

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C1 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (75)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January	February	March	April	May	June
1	08:51 12:38-13:11/33 15:48 10:17-11:21/64	08:15 16:45	07:11 08:06-08:13/7 08:15-08:31/16 17:47 07:37-07:55/18	06:49 19:53	05:32 06:00-06:05/5 20:55 06:18-07:18/60	04:36 21:52
2	08:50 12:39-13:11/32 15:49 10:19-11:22/63	08:13 08:43-08:46/3 16:47	07:08 07:34-07:56/22 17:50 08:17-08:28/11	06:46 19:55	05:30 05:58-06:07/9 20:57 06:19-07:18/59	04:35 21:54
3	08:50 12:39-13:11/32 15:50 10:19-11:22/63	08:11 08:41-08:49/8 16:50	07:06 07:33-07:57/24 17:52	06:43 07:21-07:31/10 19:57	05:28 05:56-06:08/12 20:59 06:21-07:17/56	04:33 21:55
4	08:50 12:40-13:11/31 15:52 10:19-11:22/63	08:09 08:39-08:50/11 16:52	07:03 07:32-07:57/25 17:54	06:41 07:16-07:35/19 19:59	05:25 05:54-06:09/15 21:02 06:23-07:17/54	04:32 21:57
5	08:49 12:41-13:12/31 10:39-11:23/44 15:53 10:21-10:38/17	08:07 08:37-08:52/15 16:54	07:00 07:32-07:56/24 17:56	06:38 07:13-07:37/24 20:01	05:23 05:52-06:09/17 21:04 06:24-07:16/52	04:32 21:58
6	08:49 12:42-13:11/29 10:39-11:23/44 15:55 10:22-10:37/15	08:05 08:34-08:52/18 16:56	06:58 07:32-07:57/25 17:58	06:35 07:11-07:39/28 20:03	05:21 05:50-06:10/20 21:06 06:24-07:15/51	04:31 21:59
7	08:48 12:43-13:11/28 10:39-11:24/45 15:56 10:23-10:37/14	08:03 08:32-08:53/21 16:58	06:55 07:32-07:56/24 18:00	06:33 07:08-07:40/32 20:05	05:19 05:48-06:10/22 21:08 06:24-07:14/50	04:30 22:00
8	08:47 12:44-13:11/27 10:40-11:24/44 15:58 10:25-10:36/11	08:00 08:31-08:54/23 17:01	06:53 07:32-07:55/23 18:03	06:30 07:06-07:41/35 20:07	05:17 05:46-06:10/24 21:10 06:24-07:13/49	04:29 22:01
9	08:47 12:45-13:11/26 10:40-11:24/44 15:59 10:26-10:35/9	07:58 08:30-08:53/23 17:03	06:50 07:33-07:55/22 18:05	06:27 07:05-07:42/37 20:10	05:15 05:44-06:10/26 21:12 06:25-07:12/47	04:28 22:02
10	08:46 12:46-13:11/25 10:41-11:25/44 16:01 10:30-10:33/3	07:56 08:31-08:54/23 17:05	06:47 07:33-07:53/20 18:07	06:25 07:04-07:42/38 20:12	05:12 05:42-06:10/28 21:14 06:25-07:10/45	04:28 22:03
11	08:45 12:47-13:10/23 16:03 10:41-11:25/44	07:54 08:31-08:54/23 17:07	06:45 07:34-07:51/17 18:09	06:22 07:03-07:43/40 20:14	05:10 05:40-06:09/29 21:16 06:25-07:09/44	04:27 22:04
12	08:44 12:49-13:10/21 16:04 10:42-11:26/44	07:52 08:20-08:30/10 17:10 08:31-08:54/23	06:42 07:36-07:50/14 18:11	06:20 07:02-07:43/41 20:16	05:08 05:40-06:08/28 21:18 06:26-07:07/41	04:27 22:05
13	08:43 12:50-13:09/19 16:06 10:42-11:25/43	07:49 08:18-08:54/36 17:12	06:39 07:39-07:45/6 18:13	06:17 06:55-07:43/48 20:18	05:06 05:40-06:08/28 21:20 06:26-07:04/38	04:26 22:06
14	08:42 12:52-13:08/16 16:08 10:43-11:26/43	07:47 08:15-08:52/37 17:14	06:37 18:15	06:14 06:51-07:43/52 20:20	05:04 05:40-06:08/28 21:22 06:28-07:01/33	04:26 22:07
15	08:41 12:55-13:07/12 16:10 10:44-11:26/42	07:45 08:13-08:52/39 17:16	06:34 18:17	06:12 06:46-07:43/57 20:22	05:02 05:40-06:07/27 21:23 06:29-06:55/26	04:25 22:07
16	08:40 12:59-13:02/3 16:12 10:44-11:26/42	07:43 08:10-08:50/40 17:19	06:31 18:19	06:09 06:41-07:42/61 20:24	05:00 05:40-06:06/26 21:25 06:30-06:54/24	04:25 22:08
17	08:39 10:45-11:26/41 16:14	07:40 08:08-08:49/41 17:21	06:29 18:22	06:07 06:38-07:43/65 20:26	04:59 05:41-06:06/25 21:27 06:32-06:53/21	04:25 22:08
18	08:37 10:45-11:26/41 16:15	07:38 08:05-08:46/41 17:23	06:26 18:24	06:04 06:36-07:42/66 20:28 06:30-06:34/4	04:57 05:42-06:05/23 21:29 06:33-06:51/18	04:25 22:09
19	08:36 10:46-11:25/39 16:17	07:35 08:03-08:39/36 17:25	06:23 18:26	06:02 06:28-07:42/74 20:30	04:55 05:42-06:03/21 21:31 06:34-06:49/15	04:25 22:09
20	08:35 10:47-11:26/39 16:19	07:33 08:00-08:38/38 17:28	06:21 18:28	05:59 06:25-07:40/75 20:32	04:53 05:43-06:02/19 21:33 06:38-06:46/8	04:25 22:10
21	08:33 10:48-11:25/37 16:22	07:31 08:00-08:39/39 17:30	06:18 18:30	05:57 06:23-07:40/77 20:35	04:51 05:44-05:57/13 21:35	04:25 22:10
22	08:32 10:49-11:24/35 16:24	07:28 07:59-08:38/39 17:32	06:15 18:32	05:54 06:21-07:40/79 20:37	04:50 05:46-05:56/10 21:36	04:25 22:10
23	08:30 10:49-11:24/35 16:26	07:26 08:00-08:39/39 17:34	06:13 18:34	05:52 06:18-07:38/80 20:39	04:48 05:49-05:54/5 21:38	04:26 22:10
24	08:29 10:51-11:24/33 16:28	07:23 08:00-08:38/38 17:36	06:10 18:36	05:49 06:17-07:37/80 20:41	04:47 21:40	04:26 22:10
25	08:27 10:53-11:23/30 16:30	07:21 08:01-08:37/36 17:39	06:07 18:38	05:47 06:17-07:36/79 20:43	04:45 21:42	04:26 22:10
26	08:25 10:54-11:22/28 16:32	07:18 08:01-08:36/35 17:41 07:45-07:50/5	06:05 18:40	05:44 06:17-07:34/77 20:45	04:44 21:43	04:27 22:10
27	08:24 10:56-11:20/24 16:34	07:16 08:02-08:35/33 17:43 07:42-07:52/10	06:02 18:42	05:42 06:17-07:33/76 20:47	04:42 21:45	04:27 22:10
28	08:22 10:58-11:19/21 16:36	07:13 08:04-08:34/30 17:45 07:40-07:55/15	05:59 18:45	05:39 06:17-07:31/74 20:49	04:41 21:47	04:28 22:10
29	08:20 11:01-11:16/15 16:38		06:57 19:47	05:37 06:18-07:29/71 20:51	04:39 21:48	04:28 22:10
30	08:18 11:06-11:11/5 16:41		06:54 19:49	05:35 06:17-07:25/68 20:53 06:02-06:03/1	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
Sum of minutes with flicker	1656	828	298	1568	1251	0

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

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

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Vilandes 3-6

LV-1010 Riga

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10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C1 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (75)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July	August	September	October	November	December
1	04:30 22:09	05:15 05:50-06:19/29 21:28 06:36-07:18/42	06:17 07:02-07:42/40 20:14	07:17 08:16-08:27/11 18:53	07:22 08:00-08:24/24 16:36	08:24 12:29-12:53/24 15:45 10:23-11:07/44
2	04:31 22:08	05:17 05:51-06:19/28 21:26 06:35-07:19/44	06:19 07:03-07:41/38 20:11	07:19 08:14-08:29/15 18:51	07:25 08:00-08:23/23 16:34	08:26 12:29-12:54/25 10:24-11:08/44 15:44 10:14-10:15/1
3	04:31 22:08	05:19 05:53-06:20/27 21:24 06:35-07:21/46	06:21 07:03-07:40/37 20:09	07:21 08:12-08:31/19 18:48	07:27 08:01-08:23/22 16:31	08:27 12:28-12:54/26 10:24-11:08/44 15:43 10:11-10:19/8
4	04:32 22:07	05:21 05:55-06:20/25 21:22 06:35-07:22/47	06:23 07:04-07:39/35 20:06	07:23 08:10-08:31/21 18:45	07:29 08:02-08:22/20 16:29	08:29 12:28-12:55/27 10:24-11:08/44 15:42 10:09-10:20/11
5	04:33 22:07	05:23 05:56-06:19/23 21:19 06:33-07:23/50	06:25 07:04-07:36/32 20:03	07:25 08:09-08:32/23 18:43	07:31 08:05-08:22/17 16:27	08:31 12:28-12:56/28 10:24-11:09/45 15:41 10:08-10:22/14
6	04:34 22:06	05:25 05:58-06:19/21 21:17 06:33-07:24/51	06:27 07:06-07:34/28 20:01	07:27 08:08-08:32/24 18:40	07:33 08:07-08:21/14 16:25	08:32 12:28-12:58/30 10:25-11:09/44 15:41 10:08-10:23/15
7	04:36 22:05	05:27 06:00-06:19/19 21:15 06:33-07:25/52	06:29 07:08-07:32/24 19:58	07:29 08:07-08:32/25 18:38	07:36 08:09-08:20/11 16:23	08:34 12:27-12:58/31 10:25-11:09/44 15:40 10:07-10:24/17
8	04:37 22:04	05:29 06:02-06:19/17 21:13 06:33-07:25/52	06:31 07:10-07:30/20 19:55	07:31 08:07-08:31/24 18:35	07:38 08:12-08:19/7 16:21	08:35 12:28-12:59/31 15:40 10:08-11:10/62
9	04:38 22:03	05:31 06:04-06:18/14 21:11 06:31-07:26/55	06:33 07:15-07:25/10 19:53	07:34 08:08-08:32/24 18:32	07:40 08:14-08:17/3 16:19	08:37 12:27-12:59/32 15:39 10:08-11:11/63
10	04:39 22:02	05:33 06:06-06:17/11 21:08 06:30-07:26/56	06:35 19:50	07:36 08:07-08:31/24 18:30	07:42 16:17	08:38 12:28-13:00/32 15:39 10:08-11:11/63
11	04:40 22:01	05:35 06:07-06:15/8 21:06 06:27-07:26/59	06:37 19:47	07:38 08:07-08:30/23 18:27 08:54-09:00/6	07:44 16:15	08:39 12:28-13:01/33 15:38 10:07-11:11/64
12	04:42 22:00	05:37 06:26-07:29/63 21:04 06:09-06:13/4	06:39 19:45	07:40 08:09-08:29/20 18:25 08:49-09:03/14	07:46 10:36-10:42/6 16:13	08:40 12:29-13:02/33 15:38 10:08-11:12/64
13	04:43 21:59	05:39 06:26-07:34/68 21:01	06:41 19:42	07:42 08:38-09:05/27 18:22 08:11-08:28/17	07:48 10:33-10:48/15 16:11	08:41 12:29-13:02/33 15:38 10:08-11:12/64
14	04:45 21:58	05:41 06:25-07:37/72 20:59	06:43 19:39	07:44 08:35-09:06/31 18:19 08:13-08:26/13	07:51 10:30-10:51/21 16:09	08:43 12:29-13:03/34 15:38 10:08-11:13/65
15	04:46 21:57	05:43 06:25-07:39/74 20:57	06:45 19:37	07:46 08:34-09:08/34 18:17 08:16-08:25/9	07:53 10:28-10:52/24 16:07	08:44 12:29-13:03/34 15:38 10:09-11:13/64
16	04:48 21:55	05:45 06:24-07:41/77 20:54	06:47 19:34	07:48 08:33-09:09/36 18:14 08:18-08:20/2	07:55 10:27-10:55/28 16:06	08:45 12:30-13:04/34 15:38 10:09-11:13/64
17	04:49 21:54	05:47 06:24-07:41/77 20:52	06:49 19:31	07:50 08:32-09:09/37 18:12	07:57 10:26-10:56/30 16:04	08:45 12:30-13:05/35 15:38 10:09-11:14/65
18	04:51 21:52	05:49 06:23-07:42/79 20:49	06:51 19:28	07:52 08:31-09:09/38 18:09	07:59 10:25-10:58/33 16:02	08:46 12:31-13:05/34 15:38 10:10-11:15/65
19	04:52 21:51	05:51 06:23-07:43/80 20:47	06:53 19:26	07:54 08:31-09:10/39 18:07	08:01 10:24-10:59/35 16:01	08:47 12:31-13:06/35 15:38 10:10-11:15/65
20	04:54 21:49	05:53 06:24-07:44/80 20:45	06:55 19:23	07:57 08:31-09:10/39 18:04	08:03 10:24-10:59/35 15:59	08:48 12:31-13:06/35 15:38 10:10-11:15/65
21	04:56 05:57-06:04/7 21:48	05:55 06:26-07:44/78 20:42	06:57 19:20	07:59 08:30-09:09/39 18:02	08:05 10:23-11:00/37 15:57	08:48 12:32-13:07/35 15:39 10:11-11:16/65
22	04:57 05:55-06:07/12 21:46	05:57 06:28-07:45/77 20:40	06:59 19:18	08:01 08:31-09:09/38 17:59	08:07 10:23-11:02/39 15:56	08:49 12:32-13:07/35 15:39 10:11-11:16/65
23	04:59 05:54-06:10/16 21:45 06:51-06:52/1	05:59 06:30-07:45/75 20:37	07:01 19:15	08:03 08:34-09:09/35 17:57	08:09 10:23-11:02/39 15:55	08:49 12:33-13:08/35 15:40 10:12-11:17/65
24	05:01 05:53-06:13/20 21:43 06:46-06:58/12	06:01 06:32-07:45/73 20:35	07:03 19:12	08:05 08:36-09:17/41 17:54	08:11 10:22-11:03/41 15:53	08:50 12:33-13:08/35 15:40 10:12-11:17/65
25	05:03 05:53-06:15/22 21:41 06:44-07:00/16	06:03 06:40-07:45/65 20:32 06:34-06:37/3	07:05 19:10	07:07 07:38-08:19/41 16:52	08:13 10:22-11:03/41 15:52	08:50 12:34-13:08/34 15:41 10:13-11:17/64
26	05:04 05:52-06:15/23 21:39 06:42-07:02/20	06:05 06:40-07:44/64 20:29	07:07 19:07	07:09 07:41-08:21/40 16:50	08:15 12:38-12:40/2 15:50 10:23-11:05/42	08:51 12:34-13:08/34 15:42 10:13-11:18/65
27	05:06 05:52-06:17/25 21:37 06:41-07:04/23	06:07 06:43-07:44/61 20:27	07:09 19:04	07:12 07:43-08:22/39 16:47	08:17 12:34-12:45/11 15:49 10:23-11:05/42	08:51 12:34-13:09/35 15:43 10:14-11:18/64
28	05:08 05:51-06:17/26 21:36 06:39-07:04/25	06:09 06:50-07:44/54 20:24	07:11 19:02	07:14 07:45-08:22/37 16:45	08:19 12:32-12:48/16 15:48 10:23-11:06/43	08:51 12:35-13:09/34 15:43 10:14-11:19/65
29	05:10 05:51-06:18/27 21:34 06:39-07:06/27	06:11 06:52-07:44/52 20:22	07:13 18:59	07:16 07:48-08:23/35 16:43	08:21 12:31-12:50/19 15:47 10:23-11:06/43	08:51 12:36-13:10/34 15:44 10:15-11:19/64
30	05:12 05:51-06:18/27 21:32 06:38-07:13/35	06:13 06:55-07:43/48 20:19	07:15 18:56	07:18 07:50-07:59/9 16:40 08:00-08:23/23	08:22 12:30-12:51/21 15:46 10:23-11:07/44	08:51 12:37-13:10/33 15:45 10:16-11:20/64
31	05:14 05:51-06:19/28 21:30 06:37-07:16/39	06:15 07:02-07:43/41 20:16		07:20 08:01-08:24/23 16:38		08:51 12:38-13:11/33 15:46 10:17-11:21/64
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	431	2141	264	995	848	2921

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
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Vilandes 3-6

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0037167242411

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WTG: C10 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (84)

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

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1	08:50 15:48	08:14 16:45	07:11 07:40-08:27/47 17:47	06:49 19:53	05:32 20:55	04:36 05:39-06:14/35 21:52
2	08:50 15:49	08:13 16:47	07:08 07:39-08:27/48 17:49	06:46 19:55	05:30 20:57	04:35 05:40-06:14/34 21:54
3	08:50 15:50	08:11 16:49	07:05 07:40-08:29/49 17:52	06:43 19:57	05:28 20:59	04:33 05:40-06:14/34 21:55
4	08:49 15:52	08:09 16:52	07:03 07:40-08:29/49 17:54	06:41 19:59	05:25 21:01	04:32 05:40-06:14/34 21:56
5	08:49 15:53	08:07 16:54	07:00 07:40-08:29/49 17:56	06:38 20:01	05:23 21:03	04:32 05:41-06:15/34 21:58
6	08:49 15:55	08:04 16:56	06:58 07:39-08:30/51 17:58	06:35 20:03	05:21 21:05	04:31 05:41-06:14/33 21:59
7	08:48 15:56	08:02 08:32-08:39/7 16:58	06:55 07:38-08:30/52 18:00	06:33 20:05	05:19 21:07	04:30 05:41-06:14/33 22:00
8	08:47 15:58	08:00 08:30-08:42/12 17:01	06:52 07:36-08:30/54 18:02	06:30 20:07	05:17 05:53-05:59/6 21:09	04:29 05:42-06:14/32 22:01
9	08:47 15:59	07:58 08:27-08:43/16 17:03	06:50 07:36-08:30/54 18:05	06:27 20:09	05:15 05:49-06:03/14 21:11	04:28 05:42-06:14/32 22:02
10	08:46 16:01	07:56 08:25-08:44/19 17:05	06:47 07:35-08:30/55 18:07	06:25 06:50-06:51/1 20:11	05:12 05:47-06:05/18 21:13	04:28 05:42-06:15/33 22:03
11	08:45 16:03	07:54 08:23-08:45/22 17:07	06:45 07:34-08:29/55 18:09	06:22 06:48-06:54/6 20:14	05:10 05:45-06:06/21 21:15	04:27 05:42-06:14/32 22:04
12	08:44 16:04	07:52 08:23-08:46/23 17:10	06:42 07:33-08:28/55 18:11	06:19 06:45-06:55/10 20:16	05:08 05:44-06:08/24 21:17	04:27 05:43-06:14/31 22:05
13	08:43 16:06	07:49 08:23-08:46/23 17:12	06:39 07:33-08:28/55 18:13	06:17 06:43-06:56/13 20:18	05:06 05:42-06:08/26 21:19	04:26 05:44-06:15/31 22:06
14	08:42 16:08	07:47 08:22-08:46/24 17:14	06:37 07:33-08:27/54 18:15	06:14 06:40-06:56/16 20:20	05:04 05:42-06:10/28 21:21	04:26 05:43-06:14/31 22:06
15	08:41 16:10	07:45 08:23-08:47/24 17:16	06:34 07:32-08:26/54 18:17	06:12 06:38-06:57/19 20:22	05:02 05:41-06:10/29 21:23	04:26 05:44-06:14/30 22:07
16	08:40 16:12	07:42 08:22-08:46/24 17:19	06:31 07:33-08:25/52 18:19	06:09 06:36-06:56/20 20:24	05:00 05:40-06:11/31 21:25	04:25 05:44-06:15/31 22:08
17	08:38 16:14	07:40 08:23-08:46/23 17:21	06:29 07:32-08:24/52 18:22	06:07 06:36-06:56/20 20:26	04:59 05:40-06:12/32 21:27	04:25 05:44-06:15/31 22:08
18	08:37 16:15	07:38 08:23-08:45/22 17:23	06:26 07:32-08:22/50 18:24	06:04 06:36-06:55/19 20:28	04:57 05:40-06:12/32 21:29	04:25 05:45-06:15/30 22:09
19	08:36 16:17	07:35 08:24-08:45/21 17:25	06:23 07:33-08:21/48 18:26	06:02 06:36-06:55/19 20:30	04:55 05:39-06:12/33 21:31	04:25 05:45-06:15/30 22:09
20	08:35 16:19	07:33 08:24-08:44/20 17:28	06:21 07:33-08:19/46 18:28	05:59 06:36-06:53/17 20:32	04:53 05:39-06:13/34 21:33	04:25 05:45-06:15/30 22:09
21	08:33 16:21	07:30 08:26-08:43/17 17:30	06:18 07:34-08:16/42 18:30	05:56 06:38-06:52/14 20:34	04:51 05:38-06:13/35 21:34	04:25 05:46-06:16/30 22:10
22	08:32 16:24	07:28 08:27-08:40/13 17:32	06:15 07:34-08:12/38 18:32	05:54 06:39-06:51/12 20:36	04:50 05:39-06:13/34 21:36	04:25 05:46-06:16/30 22:10
23	08:30 16:26	07:26 07:53-07:54/1 17:34 08:31-08:37/6	06:13 07:36-08:08/32 18:34	05:52 06:41-06:48/7 20:39	04:48 05:38-06:13/35 21:38	04:26 05:46-06:16/30 22:10
24	08:29 16:28	07:23 07:50-07:56/6 17:36 08:06-08:15/9	06:10 07:37-08:04/27 18:36	05:49 20:41	04:47 05:38-06:13/35 21:40	04:26 05:46-06:16/30 22:10
25	08:27 16:30	07:21 07:47-07:57/10 17:39 08:01-08:19/18	06:07 07:38-08:01/23 18:38	05:47 20:43	04:45 05:38-06:14/36 21:41	04:26 05:47-06:17/30 22:10
26	08:25 16:32	07:18 07:45-08:22/37 17:41	06:05 07:41-07:58/17 18:40	05:44 20:45	04:44 05:39-06:14/35 21:43	04:27 05:46-06:17/31 22:10
27	08:24 16:34	07:16 07:42-08:24/42 17:43	06:02 07:46-07:52/6 18:42	05:42 20:47	04:42 05:38-06:14/36 21:45	04:27 05:47-06:17/30 22:10
28	08:22 16:36	07:13 07:40-08:25/45 17:45	05:59 18:44	05:39 20:49	04:41 05:38-06:14/36 21:46	04:28 05:46-06:17/31 22:10
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 05:39-06:14/35 21:48	05:47-06:18/31 22:09
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 05:39-06:14/35 21:49	05:47-06:19/32 22:09
31	08:16 16:43		06:51 19:51		04:37 05:39-06:14/35 21:51	
Potential sun hours		235	266	366	426	508
Sum of minutes with flicker		0	484	1214	193	715
						946

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C10 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (84)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July		August		September		October		November		December	
1	04:30	05:47-06:18/31	05:15	05:54-06:17/23	06:17	06:47-06:53/6	07:17	08:13-09:08/55	07:22	07:55-08:14/19	08:24	
	22:09		21:28		20:14		18:53		16:36		15:45	
2	04:31	05:47-06:19/32	05:17	05:56-06:16/20	06:19	06:49-06:50/1	07:19	08:13-09:08/55	07:24	07:57-08:12/15	08:26	
	22:08		21:26		20:11		18:51		16:34		15:44	
3	04:32	05:47-06:19/32	05:19	05:58-06:15/17	06:21		07:21	08:13-09:08/55	07:27	08:00-08:11/11	08:27	
	22:08		21:23		20:08		18:48		16:31		15:43	
4	04:32	05:47-06:20/33	05:21	06:01-06:12/11	06:23		07:23	08:13-09:07/54	07:29	08:02-08:09/7	08:29	
	22:07		21:21		20:06		18:45		16:29		15:42	
5	04:33	05:47-06:20/33	05:23		06:25		07:25	08:13-09:07/54	07:31		08:30	
	22:06		21:19		20:03		18:43		16:27		15:41	
6	04:35	05:47-06:21/34	05:25		06:27		07:27	08:13-09:06/53	07:33		08:32	
	22:06		21:17		20:01		18:40		16:25		15:41	
7	04:36	05:47-06:21/34	05:27		06:29		07:29	08:14-09:06/52	07:35		08:34	
	22:05		21:15		19:58		18:37		16:23		15:40	
8	04:37	05:47-06:21/34	05:29		06:31		07:31	08:15-09:05/50	07:38		08:35	
	22:04		21:13		19:55		18:35		16:21		15:40	
9	04:38	05:47-06:21/34	05:31		06:33		07:33	08:15-09:04/49	07:40		08:36	
	22:03		21:10		19:53		18:32		16:19		15:39	
10	04:39	05:47-06:22/35	05:33		06:35		07:35	08:14-09:04/50	07:42		08:38	
	22:02		21:08		19:50		18:30		16:17		15:39	
11	04:40	05:47-06:22/35	05:35		06:37		07:38	08:14-09:02/48	07:44		08:39	
	22:01		21:06		19:47		18:27		16:15		15:38	
12	04:42	05:48-06:23/35	05:37		06:39		07:40	08:13-09:01/48	07:46		08:40	
	22:00		21:04		19:45		18:24		16:13		15:38	
13	04:43	05:48-06:23/35	05:39		06:41		07:42	08:13-08:59/46	07:48		08:41	
	21:59		21:01		19:42		18:22		16:11		15:38	
14	04:45	05:47-06:23/36	05:41		06:43		07:44	08:13-08:57/44	07:50		08:42	
	21:58		20:59		19:39		18:19		16:09		15:38	
15	04:46	05:47-06:22/35	05:43		06:45		07:46	08:16-08:55/39	07:53		08:43	
	21:56		20:57		19:36		18:17		16:07		15:38	
16	04:48	05:48-06:23/35	05:45		06:47		07:48	08:18-08:31/13	07:55		08:44	
	21:55		20:54		19:34		18:14	08:32-08:54/22	16:06		15:38	
17	04:49	05:47-06:23/36	05:47		06:49	08:30-08:46/16	07:50	08:20-08:29/9	07:57		08:45	
	21:54		20:52		19:31		18:12	08:35-08:50/15	16:04		15:38	
18	04:51	05:48-06:24/36	05:49		06:51	08:26-08:48/22	07:52	08:22-08:27/5	07:59		08:46	
	21:52		20:49		19:28		18:09		16:02		15:38	
19	04:52	05:48-06:23/35	05:51		06:53	08:24-08:50/26	07:54	09:00-09:09/9	08:01		08:47	
	21:51		20:47		19:26		18:07		16:01		15:38	
20	04:54	05:49-06:24/35	05:53	06:46-06:54/8	06:55	08:22-08:51/29	07:56	08:58-09:12/14	08:03		08:48	
	21:49		20:44		19:23		18:04		15:59		15:38	
21	04:56	05:48-06:23/35	05:55	06:44-06:56/12	06:57	08:20-08:57/37	07:59	08:56-09:13/17	08:05		08:48	
	21:48		20:42		19:20		18:02		15:57		15:39	
22	04:57	05:49-06:23/34	05:57	06:42-06:57/15	06:59	08:18-09:00/42	08:01	08:54-09:14/20	08:07		08:49	
	21:46		20:39		19:18		17:59		15:56		15:39	
23	04:59	05:49-06:23/34	05:59	06:41-06:58/17	07:01	08:17-09:02/45	08:03	08:54-09:16/22	08:09		08:49	
	21:44		20:37		19:15		17:57		15:55		15:40	
24	05:01	05:49-06:23/34	06:01	06:40-06:59/19	07:03	08:16-09:03/47	08:05	08:53-09:16/23	08:11		08:50	
	21:43		20:34		19:12		17:54		15:53		15:40	
25	05:03	05:49-06:22/33	06:03	06:39-06:59/20	07:05	08:15-09:04/49	07:07	07:52-08:16/24	08:13		08:50	
	21:41		20:32		19:09		16:52		15:52		15:41	
26	05:04	05:50-06:22/32	06:05	06:38-06:58/20	07:07	08:14-09:05/51	07:09	07:52-08:17/25	08:15		08:50	
	21:39		20:29		19:07		16:50		15:50		15:42	
27	05:06	05:51-06:22/31	06:07	06:38-06:58/20	07:09	08:14-09:06/52	07:11	07:52-08:16/24	08:17		08:51	
	21:37		20:27		19:04		16:47		15:49		15:43	
28	05:08	05:51-06:21/30	06:09	06:39-06:57/18	07:11	08:13-09:06/53	07:14	07:52-08:16/24	08:19		08:51	
	21:35		20:24		19:01		16:45		15:48		15:43	
29	05:10	05:52-06:20/28	06:11	06:41-06:57/16	07:13	08:12-09:07/55	07:16	07:53-08:16/23	08:20		08:51	
	21:33		20:22		18:59		16:43		15:47		15:44	
30	05:12	05:53-06:20/27	06:13	06:43-06:56/13	07:15	08:13-09:08/55	07:18	07:53-08:15/22	08:22		08:51	
	21:32		20:19		18:56		16:40		15:46		15:45	
31	05:14	05:54-06:19/25	06:15	06:45-06:55/10			07:20	07:53-08:14/21			08:51	
	21:30		20:16				16:38				15:47	
Potential sun hours	529		469		385		324		247		216	
Sum of minutes with flicker	1028		259		586		1084		52		0	

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C11 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (85)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 08:58-09:40/42 16:45	07:11 17:47	06:49 07:25-07:58/33 19:53	05:32 20:55	04:36 21:52
2	08:50 15:49	08:13 08:58-09:40/42 16:47	07:08 17:49	06:46 07:24-07:58/34 19:55	05:30 20:57	04:35 21:54
3	08:50 15:51	08:11 08:58-09:40/42 16:49	07:05 17:52	06:43 07:23-07:58/35 19:57	05:28 20:59	04:34 21:55
4	08:49 15:52	08:09 08:58-09:41/43 16:52	07:03 17:54	06:41 07:23-07:58/35 19:59	05:25 21:01	04:33 21:56
5	08:49 15:53	08:07 08:58-09:40/42 16:54	07:00 17:56	06:38 07:22-07:58/36 20:01	05:23 21:03	04:32 21:58
6	08:48 15:55	08:04 08:58-09:40/42 16:56	06:58 17:58	06:35 07:22-07:58/36 20:03	05:21 21:05	04:31 21:59
7	08:48 15:56	08:02 08:59-09:39/40 16:58	06:55 18:00	06:33 07:22-07:57/35 20:05	05:19 21:07	04:30 22:00
8	08:47 15:58	08:00 08:59-09:39/40 17:01	06:52 18:02	06:30 07:21-07:56/35 20:07	05:17 21:09	04:29 22:01
9	08:46 15:59	07:58 08:59-09:38/39 17:03	06:50 18:05	06:27 07:22-07:56/34 20:09	05:15 21:11	04:28 22:02
10	08:46 16:01	07:56 09:00-09:37/37 17:05	06:47 18:07	06:25 07:22-07:55/33 20:11	05:12 21:13	04:28 22:03
11	08:45 16:03	07:54 09:00-09:35/35 17:07	06:45 18:09	06:22 07:23-07:54/31 20:14	05:10 21:15	04:27 22:04
12	08:44 16:04	07:51 09:01-09:33/32 17:10	06:42 18:11	06:19 07:23-07:52/29 20:16	05:08 21:17	04:27 22:05
13	08:43 16:06	07:49 09:02-09:31/29 17:12	06:39 18:13	06:17 07:24-07:51/27 20:18	05:06 21:19	04:26 22:06
14	08:42 16:08	07:47 09:03-09:25/22 17:14	06:37 18:15	06:14 07:25-07:49/24 20:20	05:04 21:21	04:26 22:06
15	08:41 16:10	07:45 09:05-09:24/19 17:16	06:34 18:17	06:12 07:27-07:47/20 20:22	05:02 21:23	04:26 22:07
16	08:40 16:12	07:42 09:07-09:21/14 17:19	06:31 18:19	06:09 07:29-07:44/15 20:24	05:00 21:25	04:25 22:08
17	08:38 16:14	07:40 09:12-09:17/5 17:21	06:29 18:22	06:07 07:34-07:38/4 20:26	04:59 21:27	04:25 22:08
18	08:37 09:16-09:25/9 16:16	07:38 17:23	06:26 06:51-06:52/1 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 09:14-09:28/14 16:17	07:35 17:25	06:23 06:49-06:55/6 18:26	06:02 20:30	04:55 21:31	04:25 22:09
20	08:34 09:12-09:29/17 16:19	07:33 17:28	06:21 06:46-06:56/10 18:28	05:59 20:32	04:53 21:33	04:25 22:09
21	08:33 09:12-09:32/20 16:22	07:30 17:30	06:18 06:43-06:56/13 18:30	05:57 20:34	04:51 21:34	04:25 22:10
22	08:32 09:11-09:33/22 16:24	07:28 17:32	06:15 06:41-06:57/16 18:32	05:54 20:36	04:50 21:36	04:25 22:10
23	08:30 09:08-09:34/26 16:26	07:26 17:34	06:13 06:38-06:57/19 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 09:05-09:35/30 16:28	07:23 17:36	06:10 06:37-06:56/19 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 09:03-09:36/33 16:30	07:21 17:39	06:07 06:37-06:56/19 18:38	05:47 20:43	04:45 21:41	04:26 22:10
26	08:25 09:03-09:37/34 16:32	07:18 17:41	06:05 06:37-06:55/18 18:40	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 09:02-09:38/36 16:34	07:16 17:43	06:02 06:33-06:54/21 18:42	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 09:01-09:39/38 16:36	07:13 17:45	05:59 06:30-06:54/24 18:44	05:39 20:49	04:41 21:46	04:28 22:10
29	08:20 09:00-09:39/39 16:38		06:57 07:29-07:56/27 19:47	05:37 20:51	04:39 21:48	04:28 22:09
30	08:18 08:59-09:39/40 16:41		06:54 07:27-07:57/30 19:49	05:35 20:53	04:38 21:49	04:29 22:09
31	08:16 08:59-09:39/40 16:43		06:51 07:25-07:57/32 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	398	565	255	496	0	0

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C11 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (85)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July	August	September	October	November	December
1	04:30 22:09	05:15 21:28	06:17 07:22-07:53/31 20:14	07:17 18:53	07:22 08:29-09:07/38 16:36	08:24 15:45
2	04:31 22:08	05:17 21:26	06:19 07:21-07:54/33 20:11	07:19 18:51	07:24 08:28-09:07/39 16:34	08:26 15:44
3	04:32 22:08	05:19 21:23	06:21 07:20-07:54/34 20:08	07:21 18:48	07:27 08:28-09:08/40 16:31	08:27 15:43
4	04:32 22:07	05:21 21:21	06:23 07:18-07:53/35 20:06	07:23 18:45	07:29 08:28-09:09/41 16:29	08:29 15:42
5	04:33 22:06	05:23 21:19	06:25 07:18-07:53/35 20:03	07:25 18:43	07:31 08:28-09:09/41 16:27	08:30 15:41
6	04:35 22:06	05:25 21:17	06:27 07:17-07:53/36 20:01	07:27 18:40	07:33 08:28-09:10/42 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 07:17-07:53/36 19:58	07:29 18:37	07:35 08:28-09:10/42 16:23	08:33 15:40
8	04:37 22:04	05:29 21:13	06:31 07:17-07:53/36 19:55	07:31 18:35	07:38 08:28-09:10/42 16:21	08:35 15:40
9	04:38 22:03	05:31 21:10	06:33 07:17-07:52/35 19:53	07:33 18:32	07:40 08:29-09:11/42 16:19	08:36 15:39
10	04:39 22:02	05:33 21:08	06:35 07:17-07:51/34 19:50	07:35 18:30	07:42 08:29-09:11/42 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 07:17-07:51/34 19:47	07:38 18:27	07:44 08:30-09:11/41 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:39 07:18-07:50/32 19:45	07:40 18:24	07:46 08:31-09:11/40 16:13	08:40 15:38
13	04:43 21:59	05:39 21:01	06:41 07:18-07:48/30 19:42	07:42 18:22	07:48 08:32-09:11/39 16:11	08:41 15:38
14	04:45 21:58	05:41 20:59	06:43 07:19-07:47/28 19:39	07:44 18:19	07:50 08:33-09:11/38 16:09	08:42 15:38
15	04:46 21:56	05:43 20:57	06:45 07:20-07:45/25 19:36	07:46 18:17	07:53 08:34-09:10/36 16:07	08:43 15:38
16	04:48 21:55	05:45 20:54	06:47 07:22-07:43/21 19:34	07:48 18:14	07:55 08:36-09:10/34 16:06	08:44 15:38
17	04:49 21:54	05:47 20:52	06:49 07:25-07:44/19 19:31	07:50 18:12	07:57 08:37-09:10/33 16:04	08:45 15:38
18	04:51 21:52	05:49 20:49	06:51 07:25-07:44/19 19:28	07:52 18:09	07:59 08:39-09:09/30 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:53 07:25-07:44/19 19:26	07:54 18:07	08:01 08:43-09:09/26 16:01	08:47 15:38
20	04:54 21:49	05:53 20:44	06:55 07:23-07:43/20 19:23	07:56 18:04	08:03 08:46-09:08/22 15:59	08:48 15:38
21	04:56 21:48	05:55 20:42	06:57 07:25-07:42/17 19:20	07:59 18:02	08:05 08:47-09:07/20 15:57	08:48 15:39
22	04:57 21:46	05:57 20:39	06:59 07:27-07:41/14 19:18	08:01 17:59	08:07 08:48-09:05/17 15:56	08:49 15:39
23	04:59 21:44	05:59 20:37	07:01 07:29-07:40/11 19:15	08:03 17:57	08:09 08:51-09:05/14 15:55	08:49 15:40
24	05:01 21:43	06:01 20:34	07:03 07:31-07:38/7 19:12	08:05 17:54	08:11 08:53-09:02/9 15:53	08:50 15:40
25	05:03 21:41	06:03 20:32	07:05 07:33-07:36/3 19:09	08:07 08:40-08:48/8 16:52	08:13 15:52	08:50 15:41
26	05:04 21:39	06:05 07:35-07:41/6 20:29	07:07 19:07	08:09 08:37-08:52/15 16:50	08:15 15:50	08:50 15:42
27	05:06 21:37	06:07 07:30-07:46/16 20:27	07:09 19:04	08:11 08:34-08:54/20 16:47	08:17 15:49	08:50 15:43
28	05:08 21:35	06:09 07:27-07:48/21 20:24	07:11 19:01	08:14 08:32-08:55/23 16:45	08:19 15:48	08:51 15:44
29	05:10 21:33	06:11 07:26-07:50/24 20:22	07:13 18:59	08:16 08:32-09:01/29 16:43	08:20 15:47	08:51 15:44
30	05:12 21:32	06:13 07:24-07:51/27 20:19	07:15 18:56	08:18 08:30-09:03/33 16:40	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 07:23-07:52/29 20:16		08:20 08:29-09:05/36 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	0	123	644	164	808	0

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C12 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (86)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January		February		March		April		May		June	
1	08:50	09:30-09:54/24	08:14		07:10	07:46-08:15/29	06:49		05:32		04:36	05:47-06:02/15
	15:48		16:45		17:47		19:53		20:55		21:52	
2	08:50	09:29-09:54/25	08:12		07:08	07:45-08:15/30	06:46		05:30		04:35	05:47-06:01/14
	15:49		16:47		17:49		19:55		20:57		21:54	
3	08:50	09:29-09:55/26	08:11		07:05	07:46-08:16/30	06:43		05:28		04:34	05:48-06:00/12
	15:51		16:50		17:52		19:57		20:59		21:55	
4	08:49	09:28-09:56/28	08:09		07:03	07:45-08:15/30	06:41		05:25		04:33	05:50-05:59/9
	15:52		16:52		17:54		19:59		21:01		21:56	
5	08:49	09:27-09:56/29	08:06		07:00	07:45-08:14/29	06:38		05:23		04:32	05:52-05:58/6
	15:53		16:54		17:56		20:01		21:03		21:57	
6	08:48	09:27-09:57/30	08:04		06:58	07:46-08:14/28	06:35		05:21	05:50-05:59/9	04:31	05:06-05:07/1
	15:55		16:56		17:58		20:03		21:05		21:59	
7	08:48	09:27-09:58/31	08:02		06:55	07:46-08:13/27	06:33		05:19	05:48-06:01/13	04:30	05:05-05:08/3
	15:56		16:58		18:00		20:05		21:07		22:00	
8	08:47	09:27-09:58/31	08:00		06:52	07:46-08:11/25	06:30		05:17	05:46-06:03/17	04:29	05:05-05:10/5
	15:58		17:01		18:02		20:07		21:09		22:01	
9	08:46	09:28-09:59/31	07:58		06:50	07:48-08:10/22	06:27		05:15	05:44-06:04/20	04:28	05:04-05:10/6
	15:59		17:03		18:05		20:09		21:11		22:02	
10	08:46	09:28-09:59/31	07:56		06:47	07:49-08:08/19	06:25		05:12	05:42-06:04/22	04:28	05:04-05:11/7
	16:01		17:05		18:07		20:11		21:13		22:03	
11	08:45	09:28-10:00/32	07:54		06:45	07:50-08:04/14	06:22		05:10	05:42-06:05/23	04:27	05:03-05:11/8
	16:03		17:07		18:09		20:14		21:15		22:04	
12	08:44	09:28-09:59/31	07:51		06:42	07:54-07:59/5	06:19		05:08	05:41-06:05/24	04:27	05:03-05:12/9
	16:04		17:10		18:11		20:16		21:17		22:05	
13	08:43	09:28-10:00/32	07:49		06:39		06:17		05:06	05:40-06:05/25	04:26	05:03-05:13/10
	16:06		17:12		18:13		20:18		21:19		22:06	
14	08:42	09:29-10:00/31	07:47		06:37		06:14		05:04	05:41-06:06/25	04:26	05:03-05:14/11
	16:08		17:14		18:15		20:20		21:21		22:06	
15	08:41	09:29-10:00/31	07:45		06:34		06:12		05:02	05:40-06:06/26	04:26	05:02-05:13/11
	16:10		17:16		18:17		20:22		21:23		22:07	
16	08:40	09:29-10:01/32	07:42		06:31		06:09		05:00	05:40-06:06/26	04:25	05:02-05:14/12
	16:12		17:19		18:19		20:24		21:25		22:08	
17	08:38	09:29-10:00/31	07:40		06:29		06:07		04:59	05:40-06:07/27	04:25	05:02-05:14/12
	16:14		17:21		18:21		20:26		21:27		22:08	
18	08:37	09:30-10:01/31	07:38		06:26		06:04		04:57	05:40-06:07/27	04:25	05:02-05:15/13
	16:16		17:23		18:24		20:28		21:29		22:09	
19	08:36	09:31-10:00/29	07:35		06:23		06:02		04:55	05:39-06:06/27	04:25	05:02-05:15/13
	16:18		17:25		18:26		20:30		21:31		22:09	
20	08:34	09:31-09:59/28	07:33		06:21		05:59		04:53	05:40-06:07/27	04:25	05:02-05:15/13
	16:20		17:28		18:28		20:32		21:33		22:09	
21	08:33	09:32-09:59/27	07:30		06:18		05:57		04:52	05:40-06:06/26	04:25	05:03-05:16/13
	16:22		17:30		18:30		20:34		21:34		22:10	
22	08:32	09:33-09:58/25	07:28	07:57-08:08/11	06:15		05:54		04:50	05:41-06:06/25	04:25	05:03-05:16/13
	16:24		17:32		18:32		20:36		21:36		22:10	
23	08:30	09:34-09:57/23	07:26	07:53-08:10/17	06:13		05:52		04:48	05:41-06:07/26	04:26	05:03-05:16/13
	16:26		17:34		18:34		20:39		21:38		22:10	
24	08:28	09:34-09:55/21	07:23	07:51-08:12/21	06:10		05:49		04:47	05:41-06:06/25	04:26	05:04-05:17/13
	16:28		17:36		18:36		20:41		21:40		22:10	
25	08:27	09:36-09:51/15	07:21	07:49-08:13/24	06:07		05:47		04:45	05:42-06:06/24	04:26	05:04-05:16/12
	16:30		17:39		18:38		20:43		21:41		22:10	
26	08:25	09:38-09:50/12	07:18	07:49-08:14/25	06:05		05:44		04:44	05:43-06:06/23	04:27	05:04-05:16/12
	16:32		17:41		18:40		20:45		21:43		22:10	
27	08:24	09:41-09:48/7	07:16	07:47-08:15/28	06:02		05:42		04:42	05:42-06:04/22	04:27	05:05-05:17/12
	16:34		17:43		18:42		20:47		21:45		22:10	
28	08:22		07:13	07:46-08:15/29	05:59		05:39		04:41	05:43-06:04/21	04:28	05:05-05:16/11
	16:36		17:45		18:44		20:49		21:46		22:10	
29	08:20				06:57		05:37		04:39	05:44-06:04/20	04:28	05:06-05:16/10
	16:38				19:47		20:51		21:48		22:09	
30	08:18				06:54		05:35		04:38	05:45-06:03/18	04:29	05:07-05:17/10
	16:41				19:49		20:53		21:49		22:09	
31	08:16				06:51				04:37	05:46-06:03/17		
	16:43				19:51				21:51			
Potential sun hours	235		266		366		426		508		528	
Sum of minutes with flicker	724		155		288		0		585		309	

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C12 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (86)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July		August		September		October		November		December	
1	04:30	05:07-05:16/9	05:16	05:51-06:15/24	06:17	07:17			07:22		08:24	09:09-09:41/32
	22:09		21:28		20:14	18:53			16:36		15:45	
2	04:31	05:08-05:16/8	05:17	05:52-06:15/23	06:19	07:19	08:31-08:42/11		07:24		08:26	09:10-09:41/31
	22:08		21:25		20:11	18:51			16:34		15:44	
3	04:32	05:09-05:16/7	05:19	05:53-06:14/21	06:21	07:21	08:27-08:45/18		07:27		08:27	09:11-09:42/31
	22:08		21:23		20:08	18:48			16:31		15:43	
4	04:33	05:10-05:15/5	05:21	05:55-06:13/18	06:23	07:23	08:25-08:46/21		07:29		08:29	09:12-09:42/30
	22:07		21:21		20:06	18:45			16:29		15:42	
5	04:34	05:11-05:15/4	05:23	05:56-06:11/15	06:25	07:25	08:24-08:48/24		07:31		08:30	09:12-09:43/31
	22:06		21:19		20:03	18:43			16:27		15:41	
6	04:35	05:12-05:14/2	05:25	05:58-06:10/12	06:27	07:27	08:22-08:48/26		07:33		08:32	09:13-09:43/30
	22:06		21:17		20:01	18:40			16:25		15:41	
7	04:36	06:00-06:03/3	05:27	06:00-06:07/7	06:29	07:29	08:21-08:49/28		07:35		08:33	09:14-09:43/29
	22:05		21:15		19:58	18:37			16:23		15:40	
8	04:37	05:58-06:06/8	05:29		06:31	07:31	08:20-08:49/29		07:37		08:35	09:16-09:44/28
	22:04		21:13		19:55	18:35			16:21		15:40	
9	04:38	05:56-06:07/11	05:31		06:33	07:33	08:19-08:49/30		07:40		08:36	09:17-09:43/26
	22:03		21:10		19:53	18:32			16:19		15:39	
10	04:39	05:55-06:08/13	05:33		06:35	07:35	08:20-08:50/30		07:42		08:38	09:19-09:44/25
	22:02		21:08		19:50	18:30			16:17		15:39	
11	04:41	05:54-06:09/15	05:35		06:37	07:38	08:19-08:49/30		07:44		08:39	09:20-09:44/24
	22:01		21:06		19:47	18:27			16:15		15:38	
12	04:42	05:55-06:11/16	05:37		06:39	07:40	08:19-08:49/30		07:46		08:40	09:21-09:44/23
	22:00		21:04		19:44	18:24			16:13		15:38	
13	04:43	05:54-06:12/18	05:39		06:41	07:42	08:19-08:48/29		07:48		08:41	09:23-09:45/22
	21:59		21:01		19:42	18:22			16:11		15:38	
14	04:45	05:53-06:12/19	05:41		06:43	07:44	08:19-08:47/28		07:50		08:42	09:24-09:45/21
	21:57		20:59		19:39	18:19			16:09		15:38	
15	04:46	05:52-06:12/20	05:43		06:45	07:46	08:20-08:46/26		07:52	09:13-09:20/7	08:43	09:25-09:46/21
	21:56		20:56		19:36	18:17			16:07		15:38	
16	04:48	05:52-06:14/22	05:45		06:47	07:48	08:21-08:46/25		07:55	09:11-09:23/12	08:44	09:26-09:46/20
	21:55		20:54		19:34	18:14			16:06		15:38	
17	04:49	05:51-06:14/23	05:47		06:49	07:50	08:22-08:45/23		07:57	09:10-09:25/15	08:45	09:27-09:46/19
	21:54		20:52		19:31	18:12			16:04		15:38	
18	04:51	05:52-06:15/23	05:49		06:51	07:52	08:23-08:43/20		07:59	09:08-09:29/21	08:46	09:28-09:47/19
	21:52		20:49		19:28	18:09			16:02		15:38	
19	04:52	05:51-06:15/24	05:51		06:53	07:54	08:25-08:40/15		08:01	09:09-09:32/23	08:47	09:28-09:47/19
	21:51		20:47		19:26	18:07			16:01		15:38	
20	04:54	05:51-06:16/25	05:53		06:55	07:56	08:29-08:38/9		08:03	09:08-09:33/25	08:47	09:29-09:47/18
	21:49		20:44		19:23	18:04			15:59		15:38	
21	04:56	05:50-06:16/26	05:55		06:57	07:59			08:05	09:07-09:34/27	08:48	09:29-09:47/18
	21:48		20:42		19:20	18:02			15:57		15:39	
22	04:57	05:51-06:17/26	05:57		06:59	08:01			08:07	09:07-09:35/28	08:49	09:30-09:48/18
	21:46		20:39		19:18	17:59			15:56		15:39	
23	04:59	05:50-06:16/26	05:59		07:01	08:03			08:09	09:08-09:37/29	08:49	09:30-09:48/18
	21:44		20:37		19:15	17:57			15:55		15:40	
24	05:01	05:50-06:17/27	06:01		07:03	08:05			08:11	09:07-09:38/31	08:50	09:31-09:49/18
	21:43		20:34		19:12	17:54			15:53		15:40	
25	05:03	05:50-06:17/27	06:03		07:05	07:07			08:13	09:07-09:38/31	08:50	09:31-09:50/19
	21:41		20:32		19:09	16:52			15:52		15:41	
26	05:04	05:50-06:17/27	06:05		07:07	07:09			08:15	09:07-09:39/32	08:50	09:31-09:50/19
	21:39		20:29		19:07	16:50			15:51		15:42	
27	05:06	05:50-06:17/27	06:07		07:09	07:11			08:17	09:08-09:39/31	08:50	09:31-09:51/20
	21:37		20:27		19:04	16:47			15:49		15:43	
28	05:08	05:50-06:17/27	06:09		07:11	07:14			08:18	09:08-09:40/32	08:51	09:31-09:51/20
	21:35		20:24		19:01	16:45			15:48		15:44	
29	05:10	05:50-06:17/27	06:11		07:13	07:16			08:20	09:09-09:41/32	08:51	09:31-09:52/21
	21:33		20:22		18:59	16:43			15:47		15:44	
30	05:12	05:51-06:17/26	06:13		07:15	07:18			08:22	09:10-09:41/31	08:51	09:31-09:53/22
	21:31		20:19		18:56	16:40			15:46		15:45	
31	05:14	05:52-06:17/25	06:15			07:20					08:51	09:30-09:53/23
	21:30		20:16			16:38					15:47	
Potential sun hours	529		469		385	324		247			216	
Sum of minutes with flicker	566		120		0	452		407			715	

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	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:
10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C13 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (87)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January	February	March	April	May	June
1	08:51 09:42-11:29/107 13:19-13:34/15 15:48 13:58-14:46/48 2 08:50 09:43-11:29/106 13:21-13:34/13 15:49 13:59-14:49/50	08:15 10:08-11:12/64 09:02-09:54/52 16:45 14:08-15:12/64 08:13 10:09-11:09/60 09:01-09:55/54 16:47 14:09-15:12/63	07:11 16:11-17:00/49 17:48 07:37-07:53/16 07:08 16:11-16:59/48 17:50 07:34-07:53/19	06:49 08:10-08:20/10 19:53 07:56-08:06/10 06:46 07:17-07:30/13 19:55	05:33 06:00-06:33/33 20:04-20:23/19 20:55 06:53-07:08/15 05:30 05:58-06:32/34 20:04-20:25/21 20:57 06:57-07:04/7	04:36 05:10-05:29/19 21:52 20:28-21:01/33 04:35 05:09-05:29/20 21:54 20:28-21:02/34
3	08:50 09:43-11:29/106 13:22-13:33/11 15:51 13:59-14:50/51	08:11 14:11-15:12/61 09:00-09:56/56 16:50 10:10-10:58/48 08:09 14:13-15:11/58 09:00-09:57/57 16:52 10:11-10:57/46 08:39-08:44/5	07:06 16:12-17:00/48 17:52 07:32-07:53/21 07:03 16:12-16:59/47 17:54 07:29-07:52/23	06:43 07:13-07:34/21 19:57 06:41 07:06-07:36/30 19:59	05:28 05:56-06:31/35 20:59 20:04-20:25/21 05:26 05:56-06:29/33 21:02 20:04-20:25/21	04:34 05:08-05:30/22 21:55 20:28-21:02/34 04:33 05:08-05:31/23 21:57 20:28-21:02/34
4	08:49 09:43-11:30/107 13:24-13:32/8 15:52 13:59-14:51/52	08:07 14:15-15:11/56 08:37-08:46/9 16:54 10:12-10:54/44 09:00-09:57/57 16:52 10:11-10:57/46 08:39-08:44/5	08:07 14:15-15:11/56 08:37-08:46/9 17:56 07:26-07:51/25 07:00 16:12-16:58/46 20:01	06:38 07:03-07:37/34 20:01 06:35 07:01-07:39/38 20:03	05:23 05:56-06:20/24 21:04 20:04-20:25/21 05:21 05:56-06:19/23 21:06 20:05-20:25/20	04:32 05:07-05:31/24 21:58 20:28-21:03/35 04:31 05:06-05:31/25 21:59 20:28-21:03/35
5	15:53 13:59-14:53/54 08:49 09:43-11:30/107 15:55 13:59-14:55/56	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
6	08:49 09:43-11:30/107 15:55 13:59-14:55/56	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
7	08:49 09:43-11:30/107 15:55 13:59-14:55/56	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
8	08:49 09:43-11:30/107 15:55 13:59-14:55/56	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
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10	08:49 09:43-11:29/105 16:01 14:00-15:49/59	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
11	08:49 09:43-11:29/104 09:22-09:27/5 16:03 14:00-15:01/61	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
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13	08:43 09:45-11:28/103 09:19-09:30/11 16:06 14:00-15:02/62	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
14	08:42 09:46-11:27/101 09:18-09:32/14 16:08 14:00-15:04/64	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
15	08:41 09:46-11:26/100 09:17-09:34/17 16:10 14:00-15:04/64	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
16	08:40 09:46-11:24/98 09:15-09:34/19 16:12 14:01-15:05/64	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
17	08:39 09:47-11:21/94 09:14-09:36/22 16:14 14:00-15:06/66	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
18	08:37 09:47-11:19/94 09:12-09:36/24 16:16 14:01-15:07/66	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
19	08:36 09:47-11:20/93 09:10-09:37/27 16:18 14:01-15:07/66	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
20	08:35 09:49-11:21/92 09:09-09:38/29 16:20 14:02-15:06/67	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
21	08:33 09:49-11:21/92 09:07-09:39/32 16:22 14:02-15:06/67	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	04:30 05:06-05:31/25 22:00 20:28-21:03/35 04:29 05:05-05:31/26 22:01 20:28-21:04/36
22	08:32 09:49-11:20/91 09:05-09:42/37 16:24 14:02-15:09/67	08:05 14:16-15:10/54 08:34-08:47/13 16:56 10:13-10:54/41 08:58-09:57/59 08:03 10:15-10:52/37 08:32-08:48/16 16:59 14:19-15:09/50 08:58-09:57/59	06:58 16:13-16:58/45 17:58 07:27-07:51/24 06:55 07:21-07:25/4 07:27-07:49/22 18:00 16:13-16:57/44	06:35 07:01-07:39/38 20:03 06:33 06:58-07:39/41 20:05	05:19 05:56-06:18/22 21:08 20:05-20:24/19 05:17 05:56-06:18/22 21:10 20:06-20:24/18	

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C13 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (87)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July	August	September	October	November	December
1	04:30 05:08-05:36/28 22:09 20:32-21:09/37	05:16 20:20-20:29/9 21:28 06:09-06:25/16	06:17 06:47-07:40/53 20:14	07:17 07:47-08:17/30 18:54 17:17-17:24/7	07:23 09:52-10:12/20 07:57-08:20/23 16:36 14:02-14:35/33 08:27-09:27/60	08:24 09:27-11:11/104 09:04-09:09/5 15:45 13:42-14:43/61
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Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1098	1851	1343	2414	5385	5422

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	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:
10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C14 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (88)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January	February	March	April	May	June
1	08:51 09:30-10:29/59 15:48 14:14-14:46/32	08:15 09:19-10:26/67 15:31-15:47/16 16:45 08:57-09:17/20	07:11 07:37-08:22/45 17:48	06:49 07:14-07:26/12 19:53	05:33 06:18-07:12/54 20:55 06:00-06:03/3	04:36 05:15-05:38/23 21:52 05:52-06:25/33
2	08:50 09:30-10:30/60 15:49 14:16-14:47/31	08:13 09:19-10:26/67 15:33-15:46/13 16:48 08:58-09:16/18	07:08 07:34-08:21/47 17:50	06:46 07:11-07:27/16 19:55	05:30 06:18-07:11/53 20:57 05:58-06:05/7	04:35 05:16-05:38/22 05:09-05:11/2 21:54 05:53-06:25/32
3	08:50 09:30-10:30/60 15:51 14:16-14:47/31	08:11 09:19-10:26/67 15:35-15:45/10 16:50 08:59-09:16/17	07:06 07:32-08:21/49 17:52	06:43 07:09-07:28/19 19:57	05:28 06:18-07:10/52 20:59 05:56-06:14/18	04:34 05:17-05:39/22 05:09-05:13/4 21:55 05:53-06:24/31
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16	08:40 09:26-10:34/68 16:12 15:31-15:32/1	07:43 09:29-09:52/23 17:19	06:32 06:57-07:51/54 18:20 17:18-17:44/26	06:09 06:41-07:14/33 20:24	05:01 05:49-06:26/37 21:25	04:26 05:21-05:40/19 05:03-05:19/16 22:08 06:00-06:22/22
17	08:39 09:25-10:35/70 16:14 15:29-15:34/5	07:40 09:32-09:49/17 17:21	06:29 06:55-07:49/54 18:22 17:17-17:44/27	06:07 06:41-07:15/34 20:26	04:59 05:49-06:27/38 21:27	04:25 05:20-05:39/19 05:02-05:18/16 22:08 06:00-06:23/23
18	08:37 09:24-10:34/70 16:16 15:29-15:37/8	07:38 09:36-09:44/8 17:23	06:26 06:54-07:46/52 18:24 17:16-17:43/27	06:04 06:33-07:15/42 20:28	04:57 05:28-05:29/1 06:33-06:52/19 21:29	04:25 05:20-05:39/19 05:02-05:19/17 22:09 06:00-06:23/23
19	08:36 09:23-10:34/71 16:18 15:28-15:39/11	07:35 08:03-08:20/17 17:26	06:24 06:54-07:44/50 18:26 17:17-17:43/26	06:02 06:29-07:16/47 20:30	04:55 05:27-05:32/5 06:35-06:50/15 21:31	04:25 05:21-05:41/20 05:03-05:20/17 22:09 06:01-06:23/22
20	08:35 09:23-10:34/71 15:28-15:42/14 16:20 09:09-09:11/2	07:33 08:00-08:21/21 17:28	06:21 06:54-07:34/40 18:28 17:17-17:42/25	05:59 06:27-07:16/49 20:33	04:53 05:25-05:33/8 06:37-06:47/10 21:33	04:25 05:21-05:41/20 05:03-05:20/17 22:10 06:02-06:24/22
21	08:33 09:22-10:33/71 15:28-15:44/16 16:22 09:07-09:12/5	07:31 07:58-08:22/24 17:30	06:18 06:53-07:34/41 18:30 17:17-17:41/24	05:57 06:24-07:16/52 20:35	04:52 05:24-05:34/10 21:35	04:25 05:22-05:41/19 05:03-05:20/17 22:10 06:02-06:24/22
22	08:32 09:21-10:33/72 15:28-15:46/18 16:24 09:05-09:13/8	07:28 07:55-08:23/28 17:32	06:16 06:53-07:34/41 18:32 17:18-17:40/22	05:54 06:23-07:16/53 20:37	04:50 05:22-05:34/12 21:36	04:26 05:22-05:41/19 05:03-05:20/17 22:10 06:02-06:24/22
23	08:30 09:21-10:32/71 15:27-15:47/20 16:26 09:03-09:14/11	07:26 07:53-08:24/31 17:34	06:13 06:53-07:32/39 18:34 17:19-17:38/19	05:52 06:21-07:16/55 20:39	04:48 05:21-05:36/15 21:38	04:26 05:21-05:41/20 05:03-05:20/17 22:10 06:02-06:24/22
24	08:29 09:21-10:32/71 15:27-15:48/21 16:28 09:02-09:15/13	07:23 07:50-08:24/34 17:37	06:10 06:53-07:31/38 18:36 17:20-17:36/16	05:49 06:21-07:16/55 20:41	04:47 05:19-05:36/17 21:40	04:26 05:22-05:41/19 05:04-05:21/17 22:10 06:03-06:25/22
25	08:27 09:21-10:30/69 15:28-15:49/21 16:30 09:00-09:16/16	07:21 07:48-08:24/36 17:39	06:07 06:54-07:30/36 18:38 17:22-17:33/11	05:47 06:20-07:16/56 20:43	04:45 05:18-05:36/18 21:42	04:26 05:22-05:41/19 05:04-05:21/17 22:10 06:02-06:25/23
26	08:25 09:20-10:28/68 15:28-15:49/21 16:32 08:58-09:17/19	07:18 07:45-08:24/39 17:41	06:05 06:54-07:29/35 18:41	05:44 06:19-07:15/56 20:45	04:44 05:17-05:37/20 21:43	04:27 05:23-05:42/19 05:05-05:21/16 22:10 06:03-06:25/22
27	08:24 09:20-10:28/68 15:29-15:49/20 16:34 08:56-09:17/21	07:16 07:42-08:23/41 17:43	06:02 06:55-07:26/31 18:43	05:42 06:19-07:14/55 20:47	04:42 05:16-05:38/22 21:45	04:27 05:22-05:42/20 05:05-05:21/16 22:10 06:02-06:25/23
28	08:22 09:20-10:28/68 15:29-15:49/20 16:37 08:56-09:17/21	07:13 07:40-08:23/43 17:45	05:59 06:57-07:24/27 18:45	05:40 06:19-07:14/55 20:49	04:41 05:15-05:37/22 21:46	04:28 05:23-05:43/20 05:06-05:21/15 22:10 06:03-06:26/23
29	08:20 09:20-10:28/68 15:30-15:49/19 16:39 08:57-09:18/21	07:11 07:38-08:21/23 19:47	05:57 07:58-08:21/23 19:47	05:37 06:19-07:14/55 20:51	04:40 05:15-05:37/22 21:48	04:29 05:22-05:42/20 05:06-05:21/15 22:10 06:02-06:26/24
30	08:18 09:20-10:28/68 15:30-15:49/19 16:41 08:57-09:18/21	07:09 07:30-08:13/21 19:49	06:54 07:19-07:21/2 19:49	05:35 06:19-07:13/54 20:53	04:38 05:15-05:38/23 21:50	04:29 05:23-05:43/20 05:07-05:21/14 22:09 06:02-06:27/25
31	08:17 09:20-10:28/68 15:30-15:48/18 16:43 08:57-09:18/21	07:07 07:25-07:28 19:51	06:51 07:17-07:25/8 19:51	05:31 06:19-07:13/54 20:53	04:37 05:15-05:38/23 21:51	04:29 05:23-05:43/20 05:07-05:21/14 22:09 06:02-06:27/25
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	2788	1297	1653	1180	1935	1757

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	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:
10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C14 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (88)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July	August	September	October	November	December
1	04:30 05:23-05:44/21 05:08-05:22/14 22:09 06:03-06:28/25	05:16 05:59-07:09/70 21:28	06:17 06:47-07:23/36 20:14	07:17 07:46-08:35/49 18:54 18:00-18:22/22	07:23 08:52-09:44/52 16:36	08:24 09:12-10:16/64 15:45 14:13-14:29/16
2	04:31 05:09-05:43/34 22:08 06:02-06:28/26	05:18 06:35-07:10/35 21:26 05:58-06:34/36	06:19 06:49-07:24/35 20:11	07:19 07:48-08:35/47 18:51 18:01-18:20/19	07:25 08:51-09:47/56 16:34	08:26 09:13-10:16/63 15:44 14:12-14:30/18
3	04:32 05:23-05:44/21 05:09-05:21/12 22:08 06:02-06:28/26	05:20 05:58-07:11/73 21:24	06:21 06:51-07:24/33 20:09	07:21 07:50-08:35/45 18:48 18:02-18:18/16	07:27 08:51-09:50/59 16:32	08:27 09:13-10:16/63 15:43 14:11-14:30/19
4	04:33 05:23-05:44/21 05:10-05:21/11 22:07 06:02-06:29/27	05:21 05:58-07:11/73 21:22	06:23 06:53-07:25/32 20:06	07:23 07:52-08:36/44 18:46 18:05-18:15/10	07:29 08:50-09:52/62 16:29	08:29 09:14-10:16/62 15:42 14:07-14:31/24
5	04:34 05:23-05:45/22 05:11-05:21/10 22:07 06:02-06:30/28	05:23 05:58-07:12/74 21:19	06:25 06:55-07:25/30 20:03	07:25 07:54-08:38/44 18:43	07:31 08:50-09:53/63 16:27 08:35-08:42/7	08:31 09:15-10:17/62 15:42 14:06-14:33/27
6	04:35 05:23-05:45/22 05:12-05:21/9 22:06 06:01-06:30/29	05:25 05:58-07:14/76 21:17	06:27 06:57-07:24/27 20:01	07:27 07:56-08:39/43 18:40	07:33 08:50-09:54/64 16:25 08:32-08:44/12	08:32 09:16-10:17/61 15:41 14:06-14:34/28
7	04:36 05:23-05:45/22 05:13-05:21/8 22:05 06:01-06:31/30	05:27 06:00-07:15/75 21:15	06:29 06:58-07:23/25 19:58	07:29 07:58-08:48/50 18:38	07:36 08:50-09:55/65 16:23 08:30-08:45/15	08:34 09:16-10:17/61 15:40 14:05-14:34/29
8	04:37 05:23-05:45/22 05:14-05:20/6 22:04 06:01-06:31/30	05:29 06:02-07:17/75 21:13	06:31 07:00-07:22/22 19:55	07:32 08:00-08:51/51 18:35	07:38 08:50-09:57/67 15:06-15:16/10 16:21 08:30-08:47/17	08:35 09:17-10:18/61 15:40 14:05-14:35/30
9	04:38 05:23-05:45/22 05:15-05:20/5 22:03 06:01-06:32/31	05:31 06:28-07:18/50 21:11	06:33 07:02-07:21/19 19:53	07:34 08:03-08:53/50 18:32	07:40 08:50-09:57/67 15:04-15:17/13 16:19 08:29-08:47/18	08:36 09:18-10:18/60 15:39 14:04-14:35/31
10	04:39 05:23-05:46/23 05:16-05:19/3 22:02 06:00-06:32/32	05:33 06:28-07:19/51 21:08	06:35 07:04-07:20/16 19:50	07:36 08:05-08:54/49 18:30	07:42 08:50-09:57/67 15:02-15:18/16 16:17 08:29-08:49/20	08:38 09:19-10:19/60 15:39 14:05-14:36/31
11	04:41 05:24-05:47/23 05:18-05:19/1 22:01 06:01-06:33/32	05:35 06:27-07:20/53 21:06	06:37 07:06-07:19/13 19:47	07:38 08:07-08:55/48 18:27	07:44 08:51-09:58/67 15:02-15:20/18 16:15 08:28-08:49/21	08:39 09:20-10:19/59 15:38 14:05-14:36/32
12	04:42 05:24-05:46/22 22:00 06:01-06:34/33	05:37 06:26-07:20/54 21:04	06:39 07:08-07:17/9 19:45	07:40 08:09-08:55/46 18:25	07:46 08:51-09:59/68 15:01-15:20/19 16:13 08:28-08:49/21	08:40 09:22-10:20/58 15:38 14:05-14:37/32
13	04:43 05:24-05:46/22 21:59 06:00-06:34/34	05:39 06:26-07:21/55 21:01	06:41 07:10-07:13/3 19:42	07:42 08:11-08:55/44 18:22	07:48 08:52-10:00/68 15:01-15:21/20 16:11 08:28-08:49/21	08:41 09:23-10:20/57 15:38 14:05-14:38/33
14	04:45 05:24-05:46/22 21:58 06:00-06:34/34	05:41 06:26-07:21/55 20:59	06:43 07:49-08:10/21 19:39	07:44 08:13-08:55/42 18:20	07:51 08:52-10:00/68 15:01-15:21/20 16:09 08:28-08:49/21	08:43 09:24-10:21/57 15:38 14:05-14:38/33
15	04:46 05:25-05:47/22 21:56 06:00-06:35/35	05:43 06:26-07:22/56 20:57	06:45 07:47-08:13/26 19:37	07:46 08:16-08:56/40 18:17	07:53 08:52-10:00/68 15:00-15:21/21 16:08 08:29-08:50/21	08:44 09:25-10:22/57 15:38 14:06-14:38/33
16	04:48 05:25-05:46/21 21:55 06:00-06:35/35	05:45 06:26-07:22/56 20:54	06:47 07:45-08:15/30 19:34	07:48 08:18-08:56/38 18:14	07:55 08:53-10:01/68 15:01-15:22/21 16:06 08:31-08:49/18	08:45 09:26-10:23/57 15:38 14:06-14:39/33
17	04:49 05:26-05:47/21 21:54 05:59-06:35/36	05:47 06:27-07:22/55 20:52	06:49 07:43-08:17/34 19:31	07:50 08:20-08:55/35 18:12	07:57 08:54-10:03/69 15:01-15:22/21 16:04 08:33-08:49/16	08:45 09:27-10:24/57 15:38 14:06-14:40/34
18	04:51 05:27-05:46/19 21:52 06:00-06:36/36	05:49 06:27-07:22/55 20:49	06:51 07:42-08:18/36 19:29	07:52 08:22-08:55/33 18:09	07:59 08:55-10:06/71 15:01-15:22/21 16:02 08:36-08:49/13	08:46 09:28-10:25/57 15:38 14:07-14:40/33
19	04:53 05:28-05:45/17 21:51 05:59-06:36/37	05:51 06:27-07:21/54 20:47	06:53 07:41-08:18/37 19:26	07:55 08:25-08:55/30 18:07	08:01 08:56-10:07/71 15:02-15:22/20 16:01 08:38-08:49/11	08:47 09:28-10:26/58 15:38 14:06-14:40/34
20	04:54 05:30-05:46/16 21:49 06:00-06:37/37	05:53 06:27-07:21/54 20:45	06:55 07:40-08:19/39 19:23	07:57 08:27-08:54/27 18:04	08:03 08:56-10:08/72 15:03-15:21/18 15:59 08:40-08:48/8	08:48 09:41-10:26/45 14:07-14:41/34 15:39 09:29-09:40/11
21	04:56 05:31-05:45/14 21:48 05:59-06:36/37	05:55 06:28-07:21/53 20:42	06:57 07:39-08:19/40 19:20	07:59 08:29-08:52/23 18:02	08:05 08:57-10:08/71 15:03-15:19/16 15:58 08:43-08:48/5	08:48 09:42-10:27/45 14:08-14:42/34 15:39 09:30-09:41/11
22	04:58 05:33-05:44/11 21:46 05:59-06:37/38	05:57 06:29-07:21/52 20:40	06:59 07:39-08:19/40 19:18	08:01 08:31-08:51/20 17:59	08:07 08:59-10:10/71 15:04-15:18/14 15:56 08:45-08:47/2	08:49 09:42-10:27/45 14:08-14:42/34 15:40 09:30-09:41/11
23	04:59 05:35-05:44/9 06:50-06:54/4 21:45 05:59-06:38/37	05:59 06:31-07:20/49 20:37	07:01 07:38-08:19/41 19:15	08:03 08:34-08:50/16 17:57	08:09 09:00-10:11/71 15:55 15:05-15:16/11	08:49 09:43-10:28/45 14:09-14:43/34 15:40 09:31-09:42/11
24	05:01 05:36-05:42/6 06:46-06:59/13 21:43 05:59-06:37/38	06:01 06:33-07:19/46 20:35	07:03 07:38-08:26/48 19:12	08:05 10:05-10:16/11 17:55	08:11 09:01-10:11/70 15:53 15:06-15:14/8	08:50 09:43-10:28/45 14:09-14:43/34 15:41 09:31-09:42/11
25	05:03 05:38-05:41/3 06:44-07:01/17 21:41 06:00-06:37/37	06:03 06:38-06:41/3 20:32	07:05 07:38-08:29/51 19:10	07:07 09:01-09:19/18 16:52	08:13 09:03-10:12/69 15:52 15:07-15:12/5	08:50 09:31-10:28/57 15:41 14:10-14:43/33
26	05:05 05:59-06:37/38 21:39 06:42-07:03/21	06:05 06:43-07:18/35 20:29	07:07 07:38-08:31/53 19:07	07:09 08:59-09:23/24 16:50	08:15 09:04-10:12/68 15:51 15:09-15:11/2	08:50 09:31-10:28/57 15:42 14:10-14:43/33
27	05:06 06:00-06:37/37 21:37 06:41-07:04/23	06:07 06:43-07:17/34 20:27	07:09 07:38-08:33/55 19:04	07:12 08:57-09:24/27 16:47	08:17 09:07-10:14/67 15:49	08:51 09:31-10:28/57 15:43 14:11-14:44/33
28	05:08 06:00-06:37/37 21:36 06:40-07:06/26	06:09 06:42-07:14/32 20:24	07:11 07:40-08:33/53 19:02	08:55-09:25/30 16:45	08:19 09:09-10:14/65 15:48	08:51 09:31-10:28/57 15:44 14:11-14:44/33
29	05:10 06:00-06:36/36 21:34 06:39-07:07/28	06:11 06:43-07:18/35 20:22	07:13 07:42-08:34/52 18:59	07:16 08:54-09:27/33 16:43	08:21 09:11-10:15/64 15:47 14:15-14:26/11	08:51 09:31-10:28/57 15:45 14:12-14:45/33
30	05:12 06:00-06:36/36 21:32 06:38-07:08/30	06:13 06:43-07:21/38 20:19	07:15 07:44-08:34/50 18:56	07:18 08:53-09:30/37 16:41	08:22 09:11-10:15/64 15:46 14:14-14:28/14	08:51 09:31-10:28/57 15:46 14:13-14:45/32
31	05:14 06:37-07:09/32 21:30 05:59-06:36/37	06:15 06:45-07:22/37 20:17	07:20 08:52-09:34/42 16:38	08:52-09:34/42 16:24	08:52-09:34/42 16:24	08:51 09:31-10:28/57 15:47 14:14-14:46/32
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1792	1732	1301	1222	2578	2762

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
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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:
10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C15 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (89)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January	February	March	April	May	June
1	08:51 14:07-14:23/16 15:48 13:54-13:59/5	08:15 08:45-09:26/41 16:45	07:11 07:37-07:49/12 17:48 15:40-16:12/32	06:49 07:14-07:48/34 19:53	05:33 20:55	04:36 05:17-05:32/15 21:52 20:30-20:43/13
2	08:50 14:07-14:23/16 15:49	08:13 08:43-09:24/41 16:47	07:08 07:34-07:49/15 17:50 15:41-16:10/29	06:46 07:11-07:46/35 19:55	05:30 20:57	04:35 05:16-05:33/17 21:54 20:31-20:42/11
3	08:50 14:08-14:24/16 15:51	08:11 08:41-09:16/35 16:50	07:06 07:32-07:50/18 17:52 15:44-16:09/25	06:43 07:09-07:44/35 19:57	05:28 20:59	04:34 05:15-05:34/19 21:55 20:32-20:41/9
4	08:50 14:09-14:23/14 15:52	08:09 08:39-09:14/35 16:52 15:54-16:00/6	07:03 07:29-07:49/20 17:54 15:46-16:06/20	06:41 07:06-07:42/36 19:59	05:26 21:01	04:33 05:15-05:36/21 21:56 20:34-20:40/6
5	08:49 14:11-14:24/13 15:53	08:07 08:37-09:14/37 16:54 15:48-16:04/16	07:00 17:20-17:27/7 15:49-16:02/13 17:56 07:26-07:48/22	06:38 07:03-07:40/37 20:01	05:23 21:04	04:32 05:14-05:37/23 21:58
6	08:49 14:12-14:23/11 15:55	08:05 08:34-09:13/39 16:56 15:46-16:07/21	06:58 17:18-17:30/12 17:58 07:24-07:48/24	06:35 07:01-07:39/38 20:03	05:21 21:06	04:31 05:13-05:38/25 21:59
7	08:48 14:13-14:22/9 15:56	08:03 08:34-09:13/39 16:59 15:44-16:09/25	06:55 17:16-17:32/16 18:00 07:21-07:47/26	06:33 06:58-07:35/37 20:05	05:19 21:08	04:30 05:14-05:39/25 22:00
8	08:47 14:16-14:21/5 15:58	08:00 08:34-09:13/39 17:01 15:43-16:12/29	06:53 17:14-17:34/20 18:03 07:18-07:45/27	06:30 06:58-07:25/27 20:07	05:17 20:31-20:36/5 21:10	04:29 05:13-05:39/26 22:01
9	08:47 16:00	07:58 08:34-09:12/38 17:03 15:41-16:12/31	06:50 17:14-17:36/22 18:05 07:16-07:42/26	06:28 06:57-07:22/25 20:10	05:15 20:29-20:38/9 21:12	04:29 05:12-05:39/27 22:02
10	08:46 16:01	07:56 08:34-09:11/37 17:05 15:40-16:14/34	06:47 17:13-17:36/23 18:07 07:16-07:36/20	06:25 06:56-07:19/23 20:12	05:13 20:27-20:40/13 21:14	04:28 05:12-05:40/28 22:03
11	08:45 16:03	07:54 08:35-09:10/35 17:08 15:39-16:14/35	06:45 17:12-17:35/23 18:09 07:16-07:35/19	06:22 06:56-07:19/23 20:14	05:11 20:26-20:41/15 21:16	04:27 05:13-05:41/28 22:04
12	08:44 16:05	07:52 08:35-09:07/32 17:10 15:38-16:16/38	06:42 17:11-17:35/24 18:11 07:17-07:34/17	06:20 06:56-07:18/22 20:16	05:09 20:25-20:43/18 21:18	04:27 05:12-05:41/29 22:05
13	08:43 16:06	07:49 08:36-09:02/26 17:12 15:38-16:17/39	06:39 17:12-17:35/23 18:13 07:17-07:33/16	06:17 06:57-07:17/20 20:18	05:07 20:24-20:45/21 21:20	04:26 05:12-05:42/30 22:06
14	08:42 09:18-09:20/2 16:08	07:47 08:36-08:59/23 17:14 15:37-16:17/40	06:37 17:12-17:34/22 18:15 07:18-07:30/12	06:14 06:57-07:15/18 20:20	05:05 20:24-20:47/23 21:21	04:26 05:12-05:43/31 22:06
15	08:41 09:16-09:21/5 16:10	07:45 08:37-08:56/19 17:17 15:37-16:18/41	06:34 17:12-17:33/21 18:17 07:22-07:28/6	06:12 06:59-07:14/15 20:22	05:03 20:24-20:47/23 21:23	04:26 05:12-05:43/31 22:07
16	08:40 09:15-09:23/8 16:12	07:43 08:38-08:54/16 17:19 15:36-16:18/42	06:32 17:13-17:33/20 18:20	06:09 07:00-07:12/12 20:24	05:01 20:23-20:47/24 21:25	04:26 05:12-05:43/31 22:08
17	08:39 09:14-09:25/11 16:14	07:40 08:41-08:52/11 17:21 15:36-16:19/43	06:29 17:14-17:31/17 18:22	06:07 07:03-07:09/6 20:26	04:59 20:24-20:48/24 21:27	04:25 05:12-05:43/31 22:08
18	08:37 09:12-09:25/13 16:16	07:38 08:45-08:46/1 17:23 15:35-16:18/43	06:26 17:15-17:28/13 18:24	06:04 20:28	04:57 20:23-20:47/24 21:29	04:25 05:12-05:43/31 22:09
19	08:36 09:10-09:26/16 16:18	07:35 15:36-16:19/43 17:26	06:24 17:19-17:26/7 18:26	06:02 20:30	04:55 20:23-20:47/24 21:31	04:25 05:12-05:44/32 22:09
20	08:35 09:09-09:27/18 16:20	07:33 15:35-16:18/43 17:28	06:21 18:28	05:59 20:32	04:53 20:23-20:48/25 21:33	04:25 05:13-05:45/32 22:10
21	08:33 09:07-09:27/20 16:22	07:31 15:36-16:19/43 17:30	06:18 06:43-06:44/1 18:30	05:57 20:35	04:52 20:23-20:47/24 21:35	04:25 05:13-05:45/32 22:10
22	08:32 09:05-09:28/23 16:24	07:28 15:35-16:18/43 17:32	06:15 06:41-06:48/7 18:32	05:54 20:37	04:50 20:24-20:47/23 21:36	04:26 05:13-05:45/32 22:10
23	08:30 09:03-09:28/25 16:26	07:26 15:36-16:18/42 17:34	06:13 06:38-06:49/11 18:34	05:52 20:39	04:48 20:25-20:48/23 21:38	04:26 05:13-05:45/32 22:10
24	08:29 09:02-09:29/27 16:28	07:23 15:36-16:17/41 17:37	06:10 06:35-06:50/15 18:36	05:49 20:41	04:47 20:24-20:47/23 21:40	04:26 05:14-05:46/32 22:10
25	08:27 09:00-09:29/29 16:30	07:21 15:36-16:16/40 17:39	06:07 06:33-06:51/18 18:38	05:47 20:43	04:45 20:25-20:47/22 21:42	04:26 05:14-05:45/31 22:10
26	08:25 08:58-09:29/31 16:32	07:18 07:45-07:46/1 17:41 15:37-16:16/39	06:05 06:30-06:51/21 18:40	05:44 20:45	04:44 20:26-20:47/21 21:43	04:27 05:14-05:45/31 22:10
27	08:24 08:56-09:29/33 16:34	07:16 07:42-07:47/5 17:43 15:38-16:15/37	06:02 06:27-06:51/24 18:43	05:42 20:47	04:42 20:26-20:46/20 21:45	04:27 05:15-05:45/30 22:10
28	08:22 08:54-09:29/35 16:36	07:13 07:40-07:49/9 17:45 15:39-16:14/35	05:59 06:25-06:51/26 18:45	05:40 20:49	04:41 20:26-20:45/19 21:46	04:28 05:15-05:46/31 22:10
29	08:20 08:52-09:29/37 16:39		06:57 07:22-07:50/28 19:47	05:37 20:51	04:40 20:27-20:45/18 21:48	04:29 05:15-05:45/30 22:10
30	08:18 08:50-09:28/38 16:41		06:54 07:19-07:49/30 19:49	05:35 20:53	04:38 05:23-05:26/3 21:49	04:29 05:16-05:46/30 22:09
31	08:17 08:48-09:28/40 16:43		06:51 07:17-07:49/32 19:51		04:37 05:19-05:30/11 21:51	22:09 21:27-21:29/2
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	516	1448	882	443	487	977

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/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:
10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C15 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (89)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July		August		September		October		November		December	
1	04:30	05:17-05:46/29	05:16	20:36-20:53/17	06:17	06:55-07:18/23	07:17	17:51-18:15/24	07:22	08:04-08:41/37	08:24	
	22:09	21:27-21:28/1	21:28		20:14		18:54	07:56-08:13/17	16:36	15:10-15:43/33	15:45	
2	04:31	05:16-05:45/29	05:18	20:37-20:51/14	06:19	06:55-07:18/23	07:19	17:51-18:15/24	07:25	08:03-08:42/39	08:26	
	22:08		21:26		20:11		18:51	07:55-08:14/19	16:34	15:11-15:42/31	15:44	
3	04:32	05:17-05:45/28	05:20	20:38-20:49/11	06:21	06:55-07:20/25	07:21	17:51-18:14/23	07:27	08:04-08:43/39	08:27	
	22:08		21:24		20:09		18:48	07:54-08:14/20	16:32	15:13-15:41/28	15:43	
4	04:33	05:18-05:45/27	05:21	20:40-20:48/8	06:23	06:55-07:22/27	07:23	17:51-18:13/22	07:29	08:04-08:43/39	08:29	14:00-14:05/5
	22:07		21:22		20:06		18:46	07:53-08:17/24	16:29	15:14-15:39/25	15:42	
5	04:34	05:19-05:45/26	05:23	20:41-20:45/4	06:25	06:55-07:32/37	07:25	17:51-18:12/21	07:31	08:04-08:43/39	08:31	13:59-14:07/8
	22:07		21:19		20:03		18:43	07:54-08:21/27	16:27	15:16-15:36/20	15:42	
6	04:35	05:19-05:44/25	05:25		06:27	06:57-07:35/38	07:27	17:52-18:09/17	07:33	08:07-08:44/37	08:32	13:58-14:09/11
	22:06		21:17		20:01		18:40	07:56-08:22/26	16:25	15:19-15:34/15	15:41	
7	04:36	05:20-05:44/24	05:27		06:29	06:58-07:35/37	07:29	17:52-18:06/14	07:36	08:09-08:44/35	08:34	13:57-14:10/13
	22:05		21:15		19:58		18:38	07:58-08:23/25	16:23	15:25-15:28/3	15:40	
8	04:37	05:21-05:43/22	05:29		06:31	07:00-07:36/36	07:32	17:54-18:04/10 16:28-16:34/6	07:38	08:12-08:48/36	08:35	13:57-14:11/14
	22:04	20:42-20:46/4	21:13		19:55		18:35	08:00-08:23/23	16:21		15:40	
9	04:38	05:22-05:42/20	05:31		06:33	07:02-07:37/35	07:34	17:57-18:01/4 16:22-16:39/17	07:40	08:14-08:55/41	08:36	13:57-14:12/15
	22:03	20:40-20:48/8	21:11		19:53		18:32	08:03-08:24/21	16:19		15:39	
10	04:39	05:23-05:41/18	05:33		06:35	07:04-07:39/35	07:36	08:05-08:24/19	07:42	08:16-08:58/42	08:38	13:57-14:13/16
	22:02	20:39-20:49/10	21:08		19:50		18:30	16:19-16:42/23	16:17		15:39	
11	04:41	05:25-05:41/16	05:35		06:37	07:06-07:40/34	07:38	08:07-08:24/17	07:44	08:19-08:59/40	08:39	13:57-14:14/17
	22:01	20:38-20:50/12	21:06		19:47		18:27	16:17-16:44/27	16:15		15:39	13:45-13:49/4
12	04:42	05:27-05:39/12	05:37		06:39	07:08-07:40/32	07:40	08:09-08:23/14	07:46	08:21-08:59/38	08:40	13:57-14:14/17
	22:00	20:38-20:52/14	21:04		19:45		18:25	16:14-16:45/31	16:13		15:38	13:43-13:51/8
13	04:43	05:29-05:37/8	05:39		06:41	07:10-07:41/31	07:42	08:11-08:22/11	07:48	08:24-09:01/37	08:41	13:58-14:15/17
	21:59	20:37-20:53/16	21:01		19:42		18:22	16:13-16:46/33	16:11		15:38	13:44-13:53/9
14	04:45	20:36-20:53/17	05:41		06:43	07:12-07:41/29	07:44	08:13-08:21/8	07:51	08:26-09:01/35	08:42	13:58-14:16/18
	21:58		20:59		19:39		18:19	16:11-16:47/36	16:09		15:38	13:43-13:54/11
15	04:46	20:35-20:54/19	05:43		06:45	07:14-07:41/27	07:46	08:16-08:20/4	07:53	08:28-09:01/33	08:44	13:58-14:16/18
	21:56		20:57		19:37		18:17	16:10-16:48/38	16:08		15:38	13:43-13:55/12
16	04:48	20:35-20:55/20	05:45		06:47	07:16-07:40/24	07:48	16:09-16:48/39	07:55	08:31-09:02/31	08:44	13:58-14:17/19 10:17-10:22/5
	21:55		20:54		19:34		18:14		16:06		15:38	13:43-13:55/12
17	04:49	20:35-20:55/20	05:47		06:49	07:18-07:40/22	07:50	16:08-16:48/40	07:57	08:33-09:02/29	08:45	13:59-14:18/19 10:17-10:23/6
	21:54		20:52		19:31		18:12		16:04		15:38	13:44-13:56/12
18	04:51	20:35-20:56/21	05:49		06:51	07:20-07:39/19	07:52	16:07-16:49/42	07:59	08:36-09:03/27	08:46	13:59-14:18/19 10:17-10:24/7
	21:52		20:49		19:29		18:09		16:02		15:38	13:44-13:57/13
19	04:53	20:34-20:56/22	05:51		06:53	07:22-07:38/16	07:54	16:06-16:48/42	08:01	08:38-09:03/25	08:47	13:59-14:18/19 10:17-10:24/7
	21:51		20:47		19:26		18:07		16:01		15:38	13:44-13:57/13
20	04:54	20:34-20:57/23	05:53		06:55	07:24-07:36/12	07:57	16:07-16:49/42	08:03	08:40-09:03/23	08:48	14:00-14:19/19 10:17-10:25/8
	21:49		20:45		19:23		18:04		15:59		15:39	13:44-13:58/14
21	04:56	20:34-20:57/23	05:55		06:57	07:26-07:34/8	07:59	16:06-16:49/43	08:05	08:42-09:02/20	08:48	14:00-14:20/20 10:18-10:26/8
	21:48		20:42		19:20		18:02		15:58		15:39	13:45-13:59/14
22	04:58	20:34-20:58/24	05:57		06:59	07:28-07:31/3	08:01	16:05-16:49/44	08:07	08:45-09:03/18	08:49	14:00-14:20/20 10:18-10:26/8
	21:46		20:40		19:18		17:59		15:56		15:39	13:45-13:59/14
23	04:59	20:33-20:57/24	05:59		07:01		08:03	16:06-16:49/43	08:09	08:47-09:03/16	08:49	14:00-14:20/20 10:19-10:27/8
	21:44		20:37		19:15		17:57		15:55		15:40	13:45-13:59/14
24	05:01	20:34-20:58/24	06:01		07:03		08:05	09:13-09:19/6	08:11	08:49-09:02/13	08:50	14:02-14:21/19 10:20-10:27/7
	21:43		20:35		19:12		17:55	16:06-16:49/43	15:53		15:41	13:46-14:00/14
25	05:03	20:33-20:57/24	06:03		07:05	17:59-18:10/11	07:07	08:09-08:22/13	08:13	08:51-09:02/11	08:50	14:02-14:21/19 10:20-10:27/7
	21:41		20:32		19:10		16:52	15:05-15:48/43	15:52		15:41	13:47-14:00/13
26	05:05	20:34-20:58/24	06:05	07:05-07:12/7	07:07	17:56-18:12/16	07:09	08:08-08:25/17	08:15	08:53-09:01/8	08:50	14:02-14:22/20 10:21-10:27/6
	21:39		20:29		19:07		16:50	15:06-15:48/42	15:51		15:42	13:47-14:00/13
27	05:06	20:34-20:58/24	06:07	07:02-07:15/13	07:09	17:54-18:13/19	07:12	08:06-08:25/19	08:17	08:56-09:01/5	08:51	14:03-14:22/19 10:22-10:27/5
	21:37		20:27		19:04		16:47	15:06-15:47/41	15:49		15:43	13:48-14:00/12
28	05:08	20:34-20:57/23	06:09	06:59-07:15/16	07:11	17:53-18:14/21	07:14	08:05-08:29/24	08:19	08:58-09:00/2	08:51	14:04-14:22/18 10:24-10:26/2
	21:36		20:24		19:02		16:45	15:06-15:46/40	15:48		15:44	13:49-14:01/12
29	05:10	20:34-20:57/23	06:11	06:58-07:16/18	07:13	17:52-18:14/22	07:16	08:05-08:34/29	08:20		08:51	14:04-14:23/19
	21:34		20:22		18:59	08:00-08:10/10	16:43	15:08-15:46/38	15:47		15:45	13:50-14:01/11
30	05:12	20:35-20:57/22	06:13	06:57-07:17/20	07:15	17:52-18:15/23	07:18	08:04-08:37/33	08:22		08:51	14:05-14:23/18
	21:32		20:19		18:56	07:58-08:12/14	16:41	15:08-15:45/37	15:46		15:46	13:51-14:01/10
31	05:14	20:36-20:55/19	06:15	06:56-07:17/21			07:20	08:03-08:39/36			08:51	14:05-14:23/18
	21:30		20:17				16:38	15:09-15:44/35			15:47	13:52-14:00/8
Potential sun hours	529		469		385		324		247		216	
Sum of minutes with flicker	745		149		709		1476		950		801	

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C16 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (90)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January			February			March	April			May			June		
1	08:51	12:55-13:41/46	15:48	08:15	16:45	17:47	07:11	06:49	19:53	20:55	05:33	06:36-06:53/17	21:52	04:36	20:04-20:39/35	
2	08:50	12:55-13:40/45	15:49	08:13	16:47	17:50	07:08	06:46	19:55	20:57	05:30	06:39-06:51/12	21:54	04:35	20:04-20:38/34	
3	08:50	12:56-13:42/46	15:51	08:11	16:50	17:52	07:06	06:43	19:57	20:59	05:28	06:43-06:46/3	21:55	04:34	20:04-20:38/34	
4	08:50	12:56-13:42/46	15:52	08:09	16:52	17:54	07:03	06:41	19:59	21:01	05:26		21:56	04:33	20:04-20:38/34	
5	08:49	12:56-13:42/46	15:53	08:07	16:54	17:56	07:00	06:38	20:01	21:03	05:23		21:58	04:32	20:06-20:39/33	
6	08:49	12:57-13:43/46	15:55	08:05	16:56	17:58	06:58	06:35	20:03	21:06	05:21	20:15-20:25/10	21:59	04:31	20:06-20:38/32	
7	08:48	12:57-13:43/46	15:56	08:02	16:14-16:23/9	18:00	06:55	06:33	20:05	21:08	05:19	20:12-20:28/16	22:00	04:30	20:06-20:38/32	
8	08:47	12:58-13:44/46	15:58	08:00	16:10-16:26/16	18:03	06:53	06:30	20:07	21:10	05:17	20:10-20:30/20	22:01	04:29	20:07-20:38/31	
9	08:47	12:58-13:44/46	15:59	07:58	16:09-16:28/19	18:05	06:50	06:27	20:10	21:12	05:15	20:08-20:32/24	22:02	04:29	20:07-20:38/31	
10	08:46	12:59-13:44/45	16:01	07:56	16:08-16:30/22	18:07	06:47	06:25	20:12	21:14	05:13	20:07-20:33/26	22:03	04:28	20:08-20:38/30	
11	08:45	13:00-13:45/45	16:03	07:54	16:06-16:31/25	18:09	06:45	06:22	20:14	21:16	05:11	20:06-20:34/28	22:04	04:27	20:07-20:38/31	
12	08:44	12:59-13:44/45	16:05	07:52	16:06-16:32/26	18:11	06:42	06:20	20:16	21:18	05:08	20:05-20:34/29	22:05	04:27	20:08-20:38/30	
13	08:43	13:00-13:45/45	16:06	07:49	16:05-16:33/28	18:13	06:39	06:17	20:18	21:20	05:06	20:04-20:35/31	22:06	04:26	20:09-20:38/29	
14	08:42	13:01-13:45/44	16:08	07:47	16:04-16:33/29	18:15	06:37	06:14	20:20	21:21	05:05	20:04-20:36/32	22:06	04:26	20:09-20:39/30	
15	08:41	13:01-13:45/44	16:10	07:45	16:04-16:34/30	18:17	06:34	06:12	20:22	21:23	05:03	20:03-20:36/33	22:07	04:26	20:09-20:38/29	
16	08:40	13:02-13:46/44	16:12	07:42	16:04-16:34/30	18:20	06:31	06:09	20:24	21:25	05:01	20:02-20:37/35	22:08	04:26	20:09-20:38/29	
17	08:39	13:02-13:45/43	16:14	07:40	16:04-16:34/30	18:22	06:29	06:07	20:26	21:27	04:59	20:03-20:38/35	22:08	04:25	20:10-20:38/28	
18	08:37	13:03-13:46/43	16:16	07:38	16:03-16:34/31	18:24	06:26	06:04	20:28	21:29	04:57	20:02-20:38/36	22:09	04:25	20:10-20:38/28	
19	08:36	13:04-13:45/41	16:18	07:35	16:04-16:34/30	18:26	06:23	06:02	20:30	21:31	04:55	20:01-20:37/36	22:09	04:25	20:10-20:39/29	
20	08:35	13:04-13:45/41	16:20	07:33	16:04-16:33/29	18:28	06:21	05:59	20:32	21:33	04:53	20:02-20:38/36	22:09	04:25	20:11-20:39/28	
21	08:33	13:06-13:45/39	16:22	07:31	16:05-16:33/28	18:30	06:18	05:57	20:34	21:35	04:52	20:01-20:38/37	22:10	04:25	20:12-20:40/28	
22	08:32	13:06-13:45/39	16:24	07:28	16:05-16:32/27	18:32	06:15	05:54	20:37	21:36	04:50	20:02-20:38/36	22:10	04:26	20:12-20:40/28	
23	08:30	13:07-13:44/37	16:26	07:26	16:05-16:31/26	18:34	06:13	05:52	20:39	21:38	04:48	20:02-20:39/37	22:10	04:26	20:11-20:40/29	
24	08:29	13:08-13:43/35	16:28	07:23	16:07-16:30/23	18:36	06:10	05:49	20:41	21:40	04:47	20:02-20:38/36	22:10	04:26	20:11-20:39/28	
25	08:27	13:09-13:43/34	16:30	07:21	16:08-16:28/20	18:38	06:07	05:47	20:43	21:41	04:45	20:02-20:39/37	22:10	04:26	20:12-20:40/28	
26	08:25	13:12-13:43/31	16:32	07:18	16:11-16:26/15	18:40	06:05	05:44	20:45	21:43	04:44	20:02-20:39/37	22:10	04:27	20:12-20:40/28	
27	08:24	13:13-13:42/29	16:34	07:16	16:14-16:22/8	18:43	06:02	05:42	20:47	21:45	04:42	20:02-20:38/36	22:10	04:27	20:12-20:41/29	
28	08:22	13:15-13:40/25	16:36	07:13	17:45	18:45	05:59	05:40	20:49	21:46	04:41	20:02-20:38/36	22:10	04:28	20:12-20:41/29	
29	08:20	13:18-13:38/20	16:39			19:47	06:57	05:37	20:51	21:48	04:40	20:03-20:39/36	22:10	04:29	20:12-20:42/30	
30	08:18	13:20-13:35/15	16:41			19:49	06:54	05:35	20:53	21:49	04:38	20:03-20:39/36	22:09	04:29	20:12-20:42/30	
31	08:16	13:26-13:29/3	16:43			19:51	06:51			21:51	04:37	20:03-20:39/36				
	Potential sun hours	235		266		366		426		508				528		904
	Sum of minutes with flicker	1200		501		0		459		859						

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C16 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (90)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July	August	September	October	November	December
1	04:30 20:12-20:42/30 22:09	05:16 20:15-20:44/29 21:28	06:17 20:14 20:14	07:17 18:54	07:22 15:38-15:59/21 16:36	08:24 12:42-13:27/45 15:45
2	04:31 20:12-20:43/31 22:08	05:18 20:16-20:44/28 21:26	06:19 20:11 20:11	07:19 18:51	07:25 15:39-15:57/18 16:34	08:26 12:41-13:27/46 15:44
3	04:32 20:12-20:43/31 22:08	05:20 20:18-20:43/25 21:24	06:21 20:09 20:09	07:21 18:48	07:27 15:40-15:55/15 16:32	08:27 12:41-13:27/46 15:43
4	04:33 20:12-20:44/32 22:07	05:21 20:19-20:41/22 21:21	06:23 20:06 20:06	07:23 18:46	07:29 15:44-15:52/8 16:29	08:29 12:42-13:28/46 15:42
5	04:34 20:12-20:44/32 22:06	05:23 20:20-20:39/19 21:19	06:25 20:03 20:03	07:25 18:43	07:31 16:27	08:31 12:43-13:28/45 15:42
6	04:35 20:12-20:45/33 22:06	05:25 20:22-20:37/15 21:17	06:27 20:01 20:01	07:27 18:40	07:33 16:25	08:32 12:43-13:29/46 15:41
7	04:36 20:12-20:45/33 22:05	05:27 20:26-20:33/7 21:15	06:29 19:58 19:58	07:29 18:38	07:35 16:23	08:34 12:43-13:29/46 15:40
8	04:37 20:12-20:45/33 22:04	05:29 21:13	06:31 19:55 19:55	07:31 18:35	07:38 16:21	08:35 12:44-13:30/46 15:40
9	04:38 20:12-20:46/34 22:03	05:31 21:11	06:33 19:53 19:53	07:34 18:32	07:40 16:19	08:36 12:44-13:30/46 15:39
10	04:39 20:12-20:46/34 22:02	05:33 06:51-06:58/7 21:08	06:35 19:50 19:50	07:36 18:30	07:42 16:17	08:38 12:45-13:31/46 15:39
11	04:41 20:11-20:46/35 22:01	05:35 06:46-07:00/14 21:06	06:37 19:47 19:47	07:38 18:27	07:44 12:57-13:02/5 16:15	08:39 12:45-13:31/46 15:39
12	04:42 20:12-20:47/35 22:00	05:37 06:44-07:02/18 21:04	06:39 19:45 19:45	07:40 18:25	07:46 12:51-13:07/16 16:13	08:40 12:45-13:31/46 15:38
13	04:43 20:12-20:47/35 21:59	05:39 06:43-07:03/20 21:01	06:41 19:42 19:42	07:42 18:22	07:48 12:49-13:10/21 16:11	08:41 12:46-13:32/46 15:38
14	04:45 20:11-20:47/36 21:58	05:41 06:42-07:04/22 20:59	06:43 19:39 19:39	07:44 18:19	07:51 12:47-13:12/25 16:09	08:42 12:47-13:32/45 15:38
15	04:46 20:11-20:47/36 21:56	05:43 06:41-07:05/24 20:57	06:45 19:37 19:37	07:46 16:44-16:56/12 18:17	07:53 12:45-13:14/29 16:08	08:43 12:47-13:33/46 15:38
16	04:48 20:12-20:48/36 21:55	05:45 06:40-07:06/26 20:54	06:47 19:34 19:34	07:48 16:42-16:59/17 18:14	07:55 12:45-13:16/31 16:06	08:44 12:47-13:33/46 15:38
17	04:49 20:11-20:48/37 21:54	05:47 06:39-07:07/28 20:52	06:49 19:31 19:31	07:50 16:40-17:01/21 18:12	07:57 12:43-13:17/34 16:04	08:45 12:48-13:33/45 15:38
18	04:51 20:12-20:48/36 21:52	05:49 06:38-07:06/28 20:49	06:51 19:28 19:28	07:52 16:38-17:02/24 18:09	07:59 12:42-13:17/35 16:02	08:46 12:49-13:34/45 15:38
19	04:53 20:11-20:48/37 21:51	05:51 06:37-07:06/29 20:47	06:53 19:26 19:26	07:54 16:36-17:02/26 18:07	08:01 12:42-13:19/37 16:01	08:47 12:48-13:34/46 15:38
20	04:54 20:12-20:49/37 21:49	05:53 06:37-07:06/29 20:44	06:55 19:23 19:23	07:57 16:36-17:03/27 18:04	08:03 12:42-13:20/38 15:59	08:48 12:49-13:35/46 15:39
21	04:56 20:11-20:48/37 21:48	05:55 06:37-07:06/29 20:42	06:57 19:20 19:20	07:59 16:35-17:04/29 18:02	08:05 12:41-13:20/39 15:58	08:48 12:49-13:34/45 15:39
22	04:58 20:12-20:49/37 21:46	05:57 06:37-07:06/29 20:40	06:59 19:18 19:18	08:01 16:34-17:04/30 17:59	08:07 12:41-13:22/41 15:56	08:49 12:50-13:35/45 15:39
23	04:59 20:12-20:48/36 21:44	05:59 06:37-07:06/29 20:37	07:01 19:15 19:15	08:03 16:34-17:04/30 17:57	08:09 12:41-13:22/41 15:55	08:49 12:50-13:36/46 15:40
24	05:01 20:12-20:48/36 21:43	06:01 06:37-07:05/28 20:34	07:03 19:12 19:12	08:05 16:34-17:04/30 17:55	08:11 12:40-13:23/43 15:53	08:50 12:51-13:37/46 15:41
25	05:03 20:12-20:48/36 21:41	06:03 06:38-07:05/27 20:32	07:05 19:10 19:10	07:07 15:33-16:04/31 16:52	08:13 12:40-13:23/43 15:52	08:50 12:52-13:37/45 15:41
26	05:05 20:12-20:48/36 21:39	06:05 06:38-07:04/26 20:29	07:07 19:07 19:07	07:09 15:33-16:03/30 16:50	08:15 12:40-13:24/44 15:51	08:50 12:52-13:37/45 15:42
27	05:06 20:13-20:48/35 21:37	06:07 06:38-07:02/24 20:27	07:09 19:04 19:04	07:12 15:34-16:03/29 16:47	08:17 12:40-13:24/44 15:49	08:51 12:52-13:38/46 15:43
28	05:08 20:13-20:47/34 21:35	06:09 06:39-07:00/21 20:24	07:11 19:02 19:02	07:14 15:34-16:03/29 16:45	08:19 12:41-13:26/45 15:48	08:51 12:53-13:38/45 15:44
29	05:10 20:14-20:47/33 21:34	06:11 06:41-06:59/18 20:22	07:13 18:59 18:59	07:16 15:35-16:03/28 16:43	08:20 12:41-13:26/45 15:47	08:51 12:53-13:39/46 15:45
30	05:12 20:14-20:46/32 21:32	06:13 06:43-06:56/13 20:19	07:15 18:56 18:56	07:18 15:35-16:01/26 16:40	08:22 12:41-13:26/45 15:46	08:51 12:54-13:40/46 15:46
31	05:14 20:15-20:46/31 21:30	06:15 06:45-06:53/8 20:16		07:20 15:36-16:00/24 16:38		08:51 12:54-13:39/45 15:47
Potential sun hours	529	469	384	324	248	216
Sum of minutes with flicker	1066	642	0	443	763	1415

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C17 - Siemens Gamesa SG 6.6-170 6600 170.0 IO! hub: 165.0 m (TOT: 250.0 m) (91)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January			February			March			April			May			June		
1	08:51	14:07-14:16/9		08:15	07:11		07:11			06:49	07:14-07:31/17		05:32	07:22-08:44/82		04:36	07:36-08:25/49	
	15:48	10:50-11:33/43		16:45	17:47		17:47			19:53			20:55	06:30-07:12/42		21:53	05:10-05:28/18	
2	08:50	14:09-14:16/7		08:13	07:08	07:34-07:43/9				06:46	08:00-08:22/22		05:30	07:22-08:44/82		04:34	07:36-08:24/48	
	15:49	10:51-11:33/42		16:47	17:50					19:55	07:11-07:30/19		20:57	06:30-07:12/42		21:54	05:09-05:29/20	
3	08:50	14:11-14:14/3		08:11	07:06	07:32-07:47/15				06:43	07:55-08:26/31		05:28	07:22-08:44/82		04:33	07:37-08:24/47	
	15:50	10:51-11:33/42		16:49	17:52					19:57	07:10-07:29/19		20:59	06:30-07:12/42		21:55	05:08-05:29/21	
4	08:50	10:51-11:34/43		08:09	07:03	07:29-07:48/19				06:41	07:52-08:30/38		05:25	07:22-08:44/82		04:32	07:38-08:23/45	
	15:52			16:52	17:54					19:59	07:11-07:29/18		21:02	06:31-07:11/40		21:57	05:07-05:29/22	
5	08:49	10:52-11:35/43		08:07	07:00	07:27-07:49/22				06:38	07:49-08:32/43		05:23	07:23-08:43/80		04:31	07:39-08:23/44	
	15:53			16:54	17:56					20:01	07:11-07:28/17		21:04	06:31-07:11/40		21:58	05:07-05:30/23	
6	08:49	10:52-11:35/43		08:05	06:58	07:26-07:51/25				06:35	07:47-08:35/48		05:21	07:23-08:43/80		04:31	07:40-08:22/42	
	15:55			16:56	17:58					20:03	07:12-07:27/15		21:06	06:31-07:10/39		21:59	05:06-05:30/24	
7	08:48	10:53-11:35/42		08:03	06:55	07:25-07:51/26				06:33	07:44-08:36/52		05:19	07:23-08:42/79		04:30	07:40-08:21/41	
	15:56			16:58	18:00					20:05	07:13-07:25/12		21:08	06:32-07:10/38		22:00	05:05-05:30/25	
8	08:47	10:53-11:35/42		08:00	06:53	07:24-07:51/27				06:30	07:41-08:37/56		05:17	07:23-08:42/79		04:29	07:42-08:21/39	
	15:58			17:01	18:02					20:07	07:14-07:22/8		21:10	06:32-07:09/37		22:01	05:05-05:30/25	
9	08:47	10:54-11:36/42		07:58	06:50	07:24-07:52/28				06:27	07:40-08:39/59		05:14	07:23-08:41/78		04:28	07:42-08:20/38	
	15:59			17:03	18:05					20:10			21:12	06:33-07:08/35		22:02	05:04-05:30/26	
10	08:46	10:54-11:36/42		07:56	06:47	07:23-07:51/28				06:25	07:38-08:40/62		05:12	07:23-08:40/77		04:28	07:43-08:20/37	
	16:01			17:05	18:07					20:12			21:14	06:33-07:07/34		22:03	05:04-05:31/27	
11	08:45	10:55-11:36/41		07:54	06:45	07:23-07:51/28				06:22	07:37-08:41/64		05:10	07:23-08:40/77		04:27	07:43-08:19/36	
	16:02			17:07	18:09					20:14			21:16	06:34-07:06/32		22:04	05:03-05:30/27	
12	08:44	10:56-11:37/41		07:52	06:42	07:23-07:51/28				06:19	07:35-08:42/67		05:08	07:23-08:39/76		04:26	07:44-08:19/35	
	16:04			17:10	18:11					20:16	06:45-06:49/4		21:18	06:35-07:05/30		22:05	05:03-05:31/28	
13	08:43	10:56-11:36/40		07:49	06:39	07:23-07:50/27				06:17	07:34-08:43/69		05:06	07:24-08:38/74		04:26	07:45-08:19/34	
	16:06			17:12	18:13					20:18	06:43-06:51/8		21:20	06:36-07:03/27		22:06	05:03-05:31/28	
14	08:42	10:57-11:37/40		07:47	06:37	07:23-07:49/26				06:14	07:32-08:43/71		05:04	07:24-08:37/73		04:26	07:45-08:18/33	
	16:08			17:14	18:15					20:20	06:40-06:57/17		21:22	06:38-07:03/25		22:07	05:02-05:31/29	
15	08:41	10:58-11:37/39		07:45	06:34	07:23-07:48/25				06:12	07:32-08:44/72		05:02	07:25-08:37/72		04:25	07:46-08:17/31	
	16:10			17:16	18:17					20:22	06:38-07:03/25		21:24	06:39-07:01/22		22:07	05:02-05:31/29	
16	08:40	10:58-11:37/39		07:42	06:31	07:25-07:47/22				06:09	07:30-08:44/74		05:00	07:25-08:36/71		04:25	07:47-08:17/30	
	16:12			17:19	18:19					20:24	06:35-07:05/30		21:25	06:41-06:59/18		22:08	05:02-05:31/29	
17	08:39	10:59-11:37/38		07:40	06:29	07:25-07:45/20				06:07	07:30-08:45/75		04:58	07:25-08:35/70		04:25	07:47-08:17/30	
	16:13			17:21	18:22					20:26	06:33-07:07/34		21:27	06:43-06:56/13		22:08	05:02-05:32/30	
18	08:37	11:00-11:36/36		07:38	06:26	07:27-07:43/16				06:04	07:28-08:45/77		04:57	07:26-08:35/69		04:25	07:48-08:17/29	
	16:15			17:23	18:24					20:28	06:31-07:08/37		21:29	06:47-06:52/5		22:09	05:02-05:32/30	
19	08:36	11:00-11:36/36		07:35	06:23	07:30-07:40/10				06:02	07:28-08:46/78		04:55	07:26-08:34/68		04:25	07:48-08:17/29	
	16:17			17:25	18:26					20:30	06:31-07:10/39		21:31			22:09	05:02-05:32/30	
20	08:35	11:02-11:36/34		07:33	06:21					05:59	07:26-08:45/79		04:53	07:27-08:34/67		04:25	07:48-08:17/29	
	16:19			17:28	18:28					20:32	06:31-07:10/39		21:33			22:10	05:02-05:32/30	
21	08:33	11:03-11:35/32		07:31	06:18					05:56	07:26-08:46/80		04:51	07:28-08:33/65		04:25	07:48-08:17/29	
	16:21			17:30	18:30					20:35	06:31-07:11/40		21:35			22:10	05:02-05:32/30	
22	08:32	11:04-11:34/30		07:28	06:15					05:54	07:25-08:45/80		04:50	07:29-08:33/64		04:25	07:49-08:18/29	
	16:23			17:32	18:32					20:37	06:32-07:12/40		21:36			22:10	05:03-05:33/30	
23	08:30	11:05-11:33/28		07:26	06:13					05:51	07:25-08:46/81		04:48	07:29-08:31/62		04:25	07:49-08:18/29	
	16:26			17:34	18:34					20:39	06:32-07:12/40		21:38			22:10	05:03-05:33/30	
24	08:29	11:07-11:33/26		07:23	06:10					05:49	07:25-08:46/81		04:46	07:30-08:31/61		04:26	07:49-08:18/29	
	16:28			17:36	18:36					20:41	06:32-07:13/41		21:40	05:19-05:23/4		22:10	05:03-05:33/30	
25	08:27	11:09-11:32/23		07:21	06:07					05:47	07:23-08:45/82		04:45	07:31-08:30/59		04:26	07:50-08:19/29	
	16:30			17:39	18:38					20:43	06:32-07:13/41		21:42	05:18-05:24/6		22:10	05:04-05:34/30	
26	08:25	11:11-11:30/19		07:18	06:05					05:44	07:23-08:45/82		04:43	07:31-08:29/58		04:27	07:49-08:19/30	
	16:32			17:41	18:40					20:45	06:31-07:13/42		21:43	05:17-05:25/8		22:10	05:04-05:33/29	
27	08:24	11:14-11:27/13		07:16	06:02					05:42	07:23-08:45/82		04:42	07:32-08:28/56		04:27	07:49-08:20/31	
	16:34			17:43	18:42					20:47	06:31-07:13/42		21:45	05:15-05:25/10		22:10	05:05-05:34/29	
28	08:22			07:13	05:59	06:24-06:27/3				05:39	07:23-08:46/83		04:41	07:32-08:28/56		04:28	07:49-08:21/32	
	16:36			17:45	18:45					20:49	06:31-07:13/42		21:47	05:14-05:26/12		22:10	05:05-05:34/29	
29	08:20				06:57	07:22-07:29/7				05:37	07:22-08:45/83		04:39	07:33-08:27/54		04:28	07:49-08:22/33	
	16:38				19:47					20:51	06:30-07:12/42		21:48	05:13-05:27/14		22:10	05:06-05:34/28	
30	08:18				06:54	07:19-07:30/11				05:35	07:22-08:44/82		04:38	07:34-08:27/53		04:29	07:48-08:22/34	
	16:41				19:49					20:53	06:30-07:12/42		21:50	05:12-05:28/16		22:09	05:07-05:35/28	
31	08:17				06:51	07:16-07:30/14							04:37	07:35-08:26/51				
	16:43				19:51								21:51	05:11-05:28/17				
Potential sun hours	235			266						426			508			529		
Sum of minutes with flicker	998		0	436		2723		2805		1865								

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C17 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (91)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July		August		September		October		November		December	
1	04:30	07:48-08:23/35	05:15	07:34-08:50/76	06:17	07:36-08:40/64	07:17	08:02-08:30/28	07:22		08:24	10:37-11:18/41
	22:09	05:07-05:35/28	21:28	06:45-07:15/30	20:14		18:53		16:36		15:45	
2	04:31	07:48-08:24/36	05:17	07:34-08:50/76	06:19	07:37-08:39/62	07:19	08:02-08:30/28	07:25		08:26	10:38-11:19/41
	22:08	05:08-05:35/27	21:26	06:44-07:17/33	20:11		18:51		16:34		15:44	
3	04:31	07:47-08:25/38	05:19	07:33-08:51/78	06:21	07:38-08:37/59	07:21	08:01-08:30/29	07:27		08:28	10:38-11:20/42
	22:08	05:09-05:35/26	21:24	06:44-07:18/34	20:09		18:48		16:31		15:43	
4	04:32	07:47-08:26/39	05:21	07:32-08:51/79	06:23	07:38-08:34/56	07:23	08:01-08:29/28	07:29		08:29	10:37-11:19/42
	22:07	05:10-05:36/26	21:22	06:43-07:19/36	20:06	07:12-07:20/8	18:45		16:29		15:42	
5	04:33	07:47-08:27/40	05:23	07:32-08:51/79	06:25	07:40-08:32/52	07:25	08:01-08:28/27	07:31		08:31	10:38-11:20/42
	22:07	05:11-05:36/25	21:19	06:41-07:18/37	20:03	07:09-07:21/12	18:43		16:27		15:41	
6	04:34	07:46-08:28/42	05:25	07:32-08:52/80	06:27	07:42-08:30/48	07:27	08:01-08:27/26	07:33		08:32	10:39-11:21/42
	22:06	05:12-05:36/24	21:17	06:41-07:19/38	20:01	07:07-07:22/15	18:40		16:25		15:41	
7	04:35	07:46-08:29/43	05:27	07:32-08:52/80	06:29	07:44-08:27/43	07:29	08:01-08:26/25	07:36		08:34	10:38-11:21/43
	22:05	05:13-05:36/23	21:15	06:41-07:20/39	19:58	07:06-07:23/17	18:38		16:23		15:40	
8	04:37	07:45-08:30/45	05:29	07:32-08:53/81	06:31	07:46-08:24/38	07:31	08:02-08:25/23	07:38		08:35	10:39-11:22/43
	22:04	05:14-05:36/22	21:13	06:40-07:20/40	19:55	07:05-07:23/18	18:35		16:21		15:39	
9	04:38	07:45-08:31/46	05:31	07:32-08:53/81	06:33	07:49-08:21/32	07:33	08:04-08:24/20	07:40		08:37	14:01-14:03/2
	22:03	05:15-05:36/21	21:11	06:40-07:21/41	19:53	07:04-07:24/20	18:32		16:19		15:39	10:40-11:23/43
10	04:39	07:44-08:31/47	05:33	07:31-08:52/81	06:35	07:53-08:16/23	07:36	08:05-08:22/17	07:42		08:38	13:59-14:05/6
	22:02	05:16-05:36/20	21:08	06:39-07:20/41	19:50	07:04-07:23/19	18:30		16:17		15:39	10:40-11:23/43
11	04:40	07:44-08:32/48	05:35	07:31-08:53/82	06:37	08:01-08:07/6	07:38	08:07-08:19/12	07:44		08:39	13:58-14:06/8
	22:01	05:17-05:36/19	21:06	06:38-07:20/42	19:47	07:06-07:23/17	18:27		16:15		15:38	10:40-11:23/43
12	04:42	07:43-08:33/50	05:37	07:31-08:53/82	06:39	07:08-07:22/14	07:40		07:46		08:40	13:58-14:08/10
	22:00	05:19-05:37/18	21:04	06:38-07:21/43	19:45		18:24		16:13		15:38	10:41-11:24/43
13	04:43	07:43-08:35/52	05:39	07:31-08:53/82	06:41	07:10-07:21/11	07:42		07:48		08:42	13:58-14:09/11
	21:59	05:20-05:36/16	21:01	06:38-07:21/43	19:42		18:22		16:11		15:38	10:41-11:24/43
14	04:45	07:42-08:35/53	05:41	07:31-08:53/82	06:43	07:12-07:20/8	07:44		07:51		08:43	13:57-14:10/13
	21:58	05:21-05:36/15	20:59	06:38-07:21/43	19:39		18:19		16:09		15:38	10:42-11:24/42
15	04:46	07:41-08:36/55	05:43	07:31-08:53/82	06:45	07:14-07:18/4	07:46		07:53	10:46-10:59/13	08:44	13:58-14:10/12
	21:57	05:22-05:35/13	20:57	06:38-07:21/43	19:37		18:17		16:07		15:38	10:42-11:25/43
16	04:47	07:42-08:38/56	05:45	07:30-08:52/82	06:47		07:48		07:55	10:44-11:03/19	08:45	13:58-14:11/13
	21:55	05:24-05:35/11	20:54	06:38-07:20/42	19:34		18:14		16:06		15:38	10:42-11:25/43
17	04:49	07:41-08:38/57	05:47	07:30-08:52/82	06:49		07:50		07:57	10:42-11:05/23	08:46	13:58-14:12/14
	21:54	05:25-05:34/9	20:52	06:38-07:19/41	19:31		18:12		16:04		15:38	10:43-11:26/43
18	04:51	07:40-08:39/59	05:49	07:30-08:52/82	06:51		07:52		07:59	10:41-11:07/26	08:46	13:58-14:13/15
	21:52	05:27-05:34/7	20:49	06:38-07:19/41	19:28		18:09		16:02		15:38	10:44-11:26/42
19	04:52	07:40-08:40/60	05:51	07:30-08:51/81	06:53		07:54		08:01	10:40-11:08/28	08:47	13:59-14:13/14
	21:51	05:28-05:33/5	20:47	06:38-07:18/40	19:26		18:07		16:01		15:38	10:44-11:27/43
20	04:54	07:39-08:41/62	05:53	07:30-08:51/81	06:55		07:57		08:03	10:39-11:09/30	08:48	13:59-14:13/14
	21:49	05:30-05:32/2	20:45	06:37-07:17/40	19:23		18:04		15:59		15:38	10:44-11:27/43
21	04:55	07:39-08:42/63	05:55	07:31-08:51/80	06:57		07:59		08:05	10:38-11:10/32	08:48	14:00-14:14/14
	21:48		20:42	06:37-07:17/40	19:20		18:02		15:57		15:39	10:45-11:28/43
22	04:57	07:39-08:43/64	05:57	07:31-08:50/79	06:59		08:01		08:07	10:38-11:12/34	08:49	14:00-14:14/14
	21:46		20:40	06:36-07:16/40	19:18		17:59		15:56		15:39	10:45-11:28/43
23	04:59	07:38-08:43/65	05:59	07:31-08:50/79	07:01		08:03		08:09	10:37-11:13/36	08:50	14:01-14:15/14
	21:45		20:37	06:35-07:15/40	19:15		17:57		15:54		15:40	10:46-11:29/43
24	05:01	07:38-08:45/67	06:01	07:32-08:49/77	07:03	08:14-08:21/7	08:05		08:11	10:37-11:13/36	08:50	14:01-14:15/14
	21:43		20:35	06:35-07:13/38	19:12		17:54		15:53		15:40	10:46-11:29/43
25	05:02	07:36-08:45/69	06:03	07:31-08:48/77	07:05	08:10-08:24/14	07:07		08:13	10:36-11:14/38	08:50	14:01-14:16/15
	21:41		20:32	06:35-07:11/36	19:10		16:52		15:52		15:41	10:47-11:29/42
26	05:04	07:36-08:46/70	06:05	07:31-08:47/76	07:07	08:08-08:26/18	07:09		08:15	10:37-11:16/39	08:51	14:02-14:16/14
	21:39	06:55-07:05/10	20:29	06:35-07:09/34	19:07		16:50		15:50		15:42	10:47-11:29/42
27	05:06	07:36-08:47/71	06:07	07:32-08:46/74	07:09	08:07-08:29/22	07:12		08:17	10:37-11:16/39	08:51	14:02-14:16/14
	21:37	06:53-07:08/15	20:27	06:37-07:07/30	19:04		16:47		15:49		15:42	10:47-11:30/43
28	05:08	07:35-08:47/72	06:09	07:33-08:45/72	07:11	08:05-08:29/24	07:14		08:19	10:37-11:17/40	08:51	14:03-14:16/13
	21:36	06:50-07:10/20	20:24	06:39-07:04/25	19:01		16:45		15:48		15:43	10:48-11:30/42
29	05:10	07:35-08:48/73	06:11	07:33-08:44/71	07:13	08:04-08:30/26	07:16		08:21	10:37-11:17/40	08:51	14:04-14:16/12
	21:34	06:49-07:12/23	20:22	06:41-06:52/11	18:59		16:43		15:47		15:44	10:48-11:31/43
30	05:12	07:35-08:49/74	06:13	07:34-08:43/69	07:15	08:03-08:30/27	07:18		08:22	10:37-11:18/41	08:51	14:05-14:17/12
	21:32	06:48-07:13/25	20:19	06:43-06:51/8	18:56		16:40		15:46		15:45	10:49-11:32/43
31	05:13	07:34-08:49/75	06:15	07:35-08:41/66			07:20				08:51	14:07-14:17/10
	21:30	06:46-07:14/28	20:16	06:45-06:48/3			16:38				15:46	10:50-11:32/42
Potential sun hours	529		469		385		324		247		216	
Sum of minutes with flicker	2204		3524		784		263		514		1597	

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C2 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (76)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 08:59-09:29/30 16:45	07:11 07:55-08:18/23 17:47	06:49 19:53	05:32 20:55	04:36 21:52	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 08:31-08:59/28 16:36	08:24 15:45
2	08:50 15:49	08:13 08:59-09:29/30 16:47	07:08 07:56-08:16/20 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:31 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 08:30-08:59/29 16:34	08:26 15:44
3	08:50 15:50	08:11 08:59-09:30/31 16:49	07:05 07:57-08:16/19 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 08:30-09:00/30 16:31	08:27 15:43
4	08:50 15:52	08:09 08:59-09:30/31 16:52	07:03 07:58-08:13/15 17:54	06:41 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 08:29-09:00/31 16:29	08:29 15:42
5	08:49 15:53	08:07 09:00-09:31/31 16:54	07:00 08:01-08:10/9 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 08:29-09:00/31 16:27	08:31 15:41
6	08:49 15:55	08:05 08:59-09:30/31 16:56	06:58 17:58	06:35 20:03	05:21 21:06	04:31 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 08:29-09:01/32 16:25	08:32 15:41
7	08:48 15:56	08:02 09:00-09:30/30 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	07:35 08:29-09:00/31 16:23	08:34 15:40
8	08:47 15:58	08:00 09:00-09:30/30 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 08:30-09:01/31 16:21	08:35 15:39
9	08:47 15:59	07:58 09:00-09:29/29 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 08:34-08:46/12 18:32	07:40 08:30-09:00/30 16:19	08:36 15:39
10	08:46 16:01	07:56 09:01-09:29/28 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 08:32-08:49/17 18:30	07:42 08:30-09:00/30 16:17	08:38 15:39
11	08:45 16:03	07:54 09:03-09:29/26 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 08:31-08:50/19 18:27	07:44 08:31-09:00/29 16:15	08:39 15:38
12	08:44 16:04	07:52 09:03-09:27/24 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 08:29-08:51/22 18:24	07:46 08:31-08:59/28 16:13	08:40 15:38
13	08:43 16:06	07:49 09:05-09:26/21 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 08:28-08:51/23 18:22	07:48 08:32-08:59/27 16:11	08:41 15:38
14	08:42 16:08	07:47 09:06-09:24/18 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 08:27-08:51/24 18:19	07:51 08:33-08:58/25 16:09	08:43 15:38
15	08:41 16:10	07:45 09:08-09:22/14 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 08:27-08:52/25 18:17	07:53 08:33-08:57/24 16:07	08:44 15:38
16	08:40 16:12	07:42 09:13-09:16/3 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 08:26-08:52/26 18:14	07:55 08:35-08:57/22 16:06	08:45 15:38
17	08:39 16:13	07:40 08:08-08:12/4 17:21	06:29 18:22	06:07 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 08:26-08:51/25 18:12	07:57 08:36-08:56/20 16:04	08:45 15:38
18	08:37 16:15	07:38 08:05-08:14/9 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 08:26-08:51/25 18:09	07:59 08:39-08:55/16 16:02	08:46 15:38
19	08:36 16:17	07:35 08:03-08:17/14 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 08:27-08:51/24 18:07	08:01 08:40-08:53/13 16:01	08:47 15:38
20	08:35 16:19	07:33 08:00-08:17/17 17:28	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	07:57 08:27-08:50/23 18:04	08:03 08:43-08:50/7 15:59	08:48 15:38
21	08:33 16:21	07:31 07:58-08:19/21 17:30	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 08:29-08:49/20 18:02	08:05 15:57	08:48 15:39
22	08:32 09:08-09:15/7 16:23	07:28 07:55-08:19/24 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:18	08:01 08:31-08:47/16 17:59	08:07 15:56	08:49 15:39
23	08:30 09:05-09:18/13 16:26	07:26 07:55-08:20/25 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 08:34-08:46/12 17:57	08:09 15:54	08:49 15:40
24	08:29 09:05-09:21/16 16:28	07:23 07:55-08:20/25 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 08:36-08:44/8 17:54	08:11 15:53	08:50 15:40
25	08:27 09:03-09:23/20 16:30	07:21 07:54-08:19/25 17:39	06:07 18:38	05:47 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:10	07:07 07:38-07:40/2 16:52	08:13 15:52	08:50 15:41
26	08:25 09:02-09:24/22 16:32	07:18 07:54-08:20/26 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 08:41-08:49/8 16:50	08:15 15:50	08:50 15:42
27	08:24 09:02-09:25/23 16:34	07:16 07:54-08:19/25 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 08:37-08:52/15 16:47	08:17 15:49	08:51 15:42
28	08:22 09:01-09:27/26 16:36	07:13 07:55-08:19/24 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 08:35-08:54/19 16:45	08:19 15:48	08:51 15:43
29	08:20 09:00-09:27/27 16:38		05:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 08:34-08:56/22 16:43	08:21 15:47	08:51 15:44
30	08:18 09:00-09:28/28 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	07:18 08:32-08:57/25 16:40	08:22 15:46	08:51 15:45
31	08:16 09:00-09:29/29 16:43		05:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 08:31-08:57/26 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Sum of minutes with flicker	211	646	86	0	0	0	0	0	0	438	514	0

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C3 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (77)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 15:35-15:56/21 16:45	07:10 16:22-16:53/31 17:47	06:48 19:53	05:32 20:55	04:35 21:52
2	08:50 15:49	08:12 15:36-15:56/20 16:47	07:08 16:22-16:53/31 17:49	06:46 19:55	05:30 20:57	04:34 21:54
3	08:50 15:50	08:11 15:37-15:56/19 16:49	07:05 16:22-16:51/29 17:51	06:43 19:57	05:27 20:59	04:33 21:55
4	08:50 15:51	08:09 15:38-15:55/17 16:51	07:03 16:24-16:51/27 17:54	06:40 19:59	05:25 21:01	04:32 21:56
5	08:49 15:53	08:06 15:38-15:53/15 16:54	07:00 16:24-16:50/26 17:56	06:38 20:01	05:23 21:03	04:31 21:58
6	08:49 15:54	08:04 15:41-15:52/11 16:56	06:58 16:25-16:48/23 17:58	06:35 20:03	05:21 21:05	04:30 21:59
7	08:48 15:56	08:02 15:44-15:50/6 16:58	06:55 16:27-16:46/19 18:00	06:32 20:05	05:19 21:07	04:29 22:00
8	08:47 15:57	08:00 17:00	06:52 16:29-16:43/14 18:02	06:30 20:07	05:16 21:09	04:29 22:01
9	08:47 15:59	07:58 17:03	06:50 16:34-16:37/3 18:04	06:27 20:09	05:14 21:11	04:28 22:02
10	08:46 16:01	07:56 17:05	06:47 17:10-17:38/28 18:07	06:25 20:11	05:12 21:13	04:27 22:03
11	08:45 16:02	07:54 17:07	06:44 17:10-17:40/30 18:09	06:22 20:13	05:10 21:15	04:27 22:04
12	08:44 16:04	07:51 17:09	06:42 17:09-17:41/32 18:11	06:19 20:16	05:08 21:17	04:26 22:05
13	08:43 16:06	07:49 17:12	06:39 17:08-17:41/33 18:13	06:17 20:18	05:06 21:19	04:26 22:06
14	08:42 16:08	07:47 17:14	06:37 17:09-17:42/33 18:15	06:14 20:20	05:04 21:21	04:25 22:06
15	08:41 16:09	07:45 17:16	06:34 17:09-17:41/32 18:17	06:12 20:22	05:02 21:23	04:25 22:07
16	08:40 16:11	07:42 16:37-16:40/3 17:18	06:31 17:09-17:41/32 18:19	06:09 20:24	05:00 21:25	04:25 22:08
17	08:38 16:13	07:40 16:32-16:46/14 17:21	06:29 17:11-17:41/30 18:21	06:06 20:26	04:58 21:27	04:25 22:08
18	08:37 16:15	07:38 16:29-16:48/19 17:23	06:26 17:12-17:40/28 18:23	06:04 20:28	04:56 21:29	04:25 22:09
19	08:36 16:17	07:35 16:28-16:50/22 17:25	06:23 17:13-17:39/26 18:26	06:01 20:30	04:55 21:31	04:25 22:09
20	08:35 15:37-15:40/3 16:19	07:33 16:26-16:51/25 17:27	06:21 17:18-17:38/20 18:28	05:59 20:32	04:53 21:33	04:25 22:09
21	08:33 15:37-15:43/6 16:21	07:30 16:25-16:51/26 17:30	06:18 17:19-17:36/17 18:30	05:56 20:34	04:51 21:34	04:25 22:10
22	08:32 15:36-15:46/10 16:23	07:28 16:24-16:53/29 17:32	06:15 17:21-17:33/12 18:32	05:54 20:36	04:49 21:36	04:25 22:10
23	08:30 15:35-15:48/13 16:25	07:25 16:23-16:53/30 17:34	06:12 17:24-17:29/5 18:34	05:51 20:38	04:48 21:38	04:25 22:10
24	08:29 15:34-15:50/16 16:27	07:23 16:23-16:54/31 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10
25	08:27 15:34-15:52/18 16:30	07:20 16:22-16:54/32 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10
26	08:25 15:34-15:54/20 16:32	07:18 16:22-16:54/32 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10
27	08:24 15:33-15:55/22 16:34	07:15 16:22-16:54/32 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 15:33-15:55/22 16:36	07:13 16:22-16:53/31 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10
29	08:20 15:34-15:56/22 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09
30	08:18 15:34-15:56/22 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09
31	08:16 15:34-15:56/22 16:43		06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	196	435	649	0	0	0

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C3 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (77)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July	August	September	October	November	December
1	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	17:48-18:20/32 16:36	07:22 15:45
2	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	17:47-18:19/32 16:33	07:24 15:44
3	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	17:47-18:17/30 16:31	07:27 15:43
4	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	17:48-18:15/27 16:29	07:29 15:42
5	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:43	17:08-17:19/11 17:49-18:12/23	07:31 16:27
6	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	17:05-17:22/17 17:49-18:09/20	07:33 16:25
7	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	17:02-17:23/21 17:50-18:06/16	07:35 16:23
8	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	17:00-17:24/24 17:51-18:03/12	07:37 16:21
9	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	16:58-17:25/27 17:54-18:01/7	07:40 16:19
10	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	16:57-17:25/28 16:17	07:42 16:17
11	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	16:56-17:26/30 16:15	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:44	07:40 18:24	16:56-17:27/31 16:13	07:46 16:13
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	16:55-17:27/32 16:11	07:48 16:11
14	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	16:54-17:26/32 16:09	07:50 16:09
15	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	16:54-17:26/32 16:07	07:53 16:07
16	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	16:54-17:25/31 16:05	07:55 16:05
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	16:54-17:26/32 16:04	07:57 16:04
18	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	16:54-17:25/31 16:02	07:59 16:02
19	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	16:54-17:24/30 16:00	08:01 16:00
20	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	16:55-17:23/28 15:59	08:03 15:59
21	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	16:56-17:22/26 15:57	08:05 15:57
22	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	16:57-17:21/24 15:56	08:07 15:56
23	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	16:58-17:19/21 15:54	08:09 15:54
24	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	17:00-17:18/18 15:53	08:11 15:53
25	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	16:03-16:14/11 15:51	08:13 15:51
26	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	17:53-18:23/30 15:50	08:15 15:50
27	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	17:51-18:23/32 15:49	08:17 15:49
28	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	17:50-18:22/32 15:48	08:19 15:48
29	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:42	17:49-18:22/33 15:47	08:20 15:47
30	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	17:48-18:21/33 15:46	08:22 15:46
31	05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	0	0	258	736	310	0

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C4 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (78)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January		February		March	April		May		June	
1	08:51	10:28-10:40/12	08:15	07:11		06:49		05:32		04:36	05:28-06:03/35
	15:48	09:30-09:31/1	16:45	17:47		19:53		20:55		21:52	
2	08:50	10:29-10:40/11	08:13	07:08		06:46		05:30		04:35	05:27-06:02/35
	15:49	09:30-09:32/2	16:47	17:50		19:55		20:57		21:54	
3	08:50	10:30-10:40/10	08:11	07:05		06:43		05:28		04:33	05:26-06:03/37
	15:50	09:29-09:33/4	16:49	17:52		19:57		20:59		21:55	
4	08:50	10:31-10:38/7	08:09	07:03		06:41		05:25		04:32	05:26-06:03/37
	15:52	09:28-09:33/5	16:52	17:54		19:59		21:01		21:56	
5	08:49	10:35-10:37/2	08:07	07:00		06:38		05:23		04:31	05:26-06:05/39
	15:53	09:28-09:35/7	16:54	17:56		20:01		21:03		21:58	
6	08:49	09:27-09:36/9	08:05	06:58		06:35		05:21		04:31	05:25-06:05/40
	15:55		16:56	17:58		20:03		21:06		21:59	
7	08:48	09:26-09:37/11	08:02	06:55	07:21-07:22/1	06:33		05:19	05:50-05:53/3	04:30	05:25-06:05/40
	15:56		16:58	18:00		20:05		21:08		22:00	
8	08:47	09:25-09:38/13	08:00	06:53	07:18-07:25/7	06:30	06:55-06:59/4	05:17	05:46-05:57/11	04:29	05:25-06:06/41
	15:58		17:01	18:02		20:07		21:10		22:01	
9	08:47	09:24-09:38/14	07:58	06:50	07:16-07:27/11	06:27	06:53-07:02/9	05:15	05:44-05:59/15	04:28	05:25-06:06/41
	15:59		17:03	18:05		20:09		21:12		22:02	
10	08:46	09:23-09:39/16	07:56	06:47	07:13-07:28/15	06:25	06:50-07:03/13	05:12	05:42-06:00/18	04:28	05:25-06:07/42
	16:01		17:05	18:07		20:12		21:14		22:03	
11	08:45	09:22-09:40/18	07:54	06:45	07:10-07:28/18	06:22	06:48-07:05/17	05:10	05:41-06:01/20	04:27	05:24-06:07/43
	16:03		17:07	18:09		20:14		21:16		22:04	
12	08:44	09:21-09:41/20	07:52	06:42	07:08-07:29/21	06:20	06:45-07:05/20	05:08	05:39-06:02/23	04:27	05:25-06:07/42
	16:04		17:10	18:11		20:16		21:18		22:05	
13	08:43	09:19-09:41/22	07:49	06:39	07:05-07:29/24	06:17	06:43-07:06/23	05:06	05:39-06:02/23	04:26	05:25-06:08/43
	16:06		17:12	18:13		20:18		21:20		22:06	
14	08:42	09:19-09:42/23	07:47	06:37	07:02-07:28/26	06:14	06:40-07:05/25	05:04	05:37-06:04/27	04:26	05:24-06:08/44
	16:08		17:14	18:15		20:20		21:21		22:06	
15	08:41	09:20-09:43/23	07:45	06:34	06:59-07:27/28	06:12	06:38-07:06/28	05:02	05:35-06:04/29	04:25	05:24-06:08/44
	16:10		17:16	18:17		20:22		21:23		22:07	
16	08:40	09:20-09:43/23	07:42	06:31	06:57-07:27/30	06:09	06:35-07:05/30	05:00	05:33-06:04/31	04:25	05:25-06:09/44
	16:12		17:19	18:19		20:24		21:25		22:08	
17	08:39	09:20-09:44/24	07:40	06:29	06:54-07:26/32	06:07	06:33-07:05/32	04:59	05:33-06:05/32	04:25	05:25-06:09/44
	16:14		17:21	18:22		20:26		21:27		22:08	
18	08:37	09:20-09:44/24	07:38	06:26	06:51-07:24/33	06:04	06:31-07:04/33	04:57	05:31-06:05/34	04:25	05:25-06:09/44
	16:15		17:23	18:24		20:28		21:29		22:09	
19	08:36	09:20-09:44/24	07:35	06:23	06:49-07:22/33	06:02	06:31-07:03/32	04:55	05:30-06:04/34	04:25	05:25-06:09/44
	16:17		17:25	18:26		20:30		21:31		22:09	
20	08:35	09:21-09:44/23	07:33	06:21	06:46-07:18/32	05:59	06:30-07:02/32	04:53	05:30-06:05/35	04:25	05:25-06:10/45
	16:19		17:28	18:28		20:32		21:33		22:10	
21	08:33	09:22-09:44/22	07:31	06:18	06:43-07:15/32	05:56	06:30-07:01/31	04:51	05:29-06:04/35	04:25	05:25-06:10/45
	16:21		17:30	18:30		20:34		21:35		22:10	
22	08:32	09:22-09:44/22	07:28	06:15	06:43-07:15/32	05:54	06:30-06:59/29	04:50	05:29-06:05/36	04:25	05:26-06:11/45
	16:24		17:32	18:32		20:37		21:36		22:10	
23	08:30	09:23-09:44/21	07:26	06:13	06:43-07:12/29	05:52	06:30-06:56/26	04:48	05:28-06:04/36	04:25	05:26-06:11/45
	16:26		17:34	18:34		20:39		21:38		22:10	
24	08:29	09:24-09:44/20	07:23	06:10	06:42-07:09/27	05:49	06:31-06:53/22	04:47	05:28-06:04/36	04:26	05:26-06:10/44
	16:28		17:36	18:36		20:41		21:40		22:10	
25	08:27	09:25-09:44/19	07:21	06:07	06:43-07:03/20	05:47	06:31-06:52/21	04:45	05:29-06:05/36	04:26	05:27-06:11/44
	16:30		17:39	18:38		20:43		21:42		22:10	
26	08:25	09:26-09:43/17	07:18	06:05	06:44-07:03/19	05:44	06:32-06:50/18	04:44	05:29-06:05/36	04:27	05:27-06:11/44
	16:32		17:41	18:40		20:45		21:43		22:10	
27	08:24	09:27-09:42/15	07:16	06:02	06:45-07:00/15	05:42	06:33-06:48/15	04:42	05:28-06:04/36	04:27	05:28-06:11/43
	16:34		17:43	18:42		20:47		21:45		22:10	
28	08:22	09:29-09:41/12	07:13	05:59	06:52-06:56/4	05:39	06:36-06:45/9	04:41	05:28-06:04/36	04:28	05:27-06:11/44
	16:36		17:45	18:45	06:49-06:51/2	20:49		21:46		22:10	
29	08:20	09:32-09:38/6		06:57		05:37		04:39	05:28-06:04/36	04:28	05:28-06:11/43
	16:38			19:47		20:51		21:48		22:10	
30	08:18			06:54		05:35		04:38	05:28-06:03/35	04:29	05:29-06:12/43
	16:41			19:49		20:53		21:49		22:09	
31	08:16			06:51				04:37	05:28-06:03/35		
	16:43			19:51				21:51			
Potential sun hours	235		266	366		426		508		529	1264
Sum of minutes with flicker		502		0	491		469		728		

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C4 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (78)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July		August		September		October		November		December	
1	04:30	05:28-06:11/43	05:15	05:50-06:12/22	06:17	06:47-07:04/17	07:17	07:46-08:08/22	07:22		08:24	09:04-09:22/18
	22:09		21:28		20:14		18:53		16:36		15:45	
2	04:31	05:29-06:11/42	05:17	05:51-06:11/20	06:19	06:49-07:02/13	07:19	07:48-08:07/19	07:25		08:26	09:06-09:22/16
	22:08		21:26		20:11		18:51		16:34		15:44	
3	04:31	05:30-06:11/41	05:19	05:53-06:10/17	06:21	06:51-07:00/9	07:21	07:50-08:06/16	07:27		08:27	09:08-09:23/15
	22:08		21:24		20:09		18:48		16:31		15:43	
4	04:32	05:30-06:11/41	05:21	05:55-06:09/14	06:23	06:53-06:57/4	07:23	07:52-08:05/13	07:29		08:29	09:09-09:22/13
	22:07		21:21		20:06		18:45		16:29		15:42	
5	04:33	05:31-06:11/40	05:23	05:56-06:05/9	06:25		07:25	07:54-08:03/9	07:31		08:31	09:11-09:22/11
	22:07		21:19		20:03		18:43		16:27		15:41	
6	04:34	05:32-06:11/39	05:25		06:27		07:27	07:56-08:00/4	07:33		08:32	09:13-09:22/9
	22:06		21:17		20:01		18:40		16:25		15:41	
7	04:36	05:32-06:11/39	05:27		06:29		07:29		07:35		08:34	09:14-09:21/7
	22:05		21:15		19:58		18:38		16:23		15:40	
8	04:37	05:33-06:11/38	05:29		06:31		07:31		07:38		08:35	10:20-10:26/6
	22:04		21:13		19:55		18:35		16:21		15:40	09:16-09:22/6
9	04:38	05:34-06:11/37	05:31		06:33		07:33		07:40		08:36	10:18-10:28/10
	22:03		21:11		19:53		18:32		16:19		15:39	09:18-09:22/4
10	04:39	05:34-06:10/36	05:33		06:35		07:36		07:42		08:38	10:18-10:29/11
	22:02		21:08		19:50		18:30		16:17		15:39	09:19-09:21/2
11	04:40	05:35-06:10/35	05:35		06:37		07:38		07:44		08:39	10:18-10:30/12
	22:01		21:06		19:47		18:27		16:15		15:38	09:20-09:21/1
12	04:42	05:36-06:12/36	05:37		06:39		07:40		07:46		08:40	10:18-10:32/14
	22:00		21:04		19:45		18:24		16:13		15:38	
13	04:43	05:37-06:12/35	05:39		06:41		07:42		07:48	09:04-09:10/6	08:41	10:18-10:33/15
	21:59		21:01		19:42		18:22		16:11		15:38	
14	04:45	05:37-06:12/35	05:41		06:43		07:44		07:51	09:01-09:13/12	08:43	10:18-10:33/15
	21:58		20:59		19:39		18:19		16:09		15:38	
15	04:46	05:37-06:12/35	05:43	06:43-06:54/11	06:45		07:46		07:53	08:59-09:14/15	08:44	10:18-10:34/16
	21:56		20:57		19:36		18:17		16:07		15:38	
16	04:48	05:37-06:13/36	05:45	06:40-06:56/16	06:47	07:35-07:49/14	07:48		07:55	08:59-09:16/17	08:44	10:18-10:35/17
	21:55		20:54		19:34		18:14		16:06		15:38	
17	04:49	05:37-06:13/36	05:47	06:38-06:57/19	06:49	07:33-07:51/18	07:50		07:57	08:58-09:17/19	08:45	10:19-10:35/16
	21:54		20:52		19:31		18:12		16:04		15:38	
18	04:51	05:38-06:14/36	05:49	06:37-06:58/21	06:51	07:31-07:52/21	07:52		07:59	08:58-09:18/20	08:46	10:19-10:36/17
	21:52		20:49		19:28		18:09		16:02		15:38	
19	04:52	05:38-06:14/36	05:51	06:36-06:58/22	06:53	07:30-07:56/26	07:54		08:01	08:58-09:19/21	08:47	10:20-10:37/17
	21:51		20:47		19:26		18:07		16:01		15:38	
20	04:54	05:39-06:15/36	05:53	06:35-07:02/27	06:55	07:29-07:58/29	07:57		08:03	08:57-09:19/22	08:48	10:19-10:37/18
	21:49		20:44		19:23		18:04		15:59		15:38	
21	04:56	05:39-06:15/36	05:55	06:35-07:04/29	06:57	07:29-08:00/31	07:59		08:05	08:57-09:19/22	08:48	10:20-10:38/18
	21:48		20:42		19:20		18:02		15:57		15:39	
22	04:57	05:40-06:15/35	05:57	06:34-07:05/31	06:59	07:28-08:00/32	08:01		08:07	08:58-09:20/22	08:49	10:20-10:38/18
	21:46		20:39		19:18		17:59		15:56		15:39	
23	04:59	05:40-06:15/35	05:59	06:34-07:06/32	07:01	07:29-08:01/32	08:03		08:09	08:57-09:21/24	08:49	10:21-10:39/18
	21:44		20:37		19:15		17:57		15:54		15:40	
24	05:01	05:41-06:15/34	06:01	06:34-07:07/33	07:03	07:31-08:04/33	08:05		08:11	08:57-09:21/24	08:50	10:22-10:39/17
	21:43		20:34		19:12		17:54		15:53		15:40	
25	05:02	05:41-06:14/33	06:03	06:35-07:07/32	07:05	07:33-08:06/33	07:07		08:13	08:58-09:21/23	08:50	10:22-10:39/17
	21:41		20:32		19:10		16:52		15:52		15:41	
26	05:04	05:42-06:15/33	06:05	06:35-07:07/32	07:07	07:36-08:08/32	07:09		08:15	08:59-09:22/23	08:50	10:22-10:39/17
	21:39		20:29		19:07		16:50		15:50		15:42	
27	05:06	05:43-06:15/32	06:07	06:37-07:07/30	07:09	07:38-08:09/31	07:12		08:17	08:59-09:22/23	08:51	10:23-10:40/17
	21:37		20:27		19:04		16:47		15:49		15:43	
28	05:08	05:44-06:14/30	06:09	06:39-07:06/27	07:11	07:40-08:09/29	07:14		08:19	08:59-09:22/23	08:51	10:24-10:40/16
	21:36		20:24		19:01		16:45		15:48		15:43	
29	05:10	05:46-06:14/28	06:11	06:41-07:06/25	07:13	07:42-08:09/27	07:16		08:20	09:00-09:22/22	08:51	10:25-10:40/15
	21:34		20:22		18:59		16:43		15:47		15:44	
30	05:12	05:49-06:14/25	06:13	06:43-07:06/23	07:15	07:44-08:09/25	07:18		08:22	09:02-09:22/20	08:51	10:26-10:41/15
	21:32		20:19		18:56		16:40		15:46		15:45	
31	05:14	05:50-06:13/23	06:15	06:45-07:05/20			07:20				08:51	10:27-10:41/14
	21:30		20:16				16:38				15:46	
Potential sun hours	529		469		385		324		247		216	
Sum of minutes with flicker	1096		512		456		83		358		468	

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C5 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (79)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

Idle 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	04:30 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 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:24 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 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:52	08:09 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	08:07 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 18:43	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 15:41
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	04:35 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 17:01	06:52 18:02	06:30 20:07	05:16 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 15:39
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	04:38 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	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	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 20:16	05:08 21:17	04:26 22:05	04:42 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 21:19	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	04:44 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 16:10	07:45 17:16	06:34 18:17	06:12 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	08:43 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	08:38 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 18:12	07:57 16:04	08:45 15:38
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	04:51 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 21:51	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 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	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	07:59 18:02	08:05 15:57	08:48 15:39
22	08:32 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 16:25	07:25 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 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:01 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 21:41	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	04:43 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 15:42
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	08:51 15:42
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	08:19 15:48	08:51 15:43
29	08:20 16:38	07:11 17:46	05:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:22	07:13 18:59	07:16 16:42	08:20 15:47	08:51 15:44
30	08:18 16:40	07:04 17:49	05:54 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 15:45
31	08:16 16:43	07:01 17:51	05:51 19:51	05:33 20:53	04:37 21:51	05:13 21:30	06:15 20:16	07:17 16:16	07:20 16:38	07:23 15:46	08:25 15:46	08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C6 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (80)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	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	04:36 21:52	04:30 22:09	05:15 21:28	06:17 20:14	06:49-07:06/17 18:53	07:17 16:36	07:22 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	04:31 22:08	05:17 21:26	06:19 20:11	06:51-07:03/12 18:51	07:19 16:34	07:25 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	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 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 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:31 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	08:02 16:58	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 18:37	07:35 16:23	08:34 15:40
8	08:47 15:58	08:00 17:01	06:52 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 20:09	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	08:36 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 22:03	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 21:16	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	04:27 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 22:06	04:43 21:59	05:39 21:01	06:42-06:46/4 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	06:38-06:49/11 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	04:25 22:07	04:46 21:56	05:43 20:57	06:37-07:10/33 19:36	07:46 18:17	07:53 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 22:08	04:48 21:55	05:45 20:54	06:35-07:11/36 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:39 16:13	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	06:33-07:12/39 19:31	07:50 18:12	07:57 16:04	08:45 15:38
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	04:51 21:52	05:49 20:49	06:33-07:13/40 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	06:32-07:13/41 19:26	07:54 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 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:44	06:32-07:14/42 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	04:56 21:48	05:55 20:42	06:31-07:14/43 19:20	07:59 18:02	08:05 15:57	08:48 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:31-07:14/43 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	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	06:31-07:14/43 19:15	08:03 17:57	08:09 15:54	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	06:32-07:14/42 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 21:41	04:26 22:10	05:02 21:41	06:03 20:32	06:34-07:13/39 19:09	08:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:27 22:10	05:04 21:39	06:05 20:29	06:35-07:13/38 19:07	08:09 16:50	08:15 15:50	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	06:37-07:12/35 19:04	08:11 16:47	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	06:00 18:44	05:39 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	06:39-07:11/32 19:01	08:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38	07:11 17:47	06:00 18:44	05:37 20:49	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	06:41-07:10/29 18:59	08:16 16:43	08:20 15:47	08:51 15:44
30	08:18 16:41	07:04 17:49	06:54 18:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	06:43-07:09/26 18:56	08:18 16:40	08:22 15:46	08:51 15:45
31	08:16 16:43	07:01 17:51	06:51 18:51	05:31 20:51	04:37 21:51	04:37 22:10	05:14 21:30	06:15 20:16	06:47-07:08/21 18:56	08:20 16:38	08:51 15:46	08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Sum of minutes with flicker	0	0	0	689	0	0	0	669	29	0	0	0

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C7 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (81)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

Idle 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 22:09	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 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:24 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 21:23	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	06:40 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 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	08:48 15:54	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 15:41
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	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	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	07:38 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 21:11	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	08:38 15:39
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	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 20:16	05:08 21:17	04:26 22:05	04:42 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 21:19	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	04:44 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 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:53 16:07	08:43 15:37
16	08:40 16:12	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 16:06	08:44 15:37
17	08:38 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 18:12	07:57 16:04	08:45 15:38
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	04:51 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 21:51	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 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	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	07:59 18:02	08:05 15:57	08:48 15:39
22	08:32 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 16:25	07:25 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 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:01 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	05:47 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	04:43 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	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 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 15:43
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 20:22	07:13 18:59	07:16 16:42	08:20 15:47	08:51 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:16 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
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C8 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (82)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	07:37-07:49/12 20:55	05:32 21:52
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	06:15-07:04/49 20:57	04:35 21:54
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	06:14-07:04/50 20:59	04:33 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	06:14-07:05/51 21:01	04:32 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	06:13-07:05/52 21:03	04:31 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	06:12-07:06/54 21:05	04:31 21:59
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	06:12-07:06/54 21:07	04:30 22:00
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	06:12-07:06/54 21:10	04:29 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	06:11-07:06/55 21:12	04:28 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	06:11-07:06/55 21:14	04:28 22:03
11	08:45 16:03	07:54 17:07	06:45 18:09	06:22 20:14	06:10-07:06/56 21:16	04:27 22:04
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	06:10-07:05/55 21:17	04:27 22:05
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	06:10-07:05/55 21:19	04:26 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	06:11-07:06/55 21:21	04:26 22:06
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	06:10-07:05/55 21:23	04:25 22:07
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	06:10-07:05/55 21:25	04:25 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	06:10-07:04/54 21:27	04:25 22:08
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	06:11-07:05/54 21:29	04:25 22:09
19	08:36 16:17	07:35 17:25	06:23 18:26	06:02 20:30	06:11-07:04/53 21:31	04:25 22:09
20	08:35 16:19	07:33 17:28	06:21 18:28	06:00 20:32	06:11-07:04/53 21:33	04:25 22:09
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	06:11-07:03/52 21:34	04:25 22:10
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	06:12-07:03/51 21:36	04:25 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	06:12-07:02/50 21:38	04:26 22:10
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	06:12-07:02/50 21:40	04:26 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	06:13-07:02/49 21:41	04:26 22:10
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	06:13-07:01/48 21:43	04:27 22:10
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	06:14-07:01/47 21:45	04:27 22:10
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	06:14-07:00/46 21:46	04:28 22:10
29	08:20 16:38		06:57 19:47	05:37 20:51	06:15-07:00/45 21:48	04:28 22:09
30	08:18 16:41		06:54 19:49	05:35 20:53	06:16-07:00/44 21:49	04:29 22:09
31	08:16 16:43		06:51 19:51		06:16-06:59/43 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	0	0	598	283	1591	849

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

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

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C8 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (82)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	487	780	784	937	1,214	1,078	832	556	8,576

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

	July	August	September	October	November	December
1	04:30 06:28-06:57/29 22:09	05:15 06:20-07:16/56 21:28	06:17 20:14	07:17 07:51-08:16/25 18:53	07:22 16:36	08:24 15:45
2	04:31 06:28-06:58/30 22:08	05:17 06:21-07:16/55 21:26	06:19 20:11	07:19 07:51-08:14/23 18:51	07:25 16:34	08:26 15:44
3	04:31 06:28-06:59/31 22:08	05:19 06:21-07:16/55 21:24	06:21 20:09	07:21 07:52-08:13/21 18:48	07:27 16:31	08:27 15:43
4	04:32 06:28-07:00/32 22:07	05:21 06:22-07:16/54 21:21	06:23 20:06	07:23 07:53-08:11/18 18:45	07:29 16:29	08:29 15:42
5	04:33 06:27-07:01/34 22:06	05:23 06:21-07:15/54 21:19	06:25 20:03	07:25 07:55-08:09/14 18:43	07:31 16:27	08:31 15:41
6	04:34 06:27-07:02/35 22:06	05:25 06:21-07:15/54 21:17	06:27 20:01	07:27 07:58-08:04/6 18:40	07:33 16:25	08:32 15:41
7	04:36 06:27-07:03/36 22:05	05:27 06:22-07:15/53 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	04:37 06:26-07:04/38 22:04	05:29 06:23-07:15/52 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	04:38 06:26-07:04/38 22:03	05:31 06:23-07:14/51 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	04:39 06:25-07:05/40 22:02	05:33 06:23-07:13/50 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:38 15:39
11	04:40 06:25-07:06/41 22:01	05:35 06:24-07:12/48 21:06	06:37 07:30-07:41/11 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	04:42 06:24-07:06/42 22:00	05:37 06:25-07:11/46 21:04	06:39 07:26-07:43/17 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	04:43 06:25-07:08/43 21:59	05:39 06:26-07:11/45 21:01	06:41 07:25-07:44/19 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	04:45 06:24-07:08/44 21:58	05:41 06:27-07:10/43 20:59	06:43 07:23-07:44/21 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	04:46 06:23-07:09/46 21:56	05:43 06:29-07:08/39 20:57	06:45 07:22-07:45/23 19:36	07:46 18:17	07:53 16:07	08:43 15:38
16	04:48 06:24-07:10/46 21:55	05:45 06:31-07:07/36 20:54	06:47 07:21-07:45/24 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	04:49 06:23-07:10/47 21:54	05:47 06:33-07:05/32 20:52	06:49 07:21-07:44/23 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	04:51 06:23-07:12/49 21:52	05:49 06:36-07:03/27 20:49	06:51 07:21-07:44/23 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	04:52 06:22-07:12/50 21:51	05:51 06:38-07:00/22 20:47	06:53 07:22-07:43/21 19:26 08:01-08:12/11	07:54 18:07	08:01 16:01	08:47 15:38
20	04:54 06:23-07:13/50 21:49	05:53 06:41-06:57/16 20:44	06:55 07:23-07:42/19 19:23 07:58-08:14/16	07:56 18:04	08:03 15:59	08:48 15:38
21	04:56 06:22-07:13/51 21:48	05:55 20:42	06:57 07:25-07:40/15 19:20 07:56-08:15/19	07:59 18:02	08:05 15:57	08:48 15:39
22	04:57 06:22-07:14/52 21:46	05:57 20:39	06:59 07:27-07:39/12 19:18 07:54-08:16/22	08:01 17:59	08:07 15:56	08:49 15:39
23	04:59 06:21-07:14/53 21:44	05:59 20:37	07:01 07:29-07:36/7 19:15 07:53-08:17/24	08:03 17:57	08:09 15:54	08:49 15:40
24	05:01 06:21-07:14/53 21:43	06:01 20:34	07:03 07:31-07:32/1 19:12 07:52-08:17/25	08:05 17:54	08:11 15:53	08:50 15:40
25	05:02 06:21-07:14/53 21:41	06:03 20:32	07:05 07:51-08:18/27 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	05:04 06:21-07:15/54 21:39	06:05 20:29	07:07 07:50-08:18/28 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	05:06 06:21-07:16/55 21:37	06:07 20:27	07:09 07:50-08:17/27 19:04	07:11 16:47	08:17 15:49	08:51 15:43
28	05:08 06:20-07:15/55 21:35	06:09 20:24	07:11 07:49-08:17/28 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	05:10 06:21-07:16/55 21:34	06:11 20:22	07:13 07:50-08:17/27 18:59	07:16 16:43	08:20 15:47	08:51 15:44
30	05:12 06:21-07:16/55 21:32	06:13 20:19	07:15 07:50-08:17/27 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	05:14 06:20-07:15/55 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1392	888	517	107	0	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

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Calculated:

10/04/2024 03:21/4.0.531

SHADOW - Calendar per WTG

WTG: C9 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (83)

Assumptions for shadow calculations

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:36 21:52	04:30 22:09	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	08:12 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:31 22:08	05:17 21:25	06:19 20:11	07:19 18:51	07:24 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 21:23	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	06:40 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 18:43	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	04:34 22:06	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	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	08:47 15:58	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 15:39
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	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	08:38 15:39
11	08:45 16:02	07:54 17:07	06:45 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 20:16	05:08 21:17	04:27 22:05	04:42 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 21:19	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
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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	04:25 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 22:08	04:47 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 16:13	07:40 17:21	06:29 18:21	06:07 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
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	04:51 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 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:34 16:19	07:33 17:27	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 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:02	08:05 15:57	08:48 15:39
22	08:32 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	06:13 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 17:57	08:09 15:54	08:49 15:40
24	08:28 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 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 15:40
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27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	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	04:41 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 15:43
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	08:51 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:16 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
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

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