:20	06:09 20:24	05:01 21:25	04:26 06:28 (E14)
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 06:28 (E14)
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 06:28 (E14)
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:30	04:55 21:31	04:25 06:28 (E14)
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 06:29 (E14)
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:25 06:29 (E14)
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:36	04:26 06:29 (E14)
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:49 21:38	04:26 06:29 (E14)
24	08:29 16:28	07:23 17:37	06:10 18:36	05:49 20:41	04:47 21:40	04:26 06:30 (E14)
25	08:27 16:30	07:21 17:39	06:08 18:38	05:47 20:43	04:45 21:42	04:27 06:30 (E14)
26	08:26 16:32	07:18 17:41	06:05 18:41	05:45 20:45	04:44 21:43	04:27 06:31 (E14)
27	08:24 16:34	07:16 17:43	06:02 18:43	05:42 20:47	04:42 21:45	04:28 06:31 (E14)
28	08:22 16:37	07:13 17:45	06:00 18:45	05:40 20:49	04:41 21:47	04:28 06:31 (E14)
29	08:20 16:39		06:57 19:47	05:37 20:51	04:40 21:48	04:29 06:31 (E14)
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 06:32 (E14)
31	08:17 16:43		06:51 19:51		04:37 21:51	05:48 (E14)
Potential sun hours	235	266	366	426	508	528
Total, worst case				276		1082
Sun reduction				0.50		0.56
Oper. time red.				0.94		0.94
Wind dir. red.				0.66		0.67
Total reduction				0.31		0.35
Total, real				86	312	381

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	06:03 (E14)	06:17	07:03 (E15)	07:17	07:23	08:24								
	22:09	36	06:32 (E14)	21:28	30	06:33 (E14)	20:14	21	07:24 (E15)	18:54	16:36	15:45					
2	04:31	05:55 (E14)	05:18	06:03 (E14)	06:19	07:02 (E15)	07:19	07:25	08:26								
	22:08	37	06:32 (E14)	21:26	28	06:31 (E14)	20:11	22	07:24 (E15)	18:51	16:34	15:44					
3	04:32	05:56 (E14)	05:20	06:05 (E14)	06:21	07:01 (E15)	07:21	07:27	08:28								
	22:08	37	06:33 (E14)	21:24	25	06:30 (E14)	20:09	23	07:24 (E15)	18:48	16:32	15:43					
4	04:33	05:56 (E14)	05:22	06:06 (E14)	06:23	07:01 (E15)	07:23	07:29	08:29								
	22:07	37	06:33 (E14)	21:22	22	06:28 (E14)	20:06	23	07:24 (E15)	18:46	16:30	15:43					
5	04:34	05:56 (E14)	05:24	06:08 (E14)	06:25	07:01 (E15)	07:25	07:31	08:31								
	22:07	37	06:33 (E14)	21:19	18	06:26 (E14)	20:03	23	07:24 (E15)	18:43	16:27	15:42					
6	04:35	05:56 (E14)	05:25	06:10 (E14)	06:27	07:01 (E15)	07:28	07:33	08:32								
	22:06	38	06:34 (E14)	21:17	13	06:23 (E14)	20:01	23	07:24 (E15)	18:40	16:25	15:41					
7	04:36	05:56 (E14)	05:27	06:29	06:29	07:00 (E15)	07:30	07:36	08:34								
	22:05	38	06:34 (E14)	21:15	19:58	07:22 (E15)	18:38	16:23	15:40								
8	04:37	05:56 (E14)	05:29	06:31	06:31	07:00 (E15)	07:32	07:38	08:35								
	22:04	38	06:34 (E14)	21:13	19:55	07:21 (E15)	18:35	16:21	15:40								
9	04:38	05:56 (E14)	05:31	06:33	06:33	07:02 (E15)	07:34	07:40	08:37								
	22:03	39	06:35 (E14)	21:11	19:53	07:19 (E15)	18:33	16:19	15:39								
10	04:40	05:56 (E14)	05:33	06:35	06:35	07:04 (E15)	07:36	07:42	08:38								
	22:02	39	06:35 (E14)	21:08	19:50	07:18 (E15)	18:30	16:17	15:39								
11	04:41	05:57 (E14)	05:35	06:37	06:37	07:06 (E15)	07:38	07:44	08:39								
	22:01	39	06:36 (E14)	21:06	19:47	07:15 (E15)	18:27	16:15	15:39								
12	04:42	05:57 (E14)	05:37	06:39	06:39	07:40	07:46	08:40									
	22:00	39	06:36 (E14)	21:04	19:45	18:25	16:13	15:38									
13	04:44	05:56 (E14)	05:39	06:41	06:41	07:42	07:49	08:41									
	21:59	40	06:36 (E14)	21:02	19:42	18:22	16:11	15:38									
14	04:45	05:56 (E14)	05:41	06:43	06:43	07:44	07:51	08:43									
	21:58	40	06:36 (E14)	20:59	19:39	18:20	16:10	15:38									
15	04:46	05:57 (E14)	05:43	06:45	06:45	07:46	07:53	08:44									
	21:57	40	06:37 (E14)	20:57	19:37	18:17	16:08	15:38									
16	04:48	05:57 (E14)	05:45	06:47	06:47	07:48	07:55	08:45									
	21:55	39	06:36 (E14)	20:54	19:34	18:15	16:06	15:38									
17	04:49	05:56 (E14)	05:47	06:49	06:49	07:50	07:57	08:45									
	21:54	40	06:36 (E14)	20:52	19:31	18:12	16:04	15:38									
18	04:51	05:57 (E14)	05:49	06:51	06:51	07:52	07:59	08:46									
	21:52	40	06:37 (E14)	20:50	19:29	18:09	16:03	15:38									
19	04:53	05:57 (E14)	05:51	06:53	06:53	07:55	08:01	08:47									
	21:51	40	06:37 (E14)	20:47	19:26	18:07	16:01	15:38									
20	04:54	05:57 (E14)	05:53	06:55	06:55	07:57	08:03	08:48									
	21:49	40	06:37 (E14)	20:45	19:23	18:04	15:59	15:39									
21	04:56	05:57 (E14)	05:55	06:57	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	05:58 (E14)	05:57	06:59	06:59	08:01	08:07	08:49									
	21:46	39	06:37 (E14)	20:40	19:18	18:00	15:56	15:40									
23	04:59	05:57 (E14)	05:59	07:01	07:01	08:03	08:09	08:49									
	21:45	39	06:36 (E14)	20:37	19:15	17:57	15:55	15:40									
24	05:01	05:58 (E14)	06:01	07:03	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	05:59 (E14)	06:03	07:05	07:05	08:07	08:13	08:50									
	21:41	38	06:37 (E14)	20:32	19:10	16:52	15:52	15:41									
26	05:05	05:58 (E14)	06:05	07:07	07:07	08:10	08:15	08:51									
	21:39	38	06:36 (E14)	20:30	19:07	16:50	15:51	15:42									
27	05:06	05:59 (E14)	06:07	07:09	07:09	08:12	08:17	08:51									
	21:37	37	06:36 (E14)	20:27	19:04	16:48	15:50	15:43									
28	05:08	06:00 (E14)	06:09	07:11	07:11	08:14	08:19	08:51									
	21:36	35	06:35 (E14)	20:24	19:02	16:45	15:48	15:44									
29	05:10	06:00 (E14)	06:11	07:13	07:13	08:16	08:21	08:51									
	21:34	34	06:34 (E14)	20:22	18:59	16:43	15:47	15:45									
30	05:12	06:01 (E14)	06:13	07:15	07:15	08:18	08:22	08:51									
	21:32	33	06:34 (E14)	20:19	18:56	16:41	15:46	15:46									
31	05:14	06:02 (E14)	06:15	07:17	07:17	08:20	08:24	08:51									
	21:30	31	06:33 (E14)	20:17	19	16:38	15:47	15:47									
Potential sun hours	529		469		385		324		248		216						
Total, worst case	1174		196		218												
Sun reduction	0.49		0.50		0.43												
Oper. time red.	0.94		0.94		0.94												
Wind dir. red.	0.67		0.67		0.66												
Total reduction	0.31		0.31		0.26												
Total, real	364		61		58												

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

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Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	07:28 (E15)	05:33
	15:48	16:45	17:48	19:53	23 07:51 (E15)	20:55
2	08:50	08:13	07:08	06:46	07:28 (E15)	05:30
	15:50	16:48	17:50	19:55	21 07:49 (E15)	20:57
3	08:50	08:11	07:06	06:43	07:30 (E15)	05:28
	15:51	16:50	17:52	19:57	19 07:49 (E15)	21:00
4	08:50	08:09	07:03	06:41	07:30 (E15)	05:26
	15:52	16:52	17:54	19:59	17 07:47 (E15)	21:02
5	08:49	08:07	07:01	06:38	07:32 (E15)	05:24
	15:54	16:54	17:56	20:01	12 07:44 (E15)	21:04
6	08:49	08:05	06:58	06:36	07:36 (E15)	05:21
	15:55	16:57	17:58	20:03	4 07:40 (E15)	21:06
7	08:48	08:03	06:55	06:33		05:19
	15:56	16:59	18:01	20:06		06:22 (E14)
8	08:47	08:01	06:53	06:30		05:17
	15:58	17:01	18:03	20:08		06:22 (E14)
9	08:47	07:58	06:50	06:28		05:15
	16:00	17:03	18:05	20:10		06:22 (E14)
10	08:46	07:56	06:47	06:25		05:13
	16:01	17:05	18:07	20:12		06:22 (E14)
11	08:45	07:54	06:45	06:22		05:11
	16:03	17:08	18:09	20:14		06:22 (E14)
12	08:44	07:52	06:42	06:20		05:09
	16:05	17:10	18:11	20:16		06:22 (E14)
13	08:43	07:50	06:40	06:17		05:07
	16:06	17:12	18:13	20:18		06:23 (E14)
14	08:42	07:47	06:37	06:15		05:05
	16:08	17:14	18:15	20:20		06:23 (E14)
15	08:41	07:45	06:34	06:12		05:03
	16:10	17:17	18:18	20:22		06:23 (E14)
16	08:40	07:43	06:32	06:09		05:01
	16:12	17:19	18:20	20:24		06:24 (E14)
17	08:39	07:40	06:29	06:07		05:00
	16:14	17:21	18:22	20:26		06:25 (E14)
18	08:37	07:38	06:26	06:04		04:57
	16:16	17:23	18:24	20:28		06:25 (E14)
19	08:36	07:36	06:24	06:02		04:55
	16:18	17:26	18:26	20:30		06:26 (E14)
20	08:35	07:33	06:21	05:59	06:43 (E14)	04:54
	16:20	17:28	18:28	20:33	7 06:50 (E14)	04:54
21	08:33	07:31	06:18	05:57	06:37 (E14)	04:52
	16:22	17:30	18:30	20:35	17 06:54 (E14)	04:52
22	08:32	07:28	06:16	05:54	06:35 (E14)	04:50
	16:24	17:32	18:32	20:37	22 06:57 (E14)	04:50
23	08:30	07:26	06:13	05:52	06:32 (E14)	04:48
	16:26	17:34	18:34	20:39	26 06:58 (E14)	04:48
24	08:29	07:23	06:10	05:49	06:30 (E14)	04:47
	16:28	17:37	18:36	20:41	30 07:00 (E14)	04:47
25	08:27	07:21	06:08	05:47	06:29 (E14)	04:45
	16:30	17:39	18:38	20:43	32 07:01 (E14)	04:45
26	08:26	07:18	06:05	05:44	06:27 (E14)	04:44
	16:32	17:41	18:41	20:45	34 07:01 (E14)	04:43
27	08:24	07:16	06:02	05:42	06:26 (E14)	04:42
	16:34	17:43	18:43	20:47	36 07:02 (E14)	04:42
28	08:22	07:13	06:00	05:40	06:26 (E14)	04:41
	16:37	17:45	18:45	20:49	37 07:03 (E14)	04:41
29	08:20		06:57	05:37	06:25 (E14)	04:40
	16:39		19:47	20:51	39 07:04 (E14)	04:40
30	08:18		06:54	05:35	06:25 (E14)	04:38
	16:41		19:49	20:53	40 07:05 (E14)	04:38
31	08:17		06:51	05:33		04:37
	16:43		19:51	20:52		05:11 (E13)
Potential sun hours	235	266	366	426	508	528
Total, worst case			185	416	1022	649
Sun reduction			0.41	0.50	0.57	0.56
Oper. time red.			0.94	0.94	0.94	0.94
Wind dir. red.			0.65	0.65	0.65	0.67
Total reduction			0.25	0.31	0.35	0.35
Total, real			47	127	356	228

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	41	07:13 (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	42	07:14 (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	23	05:33 (E13)	21:24	42	07:14 (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	22	05:33 (E13)	21:22	43	07:15 (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	43	07:15 (E14)	20:03		18:43	16:27	15:42
6	04:35		05:12 (E13)	05:25		06:31 (E14)	06:27	07:32 (E15)	07:28	07:33	08:32
	22:06	21	05:33 (E13)	21:17	43	07:14 (E14)	20:01	4 07:36 (E15)	18:40	16:25	15:41
7	04:36		05:13 (E13)	05:27		06:31 (E14)	06:29	07:27 (E15)	07:30	07:36	08:34
	22:05	20	05:33 (E13)	21:15	43	07:14 (E14)	19:58	12 07:39 (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	19	05:33 (E13)	21:13	43	07:14 (E14)	19:55	16 07:41 (E15)	18:35	16:21	15:40
9	04:38		05:15 (E13)	05:31		06:32 (E14)	06:33	07:23 (E15)	07:34	07:40	08:37
	22:03	17	05:32 (E13)	21:11	42	07:14 (E14)	19:53	19 07:42 (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	42	07:14 (E14)	19:50	21 07:43 (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	42	07:14 (E14)	19:47	22 07:43 (E15)	18:27	16:15	15:39
12	04:42		05:19 (E13)	05:37		06:32 (E14)	06:39	07:20 (E15)	07:40	07:46	08:40
	22:00	13	05:32 (E13)	21:04	40	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	40	07:12 (E14)	19:42	24 07:43 (E15)	18:22	16:11	15:38
14	04:45		05:21 (E13)	05:41		06:33 (E14)	06:43	07:19 (E15)	07:44	07:51	08:43
	21:58	9	05:30 (E13)	20:59	38	07:11 (E14)	19:39	24 07:43 (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	16	06:57 (E14)	20:57	38	07:11 (E14)	19:37	23 07:42 (E15)	18:17	16:08	15:38
16	04:48		05:24 (E13)	05:45		06:34 (E14)	06:47	07:19 (E15)	07:48	07:55	08:45
	21:55	18	06:59 (E14)	20:54	36	07:10 (E14)	19:34	23 07:42 (E15)	18:15	16:06	15:38
17	04:49		06:43 (E14)	05:47		06:35 (E14)	06:49	07:19 (E15)	07:50	07:57	08:45
	21:54	18	07:01 (E14)	20:52	34	07:09 (E14)	19:31	22 07:41 (E15)	18:12	16:04	15:38
18	04:51		06:42 (E14)	05:49		06:36 (E14)	06:51	07:20 (E15)	07:52	07:59	08:46
	21:52	21	07:03 (E14)	20:50	32	07:08 (E14)	19:29	20 07:40 (E15)	18:09	16:03	15:38
19	04:53		06:41 (E14)	05:51		06:36 (E14)	06:53	07:22 (E15)	07:55	08:01	08:47
	21:51	23	07:04 (E14)	20:47	29	07:05 (E14)	19:26	16 07:38 (E15)	18:07	16:01	15:38
20	04:54		06:40 (E14)	05:53		06:38 (E14)	06:55	07:24 (E15)	07:57	08:03	08:48
	21:49	26	07:06 (E14)	20:45	25	07:03 (E14)	19:23	12 07:36 (E15)	18:04	15:59	15:39
21	04:56		06:39 (E14)	05:55		06:40 (E14)	06:57	07:26 (E15)	07:59	08:05	08:48
	21:48	27	07:06 (E14)	20:42	21	07:01 (E14)	19:21	6 07:32 (E15)	18:02	15:58	15:39
22	04:58		06:38 (E14)	05:57		06:42 (E14)	06:59		08:01	08:07	08:49
	21:46	30	07:08 (E14)	20:40	16	06:58 (E14)	19:18		18:00	15:56	15:40
23	04:59		06:37 (E14)	05:59		06:48 (E14)	07:01		08:03	08:09	08:49
	21:45	31	07:08 (E14)	20:37	5	06:53 (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	32	07:09 (E14)	20:35			19:12		17:55	15:53	15:41
25	05:03		06:36 (E14)	06:03			07:05		07:07	08:13	08:50
	21:41	35	07:11 (E14)	20:32			19:10		16:52	15:52	15:41
26	05:05		06:35 (E14)	06:05			07:07		07:10	08:15	08:51
	21:39	36	07:11 (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	37	07:12 (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	38	07:13 (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	38	07:12 (E14)	20:22			18:59		16:43	15:47	15:45
30	05:12		06:33 (E14)	06:13			07:15		07:18	08:22	08:51
	21:32	40	07:13 (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	41	07:14 (E14)	20:17					16:38		15:47
Potential sun hours	529		469			385			324	247	216
Total, worst case		759		820		287					
Sun reduction		0.49		0.50		0.43					
Oper. time red.		0.94		0.94		0.94					
Wind dir. red.		0.66		0.65		0.65					
Total reduction		0.30		0.31		0.26					
Total, real		231		250		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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start wind speed: Cut in wind speed from 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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January		February		March	April	May	June	July	August	September	October	November	December	
1	08:51		10:26 (E13)	08:15	10:41 (E13)	07:11	06:49	05:32	04:36	04:30	05:16	06:17	07:17	07:23	08:24
	15:48	39	11:05 (E13)	16:45	11:09 (E13)	17:48	19:53	20:55	21:53	22:09	21:28	20:14	18:54	16:36	15:45
2	08:50		10:27 (E13)	08:13	10:43 (E13)	07:08	06:46	05:30	04:35	04:31	05:18	06:19	07:19	07:25	08:26
	15:49	39	11:06 (E13)	16:47	11:08 (E13)	17:50	19:55	20:57	21:54	22:09	21:26	20:11	18:51	16:34	15:44
3	08:50		10:26 (E13)	08:11	10:46 (E13)	07:06	06:43	05:28	04:34	04:32	05:19	06:21	07:21	07:27	08:28
	15:51	40	11:06 (E13)	16:50	11:06 (E13)	17:52	19:57	21:00	21:55	22:08	21:24	20:09	18:48	16:32	15:43
4	08:50		10:26 (E13)	08:09	10:49 (E13)	07:03	06:41	05:26	04:33	04:33	05:21	06:23	07:23	07:29	08:29
	15:52	41	11:07 (E13)	16:52	11:03 (E13)	17:54	19:59	21:02	21:57	22:07	21:22	20:06	18:46	16:29	15:42
5	08:49		10:27 (E13)	08:07		07:00	06:38	05:23	04:32	04:34	05:23	06:25	07:25	07:31	08:31
	15:53	41	11:08 (E13)	16:54		17:56	20:01	21:04	21:58	22:07	21:20	20:03	18:43	16:27	15:42
6	08:49		10:27 (E13)	08:05		06:58	06:35	05:21	04:31	04:35	05:25	06:27	07:27	07:33	08:32
	15:55	41	11:08 (E13)	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		10:28 (E13)	08:03		06:55	06:33	05:19	04:30	04:36	05:27	06:29	07:30	07:36	08:34
	15:56	41	11:09 (E13)	16:59		18:00	20:05	21:08	22:00	22:05	21:15	19:58	18:38	16:23	15:40
8	08:48		10:28 (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	41	11:09 (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		10:28 (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	42	11:10 (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		10:28 (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	43	11:11 (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		10:29 (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	42	11:11 (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		10:29 (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	43	11:12 (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		10:29 (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	43	11:12 (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		10:29 (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	44	11:13 (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		10:29 (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	43	11:12 (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		10:30 (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	43	11:13 (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		10:31 (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	43	11:14 (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		10:31 (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	43	11:14 (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		10:31 (E13)	07:35		06:24	06:02	04:55	04:25	04:52	05:51	06:53	07:55	08:01	08:47
	16:18	43	11:14 (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		10:32 (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	43	11:15 (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		10:32 (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	11:14 (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		10:32 (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	42	11:14 (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		10:33 (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	11:14 (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		10:34 (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	11:15 (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		10:35 (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	39	11:14 (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		10:35 (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	39	11:14 (E13)	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		10:36 (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	38	11:14 (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		10:37 (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	36	11:13 (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		10:38 (E13)			06:57	05:37	04:40	04:29	05:10	06:11	07:13	07:16	08:21	08:51
	16:39	35	11:13 (E13)			19:47	20:51	21:48	22:10	21:34	20:22	18:59	16:43	15:47	15:43
30	08:18		10:39 (E13)			06:54	05:35	04:38	04:29	05:12	06:13	07:15	07:18	08:22	08:51
	16:41	33	11:12 (E13)			19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:40	15:46	15:46
31	08:17		10:41 (E13)			06:51		04:37		05:14	06:15		07:20		08:51
	16:43	30	11:11 (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		1254		87									895		1207
Sun reduction		0.13		0.20									0.08		0.07
Oper. time red.		0.94		0.94									0.94		0.94
Wind dir. red.		0.61		0.61									0.61		0.61
Total reduction		0.08		0.12									0.05		0.04
Total, real		96		10									42		49

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January			February			March	April	May			June		
1	08:51		10:38 (E8)	08:15		09:12 (E6)	07:11	06:49		05:32		07:25 (E5)	04:36	07:33 (E5)
	15:48	48	13:09 (E7)	16:45	30	09:42 (E6)	17:47	19:53		20:55	84	08:49 (E5)	21:53	08:36 (E5)
2	08:50		10:40 (E8)	08:13		09:12 (E6)	07:08	06:46		05:30		07:25 (E5)	04:34	07:34 (E5)
	15:49	46	13:10 (E7)	16:47	30	09:42 (E6)	17:50	19:55		20:57	84	08:49 (E5)	21:54	08:35 (E5)
3	08:50		10:41 (E8)	08:11		09:13 (E6)	07:06	06:43		05:28		07:25 (E5)	04:33	07:34 (E5)
	15:50	44	13:10 (E7)	16:49	29	09:42 (E6)	17:52	19:57		20:59	84	08:49 (E5)	21:55	08:35 (E5)
4	08:50		10:43 (E8)	08:09		09:14 (E6)	07:03	06:41		05:25		07:25 (E5)	04:32	07:34 (E5)
	15:52	40	13:10 (E7)	16:52	28	09:42 (E6)	17:54	19:59	6	08:18 (E5)	84	08:49 (E5)	21:57	08:34 (E5)
5	08:49		12:36 (E7)	08:07		09:14 (E6)	07:00	06:38		05:23		07:25 (E5)	04:31	07:36 (E5)
	15:53	35	13:11 (E7)	16:54	28	09:42 (E6)	17:56	20:01	24	08:26 (E5)	84	08:49 (E5)	21:58	08:34 (E5)
6	08:49		12:36 (E7)	08:05		09:14 (E6)	06:58	06:35		05:21		07:25 (E5)	04:31	07:36 (E5)
	15:55	35	13:11 (E7)	16:56	26	09:40 (E6)	17:58	20:03	32	08:30 (E5)	84	08:49 (E5)	21:59	08:34 (E5)
7	08:48		12:37 (E7)	08:03		09:16 (E6)	06:55	06:33		05:19		07:25 (E5)	04:30	07:36 (E5)
	15:56	34	13:11 (E7)	16:58	24	09:40 (E6)	18:00	20:05	39	08:33 (E5)	83	08:48 (E5)	22:00	07:38 (E5)
8	08:48		12:37 (E7)	08:00		09:17 (E6)	06:53	06:30		05:17		07:25 (E5)	04:29	07:37 (E5)
	15:58	34	13:11 (E7)	17:01	22	09:39 (E6)	18:02	20:07	44	08:35 (E5)	83	08:48 (E5)	22:01	08:33 (E5)
9	08:47		12:38 (E7)	07:58		09:18 (E6)	06:50	06:27		05:14		07:25 (E5)	04:28	07:37 (E5)
	15:59	33	13:11 (E7)	17:03	19	09:37 (E6)	18:05	20:10	49	08:38 (E5)	82	08:47 (E5)	22:02	08:33 (E5)
10	08:46		12:39 (E7)	07:56		09:20 (E6)	06:47	06:25		05:12		07:25 (E5)	04:28	07:38 (E5)
	16:01	32	13:11 (E7)	17:05	16	09:36 (E6)	18:07	20:12	53	08:39 (E5)	82	08:47 (E5)	22:03	08:33 (E5)
11	08:45		12:40 (E7)	07:54		09:23 (E6)	06:45	06:22		05:10		07:25 (E5)	04:27	07:38 (E5)
	16:03	31	13:11 (E7)	17:07	10	09:33 (E6)	18:09	20:14	57	08:41 (E5)	81	08:46 (E5)	22:04	08:32 (E5)
12	08:44		12:41 (E7)	07:52			06:42	06:20		05:08		07:25 (E5)	04:27	07:39 (E5)
	16:04	30	13:11 (E7)	17:10			18:11	20:16	60	08:42 (E5)	81	08:46 (E5)	22:05	08:32 (E5)
13	08:43		12:42 (E7)	07:49			06:39	06:17		05:06		07:25 (E5)	04:26	07:40 (E5)
	16:06	28	13:10 (E7)	17:12			18:13	20:18	63	08:44 (E5)	80	08:45 (E5)	22:06	08:32 (E5)
14	08:42		12:43 (E7)	07:47			06:37	06:14		05:04		07:25 (E5)	04:26	07:40 (E5)
	16:08	27	13:10 (E7)	17:14			18:15	20:20	65	08:44 (E5)	79	08:44 (E5)	22:07	08:31 (E5)
15	08:41		12:45 (E7)	07:45			06:34	06:12		05:02		07:26 (E5)	04:25	07:40 (E5)
	16:10	24	13:09 (E7)	17:16			18:17	20:22	68	08:46 (E5)	79	08:45 (E5)	22:07	08:32 (E5)
16	08:40		12:46 (E7)	07:43			06:31	06:09		05:00		07:26 (E5)	04:25	07:41 (E5)
	16:12	22	13:08 (E7)	17:19			18:19	20:24	70	08:46 (E5)	78	08:44 (E5)	22:08	08:32 (E5)
17	08:39		09:19 (E6)	07:40			06:29	06:07		04:59		07:26 (E5)	04:25	07:41 (E5)
	16:13	29	13:08 (E7)	17:21			18:22	20:26	72	08:47 (E5)	77	08:43 (E5)	22:08	08:32 (E5)
18	08:37		09:17 (E6)	07:38			06:26	06:04		04:57		07:27 (E5)	04:25	07:41 (E5)
	16:15	29	13:06 (E7)	17:23			18:24	20:28	73	08:47 (E5)	76	08:43 (E5)	22:09	08:32 (E5)
19	08:36		09:15 (E6)	07:35			06:23	06:02		04:55		07:26 (E5)	04:25	07:42 (E5)
	16:17	28	13:03 (E7)	17:25			18:26	20:30	75	08:48 (E5)	76	08:42 (E5)	22:09	08:32 (E5)
20	08:35		09:15 (E6)	07:33			06:21	05:59		04:53		07:27 (E5)	04:25	07:42 (E5)
	16:19	19	09:34 (E6)	17:28			18:28	20:32	77	08:48 (E5)	75	08:42 (E5)	22:10	08:32 (E5)
21	08:33		09:14 (E6)	07:31			06:18	05:56		04:51		07:27 (E5)	04:25	07:42 (E5)
	16:21	21	09:35 (E6)	17:30			18:30	20:35	78	08:49 (E5)	74	08:41 (E5)	22:10	08:32 (E5)
22	08:32		09:13 (E6)	07:28			06:15	05:54		04:50		07:28 (E5)	04:25	07:43 (E5)
	16:23	23	09:36 (E6)	17:32			18:32	20:37	79	08:48 (E5)	73	08:41 (E5)	22:10	08:33 (E5)
23	08:30		09:12 (E6)	07:26			06:13	05:52		04:48		07:28 (E5)	04:25	07:43 (E5)
	16:26	25	09:37 (E6)	17:34			18:34	20:39	80	08:49 (E5)	72	08:40 (E5)	22:10	08:33 (E5)
24	08:29		09:13 (E6)	07:23			06:10	05:49		04:46		07:29 (E5)	04:26	07:43 (E5)
	16:28	26	09:39 (E6)	17:36			18:36	20:41	81	08:50 (E5)	71	08:40 (E5)	22:10	08:33 (E5)
25	08:27		09:12 (E6)	07:21			06:07	05:47		04:45		07:30 (E5)	04:26	07:43 (E5)
	16:30	27	09:39 (E6)	17:39			18:38	20:43	82	08:49 (E5)	70	08:40 (E5)	22:10	08:34 (E5)
26	08:25		09:12 (E6)	07:18			06:05	05:44		04:43		07:29 (E5)	04:27	07:43 (E5)
	16:32	28	09:40 (E6)	17:41			18:40	20:45	82	08:49 (E5)	69	08:38 (E5)	22:10	08:34 (E5)
27	08:24		09:12 (E6)	07:16			06:02	05:42		04:42		07:30 (E5)	04:27	07:43 (E5)
	16:34	29	09:41 (E6)	17:43			18:42	20:47	83	08:50 (E5)	68	08:38 (E5)	22:10	08:35 (E5)
28	08:22		09:12 (E6)	07:13			05:59	05:39		04:41		07:31 (E5)	04:28	07:43 (E5)
	16:36	29	09:41 (E6)	17:45			18:45	20:49	83	08:50 (E5)	67	08:38 (E5)	22:10	08:34 (E5)
29	08:20		09:12 (E6)				06:57	05:37		04:39		07:31 (E5)	04:28	07:43 (E5)
	16:38	30	09:42 (E6)				19:47	20:51	83	08:49 (E5)	66	08:37 (E5)	22:10	08:35 (E5)
30	08:18		09:12 (E6)				06:54	05:35		04:38		07:32 (E5)	04:29	07:42 (E5)
	16:41	30	09:42 (E6)				19:49	20:53	84	08:49 (E5)	65	08:37 (E5)	22:09	08:35 (E5)
31	08:17		09:12 (E6)				06:51			04:37		07:33 (E5)		
	16:43	30	09:42 (E6)				19:51			21:51	63	08:36 (E5)		
Potential sun hours	235			266			366	426	508			529		
Total, worst case	946			262				1742	2374			1610		
Sun reduction	0.13			0.20				0.50	0.57			0.56		
Oper. time red.	0.94			0.94				0.94	0.94			0.94		
Wind dir. red.	0.62			0.59				0.65	0.65			0.65		
Total reduction	0.08			0.11				0.31	0.35			0.34		
Total, real	74			29				534	827			551		

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	July			August			September			October			November			December		
1	04:30		07:43 (E5)	05:15		07:35 (E5)	06:17		07:43 (E5)	07:17		07:22		08:49 (E6)	08:24		12:22 (E7)	
	22:09	53	08:36 (E5)	21:28	81	08:56 (E5)	20:14	57	08:40 (E5)	18:53		16:36	17	09:06 (E6)	15:45	31	12:53 (E7)	
2	04:31		07:43 (E5)	05:17		07:35 (E5)	06:19		07:45 (E5)	07:19		07:25		08:47 (E6)	08:26		12:22 (E7)	
	22:09	54	08:37 (E5)	21:26	82	08:57 (E5)	20:11	53	08:38 (E5)	18:51		16:34	20	09:07 (E6)	15:44	32	12:54 (E7)	
3	04:31		07:43 (E5)	05:19		07:35 (E5)	06:21		07:47 (E5)	07:21		07:27		08:46 (E6)	08:28		12:21 (E7)	
	22:08	55	08:38 (E5)	21:24	82	08:57 (E5)	20:09	49	08:36 (E5)	18:48		16:31	23	09:09 (E6)	15:43	33	12:54 (E7)	
4	04:32		07:43 (E5)	05:21		07:34 (E5)	06:23		07:48 (E5)	07:23		07:29		08:45 (E6)	08:29		12:22 (E7)	
	22:07	55	08:38 (E5)	21:22	83	08:57 (E5)	20:06	44	08:32 (E5)	18:45		16:29	25	09:10 (E6)	15:42	33	12:55 (E7)	
5	04:33		07:43 (E5)	05:23		07:34 (E5)	06:25		07:50 (E5)	07:25		07:31		08:44 (E6)	08:31		12:22 (E7)	
	22:07	56	08:39 (E5)	21:19	83	08:57 (E5)	20:03	39	08:29 (E5)	18:43		16:27	26	09:10 (E6)	15:41	34	12:56 (E7)	
6	04:34		07:43 (E5)	05:25		07:34 (E5)	06:27		07:53 (E5)	07:27		07:33		08:44 (E6)	08:32		12:22 (E7)	
	22:06	57	08:40 (E5)	21:17	84	08:58 (E5)	20:01	33	08:26 (E5)	18:40		16:25	27	09:11 (E6)	15:41	35	12:57 (E7)	
7	04:35		07:42 (E5)	05:27		07:34 (E5)	06:29		07:57 (E5)	07:29		07:36		08:43 (E6)	08:34		12:22 (E7)	
	22:05	59	08:41 (E5)	21:15	84	08:58 (E5)	19:58	24	08:21 (E5)	18:38		16:23	29	09:12 (E6)	15:40	35	12:57 (E7)	
8	04:37		07:42 (E5)	05:29		07:34 (E5)	06:31		08:04 (E5)	07:31		07:38		08:44 (E6)	08:35		10:31 (E8)	
	22:04	59	08:41 (E5)	21:13	84	08:58 (E5)	19:55	9	08:13 (E5)	18:35		16:21	29	09:13 (E6)	15:39	40	12:58 (E7)	
9	04:38		07:42 (E5)	05:31		07:34 (E5)	06:33		07:34 (E5)	07:34		07:40		08:43 (E6)	08:37		10:29 (E8)	
	22:03	60	08:42 (E5)	21:11	84	08:58 (E5)	19:53			18:32		16:19	30	09:13 (E6)	15:39	44	12:58 (E7)	
10	04:39		07:41 (E5)	05:33		07:33 (E5)	06:35		07:36 (E5)	07:36		07:42		08:43 (E6)	08:38		10:29 (E8)	
	22:02	62	08:43 (E5)	21:08	85	08:58 (E5)	19:50		18:30			16:17	29	09:12 (E6)	15:39	46	12:59 (E7)	
11	04:40		07:41 (E5)	05:35		07:34 (E5)	06:37		07:38 (E5)	07:38		07:44		08:43 (E6)	08:39		10:28 (E8)	
	22:01	62	08:43 (E5)	21:06	84	08:58 (E5)	19:47		18:27			16:15	30	09:13 (E6)	15:38	48	12:59 (E7)	
12	04:42		07:40 (E5)	05:37		07:34 (E5)	06:39		07:40 (E5)	07:40		07:46		08:43 (E6)	08:40		10:29 (E8)	
	22:00	64	08:44 (E5)	21:04	84	08:58 (E5)	19:45		18:24			16:13	30	09:13 (E6)	15:38	49	13:00 (E7)	
13	04:43		07:41 (E5)	05:39		07:34 (E5)	06:41		07:42 (E5)	07:42		07:49		08:44 (E6)	08:42		10:29 (E8)	
	21:59	64	08:45 (E5)	21:01	84	08:58 (E5)	19:42		18:22			16:11	29	09:13 (E6)	15:38	50	13:01 (E7)	
14	04:45		07:40 (E5)	05:41		07:34 (E5)	06:43		07:44 (E5)	07:44		07:51		08:44 (E6)	08:43		10:28 (E8)	
	21:58	66	08:46 (E5)	20:59	84	08:58 (E5)	19:39		18:19			16:09	29	09:13 (E6)	15:38	52	13:01 (E7)	
15	04:46		07:40 (E5)	05:43		07:34 (E5)	06:45		07:46 (E5)	07:46		07:53		08:44 (E6)	08:44		10:28 (E8)	
	21:57	66	08:46 (E5)	20:57	83	08:57 (E5)	19:37		18:17			16:07	28	09:12 (E6)	15:38	54	13:02 (E7)	
16	04:47		07:40 (E5)	05:45		07:33 (E5)	06:47		07:48 (E5)	07:48		07:55		08:45 (E6)	08:45		10:29 (E8)	
	21:55	67	08:47 (E5)	20:54	83	08:56 (E5)	19:34		18:14			16:06	28	09:13 (E6)	15:38	53	13:02 (E7)	
17	04:49		07:39 (E5)	05:47		07:34 (E5)	06:49		07:50 (E5)	07:50		07:57		08:45 (E6)	08:46		10:29 (E8)	
	21:54	69	08:48 (E5)	20:52	82	08:56 (E5)	19:31		18:12			16:04	27	09:12 (E6)	15:38	54	13:03 (E7)	
18	04:51		07:39 (E5)	05:49		07:34 (E5)	06:51		07:52 (E5)	07:52		07:59		08:47 (E6)	08:46		10:29 (E8)	
	21:52	69	08:48 (E5)	20:49	82	08:56 (E5)	19:28		18:09			16:02	26	09:13 (E6)	15:38	54	13:03 (E7)	
19	04:52		07:39 (E5)	05:51		07:34 (E5)	06:53		07:54 (E5)	07:54		08:01		08:47 (E6)	08:47		10:30 (E8)	
	21:51	70	08:49 (E5)	20:47	81	08:55 (E5)	19:26		18:07			16:01	25	09:12 (E6)	15:38	54	13:04 (E7)	
20	04:54		07:38 (E5)	05:53		07:35 (E5)	06:55		07:57 (E5)	07:57		08:03		08:48 (E6)	08:48		10:30 (E8)	
	21:49	71	08:49 (E5)	20:45	80	08:55 (E5)	19:23		18:04			15:59	23	09:11 (E6)	15:38	55	13:04 (E7)	
21	04:56		07:38 (E5)	05:55		07:35 (E5)	06:57		07:59 (E5)	07:59		08:05		08:49 (E6)	08:48		10:31 (E8)	
	21:48	73	08:51 (E5)	20:42	79	08:54 (E5)	19:20		18:02			15:57	21	09:10 (E6)	15:39	55	13:05 (E7)	
22	04:57		07:38 (E5)	05:57		07:36 (E5)	06:59		08:01 (E5)	08:01		08:07		08:51 (E6)	08:49		10:31 (E8)	
	21:46	74	08:52 (E5)	20:40	77	08:53 (E5)	19:18		17:59			15:56	19	09:10 (E6)	15:39	55	13:05 (E7)	
23	04:59		07:37 (E5)	05:59		07:36 (E5)	07:01		08:03 (E5)	08:03		08:09		08:52 (E6)	08:50		10:32 (E8)	
	21:45	75	08:52 (E5)	20:37	77	08:53 (E5)	19:15		17:57			15:54	27	12:40 (E7)	15:40	55	13:06 (E7)	
24	05:01		07:38 (E5)	06:01		07:37 (E5)	07:03		08:05 (E5)	08:05		08:11		08:54 (E6)	08:50		10:32 (E8)	
	21:43	75	08:53 (E5)	20:35	75	08:52 (E5)	19:12		17:54			15:53	29	12:43 (E7)	15:40	55	13:06 (E7)	
25	05:02		07:37 (E5)	06:03		07:36 (E5)	07:05		07:07 (E5)	07:07		08:13		08:56 (E6)	08:50		10:32 (E8)	
	21:41	76	08:53 (E5)	20:32	74	08:50 (E5)	19:10		16:52			15:52	30	12:45 (E7)	15:41	54	13:06 (E7)	
26	05:04		07:37 (E5)	06:05		07:37 (E5)	07:07		07:09 (E5)	07:09		08:15		12:24 (E7)	08:51		10:33 (E8)	
	21:39	77	08:54 (E5)	20:29	72	08:49 (E5)	19:07		16:50			15:50	22	12:46 (E7)	15:42	54	13:07 (E7)	
27	05:06		07:37 (E5)	06:07		07:38 (E5)	07:09		07:12 (E5)	07:12		08:17		12:24 (E7)	08:51		10:33 (E8)	
	21:38	78	08:55 (E5)	20:27	70	08:48 (E5)	19:04		16:47			15:49	25	12:49 (E7)	15:42	54	13:07 (E7)	
28	05:08		07:36 (E5)	06:09		07:39 (E5)	07:11		07:14 (E5)	07:14		08:19		12:24 (E7)	08:51		10:34 (E8)	
	21:36	78	08:54 (E5)	20:24	67	08:46 (E5)	19:01		16:45			15:48	26	12:50 (E7)	15:43	53	13:07 (E7)	
29	05:10		07:36 (E5)	06:11		07:40 (E5)	07:13		07:16 (E5)	07:16		08:21		12:23 (E7)	08:51		10:35 (E8)	
	21:34	79	08:55 (E5)	20:22	65	08:45 (E5)	18:59		16:43			15:47	28	12:51 (E7)	15:44	52	13:08 (E7)	
30	05:12		07:36 (E5)	06:13		07:41 (E5)	07:15		07:18 (E5)	07:18		08:22		12:23 (E7)	08:51		10:36 (E8)	
	21:32	80	08:56 (E5)	20:19	62	08:43 (E5)	18:56		16:40			15:46	29	12:52 (E7)	15:45	51	13:09 (E7)	
31	05:14		07:35 (E5)	06:15		07:42 (E5)			07:20 (E5)	07:20					08:51 (E6)	08:51		10:37 (E8)
	21:30	81	08:56 (E5)	20:17	60	08:42 (E5)			16:38		11	08:51 (E6)			15:46	51	13:09 (E7)	
Potential sun hours	529			469			385			324			247			216		
Total, worst case	2084			2437			308			11			786			1475		
Sun reduction	0.49			0.50			0.43			0.26			0.08			0.07		
Oper. time red.	0.94			0.94			0.94			0.94			0.94			0.94		
Wind dir. red.	0.65			0.65			0.65			0.59			0.60			0.63		
Total reduction	0.30			0.31			0.26			0.14			0.05			0.04		
Total, real	630			744			81			2			37			62		

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

Day in month	Sun rise
--------------	----------

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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
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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 20:54	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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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	08:50 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:43	08:20 15:47	08:50 15:44
30	08:18 16:41		06:54 19:48	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:31	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:50 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51		05:14 21:29	06:15 20:16		07:20 16:38		08:50 15:46
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start 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		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		16:47	17:50	19:55	20:58	21:54	22:09	21:26	20:11	18:51	16:34	15:44	32 10:08 (E13)
3	08:50		09:52 (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	28		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		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	09:38 (E13)
	15:53	30		16:54	17:56	20:01	21:04	21:58	22:07	21:20	20:03	18:43	16:27	15:42	30 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		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		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		09:53 (E13)	08:01	06:53	06:30	05:17	04:29	04:37	05:29	06:31	07:32	07:38	08:35	09:40 (E13)
	15:58	30		17:01	18:03	20:08	21:10	22:01	22:04	21:13	19:55	18:35	16:21	15:40	29 10:09 (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	09:40 (E13)
	15:59	31		17:03	18:05	20:10	21:12	22:02	22:03	21:11	19:53	18:32	16:19	15:39	28 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	32		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		09:54 (E13)	07:54	06:45	06:22	05:11	04:27	04:41	05:35	06:37	07:38	07:44		09:40 (E13)
	16:03	31		17:08	18:09	20:14	21:16	22:04	22:01	21:06	19:47	18:27	16:15	12 09:52 (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		09:40 (E13)
	16:04	32		17:10	18:11	20:16	21:18	22:05	22:00	21:04	19:45	18:25	16:13	17 09:54 (E13)	15:38 27 10:10 (E13)
13	08:43		09:54 (E13)	07:50	06:40	06:17	05:06	04:26	04:43	05:39	06:41	07:42	07:49		09:40 (E13)
	16:06	32		17:12	18:13	20:18	21:20	22:06	21:59	21:02	19:42	18:22	16:11	20 09:57 (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		09:40 (E13)
	16:08	33		17:14	18:15	20:20	21:22	22:07	21:58	20:59	19:39	18:20	16:09	23 09:58 (E13)	15:38 26 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		09:40 (E13)
	16:10	33		17:17	18:18	20:22	21:24	22:07	21:57	20:57	19:37	18:17	16:08	25 09:59 (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		09:40 (E13)
	16:12	32		17:19	18:20	20:24	21:26	22:08	21:55	20:54	19:34	18:14	16:06	26 10:00 (E13)	15:38 25 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		09:40 (E13)
	16:14	32		17:21	18:22	20:26	21:27	22:09	21:54	20:52	19:31	18:12	16:04	28 10:01 (E13)	15:38 26 10:11 (E13)
18	08:38		09:55 (E13)	07:38	06:26	06:04	04:57	04:25	04:51	05:49	06:51	07:52	07:59		09:40 (E13)
	16:16	33		17:23	18:24	20:28	21:29	22:09	21:52	20:50	19:29	18:09	16:02	29 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		09:40 (E13)
	16:18	32		17:26	18:26	20:30	21:31	22:09	21:51	20:47	19:26	18:07	16:01	30 10:03 (E13)	15:38 25 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		09:40 (E13)
	16:20	32		17:28	18:28	20:33	21:33	22:10	21:49	20:45	19:23	18:04	15:59	31 10:03 (E13)	15:39 25 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		09:40 (E13)
	16:22	31		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 24 10:12 (E13)
22	08:32		09:57 (E13)	07:28	06:16	05:54	04:50	04:25	04:57	05:57	06:59	08:01	08:07		09:40 (E13)
	16:24	31		17:32	18:32	20:37	21:37	22:10	21:46	20:40	19:18	17:59	15:56	32 10:05 (E13)	15:39 24 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		09:40 (E13)
	16:26	30		17:34	18:34	20:39	21:38	22:10	21:45	20:37	19:15	17:57	15:55	32 10:05 (E13)	15:40 24 10:13 (E13)
24	08:29		09:59 (E13)	07:23	06:10	05:49	04:47	04:26	05:01	06:01	07:03	08:05	08:11		09:40 (E13)
	16:28	29		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 25 10:14 (E13)
25	08:27		10:00 (E13)	07:21	06:07	05:47	04:45	04:26	05:03	06:03	07:05	08:07	08:13		09:40 (E13)
	16:30	28		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		10:01 (E13)	07:18	06:05	05:44	04:44	04:27	05:04	06:05	07:07	08:09	08:15		09:40 (E13)
	16:32	26		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		10:02 (E13)	07:16	06:02	05:42	04:42	04:27	05:06	06:07	07:09	08:12	08:17		09:40 (E13)
	16:34	25		17:43	18:43	20:47	21:45	22:10	21:38	20:27	19:04	16:47	15:49	33 10:07 (E13)	15:43 25 10:15 (E13)
28	08:22		10:03 (E13)	07:13	05:59	05:40	04:41	04:28	05:08	06:09	07:11	08:14	08:19		09:40 (E13)
	16:36	23		17:45	18:45	20:49	21:47	22:10	21:36	20:24	19:02	16:45	15:48	33 10:07 (E13)	15:44 26 10:16 (E13)
29	08:20		10:05 (E13)		06:57	05:37	04:40	04:29	05:10	06:11	07:13	08:16	08:21		09:40 (E13)
	16:39	20			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		10:07 (E13)		06:54	05:35	04:38	04:29	05:12	06:13	07:15	08:18	08:22		09:40 (E13)
	16:41	16			19:49	20:53	21:50	22:09	21:32	20:19	18:56	16:41	15:46	32 10:07 (E13)	15:46 26 10:17 (E13)
31	08:17		10:09 (E13)		06:51		04:37		05:14	06:15		07:20	08:25		09:40 (E13)
	16:43	12			19:51		21:51		21:30	20:17		16:38	15:47	27 10:18 (E13)	
Potential sun hours	235													216	
Total, worst case		890		266		366		426		508		529		562	836
Sun reduction		0.13												0.08	0.07
Oper. time red.		0.94												0.94	0.94
Wind dir. red.		0.61												0.61	0.61
Total reduction		0.08												0.05	0.04
Total, real		68												27	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)
	Minutes with flicker		

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:51 15:48	08:15 16:45	07:11 17:48		06:49 19:53	05:33 20:55	04:36 21:53	04:30 22:09	05:16 21:28	06:17 20:14		07:17 18:54	20	07:46 (E14) 08:06 (E14)	07:23 16:36	08:24 15:45
2	08:50 15:50	08:13 16:48	07:08 17:50		06:46 19:55	05:30 20:58	04:35 21:54	04:31 22:09	05:18 21:26	06:19 20:11		07:19 18:51	17	07:48 (E14) 08:05 (E14)	07:25 16:34	08:26 15:44
3	08:50 15:51	08:11 16:50	07:06 17:52		06:44 19:57	05:28 21:00	04:34 21:55	04:32 22:08	05:20 21:24	06:21 20:09		07:21 18:48	13	07:50 (E14) 08:03 (E14)	07:27 16:32	08:28 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54		06:41 19:59	05:26 21:02	04:33 21:57	04:33 22:07	05:22 21:22	06:23 20:06		07:23 18:46	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	3	07:16 (E14) 07:19 (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 21:08	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	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 22:05	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	23	07:05 (E14) 07:28 (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	25	07:03 (E14) 07:28 (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	26	07:03 (E14) 07:29 (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	27	07:02 (E14) 07:29 (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	27	07:01 (E14) 07:28 (E14)	06:04 20:28	04:57 21:29	04:25 22:09	05:49 21:52	06:51 19:29	11	07:55 (E14) 08:06 (E14)			07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	27	07:01 (E14) 07:28 (E14)	06:02 20:31	04:55 21:31	04:25 22:09	05:51 21:51	06:53 19:26	16	07:52 (E14) 08:08 (E14)			07:55 16:01	08:47 15:38
20	08:35 16:20	07:33 17:28	06:21 18:28	26	07:01 (E14) 07:27 (E14)	05:59 20:33	04:54 21:33	04:25 22:10	05:53 20:45	06:55 19:23	19	07:50 (E14) 08:09 (E14)			07:57 16:03	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	25	07:01 (E14) 07:26 (E14)	05:57 20:35	04:52 21:35	04:25 22:10	05:55 20:42	06:57 19:21	22	07:48 (E14) 08:10 (E14)			07:59 16:05	08:49 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	23	07:02 (E14) 07:25 (E14)	05:54 20:37	04:50 21:37	04:26 22:10	05:57 20:40	06:59 19:18	24	07:47 (E14) 08:11 (E14)			08:01 16:00	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	20	07:03 (E14) 07:23 (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	17	07:04 (E14) 07:21 (E14)	05:49 20:41	04:47 21:40	04:26 22:10	05:01 20:35	06:01 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	13	07:06 (E14) 07:19 (E14)	05:47 20:43	04:45 21:42	04:27 22:10	05:03 20:32	06:03 19:10	27	07:05 08:11 (E14)			07:07 16:02	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 20:30	07:07 19:07	27	07:07 08:11 (E14)			07:10 16:05	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 20:27	07:09 19:04	27	07:09 08:11 (E14)			07:12 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	05:08 20:24	07:11 19:02	26	07:11 08:10 (E14)			07:14 16:05	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	05:10 20:22	07:13 18:59	25	07:13 07:44 (E14)			07:16 16:03	08:21 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	07:15 18:56	24	07:15 08:08 (E14)			07:18 16:01	08:22 15:46
31	08:17 16:43		06:52 19:51			05:33 21:51	04:37 21:51		05:14 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				353						299			57			
Sun reduction				0.41						0.43			0.26			
Oper. time red.				0.94						0.94			0.94			
Wind dir. red.				0.63						0.63			0.63			
Total reduction				0.24						0.25			0.15			
Total, real				86						76			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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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 20:37 (E15) 22:09	05:46 (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 20:36 (E15) 22:08	05:45 (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 20:34 (E15) 22:08	05:45 (E12) 05:19 20:35 (E16) 21:23	06:21 20:05 (E16) 20:09	07:21 18:48	07:27 16:32	08:27 15:43
4	08:49 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:26 21:01	04:33 21:56	05:36 (E12) 04:33 20:32 (E15) 22:07	05:45 (E12) 05:21 20:35 (E16) 21:21	06:23 20:06 (E16) 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 21:58	05:37 (E12) 04:34 20:30 (E16) 22:06	05:45 (E12) 05:23 20:36 (E16) 21:19	06:25 20:06 (E16) 20:03	07:25 18:43	07:31 16:27	08:30 15:42
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 21:59	05:38 (E12) 04:35 20:32 (E15) 22:06	05:44 (E12) 05:25 20:36 (E16) 21:17	06:27 20:08 (E16) 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 21:57	05:38 (E12) 04:36 20:29 (E16) 22:05	05:44 (E12) 05:27 20:36 (E16) 21:15	06:29 20:10 (E16) 20:08	07:29 18:38	07:35 16:23	08:33 15:40
8	08:47 15:58	08:00 17:01	06:53 18:03	06:30 20:07	05:17 21:09	04:29 22:01	05:39 (E12) 04:37 20:30 (E16) 22:04	05:44 (E12) 05:29 20:37 (E16) 21:13	06:31 20:13 (E16) 20:05	07:31 18:35	07:38 16:21	08:35 15:40
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:15 21:11	04:29 22:02	05:40 (E12) 04:38 20:29 (E16) 22:03	05:43 (E12) 05:31 20:41 (E15) 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	05:41 (E12) 04:39 20:30 (E16) 22:02	05:43 (E12) 05:33 20:43 (E15) 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 21:15	04:27 22:04	05:41 (E12) 04:41 20:29 (E16) 22:01	05:42 (E12) 05:35 20:44 (E15) 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	06:42 18:11	06:20 20:16	05:08 21:17	04:27 22:05	05:38 (E12) 04:42 20:30 (E16) 22:00	05:43 (E12) 05:37 20:46 (E15) 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	05:44 (E12) 04:43 20:30 (E16) 21:59	05:42 (E12) 05:39 20:46 (E15) 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	05:35 (E12) 04:45 20:41 (E15) 21:58	05:42 (E12) 05:41 20:47 (E15) 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	05:34 (E12) 04:46 20:41 (E15) 22:07	05:41 (E12) 05:43 20:47 (E15) 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	04:25 22:08	05:33 (E12) 04:48 20:41 (E15) 22:08	05:42 (E12) 05:45 20:49 (E15) 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	05:33 (E12) 04:49 20:42 (E15) 22:08	05:41 (E12) 05:47 20:49 (E15) 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	05:32 (E12) 04:49 20:42 (E15) 22:09	05:42 (E12) 05:49 20:50 (E15) 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	05:32 (E12) 04:25 20:41 (E15) 22:09	05:41 (E12) 05:51 20:50 (E15) 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	05:32 (E12) 04:25 20:42 (E15) 22:09	05:42 (E12) 05:53 20:51 (E15) 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:39
21	08:33 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:52 21:34	04:25 22:10	05:31 (E12) 04:25 20:41 (E15) 22:10	05:42 (E12) 05:55 20:51 (E15) 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	05:32 (E12) 04:26 20:41 (E15) 22:10	05:42 (E12) 05:57 20:52 (E15) 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	05:32 (E12) 04:26 20:41 (E15) 22:10	05:42 (E12) 05:59 20:52 (E15) 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	05:32 (E12) 04:26 20:41 (E15) 22:10	05:42 (E12) 06:01 20:52 (E15) 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	05:32 (E12) 04:26 20:41 (E15) 22:10	05:42 (E12) 06:03 20:52 (E15) 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	05:33 (E12) 04:27 20:41 (E15) 22:10	05:43 (E12) 06:05 20:52 (E15) 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	05:32 (E12) 04:27 20:39 (E15) 22:10	05:43 (E12) 06:07 20:52 (E15) 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 18:45	05:40 20:49	04:41 21:46	04:28 22:10	05:33 (E12) 04:28 20:39 (E15) 22:10	05:43 (E12) 06:09 20:52 (E15) 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:44
29	08:20 16:39	07:11 17:47	05:57 18:47	05:37 20:51	04:40 21:48	04:29 22:09	05:33 (E12) 04:29 20:39 (E15) 22:09	05:44 (E12) 06:11 20:52 (E15) 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:45
30	08:18 16:41	07:04 17:54	05:54 18:54	05:35 20:53	04:38 21:49	04:29 22:09	05:34 (E12) 04:29 20:38 (E15) 22:09	05:46 (E12) 06:13 20:52 (E15) 20:19	07:15 18:56	07:18 16:40	08:22 15:46	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	04:29 22:09	05:34 (E12) 04:29 20:38 (E15) 22:09	05:48 (E12) 06:15 20:51 (E15) 20:16	07:20 18:56	07:20 16:38	08:22 15:47	08:51 15:47
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case					1715	1270	2038	299				
Sun reduction					0.57	0.56	0.49	0.50				
Oper. time red.					0.94	0.94	0.94	0.94				
Wind dir. red.					0.64	0.63	0.64	0.63				
Total reduction					0.34	0.33	0.30	0.29				
Total, real					583	423	604	88				

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January				February				March				April				May				June			
1	08:51		13:09 (E13)	08:15	07:11								06:49				05:32			06:26 (E7)	04:36			
	15:48	18	13:27 (E13)	16:45	17:47								19:53				20:55	39		07:05 (E7)	21:53			
2	08:50		13:11 (E13)	08:13	07:08								06:46				05:30			06:26 (E7)	04:35			
	15:49	16	13:27 (E13)	16:47	17:50								19:55				20:57	39		07:05 (E7)	21:54			
3	08:50		13:12 (E13)	08:11	07:06								06:43				05:28			06:25 (E7)	04:34			
	15:51	14	13:26 (E13)	16:50	17:52								19:57				21:00	40		07:05 (E7)	21:55			
4	08:50		13:13 (E13)	08:09	07:03								06:41				05:26			06:25 (E7)	04:33			
	15:52	13	13:26 (E13)	16:52	17:54								19:59				21:02	40		07:05 (E7)	21:57			
5	08:49		13:15 (E13)	08:07	07:00								06:38				05:23			06:25 (E7)	04:32			
	15:53	11	13:26 (E13)	16:54	17:56								20:01				21:04	40		07:05 (E7)	21:58			
6	08:49		13:17 (E13)	08:05	06:58								06:35				05:21			06:25 (E7)	04:31			
	15:55	7	13:24 (E13)	16:56	17:58								20:03				21:06	40		07:05 (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	38		07:04 (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	38		07:04 (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	37		07:03 (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	37		07:03 (E7)	22:03			
11	08:45			07:54	06:45								06:22				05:10			06:26 (E7)	04:27			
	16:03			17:08	18:09								20:14				21:16	36		07:02 (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	34		07:01 (E7)	22:05			
13	08:43			07:49	06:39								06:17				05:06			06:27 (E7)	04:26			
	16:06			17:12	18:13								20:18				21:20	34		07:01 (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	32		07:01 (E7)	22:07			
15	08:41			07:45	06:34		06:59 (E8)						06:12				05:02			06:29 (E7)	04:26			
	16:10			17:17	18:17	11	07:10 (E8)						20:22				21:24	30		06:59 (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	28		06:58 (E7)	22:08			
17	08:39			07:40	06:29		06:54 (E8)						06:07				04:59			06:31 (E7)	04:25			
	16:14			17:21	18:22	19	07:13 (E8)						20:26				21:27	27		06:58 (E7)	22:08			
18	08:37			07:38	06:26		06:53 (E8)						06:04				04:57			06:32 (E7)	04:25			
	16:16			17:23	18:24	20	07:13 (E8)						20:28				21:29	24		06:56 (E7)	22:09			
19	08:36			07:35	06:23		06:53 (E8)						06:02		06:44 (E7)		04:55			06:33 (E7)	04:25			
	16:18			17:25	18:26	21	07:14 (E8)						20:30	8	06:52 (E7)		21:31	22		06:55 (E7)	22:09			
20	08:35			07:33	06:21		06:52 (E8)						05:59		06:39 (E7)		04:53			06:35 (E7)	04:25			
	16:20			17:28	18:28	22	07:14 (E8)						20:33	16	06:55 (E7)		21:33	19		06:54 (E7)	22:10			
21	08:33			07:31	06:18		06:51 (E8)						05:57		06:37 (E7)		04:52			06:36 (E7)	04:25			
	16:22			17:30	18:30	22	07:13 (E8)						20:35	21	06:58 (E7)		21:35	15		06:51 (E7)	22:10			
22	08:32			07:28	06:15		06:52 (E8)						05:54		06:35 (E7)		04:50			06:39 (E7)	04:25			
	16:24			17:32	18:32	21	07:13 (E8)						20:37	25	07:00 (E7)		21:36	10		06:49 (E7)	22:10			
23	08:30			07:26	06:13		06:51 (E8)						05:52		06:32 (E7)		04:48				04:26			
	16:26			17:34	18:34	21	07:12 (E8)						20:39	29	07:01 (E7)		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	19	07:11 (E8)						20:41	31	07:02 (E7)		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	33	07:03 (E7)		21:42				22:10			
26	08:26			07:18	06:05		06:54 (E8)						05:44		06:29 (E7)		04:44				04:27			
	16:32			17:41	18:40	14	07:08 (E8)						20:45	34	07:03 (E7)		21:43				22:10			
27	08:24			07:16	06:02		06:55 (E8)						05:42		06:28 (E7)		04:42				04:27			
	16:34			17:43	18:43	10	07:05 (E8)						20:47	36	07:04 (E7)		21:45				22:10			
28	08:22			07:13	05:59								05:39		06:28 (E7)		04:41				04:28			
	16:36			17:45	18:45								20:49	37	07:05 (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	38	07:05 (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	38	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		79			238									346				699						
Sun reduction		0.13			0.41									0.50					0.57					
Oper. time red.		0.94			0.94									0.94					0.94					
Wind dir. red.		0.63			0.64									0.65					0.65					
Total reduction		0.08			0.25									0.31					0.35					
Total, real		6			59									106					244					

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

Day in month	Sun rise (hh:mm)
--------------	------------------

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

July		August		September		October		November		December	
1	04:30	05:16	06:37 (E7)	06:17		07:17	07:23	08:24			
	22:09	21:28	35 07:12 (E7)	20:14		18:54	16:36	15:45			
2	04:31	05:17	06:37 (E7)	06:19		07:19	07:25	08:26			
	22:09	21:26	36 07:13 (E7)	20:11		18:51	16:34	15:44			
3	04:32	05:19	06:36 (E7)	06:21		07:21	07:27	08:28			
	22:08	21:24	37 07:13 (E7)	20:09		18:48	16:31	15:43			
4	04:33	05:21	06:36 (E7)	06:23		07:23	07:29	08:29			
	22:07	21:22	38 07:14 (E7)	20:06		18:46	16:29	15:42			
5	04:34	05:23	06:35 (E7)	06:25		07:25	07:31	08:31			
	22:07	21:19	38 07:13 (E7)	20:03		18:43	16:27	15:42			
6	04:35	05:25	06:35 (E7)	06:27		07:27	07:33	08:32		13:03 (E13)	
	22:06	21:17	39 07:14 (E7)	20:01		18:40	16:25	15:41	7	13:10 (E13)	
7	04:36	05:27	06:35 (E7)	06:29		07:29	07:36	08:34		13:01 (E13)	
	22:05	21:15	39 07:14 (E7)	19:58		18:38	16:23	15:40	11	13:12 (E13)	
8	04:37	05:29	06:35 (E7)	06:31		07:32	07:38	08:35		13:01 (E13)	
	22:04	21:13	39 07:14 (E7)	19:55		18:35	16:21	15:40	13	13:14 (E13)	
9	04:38	05:31	06:35 (E7)	06:33		07:34	07:40	08:37		13:00 (E13)	
	22:03	21:11	39 07:14 (E7)	19:53		18:32	16:19	15:39	14	13:14 (E13)	
10	04:39	05:33	06:34 (E7)	06:35		07:36	07:42	08:38		13:00 (E13)	
	22:02	21:08	39 07:13 (E7)	19:50		18:30	16:17	15:39	16	13:16 (E13)	
11	04:41	05:35	06:34 (E7)	06:37		07:38	07:44	08:39		13:00 (E13)	
	22:01	21:06	39 07:13 (E7)	19:47		18:27	16:15	15:38	17	13:17 (E13)	
12	04:42	05:37	06:34 (E7)	06:39		07:40	07:46	08:40		13:00 (E13)	
	22:00	21:04	39 07:13 (E7)	19:45		18:25	16:13	15:38	18	13:18 (E13)	
13	04:43	05:39	06:34 (E7)	06:41		07:42	07:49	08:42		13:00 (E13)	
	21:59	21:01	39 07:13 (E7)	19:42		18:22	16:11	15:38	19	13:19 (E13)	
14	04:45	05:41	06:35 (E7)	06:43		07:44	07:51	08:43		13:00 (E13)	
	21:58	20:59	37 07:12 (E7)	19:39		18:19	16:09	15:38	20	13:20 (E13)	
15	04:46	05:43	06:35 (E7)	06:45		07:46	07:53	08:44		13:00 (E13)	
	21:57	20:57	37 07:12 (E7)	19:37		18:17	16:07	15:38	20	13:20 (E13)	
16	04:48	05:45	06:36 (E7)	06:47		07:45 (E8)	07:48	07:55		08:45	13:00 (E13)
	21:55	20:54	35 07:11 (E7)	19:34	9	07:54 (E8)	18:14	16:06		15:38	21 13:21 (E13)
17	04:49	05:47	06:35 (E7)	06:49		07:43 (E8)	07:50	07:57		08:46	13:01 (E13)
	21:54	20:52	35 07:10 (E7)	19:31	13	07:56 (E8)	18:12	16:04		15:38	21 13:22 (E13)
18	04:51	05:49	06:36 (E7)	06:51		07:41 (E8)	07:52	07:59		08:46	13:01 (E13)
	21:52	20:50	33 07:09 (E7)	19:29	17	07:58 (E8)	18:09	16:02		15:38	21 13:22 (E13)
19	04:52	05:51	06:37 (E7)	06:53		07:39 (E8)	07:55	08:01		08:47	13:01 (E13)
	21:51	20:47	30 07:07 (E7)	19:26	19	07:58 (E8)	18:07	16:01		15:38	21 13:22 (E13)
20	04:54	05:53	06:38 (E7)	06:55		07:38 (E8)	07:57	08:03		08:48	13:02 (E13)
	21:49	20:45	28 07:06 (E7)	19:23	21	07:59 (E8)	18:04	15:59		15:38	21 13:23 (E13)
21	04:56	06:51 (E7)	05:55	06:40 (E7)	06:57	07:37 (E8)	07:59	08:05		08:48	13:02 (E13)
	21:48	6 06:57 (E7)	20:42	24 07:04 (E7)	19:20	22 07:59 (E8)	18:02	15:58		15:39	22 13:24 (E13)
22	04:57	06:48 (E7)	05:57	06:42 (E7)	06:59	07:36 (E8)	08:01	08:07		08:49	13:02 (E13)
	21:46	13 07:01 (E7)	20:40	20 07:02 (E7)	19:18	22 07:58 (E8)	17:59	15:56		15:39	22 13:24 (E13)
23	04:59	06:45 (E7)	05:59	06:44 (E7)	07:01	07:35 (E8)	08:03	08:09		08:50	13:03 (E13)
	21:45	18 07:03 (E7)	20:37	16 07:00 (E7)	19:15	23 07:58 (E8)	17:57	15:55		15:40	22 13:25 (E13)
24	05:01	06:44 (E7)	06:01	06:49 (E7)	07:03	07:35 (E8)	08:05	08:11		08:50	13:04 (E13)
	21:43	21 07:05 (E7)	20:35	5 06:54 (E7)	19:12	22 07:57 (E8)	17:55	15:53		15:40	21 13:25 (E13)
25	05:03	06:42 (E7)	06:03		07:05	07:35 (E8)	07:07	08:13		08:50	13:04 (E13)
	21:41	24 07:06 (E7)	20:32		19:10	21 07:56 (E8)	16:52	15:52		15:41	21 13:25 (E13)
26	05:04	06:42 (E7)	06:05		07:07	07:37 (E8)	07:10	08:15		08:51	13:05 (E13)
	21:39	25 07:07 (E7)	20:29		19:07	19 07:56 (E8)	16:50	15:51		15:42	21 13:26 (E13)
27	05:06	06:41 (E7)	06:07		07:09	07:38 (E8)	07:12	08:17		08:51	13:05 (E13)
	21:38	28 07:09 (E7)	20:27		19:04	17 07:55 (E8)	16:47	15:49		15:43	21 13:26 (E13)
28	05:08	06:40 (E7)	06:09		07:11	07:40 (E8)	07:14	08:19		08:51	13:06 (E13)
	21:36	29 07:09 (E7)	20:24		19:02	13 07:53 (E8)	16:45	15:48		15:44	20 13:26 (E13)
29	05:10	06:39 (E7)	06:11		07:13	07:42 (E8)	07:16	08:21		08:51	13:07 (E13)
	21:34	31 07:10 (E7)	20:22		18:59	8 07:50 (E8)	16:43	15:47		15:44	20 13:27 (E13)
30	05:12	06:39 (E7)	06:13		07:15		07:18	08:22		08:51	13:08 (E13)
	21:32	32 07:11 (E7)	20:19		18:56		16:40	15:46		15:45	19 13:27 (E13)
31	05:14	06:38 (E7)	06:15				07:20			08:51	13:09 (E13)
	21:30	34 07:12 (E7)	20:17				16:38			15:47	18 13:27 (E13)
Potential sun hours	529		469		385		324		247		216
Total, worst case	261		796		246						487
Sun reduction	0.49		0.50		0.43						0.07
Oper. time red.	0.94		0.94		0.94						0.94
Wind dir. red.	0.65		0.65		0.64						0.63
Total reduction	0.30		0.31		0.26						0.04
Total, real	79		243		63						20

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

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

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

SHADOW - Calendar

Shadow receptor: Arsmeniek (kad. apz. 76860060006001) - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (196)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle 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
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
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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
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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	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:

26/06/2024 08:57/4.0.540

SHADOW - Calendar

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

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:50 15:48	08:14 16:45	07:10 17:47		06:48 19:53	05:32 20:55	04:35 21:52	04:29 22:09	05:15 21:27	06:17 20:14		07:17 18:53		17:52 (E1) 18:16 (E1)	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	24	17:52 (E1) 18:15 (E1)	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	23	17:53 (E1) 18:14 (E1)	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	21	17:55 (E1) 18:13 (E1)	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	18	17:56 (E1) 18:11 (E1)	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	15	17:58 (E1) 18:08 (E1)	07:33 16:25	08:32 15:40
7	08:48 15:56	08:02 16:58	06:55 18:00		06:32 17:25 (E1)	05:18 20:05	04:29 21:07	04:35 22:05	05:27 21:15	06:29 19:58		07:29 18:37	10	17:55 (E1) 18:08 (E1)	07:35 16:23	08:33 15:40
8	08:47 15:57	08:00 17:00	06:52 18:02	3	17:20 (E1) 17:33 (E1)	05:16 20:07	04:29 21:09	04:36 22:01	05:29 21:13	06:31 19:55		07:31 18:35		16:20 17:58 (E1)	07:37 16:20	08:35 15:39
9	08:46 15:59	07:58 17:03	06:50 18:04	13	17:17 (E1) 17:34 (E1)	05:14 20:09	04:28 21:11	04:37 22:02	05:31 21:10	06:33 19:52		07:33 18:32		16:18 17:58 (E1)	07:40 16:18	08:36 15:39
10	08:46 16:00	07:56 17:05	06:47 18:06	17	17:16 (E1) 17:36 (E1)	05:12 20:11	04:27 21:13	04:39 22:02	05:33 21:08	06:35 19:50		07:35 18:29		16:16 17:58 (E1)	07:42 16:16	08:38 15:38
11	08:45 16:02	07:54 17:07	06:44 18:09	20	17:15 (E1) 17:37 (E1)	05:10 20:13	04:27 21:15	04:40 22:01	05:35 21:06	06:37 19:47		07:37 18:27		16:15 17:58 (E1)	07:44 16:14	08:39 15:39
12	08:44 16:04	07:51 17:09	06:42 18:11	22	17:13 (E1) 17:37 (E1)	05:08 20:15	04:26 21:17	04:41 22:05	05:37 21:03	06:39 19:44		07:39 18:24		16:13 17:58 (E1)	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	24	17:12 (E1) 17:37 (E1)	05:06 20:18	04:26 21:19	04:43 22:06	05:39 21:01	06:41 19:42		07:41 18:22		16:11 17:58 (E1)	07:48 16:11	08:41 15:37
14	08:42 16:07	07:47 17:14	06:36 18:15	25	17:12 (E1) 17:38 (E1)	05:04 20:20	04:25 21:21	04:44 22:06	05:41 20:59	06:43 19:39		07:44 18:19		16:09 17:58 (E1)	07:50 16:09	08:42 15:37
15	08:41 16:09	07:45 17:16	06:34 18:17	26	17:11 (E1) 17:37 (E1)	05:02 20:22	04:25 21:23	04:46 22:07	05:43 20:56	06:45 19:36		07:46 18:16		16:07 17:58 (E1)	07:52 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	26	17:11 (E1) 17:37 (E1)	05:00 20:24	04:25 21:25	04:47 21:55	05:45 20:54	06:47 19:34		07:48 18:14		16:05 17:58 (E1)	07:55 16:05	08:44 15:37
17	08:38 16:13	07:40 17:21	06:28 18:21	26	17:12 (E1) 17:37 (E1)	04:58 20:26	04:25 21:27	04:49 22:08	05:47 20:52	06:49 19:31		07:50 18:11		16:05 17:58 (E1)	07:57 16:04	08:45 15:37
18	08:37 16:15	07:37 17:23	06:26 18:23	25	17:12 (E1) 17:36 (E1)	04:56 20:28	04:25 21:29	04:50 22:09	05:49 20:49	06:51 19:28		07:52 18:09		16:04 17:58 (E1)	07:59 16:02	08:46 15:37
19	08:36 16:17	07:35 17:25	06:23 18:25	24	17:12 (E1) 17:34 (E1)	04:55 20:30	04:25 21:31	04:52 22:09	05:51 20:47	06:53 19:25		07:54 18:06		16:01 17:58 (E1)	08:01 16:00	08:47 15:38
20	08:34 16:19	07:33 17:27	06:20 18:28	22	17:13 (E1) 17:34 (E1)	04:53 20:32	04:25 21:33	04:54 22:09	05:53 20:44	06:55 19:23		07:56 18:04		16:03 17:58 (E1)	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:29	06:18 18:30	21	17:14 (E1) 17:32 (E1)	04:51 20:34	04:25 21:34	04:55 22:10	05:55 20:42	06:57 19:20		07:58 18:02 (E1) 18:14 (E1)	07:58 18:01	08:05 15:57	08:48 15:38	08:48 15:38
22	08:32 16:23	07:28 17:32	06:15 18:32	18	17:16 (E1) 17:29 (E1)	04:49 20:36	04:25 21:36	04:57 22:10	05:57 20:39	06:59 19:17	12	17:59 (E1) 18:16 (E1)	08:01 17:59	08:07 15:56	08:49 15:39	08:49 15:39
23	08:30 16:25	07:25 17:34	06:12 18:34	13	17:19 (E1) 17:25 (E1)	05:51 20:38	04:48 21:38	04:59 22:10	05:59 20:37	07:01 19:15	17	17:57 (E1) 18:17 (E1)	08:03 17:56	08:09 15:54	08:49 15:39	08:49 15:39
24	08:28 16:27	07:23 17:36	06:10 18:36	6	17:34 (E1) 20:40	05:49 21:40	04:46 22:10	04:25 21:43	06:01 20:34	07:03 19:12	20	17:56 (E1) 18:18 (E1)	08:05 17:54	08:11 15:53	08:50 15:40	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	22	17:55 (E1) 18:18 (E1)	07:07 16:52	08:13 15:51	08:50 15:41	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	23	17:54 (E1) 18:18 (E1)	07:09 16:49	08:15 15:50	08:50 15:41	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	24	17:53 (E1) 18:18 (E1)	07:11 16:47	08:17 15:49	08:50 15:42	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	25	17:52 (E1) 18:18 (E1)	07:13 16:45	08:18 15:48	08:51 15:43	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	26	17:52 (E1) 18:18 (E1)	07:16 16:42	08:20 15:47	08:51 15:44	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	25	17:52 (E1) 18:17 (E1)	07:18 16:40	08:22 15:45	08:51 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		08:51 15:46
Potential sun hours	235	266	366		426	508	529	529	469	385	220	324	111	247	216	
Total, worst case				331							0.43		0.26			
Sun reduction				0.41							0.94		0.94			
Oper. time red.				0.94							0.65		0.65			
Wind dir. red.				0.65							0.26		0.16			
Total reduction				0.25							0.58		0.18			
Total, real				84							58		18			

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

Idle start wind speed: Cut in wind speed from 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
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28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:10	05:09 21:34	06:11 20:22	07:13 18:59	07:16 16:42	08:21 15:47	08:51 15:44
30	08:18 16:40		06:54 19:49	05:34 20:53	04:38 21:50	04:29 22:09	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:45	08:51 15:45
31	08:16 16:43		06:51 19:51		04:36 21:51		05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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) 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	07:41 (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	07:42 (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	07:41 (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	07:41 (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	07:42 (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	07:42 (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	07:42 (E14) 19:59	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	07:44 (E14) 19:59	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	07:44 (E14) 19:59	06:25 21:14	05:13 22:03	04:40 22:02	04:40 21:08	05:33 19:50	06:35 18:30	07:36 16:17	08:38 15:39
11	08:45 16:03	07:54 17:08	06:45 18:09	07:46 (E14) 19:59	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	07:50 (E14) 19:59	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	07:58 (E14) 19:59	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 18:15	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	07:58 (E14) 19:59	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	07:58 (E14) 19:59	05:59 21:33	04:53 22:10	04:53 21:49	04:53 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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	05:52 21:38	04:48 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	07:58 (E14) 19:59	05:49 21:40	04:47 22:10	04:59 21:43	04:59 20:35	06:01 19:12	07:03 17:55	08:05 15:51	08:50 15:41
25	08:27 16:30	07:21 17:39	06:08 18:39	07:58 (E14) 19:59	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	07:58 (E14) 19:59	05:44 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	07:58 (E14) 19:59	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	07:58 (E14) 19:59	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 15:49	08:51 15:44
29	08:20 16:39	07:11 17:46	05:57 18:47	07:58 (E14) 19:59	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
30	08:19 16:41	07:09 17:49	05:54 18:49	07:58 (E14) 19:59	05:35 21:50	04:38 22:09	05:12 21:32	05:12 20:19	06:13 18:56	07:15 17:41	08:18 15:46	08:51 15:46
31	08:17 16:43	07:07 17:51	05:52 18:51	07:58 (E14) 19:59	05:33 21:51	04:37 22:09	05:14 21:30	05:14 20:17	06:15 18:56	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		123	283							408		
Sun reduction		0.20	0.41							0.26		
Oper. time red.		0.94	0.94							0.94		
Wind dir. red.		0.63	0.63							0.63		
Total reduction		0.12	0.24							0.15		
Total, real		15	69							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 & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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
	15:48	16:45	17:48	21 07:59 (E14)	19:53	20:55
2	08:50	08:13	07:08	07:36 (E14)	06:46	05:30
	15:50	16:48	17:50	24 08:00 (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	07:34 (E14)	06:41	05:26
	15:52	16:52	17:54	28 08:02 (E14)	19:59	21:02
5	08:49	08:07	07:01	07:32 (E14)	06:38	05:24
	15:54	16:54	17:56	30 08:02 (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	31 08:03 (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	07:31 (E14)	06:30	05:17
	15:58	17:01	18:03	31 08:02 (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	32 08:03 (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	31 08:02 (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	31 08:01 (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	30 08:01 (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	29 08:00 (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	26 07:58 (E14)	20:20	21:22
15	08:41	07:45	06:34	07:33 (E14)	06:12	05:03
	16:10	17:17	18:18	24 07:57 (E14)	20:22	21:24
16	08:40	07:43	06:32	07:34 (E14)	06:09	05:01
	16:12	17:19	18:20	21 07:55 (E14)	20:24	21:25
17	08:39	07:40	06:29	07:35 (E14)	06:07	05:00
	16:14	17:21	18:22	18 07:53 (E14)	20:26	21:27
18	08:38	07:38	06:26	07:38 (E14)	06:04	05:00
	16:16	17:23	18:24	11 07:49 (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	23 06:49 (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	23 06:49 (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	22 06:48 (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	20 06:47 (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	18 06:45 (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	16 06:44 (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	12 06:42 (E13)	21:47	22:10
29	08:20		06:57	05:37	06:32 (E13)	04:40
	16:39		19:47	8 06:40 (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		26	475	263		
Sun reduction		0.20	0.41	0.50		
Oper. time red.		0.94	0.94	0.94		
Wind dir. red.		0.62	0.62	0.65		
Total reduction		0.12	0.24	0.31		
Total, real		3	115	81		

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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	08:10 (E14)	07:23
	22:09	21:28	20:14	18:54	30 08:40 (E14)	16:36
2	04:31	05:18	06:19	07:19	08:09 (E14)	07:25
	22:09	21:26	20:11	18:51	31 08:40 (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	31 08:40 (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	32 08:40 (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	32 08:39 (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	08:09 (E14)	07:42
	22:02	21:08	19:50	18:30	27 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	26 08:35 (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	08:12 (E14)	07:49
	21:59	21:02	19:42	18:22	19 08:31 (E14)	16:11
14	04:45	05:41	06:43	07:44	08:14 (E14)	07:51
	21:58	20:59	9 06:48 (E13)	18:20	14 08:28 (E14)	16:10
15	04:46	05:43	06:45	07:46	08:19 (E14)	07:53
	21:57	20:57	13 06:50 (E13)	18:17	5 08:24 (E14)	16:08
16	04:48	05:45	06:47	07:48		07:55
	21:55	20:54	17 06:52 (E13)	18:15		16:06
17	04:49	05:47	06:49	07:50		07:57
	21:54	20:52	19 06:53 (E13)	18:12		16:04
18	04:51	05:49	06:51	07:52		07:59
	21:52	20:50	21 06:54 (E13)	18:09		16:03
19	04:53	05:51	06:53	07:55		08:01
	21:51	20:47	21 06:53 (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	22 06:53 (E13)	17:57		15:55
24	05:01	06:01	07:03	08:05		08:11
	21:43	20:35	21 06:53 (E13)	17:55		15:53
25	05:03	06:03	07:05	08:23 (E14)		08:13
	21:41	20:32	18 06:52 (E13)	17:07		15:52
26	05:05	06:05	07:07	08:19 (E14)		08:15
	21:39	20:30	15 06:51 (E13)	16:50		15:51
27	05:06	06:07	07:09	08:16 (E14)		08:17
	21:38	20:27	12 06:50 (E13)	16:48		15:50
28	05:08	06:09	07:11	08:14 (E14)		08:19
	21:36	20:24	8 06:47 (E13)	16:45		15:48
29	05:10	06:11	07:13	08:13 (E14)		08:21
	21:34	20:22	4 06:45 (E13)	16:43		15:47
30	05:12	06:13	07:15	08:12 (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		266	120	391		
Sun reduction		0.50	0.43	0.26		
Oper. time red.		0.94	0.94	0.94		
Wind dir. red.		0.65	0.62	0.62		
Total reduction		0.31	0.25	0.15		
Total, real		81	30	59		

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	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	07:34 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 21:25	04:26 22:08	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:15	07:55 16:06	08:45 15:38
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:26 22:08	04:50 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:46 15:38
18	08:38 16:16	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:50	06:51 19:29	07:53 18:10	07:59 16:03	08:46 15:38
19	08:36 16:18	07:36 17:26	06:24 18:26	06:02 20:31	04:55 21:31	04:25 22:09	04:53 21:51	05:51 20:47	06:53 19:26	07:55 18:07	08:01 16:01	08:47 15:39
20	08:35 16:20	07:33 17:28	06:21 18:28	05:59 20:33	04:54 21:33	04:25 22:10	04:54 21:49	05:53 20:45	06:55 19:23	07:57 18:05	08:03 15:59	08:48 15:39
21	08:33 16:22	07:31 17:30	06:18 18:30	05:57 20:35	04:52 21:35	04:26 22:10	04:56 21:48	05:55 20:42	06:57 19:21	07:59 18:02	08:05 15:58	08:48 15:39
22	08:32 16:24	07:28 17:32	06:16 18:32	05:54 20:37	04:50 21:37	04:26 22:10	04:58 21:46	05:57 20:40	06:59 19:18	08:01 18:00	08:07 15:56	08:49 15:40
23	08:30 16:26	07:26 17:35	06:13 18:34	05:52 20:39	04:49 21:38	04:26 22:10	04:59 21:45	05:59 20:37	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			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.												
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Total reduction												
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Table layout: For each day in each month the following matrix apply

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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

26/06/2024 08:57/4.0.540

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
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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
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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
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	05:24 (E15)
Potential sun hours	235	266	366	426	508	528
Total, worst case				469	123	1060
Sun reduction				0.50	0.57	0.56
Oper. time red.				0.94	0.94	0.94
Wind dir. red.				0.66	0.67	0.67
Total reduction				0.31	0.36	0.35
Total, real				145	44	375

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes 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:

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Vilandes 3-6

LV-1010 Riga

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Calculated:

26/06/2024 08:57/4.0.540

SHADOW - Calendar

Shadow receptor: Udri - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 90.0° (186)

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Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
425	448	518	446	469	751	755	902	1,169	1,037	801	535	8,256

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

	July			August			September			October			November			December		
1	04:30		05:26 (E15)	05:16			06:17		06:50 (E16)	07:17		07:22	08:24					
	22:09	36	06:02 (E15)	21:28			20:14	21	07:11 (E16)	18:54		16:36	15:45					
2	04:31		05:26 (E15)	05:18			06:19		06:51 (E16)	07:19		07:25	08:26					
	22:08	35	06:01 (E15)	21:26			20:11	18	07:09 (E16)	18:51		16:34	15:44					
3	04:32		05:26 (E15)	05:20			06:21		06:53 (E16)	07:21		07:27	08:27					
	22:08	35	06:01 (E15)	21:24			20:09	14	07:07 (E16)	18:48		16:32	15:43					
4	04:33		05:27 (E15)	05:22			06:23		06:57 (E16)	07:23		07:29	08:29					
	22:07	34	06:01 (E15)	21:22			20:06	5	07:02 (E16)	18:46		16:29	15:43					
5	04:34		05:28 (E15)	05:23			06:25			07:25		07:31	08:31					
	22:07	33	06:01 (E15)	21:19			20:03			18:43		16:27	15:42					
6	04:35		05:28 (E15)	05:25			06:27			07:27		07:33	08:32					
	22:06	33	06:01 (E15)	21:17			20:01			18:40		16:25	15:41					
7	04:36		05:29 (E15)	05:27			06:29			07:29		07:36	08:34					
	22:05	32	06:01 (E15)	21:15			19:58			18:38		16:23	15:40					
8	04:37		05:29 (E15)	05:29			06:31			07:32		07:38	08:35					
	22:04	32	06:01 (E15)	21:13			19:55			18:35		16:21	15:40					
9	04:38		05:30 (E15)	05:31			06:33			07:34		07:40	08:36					
	22:03	30	06:00 (E15)	21:11			19:53			18:32		16:19	15:39					
10	04:40		05:30 (E15)	05:33			06:35			07:36		07:42	08:38					
	22:02	30	06:00 (E15)	21:08			19:50			18:30		16:17	15:39					
11	04:41		05:32 (E15)	05:35			06:37			07:38		07:44	08:39					
	22:01	28	06:00 (E15)	21:06			19:47			18:27		16:15	15:39					
12	04:42		05:33 (E15)	05:37			06:39			07:40		07:46	08:40					
	22:00	26	05:59 (E15)	21:04			19:45			18:25		16:13	15:38					
13	04:44		05:33 (E15)	05:39			06:41			07:42		07:48	08:41					
	21:59	25	05:58 (E15)	21:01			19:42			18:22		16:11	15:38					
14	04:45		05:34 (E15)	05:41			06:43			07:44		07:51	08:43					
	21:58	23	05:57 (E15)	20:59			19:39			18:20		16:09	15:38					
15	04:46		05:36 (E15)	05:43		07:00 (E16)	06:45			07:46		07:53	08:44					
	21:56	21	05:57 (E15)	20:57	9	07:09 (E16)	19:37			18:17		16:08	15:38					
16	04:48		05:37 (E15)	05:45		06:57 (E16)	06:47			07:48		07:55	08:44					
	21:55	18	05:55 (E15)	20:54	15	07:12 (E16)	19:34			18:14		16:06	15:38					
17	04:49		05:39 (E15)	05:47		06:55 (E16)	06:49			07:50		07:57	08:45					
	21:54	14	05:53 (E15)	20:52	19	07:14 (E16)	19:31			18:12		16:04	15:38					
18	04:51		05:42 (E15)	05:49		06:53 (E16)	06:51			07:52		07:59	08:46					
	21:52	9	05:51 (E15)	20:49	21	07:14 (E16)	19:29			18:09		16:03	15:38					
19	04:53			05:51		06:52 (E16)	06:53			07:55		08:01	08:47					
	21:51			20:47	23	07:15 (E16)	19:26			18:07		16:01	15:38					
20	04:54			05:53		06:51 (E16)	06:55			07:57		08:03	08:48					
	21:49			20:45	25	07:16 (E16)	19:23			18:04		15:59	15:39					
21	04:56			05:55		06:50 (E16)	06:57			07:59		08:05	08:48					
	21:48			20:42	27	07:17 (E16)	19:20			18:02		15:58	15:39					
22	04:58			05:57		06:49 (E16)	06:59			08:01		08:07	08:49					
	21:46			20:40	28	07:17 (E16)	19:18			18:00		15:56	15:40					
23	04:59			05:59		06:49 (E16)	07:01			08:03		08:09	08:49					
	21:44			20:37	28	07:17 (E16)	19:15			17:57		15:55	15:40					
24	05:01			06:01		06:48 (E16)	07:03			08:05		08:11	08:50					
	21:43			20:35	29	07:17 (E16)	19:12			17:55		15:53	15:41					
25	05:03			06:03		06:48 (E16)	07:05			07:07		08:13	08:50					
	21:41			20:32	29	07:17 (E16)	19:10			16:52		15:52	15:41					
26	05:05			06:05		06:48 (E16)	07:07			07:09		08:15	08:50					
	21:39			20:29	29	07:17 (E16)	19:07			16:50		15:51	15:42					
27	05:06			06:07		06:47 (E16)	07:09			07:12		08:17	08:51					
	21:37			20:27	29	07:16 (E16)	19:04			16:48		15:50	15:43					
28	05:08			06:09		06:47 (E16)	07:11			07:14		08:19	08:51					
	21:36			20:24	28	07:15 (E16)	19:02			16:45		15:48	15:44					
29	05:10			06:11		06:47 (E16)	07:13			07:16		08:21	08:51					
	21:34			20:22	27	07:14 (E16)	18:59			16:43		15:47	15:45					
30	05:12			06:13		06:48 (E16)	07:15			07:18		08:22	08:51					
	21:32			20:19	25	07:13 (E16)	18:56			16:41		15:46	15:46					
31	05:14			06:15		06:49 (E16)				07:20			08:51					
	21:30			20:17	23	07:12 (E16)				16:38			15:47					
Potential sun hours	529			469			384			324		248	216					
Total, worst case		494			414			58										
Sun reduction		0.49			0.50			0.43										
Oper. time red.		0.94			0.94			0.94										
Wind dir. red.		0.67			0.66			0.66										
Total reduction		0.31			0.31			0.26										
Total, real		154			128			15										

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

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