

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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B1 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (101)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B1 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (101)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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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Idle start wind speed: Cut in wind speed from power curve

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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
Sum of minutes with flicker		398	565	255	496	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B11 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (98)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B12 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (99)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B12 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (99)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B14 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (100)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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
4	08:50 09:29-10:30/61 15:52 14:17-14:47/30	08:09 09:20-10:25/65 16:52 09:01-09:15/14	07:03 07:29-08:19/50 17:54	06:41 07:06-07:28/22 19:59	05:26 06:19-07:09/50 21:02 05:54-06:17/23	04:33 05:17-05:39/22 05:08-05:14/6 21:56 05:54-06:25/31
5	08:49 09:30-10:31/61 15:53 14:18-14:48/30	08:07 09:20-10:25/65 16:54 09:03-09:14/11	07:00 07:26-08:17/51 17:56	06:38 07:03-07:28/25 20:01	05:23 05:52-07:07/75 21:04	04:32 05:17-05:39/22 05:07-05:14/7 21:58 05:55-06:24/29
6	08:49 09:30-10:31/61 15:55 14:19-14:47/28	08:05 09:20-10:23/63 16:56 09:05-09:10/5	06:58 07:24-08:15/51 17:58	06:35 07:01-07:28/27 20:03	05:21 05:50-07:06/76 21:06	04:31 05:17-05:39/22 05:06-05:14/8 21:59 05:55-06:24/29
7	08:48 09:30-10:32/62 15:56 14:21-14:47/26	08:03 09:21-10:22/61 16:59	06:55 07:21-08:03/42 18:01 08:04-08:10/6	06:33 06:58-07:28/30 20:05	05:19 05:48-07:04/76 21:08	04:30 05:18-05:39/21 05:06-05:16/10 22:00 05:56-06:24/28
8	08:47 09:30-10:32/62 15:58 14:23-14:47/24	08:00 09:21-10:20/59 17:01	06:53 07:18-08:01/43 18:03	06:30 06:56-07:28/32 20:08	05:17 05:48-07:02/74 21:10	04:29 05:17-05:39/22 05:05-05:16/11 22:01 05:56-06:24/28
9	08:47 09:30-10:32/62 16:00 14:28-14:47/19	07:58 09:21-10:17/56 17:03	06:50 07:16-08:00/44 18:05 17:30-17:36/6	06:28 06:53-07:26/33 20:10	05:15 05:48-07:01/73 21:12	04:29 05:18-05:39/21 05:05-05:17/12 22:02 05:56-06:23/27
10	08:46 09:30-10:33/63 16:01 14:29-14:47/18	07:56 09:22-10:14/52 17:05	06:47 07:13-07:58/45 18:07 17:25-17:39/14	06:25 06:50-07:25/35 20:12	05:13 05:48-07:00/72 21:14	04:28 05:18-05:39/21 05:04-05:17/13 22:03 05:57-06:23/26
11	08:45 09:30-10:33/63 16:03 14:31-14:47/16	07:54 09:23-10:04/41 17:08	06:45 07:10-07:57/47 18:09 17:23-17:40/17	06:22 06:48-07:24/36 20:14	05:11 06:25-06:59/34 21:16	04:27 05:19-05:39/20 05:04-05:17/13 22:04 05:58-06:24/26
12	08:44 09:30-10:34/64 16:05 14:31-14:46/15	07:52 09:24-10:00/36 17:10	06:42 07:08-07:56/48 18:11 17:22-17:43/21	06:20 06:45-07:22/37 20:16	05:09 06:26-06:58/32 21:18	04:27 05:18-05:39/21 05:03-05:17/14 22:05 05:58-06:23/25
13	08:43 09:30-10:33/63 16:06 14:34-14:45/11	07:49 09:25-09:57/32 17:12	06:40 07:05-07:55/50 18:13 17:20-17:43/23	06:17 06:43-07:21/38 20:18	05:07 05:49-06:26/37 21:20	04:26 05:19-05:39/20 05:03-05:18/15 22:06 05:59-06:23/24
14	08:42 09:29-10:34/65 16:08 14:41-14:42/1	07:47 09:26-09:56/30 17:14	06:37 07:02-07:53/51 18:15 17:19-17:43/24	06:15 06:42-07:17/35 20:20	05:05 05:50-06:26/36 21:22	04:26 05:20-05:40/20 05:03-05:18/15 22:07 05:59-06:23/24
15	08:41 09:27-10:34/67 16:10	07:45 09:28-09:54/26 17:17	06:34 07:00-07:53/53 18:18 17:17-17:43/26	06:12 06:42-07:14/32 20:22	05:03 05:49-06:26/37 21:23	04:26 05:20-05:40/20 05:03-05:19/16 22:07 06:00-06:23/23
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 07:38-08:21/43 17:47	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 07:30-08:13/43 17:49	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 07:25-07:58/43 17:51	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B14 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (100)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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	15:47 14:14-14:46/32 216	15:47 14:14-14:46/32 216
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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B15 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (92)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 15:48	08:15 16:45	07:11 17:47	06:49 19:53	07:18-07:43/25 20:55	05:32 21:52
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	07:16-07:42/26 20:57	05:30 21:54
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	07:15-07:42/27 20:59	05:28 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	07:06-07:10/4 07:15-07:43/28	05:25 21:01
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	07:03-07:12/9 07:14-07:42/28	05:23 21:03
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	07:01-07:14/13 07:15-07:42/27	05:21 21:05
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	06:58-07:41/43 21:07	05:19 22:00
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	06:55-07:40/45 21:10	05:17 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	06:54-07:39/45 21:12	05:14 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	06:53-07:14/21 07:15-07:37/22	05:12 21:14
11	08:45 16:03	07:54 17:07	06:45 18:09	06:22 20:14	06:54-07:14/20 07:17-07:36/19	05:10 21:16
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	06:53-07:13/20 07:17-07:34/17	05:08 21:18
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	06:54-07:13/19 07:20-07:32/12	05:06 21:19
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	06:54-07:11/17 21:21	05:04 22:06
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	06:55-07:10/15 21:23	05:02 22:07
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	06:56-07:08/12 21:25	05:00 22:08
17	08:39 16:13	07:40 17:21	06:29 18:22	06:07 20:26	07:00-07:05/5 21:27	04:59 22:08
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	05:05-05:56/39 22:09
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	05:05-05:56/39 22:09
20	08:35 16:19	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	05:05-05:57/40 22:09
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	05:05-05:57/40 22:10
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	05:05-05:58/40 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	05:05-05:58/40 22:10
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	05:31-05:37/6 21:40	05:05-05:57/39 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	05:05-05:58/39 22:10
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	05:05-05:58/39 22:10
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	05:23-05:44/21 21:45	05:05-05:58/38 22:10
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	05:21-05:45/24 21:46	05:05-05:58/39 22:10
29	08:20 16:38		06:57 19:47	07:22-07:40/18 20:51	05:21-05:46/25 21:48	05:05-05:58/38 22:10
30	08:18 16:41		06:54 19:49	07:20-07:41/21 20:53	05:20-05:47/27 21:49	05:05-05:59/38 22:09
31	08:16 16:43		06:51 19:51	07:18-07:41/23 19:51	05:19-05:48/29 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	0	0	81	519	162	1123

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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B15 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (92)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:20-05:58/38 22:09	05:15 21:28	06:17 06:53-07:13/20 20:14 07:15-07:35/20	07:17 18:53	07:22 16:36	08:24 15:45
2	04:31 05:21-05:58/37 22:08	05:17 21:26	06:19 06:52-07:13/21 20:11 07:14-07:36/22	07:19 18:51	07:25 16:34	08:26 15:44
3	04:31 05:22-05:59/37 22:08	05:19 21:24	06:21 06:52-07:37/45 20:09	07:21 18:48	07:27 16:31	08:27 15:43
4	04:32 05:22-05:59/37 22:07	05:21 21:21	06:23 06:53-07:38/45 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	04:33 05:23-05:59/36 22:06	05:23 21:19	06:25 06:54-07:37/43 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	04:34 05:23-05:59/36 22:06	05:25 21:17	06:27 06:56-07:09/13 20:01 07:10-07:37/27	07:27 18:40	07:33 16:25	08:32 15:41
7	04:36 05:24-05:58/34 22:05	05:27 21:15	06:29 06:58-07:07/9 19:58 07:09-07:37/28	07:29 18:37	07:35 16:23	08:34 15:40
8	04:37 05:24-05:58/34 22:04	05:29 21:13	06:31 07:00-07:05/5 19:55 07:09-07:37/28	07:31 18:35	07:38 16:21	08:35 15:40
9	04:38 05:25-05:58/33 22:03	05:31 21:10	06:33 07:09-07:36/27 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	04:39 05:25-05:57/32 22:02	05:33 21:08	06:35 07:09-07:36/27 19:50	07:35 18:30	07:42 16:17	08:38 15:39
11	04:40 05:26-05:57/31 22:01	05:35 21:06	06:37 07:10-07:35/25 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	04:42 05:26-05:56/30 22:00	05:37 21:04	06:39 07:10-07:34/24 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	04:43 05:28-05:56/28 21:59	05:39 21:01	06:41 07:11-07:33/22 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	04:45 05:29-05:55/26 21:58	05:41 20:59	06:43 07:13-07:31/18 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	04:46 05:29-05:54/25 21:56	05:43 20:57	06:45 07:14-07:29/15 19:36	07:46 18:17	07:53 16:07	08:43 15:38
16	04:48 05:31-05:54/23 21:55	05:45 20:54	06:47 07:17-07:25/8 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	04:49 05:33-05:52/19 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	04:51 05:36-05:51/15 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	04:52 05:39-05:48/9 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:48 15:39
22	04:57 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	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	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	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	05:04 21:39	06:05 07:01-07:07/6 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	05:06 21:37	06:07 06:58-07:10/12 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:43
28	05:08 21:35	06:09 06:56-07:11/15 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	05:10 21:34	06:11 06:55-07:12/17 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 15:44
30	05:12 21:32	06:13 06:54-07:13/19 20:19 07:20-07:32/12	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 06:53-07:13/20 20:16 07:17-07:34/17		07:20 16:38		08:51 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	560	118	492	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B17 - Siemens Gamesa SG 6.6-170 6600 170.0 IO! hub: 165.0 m (TOT: 250.0 m) (108)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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			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			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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B17 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (108)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B18 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (93)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 07:51-08:16/25 17:47	06:49 07:34-08:28/54 19:53	05:32 20:55	04:36 05:12-05:28/16 21:52
2	08:50 15:49	08:13 16:47	07:08 07:51-08:15/24 17:49	06:46 07:32-08:28/56 19:55	05:30 20:57	04:35 05:11-05:29/18 21:54
3	08:50 15:50	08:11 16:49	07:05 07:52-08:15/23 17:52	06:43 07:31-08:27/56 19:57	05:28 20:59	04:33 05:10-05:30/20 21:55
4	08:50 15:52	08:09 16:52	07:03 07:53-08:14/21 17:54	06:41 07:31-08:27/56 19:59	05:25 21:01	04:32 05:09-05:30/21 21:56
5	08:49 15:53	08:07 16:54	07:00 07:53-08:12/19 17:56	06:38 07:30-08:26/56 20:01	05:23 21:03	04:32 05:10-05:32/22 21:58
6	08:49 15:55	08:04 16:56	06:58 07:24-07:27/3 17:58 07:55-08:11/16	06:35 07:31-08:26/55 20:03	05:21 21:05	04:31 05:09-05:32/23 21:59
7	08:48 15:56	08:02 16:58	06:55 07:21-07:29/8 18:00 07:58-08:07/9	06:33 07:30-08:25/55 20:05	05:19 21:07	04:30 05:08-05:32/24 22:00
8	08:47 15:58	08:00 17:01	06:52 07:18-07:30/12 18:02	06:30 07:29-08:24/55 20:07	05:17 21:09	04:29 05:09-05:33/24 22:01
9	08:47 15:59	07:58 17:03	06:50 07:16-07:32/16 18:05	06:27 07:30-08:23/53 20:09	05:15 21:12	04:28 05:08-05:33/25 22:02
10	08:46 16:01	07:56 17:05	06:47 07:13-07:32/19 18:07	06:25 07:29-08:22/53 20:11	05:12 21:14	04:28 05:08-05:34/26 22:03
11	08:45 16:03	07:54 17:07	06:45 07:11-07:32/21 18:09	06:22 07:30-08:21/51 20:14	05:10 21:15	04:27 05:08-05:34/26 22:04
12	08:44 16:04	07:52 17:10	06:42 07:12-07:32/20 18:11	06:19 07:30-08:19/49 20:16	05:08 21:17	04:27 05:08-05:35/27 22:05
13	08:43 16:06	07:49 17:12	06:39 07:11-07:32/21 18:13	06:17 07:31-08:18/47 20:18	05:06 21:19	04:26 05:08-05:36/28 22:06
14	08:42 16:08	07:47 17:14	06:37 07:11-07:31/20 18:15	06:14 07:31-08:16/45 20:20	05:04 21:21	04:26 05:08-05:35/27 22:06
15	08:41 16:10	07:45 17:16	06:34 07:11-07:29/18 18:17	06:12 07:32-08:14/42 20:22	05:02 21:23	04:26 05:08-05:36/28 22:07
16	08:40 16:12	07:42 17:19	06:31 07:13-07:29/16 18:19	06:09 07:32-08:11/39 20:24	05:00 21:25	04:25 05:08-05:36/28 22:08
17	08:39 16:14	07:40 17:21	06:29 07:14-07:27/13 18:22	06:07 07:34-08:08/34 20:26	04:59 21:27	04:25 05:08-05:36/28 22:08
18	08:37 16:15	07:38 17:23	06:26 07:16-07:23/7 18:24	06:04 07:34-08:01/27 20:28	04:57 21:29	04:25 05:08-05:37/29 22:09
19	08:36 16:17	07:35 08:04-08:07/3 17:25	06:23 18:26	06:02 07:37-07:59/22 20:30	04:55 21:31	04:25 05:09-05:37/28 22:09
20	08:35 16:19	07:33 08:00-08:11/11 17:28	06:21 07:02-07:16/14 18:28	05:59 07:38-07:56/18 20:32	04:53 21:33	04:25 05:09-05:37/28 22:09
21	08:33 16:21	07:30 07:58-08:13/15 17:30	06:18 06:58-07:19/21 18:30	05:56 07:43-07:52/9 20:34	04:51 21:34	04:25 05:10-05:38/28 22:10
22	08:32 16:24	07:28 07:55-08:14/19 17:32	06:15 06:55-07:21/26 18:32	05:54 20:36	04:50 21:36	04:25 05:10-05:38/28 22:10
23	08:30 16:26	07:26 07:54-08:16/22 17:34	06:13 06:53-07:24/31 18:34	05:52 20:39	04:48 21:38	04:26 05:10-05:38/28 22:10
24	08:29 16:28	07:23 07:53-08:16/23 17:36	06:10 06:50-07:25/35 18:36	05:49 20:41	04:47 21:40	04:26 05:09-05:38/29 22:10
25	08:27 16:30	07:21 07:52-08:16/24 17:39	06:07 06:45-07:25/40 18:38	05:47 20:43	04:45 21:41	04:26 05:10-05:39/29 22:10
26	08:25 16:32	07:18 07:52-08:17/25 17:41	06:05 06:43-07:27/44 18:40	05:44 20:45	04:44 21:43	04:27 05:10-05:38/28 22:10
27	08:24 16:34	07:16 07:51-08:16/25 17:43	06:02 06:41-07:27/46 18:42	05:42 20:47	04:42 21:45	04:27 05:11-05:39/28 22:10
28	08:22 16:36	07:13 07:52-08:17/25 17:45	05:59 06:38-07:27/49 18:44	05:39 20:49	04:41 21:46	04:28 05:11-05:38/27 22:10
29	08:20 16:38		06:57 07:37-08:28/51 19:47	05:37 20:51	04:39 05:16-05:23/7 21:48	05:12-05:39/27 22:09
30	08:18 16:41		06:54 07:36-08:28/52 19:49	05:35 20:53	04:38 05:14-05:25/11 21:49	05:12-05:39/27 22:09
31	08:16 16:43		06:51 07:34-08:28/54 19:51		04:37 05:13-05:27/14 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	0	192	794	932	32	775

Table 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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B18 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (93)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:12-05:38/26 22:09	05:15 21:28	06:17 07:29-08:20/51 20:14	07:17 07:51-08:11/20 18:53	07:22 16:36	08:24 15:45
2	04:31 05:13-05:39/26 22:08	05:17 21:26	06:19 07:28-08:21/53 20:11	07:19 07:50-08:11/21 18:51	07:24 16:34	08:26 15:44
3	04:32 05:13-05:39/26 22:08	05:19 21:23	06:21 07:28-08:21/53 20:08	07:21 07:50-08:10/20 18:48	07:27 16:31	08:27 15:43
4	04:32 05:14-05:39/25 22:07	05:21 21:21	06:23 07:26-08:21/55 20:06	07:23 07:52-08:09/17 18:45	07:29 16:29	08:29 15:42
5	04:33 05:14-05:39/25 22:06	05:23 21:19	06:25 07:26-08:21/55 20:03	07:25 07:54-08:08/14 18:43	07:31 16:27	08:31 15:41
6	04:34 05:15-05:39/24 22:06	05:25 21:17	06:27 07:26-08:21/55 20:01	07:27 07:56-08:06/10 18:40	07:33 16:25	08:32 15:41
7	04:36 05:16-05:38/22 22:05	05:27 21:15	06:29 07:26-08:21/55 19:58	07:29 07:58-08:04/6 18:37	07:35 16:23	08:34 15:40
8	04:37 05:16-05:38/22 22:04	05:29 21:13	06:31 07:25-08:21/56 19:55	07:31 08:29-08:46/17 18:35	07:38 16:21	08:35 15:40
9	04:38 05:17-05:37/20 22:03	05:31 21:10	06:33 07:25-08:21/56 19:53	07:33 08:27-08:47/20 18:32	07:40 16:19	08:36 15:39
10	04:39 05:18-05:37/19 22:02	05:33 21:08	06:35 07:26-08:21/55 19:50	07:35 08:27-08:49/22 18:30	07:42 16:17	08:38 15:39
11	04:40 05:19-05:36/17 22:01	05:35 21:06	06:37 07:26-08:20/54 19:47	07:38 08:26-08:49/23 18:27	07:44 16:15	08:39 15:38
12	04:42 05:21-05:36/15 22:00	05:37 21:04	06:39 07:26-08:20/54 19:45	07:40 08:25-08:49/24 18:24	07:46 16:13	08:40 15:38
13	04:43 05:22-05:34/12 21:59	05:39 21:01	06:41 07:27-08:19/52 19:42	07:42 08:24-08:49/25 18:22	07:48 16:11	08:41 15:38
14	04:45 05:23-05:32/9 21:58	05:41 20:59	06:43 07:28-08:19/51 19:39	07:44 08:24-08:49/25 18:19	07:50 16:09	08:42 15:38
15	04:46 05:27-05:28/1 21:56	05:43 20:57	06:45 07:29-08:18/49 19:36	07:46 08:23-08:49/26 18:17	07:53 16:07	08:43 15:38
16	04:48 21:55	05:45 20:54	06:47 07:30-08:17/47 19:34	07:48 08:24-08:49/25 18:14	07:55 16:06	08:44 15:38
17	04:49 21:54	05:47 20:52	06:49 07:31-08:15/44 19:31	07:50 08:24-08:48/24 18:12	07:57 16:04	08:45 15:38
18	04:51 21:52	05:49 20:49	06:51 07:32-08:13/41 19:28	07:52 08:24-08:47/23 18:09	07:59 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:53 07:35-08:11/36 19:26	07:54 08:25-08:46/21 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 20:44	06:55 07:38-08:10/32 19:23	07:56 08:27-08:45/18 18:04	08:03 15:59	08:48 15:38
21	04:56 21:48	05:55 20:42	06:57 07:40-08:07/27 19:20	07:59 08:29-08:43/14 18:02	08:05 15:57	08:48 15:39
22	04:57 21:46	05:57 07:46-07:57/11 20:39	06:59 07:42-08:05/23 19:18	08:01 08:31-08:40/9 17:59	08:07 15:56	08:49 15:39
23	04:59 21:44	05:59 07:43-08:01/18 20:37	07:01 07:45-08:01/16 19:15	08:03 17:57	08:09 15:54	08:49 15:40
24	05:01 21:43	06:01 07:40-08:03/23 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	05:03 21:41	06:03 07:37-08:05/28 20:32	07:05 08:00-08:04/4 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	05:04 21:39	06:05 07:35-08:10/35 20:29	07:07 07:56-08:08/12 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	05:06 21:37	06:07 07:34-08:13/39 20:27	07:09 07:54-08:09/15 19:04	07:11 16:47	08:17 15:49	08:51 15:43
28	05:08 21:35	06:09 07:33-08:15/42 20:24	07:11 07:53-08:11/18 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	05:10 21:34	06:11 07:31-08:17/46 20:22	07:13 07:52-08:11/19 18:59	07:16 16:43	08:20 15:47	08:51 15:44
30	05:12 21:32	06:13 07:31-08:18/47 20:19	07:15 07:51-08:11/20 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 07:30-08:19/49 20:16		07:20 16:38		08:51 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	289	338	1158	442	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B2 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (102)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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	05:37 21:51	04:37 21:51	04:30 21:30	05:13 21:16	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B22 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (94)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 09:32-11:02/90 13:01-13:09/8 15:48 13:25-14:33/68	08:15 09:34-10:46/72 08:50-09:24/34 16:45 13:40-14:48/68	07:11 15:58-16:56/58 17:47 08:43-09:01/18	06:49 07:46-08:12/26 19:53 18:53-19:06/13	05:32 20:16-20:23/7 20:55 06:00-06:30/30	04:36 05:10-05:34/24 21:52
2	08:50 09:31-11:03/92 13:04-13:08/4 15:49 13:26-14:35/69	08:13 09:35-10:45/70 08:50-09:24/34 16:47 13:41-14:48/67	07:08 15:58-16:54/56 17:50 08:46-08:56/10	06:46 08:00-08:07/7 18:55-19:03/8 19:55 07:49-07:55/6	05:30 20:14-20:25/11 20:57 05:58-06:28/30	04:35 05:09-05:34/25 21:54
3	08:50 09:30-11:03/93 15:51 13:26-14:35/69	08:11 09:35-10:44/69 08:50-09:24/34 16:50 13:43-14:48/65	07:06 15:59-16:54/55 17:52 17:52	06:43 07:11-07:24/13 19:57	05:28 20:13-20:27/14 20:59 05:58-06:20/22	04:34 05:08-05:34/26 21:55
4	08:50 09:29-11:03/94 15:52 13:26-14:36/70	08:09 09:36-10:43/67 08:51-09:24/33 16:52 13:45-14:47/62	07:03 15:59-16:54/55 17:54 17:54	06:41 07:07-07:27/20 19:59	05:26 20:12-20:29/17 21:02 05:58-06:19/21	04:33 05:08-05:35/27 21:57
5	08:49 09:29-11:04/95 15:53 13:27-14:37/70	08:07 09:37-10:42/65 08:47-09:24/37 16:54 13:48-14:47/59	07:00 15:59-16:53/54 17:56 17:56	06:38 07:04-07:28/24 20:01	05:23 20:12-20:31/19 21:04 05:58-06:19/21	04:32 05:07-05:35/28 21:58
6	08:49 09:28-11:04/96 15:55 13:27-14:38/71	08:05 09:36-10:39/63 08:44-09:24/40 16:56 13:50-14:45/55	06:58 16:00-16:53/53 17:58 17:58	06:35 07:03-07:30/27 20:03	05:21 20:12-20:33/21 21:06 05:59-06:18/19	04:31 05:06-05:34/28 21:59
7	08:48 09:28-11:04/96 15:56 13:27-14:39/72	08:03 09:37-10:36/59 08:42-09:25/43 16:59 14:02-14:44/42	06:55 16:00-16:52/52 18:00 18:00	06:33 07:01-07:31/30 20:05	05:19 20:11-20:34/23 21:08 06:00-06:17/17	04:30 05:06-05:35/29 22:00
8	08:47 09:28-11:04/96 15:57 13:27-14:39/72	08:00 09:38-10:26/48 08:41-09:26/45 17:01 14:04-14:43/39 08:30-08:31/1	06:53 16:01-16:50/49 18:03 18:03	06:30 06:56-07:32/36 20:08	05:17 20:11-20:34/23 21:10 06:00-06:16/16	04:29 05:05-05:35/30 22:01 21:04-21:08/4
9	08:47 09:27-11:05/98 15:59 13:27-14:40/73	07:58 09:39-10:23/44 08:39-09:26/47 17:03 14:05-14:41/36 08:27-08:33/6	06:50 16:02-16:50/48 18:05 18:05	06:28 06:53-07:32/39 20:10	05:15 20:11-20:34/23 21:12 06:01-06:15/14	04:29 05:05-05:34/29 22:02 21:01-21:10/9
10	08:46 09:27-11:05/98 16:01 13:28-14:41/73	07:56 09:40-10:22/42 08:25-08:35/10 17:05 14:08-14:38/30 08:38-09:27/49	06:47 16:03-16:48/45 18:07 18:07	06:25 06:50-07:32/42 20:12	05:13 20:11-20:34/23 21:14 06:03-06:13/10	04:28 05:05-05:35/30 22:03 21:00-21:12/12
11	08:45 09:27-11:05/98 16:03 13:28-14:42/74	07:54 09:42-10:21/39 08:23-08:36/13 17:08 14:12-14:34/22 08:38-09:28/50	06:45 07:12-07:16/4 18:09 16:05-16:46/41	06:22 06:48-07:32/44 20:14	05:11 20:11-20:33/22 21:16 06:05-06:10/5	04:27 05:06-05:35/29 22:04 20:59-21:13/14
12	08:44 09:27-11:05/98 16:05 13:28-14:42/74	07:52 09:42-10:19/37 08:20-09:28/68 17:10 14:18-14:21/3	06:42 07:08-07:21/13 18:11 16:07-16:45/38	06:20 06:45-07:32/47 20:16	05:08 20:11-20:33/22 21:18	04:27 05:05-05:34/29 22:05 20:59-21:14/15
13	08:43 09:27-11:04/97 16:06 13:28-14:43/75	07:49 09:45-10:17/32 17:12 08:18-09:29/71	06:39 07:05-07:23/18 18:13 16:10-16:41/31	06:17 06:43-07:32/49 20:18	05:06 20:12-20:32/20 21:20	04:26 05:06-05:35/29 22:06 20:59-21:15/16
14	08:42 09:27-11:04/97 16:08 13:29-14:44/75	07:47 09:46-10:13/27 08:15-09:28/73 17:14 16:18-16:24/6	06:37 07:03-07:24/21 18:15 16:32-16:35/3	06:14 06:40-07:32/52 20:20	05:04 20:13-20:33/20 21:22	04:26 05:06-05:35/29 22:07 20:59-21:16/17
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17	08:39 09:27-11:04/97 16:14 13:29-14:45/76	07:40 16:08-16:34/26 16:37-16:50/13 17:21 08:14-09:28/74	06:29 06:54-07:26/32 18:22	06:07 06:33-07:30/57 20:26	04:59 20:16-20:30/14 21:27	04:25 05:06-05:35/29 22:08 20:57-21:17/20
18	08:37 09:27-11:03/96 16:16 13:30-14:46/76	07:38 16:06-16:52/46 17:23 08:14-09:27/73	06:26 06:51-07:26/35 18:24	06:04 06:30-07:29/59 20:28	04:57 20:17-20:29/12 21:29	04:25 05:07-05:35/28 22:09 20:57-21:18/21
19	08:36 09:27-11:01/94 09:10-09:11/1 16:18 13:30-14:47/77	07:35 16:05-16:55/50 17:25 08:14-09:27/73	06:24 06:49-07:27/38 18:26	06:02 06:28-07:29/61 20:30	04:55 20:18-20:27/9 21:31	04:25 05:07-05:35/28 22:09 20:57-21:18/21
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21	08:33 09:27-10:58/91 09:07-09:17/10 16:22 13:31-14:48/77	07:31 16:03-16:57/54 17:30 08:15-09:26/71	06:18 06:44-07:25/41 18:30 17:51-18:02/11	05:57 06:23-07:26/63 20:35	04:52 05:24-05:30/6 21:35	04:25 05:08-05:36/28 22:10 20:58-21:19/21
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23	08:30 09:27-10:48/81 09:03-09:19/16 16:26 13:32-14:48/76	07:26 16:01-16:58/57 08:36-09:23/47 17:34 08:17-08:34/17	06:13 06:42-07:24/42 18:34 17:49-18:06/17	05:52 06:18-07:22/64 20:39	04:48 05:21-05:32/11 21:38	04:26 05:08-05:36/28 22:10 20:58-21:19/21
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26	08:25 09:29-10:49/80 08:58-09:23/25 16:32 13:35-14:50/75	07:18 15:59-16:58/59 17:41 08:38-09:17/39	06:05 06:41-07:21/40 18:40 17:48-18:12/24	05:44 06:46-07:08/22 20:45	04:44 05:17-05:33/16 21:43	04:27 05:09-05:38/29 22:10 20:59-21:19/20
27	08:24 09:30-10:48/78 08:56-09:23/27 16:34 13:35-14:50/75	07:16 15:59-16:57/58 17:43 08:39-09:14/35	06:02 06:41-07:20/39 18:43 17:48-18:11/23	05:42 06:48-07:07/19 20:47	04:42 05:16-05:33/17 21:45	04:27 05:09-05:37/28 22:10 21:00-21:19/19
28	08:22 09:31-10:48/77 08:54-09:24/30 16:36 13:36-14:50/74	07:13 15:59-16:57/58 17:45 08:41-09:04/23	05:59 06:42-07:20/38 18:45 17:48-18:11/23	05:40 06:50-07:05/15 20:49	04:41 05:14-05:33/19 21:46	04:28 05:09-05:38/29 22:10 21:01-21:18/17
29	08:20 09:32-10:48/76 08:52-09:24/32 16:39 13:37-14:50/73	07:10 15:59-16:57/58 17:47 08:49-19:11/22	06:57 07:42-08:18/36 19:47 18:49-19:11/22	05:37 06:54-07:01/7 20:51	04:40 05:13-05:33/20 21:48	04:29 05:09-05:38/29 22:10 21:02-21:19/17
30	08:18 09:33-10:48/75 08:51-09:25/34 16:41 13:38-14:50/72	07:08 15:59-16:57/58 17:48 08:50-19:09/19	06:54 07:43-08:16/33 19:49 18:50-19:09/19	05:35 20:18-20:21/3 20:53	04:38 05:12-05:34/22 21:50	04:29 05:10-05:39/29 22:09 21:03-21:19/16
31	08:17 09:34-10:47/73 08:51-09:25/34 16:43 13:38-14:48/70	07:05 15:59-16:57/58 17:48 08:50-19:09/19	06:51 07:44-08:15/31 19:51 18:52-19:08/16	05:33 20:18-20:21/3 20:53	04:37 05:11-05:34/23 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	5348	3551	1563	1349	714	1249

Table 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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B22 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (94

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:10-05:39/29 22:09 21:03-21:17/14	05:16 20:21-20:43/22 21:28	06:17 06:47-07:31/44 20:14	07:17 07:46-08:01/15 18:54 16:48-17:23/35	07:23 09:09-09:52/43 07:55-08:04/9 16:36 13:37-14:08/31 08:08-08:57/49	08:24 09:09-10:47/98 15:45 13:10-14:24/74
2	04:31 05:10-05:39/29 22:08 21:04-21:17/13	05:18 20:21-20:44/23 21:26 06:14-06:22/8	06:19 06:49-07:31/42 20:11	07:19 07:48-07:58/10 18:51 16:45-17:24/39	07:25 09:08-09:53/45 08:09-08:56/47 16:34 13:34-14:10/36 07:57-08:02/5	08:26 09:10-10:48/98 15:44 13:11-14:24/73
3	04:32 05:10-05:39/29 22:08 21:06-21:16/10	05:19 20:21-20:44/23 21:24 06:12-06:24/12	06:21 06:51-07:30/39 20:09	07:21 16:42-17:26/44 18:48	07:27 09:08-09:56/48 08:11-08:56/45 16:32 13:33-14:13/40	08:27 09:11-10:48/97 15:43 13:11-14:23/72
4	04:33 05:10-05:40/30 22:07 21:08-21:14/6	05:21 20:21-20:44/23 21:22 06:11-06:26/15	06:23 06:53-07:29/36 20:06	07:23 16:40-17:27/47 18:46	07:29 09:07-10:06/59 08:12-08:55/43 16:29 13:26-14:14/48	08:29 09:12-10:48/96 15:42 13:11-14:23/72
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30	05:12 20:23-20:43/20 21:32	06:13 06:43-07:32/49 20:19	07:15 07:44-08:04/20 16:52-17:04/12 18:56 17:08-17:20/12	07:18 09:12-09:49/37 07:50-08:57/67 16:40 13:45-13:53/8	08:22 09:08-10:46/98 15:46 13:10-14:24/74	08:51 09:36-11:01/85 12:58-13:10/12 15:46 13:25-14:32/67 12:37-12:39/2
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Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	653	1447	1248	2739	5056	5301

Table 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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B23 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (97)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
441 466 538 463 487 780 784 937 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 15:49	08:14 16:45 16:47	07:10 17:47 17:49	06:48 19:53 19:55	07:14-07:28/14 20:55 20:57	04:36 21:52 21:54	04:30 22:09 22:08	05:15 21:28 21:26	06:17 20:14 20:11	07:00-07:25/25 18:53 18:51	07:22 16:36 16:34	08:24 15:45 15:44
2	08:50 15:49 15:50	08:13 16:47 16:49	07:08 17:49 17:52	06:46 19:55 19:57	07:11-07:28/17 20:57 20:59	04:34 21:54 21:55	04:31 22:08 22:08	05:17 21:26 21:23	06:19 20:11 20:08	06:59-07:26/27 18:53 18:48	07:24 16:34 16:31	08:26 15:44 15:43
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20	08:34 16:19 16:21	07:33 17:27 17:30	06:21 18:28 18:30	05:59 20:32 20:34	07:33 21:33 21:34	04:25 22:09 22:10	04:54 21:49 21:48	05:53 20:44 20:42	06:55 19:23 19:20	07:56 18:04 18:02	08:03 15:59 15:57	08:48 15:38 15:39
21	08:33 16:21 16:23	07:30 17:30 17:32	06:18 18:30 18:32	05:56 20:34 20:36	07:30 21:34 21:36	04:25 22:10 22:10	04:56 21:48 21:46	05:55 20:42 20:39	06:57 19:20 19:18	07:59 18:02 17:59	08:05 15:57 15:56	08:49 15:39 15:39
22	08:32 16:23 16:26	07:28 17:32 17:34	06:15 18:32 18:34	05:54 20:36 20:39	07:28 21:36 21:38	04:25 22:10 22:10	04:57 21:46 21:44	05:57 20:39 20:37	06:59 19:18 19:15	08:01 17:57 17:55	08:07 15:56 15:54	08:49 15:39 15:40
23	08:30 16:26 16:28	07:26 17:34 17:36	06:13 18:34 18:36	05:51 20:39 20:41	07:26 21:38 21:40	04:25 22:10 22:10	04:59 21:44 21:43	05:59 20:37 20:34	07:01 19:15 19:12	08:03 17:55 17:54	08:09 15:54 15:53	08:49 15:40 15:40
24	08:29 16:28 16:30	07:23 17:36 17:39	06:10 18:36 18:38	05:49 20:41 20:43	07:23 21:40 21:41	04:26 22:10 22:10	05:01 21:43 21:41	06:01 20:34 20:32	07:03 19:12 19:09	08:05 17:54 17:52	08:11 15:53 15:52	08:50 15:40 15:41
25	08:27 16:30 16:32	07:21 17:39 17:41	06:07 18:38 18:40	05:47 20:43 20:45	07:21 21:41 21:43	04:26 22:10 22:10	05:02 21:41 21:39	06:03 20:32 20:29	07:05 19:09 19:07	07:07 16:52 16:50	08:13 15:52 15:50	08:50 15:41 15:42
26	08:25 16:32 16:34	07:18 17:41 17:43	06:05 18:40 18:42	05:44 20:45 20:47	07:18 21:43 21:45	04:27 22:10 22:10	05:04 21:39 21:37	06:05 20:29 20:27	07:07 19:07 19:04	07:09 16:50 16:47	08:15 15:50 15:49	08:50 15:42 15:43
27	08:24 16:34 16:36	07:16 17:43 17:45	06:02 18:42 18:44	05:42 20:47 20:49	07:16 21:45 21:46	04:27 22:10 22:10	05:06 21:37 21:35	06:07 20:27 20:24	07:09 19:04 19:01	07:11 16:47 16:45	08:17 15:49 15:48	08:50 15:43 15:43
28	08:22 16:36 16:38	07:13 17:45 17:46	05:59 18:44 18:46	05:39 20:49 20:51	07:13 21:46 21:48	04:28 22:10 22:09	05:08 21:35 21:33	06:09 20:24 20:22	07:11 19:01 18:59	07:13 16:45 16:43	08:19 15:48 15:47	08:51 15:44 15:44
29	08:20 16:38 16:41	07:11 17:46 17:47	05:56 18:46 18:48	05:37 20:51 20:53	07:11 21:48 21:49	04:28 22:09 22:09	05:10 21:33 21:32	06:11 20:22 20:19	07:13 18:59 18:56	07:15 16:43 16:40	08:20 15:47 15:46	08:51 15:44 15:45
30	08:18 16:41 16:43	07:08 17:49 17:51	05:54 18:49 18:51	05:35 20:53 20:55	07:09-07:23/4 21:49 21:51	04:29 22:09 22:10	05:12 21:32 21:30	06:13 20:19 20:16	07:15 18:56 18:53	07:17 16:40 16:38	08:22 15:46 15:45	08:51 15:45 15:46
31	08:16 16:43 16:44	07:06 17:51 17:52	05:51 18:51 18:52	05:33 20:55 20:57	07:16-07:25/9 21:51 21:53	04:37 22:10 22:10	05:13 21:30 21:28	06:15 20:16 20:14	07:17 18:56 18:53	07:20 16:38 16:36	08:23 15:46 15:45	08:51 15:46 15:47
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Sum of minutes with flicker	0	0	13	336	0	0	0	76	282	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B24 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (95)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 14:05-14:13/8 15:48	08:15 08:45-09:19/34 16:45 15:27-15:54/27	07:11 17:11-17:18/7 17:48 07:37-07:57/20	06:49 07:14-07:50/36 19:53	05:33 20:55	04:36 05:23-06:00/37 21:52
2	08:50 14:06-14:12/6 15:49	08:13 08:43-09:19/36 16:47 15:26-15:56/30	07:08 17:09-17:20/11 17:50 07:34-07:56/22	06:46 07:11-07:48/37 19:55	05:30 20:57	04:35 05:23-06:00/37 21:54
3	08:50 15:51	08:11 08:41-09:19/38 16:50 15:25-15:57/32	07:06 17:07-17:23/16 17:52 07:32-07:56/24	06:43 07:09-07:37/28 19:57 07:38-07:45/7	05:28 20:59	04:34 05:23-06:01/38 21:55 21:15-21:16/1
4	08:50 15:52	08:09 08:41-09:19/38 16:52 15:24-15:58/34	07:03 17:06-17:25/19 17:54 07:29-07:54/25	06:41 07:08-07:35/27 19:59	05:26 20:22-20:29/7 21:01	04:33 05:24-06:02/38 21:56 21:15-21:18/3
5	08:49 15:53	08:07 08:41-09:19/38 16:54 15:23-15:59/36	07:00 17:04-17:26/22 17:56 07:26-07:52/26	06:38 07:07-07:32/25 20:01	05:23 20:20-20:31/11 21:04	04:32 05:23-06:02/39 21:58 21:14-21:19/5
6	08:49 15:55	08:05 08:41-09:17/36 16:56 15:23-16:00/37	06:58 17:04-17:27/23 17:58 07:24-07:50/26	06:35 07:07-07:30/23 20:03	05:21 20:18-20:33/15 21:06	04:31 05:23-06:02/39 21:59 21:13-21:20/7
7	08:48 15:56	08:03 08:41-09:17/36 16:59 15:22-16:01/39	06:55 17:04-17:27/23 18:00 07:24-07:44/20	06:33 07:07-07:29/22 20:05	05:19 20:17-20:35/18 21:08	04:30 05:24-06:03/39 22:00 21:13-21:20/7
8	08:47 15:58	08:00 08:42-09:16/34 17:01 15:22-16:02/40	06:53 17:03-17:26/23 18:03 07:24-07:43/19	06:30 07:07-07:29/22 20:07	05:17 20:16-20:36/20 21:10	04:29 05:23-06:03/40 22:01 21:13-21:22/9
9	08:47 16:00	07:58 08:42-09:12/30 17:03 15:21-16:01/40	06:50 17:04-17:27/23 18:05 07:25-07:42/17	06:28 07:07-07:27/20 20:10	05:15 20:16-20:38/22 21:12	04:29 05:23-06:03/40 22:02 21:12-21:22/10
10	08:46 09:23-09:24/1 16:01	07:56 08:43-09:07/24 17:05 15:21-16:02/41	06:47 17:03-17:26/23 18:07 07:26-07:40/14	06:25 07:08-07:25/17 20:12	05:13 20:15-20:38/23 21:14	04:28 05:23-06:04/41 22:03 21:13-21:23/10
11	08:45 09:22-09:25/3 16:03	07:54 08:44-09:05/21 17:08 15:21-16:02/41	06:45 17:03-17:25/22 18:09 07:28-07:38/10	06:22 07:09-07:24/15 20:14	05:11 20:15-20:38/23 21:16	04:27 05:23-06:04/41 21:12-21:24/12 22:04 05:04-05:05/1
12	08:44 09:21-09:27/6 16:05	07:52 08:44-09:02/18 17:10 15:21-16:02/41	06:42 17:04-17:23/19 18:11	06:20 07:11-07:21/10 20:16	05:09 20:14-20:39/25 21:18	04:26 05:24-06:05/41 21:12-21:25/13 22:05 05:03-05:05/2
13	08:43 09:19-09:27/8 16:06	07:49 08:46-09:00/14 17:12 15:21-16:03/42	06:39 17:05-17:22/17 18:13	06:17 20:18	05:07 20:14-20:38/24 21:20	04:26 05:24-06:05/41 21:12-21:26/14 22:06 05:03-05:06/3
14	08:42 09:18-09:28/10 16:08	07:47 08:48-08:57/9 17:14 15:21-16:02/41	06:37 17:07-17:20/13 18:15	06:14 20:20	05:05 20:14-20:39/25 21:21	04:26 05:24-06:05/41 21:13-21:27/14 22:06 05:03-05:07/4
15	08:41 09:16-09:29/13 16:10	07:45 15:21-16:03/42 17:17	06:34 17:10-17:16/6 18:17	06:12 20:22	05:03 20:14-20:39/25 21:23	04:26 05:24-06:05/41 21:12-21:26/14 22:07 05:03-05:08/5
16	08:40 09:15-09:30/15 16:12	07:42 15:21-16:02/41 17:19	06:32 18:20	06:09 20:24	05:01 20:14-20:39/25 21:25	04:26 05:24-06:05/41 21:12-21:27/15 22:08 05:03-05:08/5
17	08:39 09:14-09:31/17 16:14	07:40 15:22-16:02/40 17:21	06:29 18:22	06:07 20:26	04:59 20:15-20:39/24 21:27	04:25 05:24-06:05/41 21:12-21:28/16 22:08 05:02-05:08/6
18	08:37 09:12-09:31/19 16:16	07:38 15:22-16:01/39 17:23	06:26 06:51-06:57/6 18:24	06:04 20:28	04:57 20:15-20:38/23 21:29	04:25 05:24-06:05/41 21:13-21:28/15 22:09 05:02-05:08/6
19	08:36 09:11-09:31/20 16:18	07:35 15:23-16:01/38 17:26	06:24 06:49-06:59/10 18:26	06:02 20:30	04:55 05:37-05:45/8 21:31	04:25 05:24-06:06/42 21:13-21:28/15 22:09 05:03-05:09/6
20	08:35 09:12-09:33/21 16:20	07:33 15:23-16:00/37 17:28	06:21 06:46-07:00/14 18:28	05:59 20:32	04:53 05:33-05:48/15 21:33	04:25 05:25-06:07/42 21:13-21:29/16 22:10 05:03-05:09/6
21	08:33 09:12-09:33/21 16:22 09:07-09:10/3	07:31 15:25-15:59/34 17:30	06:18 06:43-07:00/17 18:30	05:57 20:35	04:52 05:31-05:50/19 21:35	04:25 05:25-06:07/42 21:14-21:30/16 22:10 05:03-05:10/7
22	08:32 09:05-09:33/28 16:24	07:28 15:25-15:58/33 17:32	06:15 06:41-07:01/20 18:32	05:54 20:37	04:50 05:30-05:52/22 21:36	04:26 05:25-06:07/42 21:14-21:30/16 22:10 05:03-05:10/7
23	08:30 09:03-09:33/30 16:26	07:26 07:53-07:54/1 17:34 15:27-15:57/30	06:13 06:38-07:01/23 18:34	05:52 20:39	04:48 05:29-05:53/24 21:38	04:26 05:25-06:07/42 21:14-21:29/15 22:10 05:03-05:09/6
24	08:29 09:02-09:34/32 16:28	07:23 07:50-07:55/5 17:37 15:29-15:55/26	06:10 06:35-07:01/26 18:36	05:49 20:41	04:47 05:27-05:54/27 21:40	04:26 05:26-06:07/41 21:15-21:30/15 22:10 05:04-05:10/6
25	08:27 09:00-09:33/33 16:30	07:21 07:48-07:57/9 17:39 15:30-15:52/22	06:07 06:33-07:01/28 18:38	05:47 20:43	04:45 05:27-05:55/28 21:42	04:26 05:26-06:07/41 21:14-21:30/16 22:10 05:04-05:10/6
26	08:25 08:58-09:33/35 16:32	07:18 07:45-07:57/12 17:41 15:34-15:50/16	06:05 06:30-07:00/30 18:40	05:44 20:45	04:44 05:26-05:56/30 21:43	04:27 05:26-06:07/41 21:14-21:29/15 22:10 05:05-05:10/5
27	08:24 08:56-09:33/37 16:34	07:16 07:42-07:57/15 17:43 15:40-15:42/2	06:02 06:27-06:59/32 18:43	05:42 20:47	04:42 05:26-05:57/31 21:45	04:27 05:26-06:08/42 21:15-21:30/15 22:10 05:05-05:10/5
28	08:22 08:54-09:32/38 16:36 15:35-15:45/10	07:13 07:40-07:57/17 17:45	05:59 06:25-06:58/33 18:45	05:40 20:49	04:41 05:25-05:57/32 21:46	04:28 05:27-06:08/41 21:15-21:29/14 22:10 05:06-05:10/4
29	08:20 08:52-09:31/39 16:39 15:32-15:49/17		06:57 07:22-07:56/34 19:47	05:37 20:51	04:40 05:24-05:58/34 21:48	04:29 05:27-06:08/41 21:16-21:29/13 22:10 05:06-05:09/3
30	08:18 08:50-09:19/29 15:29-15:50/21 16:41 09:20-09:30/10		06:54 07:19-07:53/34 19:49	05:35 20:53	04:38 05:24-05:59/35 21:49	04:29 05:27-06:08/41 21:16-21:29/13 22:09 05:07-05:10/3
31	08:16 08:48-09:20/32 15:28-15:52/24 16:43 09:24-09:26/2		06:51 07:17-07:52/35 19:51		04:37 05:24-05:59/35 21:51	
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	588	1386	832	289	815	1653

Table 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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B24 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (95)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:28-06:09/41 21:16-21:28/12	05:16 20:24-20:49/25	06:17 07:08-07:23/15	07:17 17:44-18:03/19	07:22 08:12-08:37/25	08:24 09:04-09:07/3
	22:09 05:08-05:09/1	21:28	20:14	18:54	16:36 14:51-15:32/41	15:45
2	04:31 05:27-06:08/41	05:18 20:25-20:49/24	06:19 07:07-07:24/17	07:19 17:43-18:03/20	07:25 08:11-08:43/32	08:26 09:06-09:07/1
	22:08 21:17-21:28/11	21:26	20:11	18:51 08:08-08:15/7	16:34 14:51-15:31/40	15:44
3	04:32 05:28-06:08/40	05:20 20:26-20:48/22	06:21 07:05-07:25/20	07:21 17:42-18:04/22	07:27 08:11-08:45/34	08:27
	22:08 21:17-21:28/11	21:24	20:09	18:48 08:05-08:18/13	16:32 14:52-15:31/39	15:43
4	04:33 05:28-06:08/40	05:21 20:26-20:48/22	06:23 07:05-07:26/21	07:23 17:41-18:04/23	07:29 08:11-08:47/36	08:29
	22:07 21:18-21:27/9	21:22	20:06	18:46 08:03-08:19/16	16:29 14:52-15:30/38	15:42
5	04:34 05:29-06:08/39	05:23 20:26-20:45/19	06:25 07:04-07:26/22	07:25 17:40-18:04/24	07:31 08:10-08:47/37	08:31
	22:07 21:19-21:27/8	21:19	20:03	18:43 08:02-08:19/17	16:27 14:52-15:29/37	15:42
6	04:35 05:29-06:08/39	05:25 20:27-20:43/16	06:27 07:03-07:26/23	07:27 17:40-18:03/23	07:33 08:11-08:49/38	08:32
	22:06 21:19-21:26/7	21:17	20:01	18:40 08:01-08:20/19	16:25 14:54-15:29/35	15:41
7	04:36 05:30-06:08/38	05:27 20:28-20:41/13	06:29 07:02-07:27/25	07:29 17:39-18:03/24	07:36 08:11-08:49/38	08:34
	22:05 21:20-21:26/6	21:15	19:58	18:38 08:00-08:20/20	16:23 14:54-15:28/34	15:40
8	04:37 05:30-06:08/38	05:29 20:30-20:40/10	06:31 07:02-07:29/27	07:32 17:39-18:02/23	07:38 08:12-08:50/38	08:35
	22:04 21:21-21:25/4	21:13	19:55	18:35 08:00-08:26/26	16:21 14:56-15:28/32	15:40
9	04:38 05:30-06:08/38	05:31 20:32-20:38/6	06:33 07:02-07:30/28	07:34 17:40-18:01/21	07:40 08:14-08:50/36	08:36
	22:03 21:22-21:24/2	21:11	19:53 07:32-07:38/6	18:32 08:03-08:29/26	16:19 14:57-15:26/29	15:39
10	04:39 05:31-06:08/37	05:33	06:35 07:04-07:41/37	07:36 17:41-17:59/18	07:42 08:16-08:50/34	08:38 13:56-14:02/6
	22:02	21:08	19:50	18:30 08:05-08:29/24	16:17 14:57-15:25/28	15:39
11	04:41 05:32-06:09/37	05:35	06:37 07:06-07:43/37	07:38 17:42-17:56/14	07:44 08:19-08:51/32 15:00-15:24/24	08:39 13:55-14:03/8
	22:01	21:06	19:47	18:27 08:07-08:30/23	16:15 08:54-08:58/4	15:39
12	04:42 05:32-06:08/36	05:37	06:39 07:08-07:44/36	07:40 17:43-17:53/10	07:46 08:21-09:01/40	08:40 13:55-14:04/9
	22:00	21:04	19:45	18:25 08:09-08:30/21	16:13 15:01-15:22/21	15:38
13	04:43 05:32-06:08/36	05:39	06:41 07:10-07:44/34	07:42 17:46-17:50/4	07:48 08:24-09:03/39	08:41 13:55-14:06/11
	21:59	21:01	19:42	18:22 08:11-08:30/19	16:11 15:04-15:21/17	15:38
14	04:45 05:33-06:07/34	05:41	06:43 07:12-07:46/34	07:44 08:13-08:29/16	07:51 08:26-09:04/38	08:42 13:55-14:07/12
	21:58	20:59	19:39	18:19	16:09 15:07-15:17/10	15:38
15	04:46 05:34-06:07/33	05:43	06:45 07:14-07:47/33	07:46 08:16-08:30/14	07:53 08:28-09:05/37	08:44 13:55-14:07/12
	21:56	20:57	19:37	18:17 16:09-16:19/10	16:08	15:38
16	04:48 05:34-06:06/32	05:45	06:47 07:16-07:48/32	07:48 08:18-08:29/11	07:55 08:31-09:06/35	08:44 13:55-14:08/13
	21:55 20:33-20:41/8	20:54	19:34	18:14 16:05-16:23/18	16:06	15:38
17	04:49 05:35-06:05/30	05:47	06:49 07:18-07:48/30	07:50 08:20-08:27/7	07:57 08:33-09:06/33	08:45 13:55-14:09/14
	21:54 20:31-20:42/11	20:52	19:31	18:12 16:01-16:25/24	16:04	15:38
18	04:51 05:36-06:05/29	05:49	06:51 07:20-07:48/28	07:52 08:22-08:26/4	07:59 08:36-09:08/32	08:46 13:56-14:10/14
	21:52 20:30-20:44/14	20:49	19:29	18:09 15:59-16:26/27	16:02	15:38
19	04:53 05:37-06:04/27	05:51	06:53 07:22-07:48/26	07:54 15:57-16:27/30	08:01 08:38-09:08/30	08:47 13:55-14:10/15
	21:51 20:29-20:44/15	20:47	19:26	18:07	16:01	15:38
20	04:54 05:38-06:04/26	05:53	06:55 07:24-07:48/24	07:57 15:56-16:29/33	08:03 08:40-09:08/28	08:48 13:56-14:11/15
	21:49 20:28-20:46/18	20:45	19:23	18:04	15:59	15:39
21	04:56 05:39-06:02/23	05:55	06:57 07:26-07:47/21	07:59 15:55-16:30/35	08:05 08:47-09:08/21	08:48 13:57-14:12/15
	21:48 20:27-20:46/19	20:42	19:20	18:02	15:58 08:42-08:45/3	15:39
22	04:58 05:41-06:01/20	05:57	06:59 07:28-07:46/18	08:01 15:53-16:30/37	08:07 08:48-09:09/21	08:49 13:57-14:12/15
	21:46 20:27-20:47/20	20:40	19:18	17:59	15:56	15:39
23	04:59 05:42-05:59/17	05:59	07:01 07:30-07:45/15	08:03 15:53-16:31/38	08:09 08:48-09:09/21	08:49 13:57-14:12/15
	21:44 20:26-20:47/21	20:37	19:15	17:57	15:55	15:40
24	05:01 05:45-05:57/12	06:01	07:03 07:32-07:43/11	08:05 15:52-16:31/39	08:11 08:49-09:08/19	08:50 13:58-14:13/15
	21:43 20:26-20:48/22	20:35	19:12	17:55	15:53	15:41
25	05:03 05:51-05:52/1	06:03	07:05 07:34-07:41/7	07:07 14:51-15:31/40	08:13 08:51-09:08/17	08:50 13:59-14:13/14
	21:41 20:25-20:48/23	20:32	19:10	16:52	15:52	15:41
26	05:05 20:25-20:49/24	06:05	07:07 07:36-07:38/2	07:09 14:51-15:32/41	08:15 08:53-09:08/15	08:50 13:59-14:13/14
	21:39	20:29	19:07	16:50	15:51	15:42
27	05:06 20:25-20:49/24	06:07	07:09	07:12 14:51-15:32/41	08:17 08:56-09:09/13	08:51 14:00-14:13/13
	21:37	20:27	19:04	16:47	15:49	15:43
28	05:08 20:24-20:49/25	06:09	07:11	07:14 08:17-08:28/11	08:19 08:58-09:08/10	08:51 14:01-14:13/12
	21:36	20:24	19:02	16:45 14:50-15:32/42	15:48	15:44
29	05:10 20:24-20:49/25	06:11	07:13 17:48-17:59/11	07:16 08:15-08:30/15	08:20 09:00-09:08/8	08:51 14:02-14:14/12
	21:34	20:22	18:59	16:43 14:51-15:32/41	15:47	15:45
30	05:12 20:25-20:50/25	06:13	07:15 17:46-18:02/16	07:18 08:14-08:31/17	08:22 09:02-09:08/6	08:51 14:03-14:14/11
	21:32	20:19	18:56	16:41 14:50-15:32/42	15:46	15:46
31	05:14 20:25-20:50/25	06:15 07:11-07:21/10		07:20 08:12-08:35/23		08:51 14:03-14:13/10
	21:30	20:17		16:38 14:50-15:31/41		15:47
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1174	167	656	1173	1275	279

Table 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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B25 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (96)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 14:49-15:05/16 15:48 12:20-13:08/48	08:15 16:45	07:11 17:47	06:49 19:53	05:33 20:01-20:21/20 20:55	04:36 20:16-20:54/38 21:52
2	08:50 14:48-15:06/18 15:49 12:20-13:08/48	08:13 16:47	07:08 17:50	06:46 19:55	05:30 20:01-20:21/20 20:57	04:35 20:15-20:55/40 21:54
3	08:50 14:49-15:08/19 15:51 12:21-13:09/48	08:11 16:50	07:06 17:52	06:43 19:57	05:28 20:01-20:21/20 20:59	04:34 20:15-20:55/40 21:55
4	08:50 14:49-15:09/20 15:52 12:21-13:09/48	08:09 16:04-16:13/9 16:52	07:03 17:54	06:41 19:59	05:26 20:02-20:20/18 21:01	04:33 20:15-20:55/40 21:56
5	08:49 14:49-15:11/22 15:53 12:21-13:09/48	08:07 16:00-16:16/16 16:54	07:00 17:56	06:38 20:01	05:23 20:02-20:20/18 21:03	04:32 20:16-20:56/40 21:58
6	08:49 14:50-15:12/22 15:55 12:22-13:10/48	08:05 15:58-16:18/20 16:56	06:58 17:58	06:35 20:03	05:21 20:03-20:19/16 21:06	04:31 20:16-20:56/40 21:59
7	08:48 14:50-15:12/22 15:56 12:22-13:11/49	08:02 15:57-16:20/23 16:59	06:55 18:00	06:33 20:05	05:19 20:04-20:18/14 21:08	04:30 20:15-20:56/41 22:00
8	08:47 14:51-15:13/22 15:58 12:23-13:11/48	08:00 15:55-16:21/26 17:01	06:53 18:03	06:30 20:07	05:17 20:05-20:16/11 21:10	04:29 20:16-20:57/41 22:01
9	08:47 14:51-15:13/22 15:59 12:23-13:11/48	07:58 15:55-16:22/27 17:03	06:50 18:05	06:27 20:10	05:15 20:07-20:14/7 21:12	04:29 20:16-20:56/40 22:02
10	08:46 14:51-15:14/23 16:01 12:24-13:12/48	07:56 15:54-16:24/30 17:05	06:47 18:07	06:25 20:12	05:13 21:14	04:28 20:16-20:57/41 22:03
11	08:45 14:52-15:14/22 16:03 12:25-13:12/47	07:54 15:53-16:24/31 17:08	06:45 18:09	06:22 20:14	05:11 21:16	04:27 20:16-20:57/41 22:04
12	08:44 14:52-15:14/22 16:05 12:24-13:12/48	07:52 15:53-16:25/32 17:10	06:42 18:11	06:20 06:45-06:54/9 20:16	05:08 21:18	04:27 20:16-20:57/41 22:05
13	08:43 14:52-15:14/22 16:06 12:25-13:12/47	07:49 15:53-16:26/33 17:12	06:39 18:13	06:17 06:43-06:57/14 20:18	05:06 21:19	04:26 20:17-20:58/41 22:06
14	08:42 14:53-15:15/22 16:08 12:26-13:13/47	07:47 15:52-16:25/33 17:14	06:37 18:15	06:14 06:40-06:58/18 20:20	05:04 21:21	04:26 20:17-20:58/41 22:06
15	08:41 14:53-15:15/22 16:10 12:26-13:12/46	07:45 15:53-16:26/33 17:17	06:34 18:17	06:12 06:38-06:59/21 20:22	05:03 21:23	04:26 20:17-20:58/41 22:07
16	08:40 14:54-15:15/21 16:12 12:27-13:13/46	07:42 15:52-16:26/34 17:19	06:31 18:20	06:09 06:35-06:59/24 20:24	05:01 20:27-20:40/13 21:25	04:26 20:17-20:58/41 22:08
17	08:39 14:55-15:14/19 16:14 12:28-13:12/44	07:40 15:53-16:26/33 17:21	06:29 18:22	06:07 06:35-07:00/25 20:26	04:59 20:25-20:43/18 21:27	04:25 20:17-20:58/41 22:08
18	08:37 14:56-15:15/19 16:16 12:29-13:13/44	07:38 15:52-16:25/33 17:23	06:26 18:24	06:04 06:34-06:59/25 20:28	04:57 20:23-20:44/21 21:29	04:25 20:17-20:59/42 22:09
19	08:36 14:57-15:14/17 16:18 12:29-13:12/43	07:35 15:53-16:25/32 17:25	06:23 18:26	06:02 06:33-07:00/27 20:30	04:55 20:21-20:45/24 21:31	04:25 20:18-20:59/41 22:09
20	08:35 14:57-15:13/16 16:20 12:30-13:12/42	07:33 15:53-16:24/31 17:28	06:21 18:28	05:59 06:34-07:00/26 20:32	04:53 20:21-20:47/26 21:33	04:25 20:18-20:59/41 22:09
21	08:33 15:00-15:13/13 16:22 12:31-13:12/41	07:31 15:54-16:24/30 17:30	06:18 18:30	05:57 06:33-06:59/26 20:34	04:52 20:19-20:48/29 21:35	04:25 20:19-21:00/41 22:10
22	08:32 15:01-15:11/10 16:24 12:32-13:11/39	07:28 15:55-16:23/28 17:32	06:15 18:32	05:54 06:33-06:59/26 20:37	04:50 20:19-20:49/30 21:36	04:26 20:19-21:00/41 22:10
23	08:30 15:04-15:08/4 16:26 12:33-13:11/38	07:26 15:55-16:21/26 17:34	06:13 18:34	05:52 06:33-06:58/25 20:39	04:48 20:19-20:50/31 21:38	04:26 20:19-21:00/41 22:10
24	08:29 12:34-13:10/36 16:28	07:23 15:57-16:20/23 17:37	06:10 18:36	05:49 20:08-20:10/2 20:41 06:33-06:58/25	04:47 20:18-20:50/32 21:40	04:26 20:19-21:00/41 22:10
25	08:27 12:35-13:09/34 16:30	07:21 15:59-16:18/19 17:39	06:07 18:38	05:47 20:06-20:12/6 20:43 06:34-06:57/23	04:45 20:17-20:51/34 21:41	04:26 20:19-21:01/42 22:10
26	08:25 12:38-13:09/31 16:32	07:18 16:02-16:15/13 17:41	06:05 18:40	05:44 20:04-20:13/9 20:45 06:34-06:55/21	04:44 20:17-20:52/35 21:43	04:27 20:19-21:00/41 22:10
27	08:24 12:39-13:08/29 16:34	07:16 17:43	06:02 18:43	05:42 20:03-20:15/12 20:47 06:35-06:54/19	04:42 20:16-20:52/36 21:45	04:27 20:20-21:01/41 22:10
28	08:22 12:41-13:06/25 16:36	07:13 17:45	05:59 18:45	05:40 20:02-20:18/16 20:49 06:37-06:53/16	04:41 20:16-20:53/37 21:46	04:28 20:19-21:01/42 22:10
29	08:20 12:44-13:04/20 16:39		06:57 19:47	05:37 20:01-20:19/18 20:51 06:39-06:51/12	04:40 20:16-20:53/37 21:48	04:29 20:20-21:01/41 22:09
30	08:18 12:46-13:00/14 16:41		06:54 19:49	05:35 20:01-20:21/20 20:53 06:42-06:47/5	04:38 20:16-20:54/38 21:49	04:29 20:21-21:02/41 22:09
31	08:16 16:43		06:51 19:51		04:37 20:16-20:54/38 21:51	
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	1677	615	0	470	623	1224

Table 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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B25 - Siemens Gamesa SG 6.6-170 6600 170.0 !OI hub: 165.0 m (TOT: 250.0 m) (96)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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	20:20-21:01/41	05:16		06:17		07:17		07:22	15:24-15:53/29	08:24	14:33-14:55/22
	22:09		21:28		20:14		18:54		16:36		15:45	12:07-12:54/47
2	04:31	20:21-21:01/40	05:18		06:19		07:19		07:25	15:25-15:52/27	08:26	14:34-14:56/22
	22:08		21:26		20:11		18:51		16:34		15:44	12:06-12:54/48
3	04:32	20:21-21:02/41	05:19		06:21		07:21		07:27	15:25-15:50/25	08:27	14:34-14:56/22
	22:08		21:24		20:09		18:48		16:32		15:43	12:07-12:54/47
4	04:33	20:21-21:02/41	05:21	20:17-20:25/8	06:23		07:23		07:29	15:27-15:50/23	08:29	14:35-14:57/22
	22:07		21:21		20:06		18:46		16:29		15:42	12:07-12:55/48
5	04:34	20:22-21:02/40	05:23	20:14-20:26/12	06:25		07:25		07:31	15:28-15:48/20	08:31	14:35-14:58/23
	22:06		21:19		20:03		18:43		16:27		15:42	12:08-12:56/48
6	04:35	20:22-21:02/40	05:25	20:13-20:27/14	06:27		07:27		07:33	15:31-15:46/15	08:32	14:36-14:58/22
	22:06		21:17		20:01		18:40		16:25		15:41	12:08-12:57/49
7	04:36	20:22-21:02/40	05:27	20:12-20:28/16	06:29		07:29		07:35	15:34-15:42/8	08:34	14:36-14:58/22
	22:05		21:15		19:58		18:38		16:23		15:40	12:08-12:56/48
8	04:37	20:22-21:02/40	05:29	20:11-20:29/18	06:31		07:31		07:38		08:35	14:37-14:58/21
	22:04		21:13		19:55		18:35		16:21		15:40	12:09-12:57/48
9	04:38	20:23-21:02/39	05:31	20:11-20:30/19	06:33		07:34		07:40		08:36	14:37-14:56/19
	22:03		21:11		19:53		18:32		16:19		15:39	12:09-12:57/48
10	04:39	20:23-21:02/39	05:33	20:10-20:29/19	06:35		07:36		07:42		08:38	14:38-14:56/18
	22:02		21:08		19:50		18:30		16:17		15:39	12:10-12:58/48
11	04:41	20:23-21:02/39	05:35	20:09-20:29/20	06:37		07:38		07:44		08:39	14:39-14:56/17
	22:01		21:06		19:47		18:27		16:15		15:39	12:10-12:58/48
12	04:42	20:24-21:03/39	05:37	20:09-20:29/20	06:39		07:40		07:46	12:18-12:32/14	08:40	14:39-14:55/16
	22:00		21:04		19:45		18:25		16:13		15:38	12:10-12:58/48
13	04:43	20:24-21:02/38	05:39	20:09-20:29/20	06:41		07:42		07:48	12:16-12:36/20	08:41	14:40-14:55/15
	21:59		21:01	06:48-06:56/8	19:42		18:22		16:11		15:38	12:11-12:59/48
14	04:45	20:24-21:02/38	05:41	20:10-20:27/17	06:43		07:44		07:51	12:13-12:38/25	08:42	14:41-14:55/14
	21:58		20:59	06:45-06:59/14	19:39		18:19		16:09		15:38	12:11-13:00/49
15	04:46	20:24-21:01/37	05:43	20:10-20:25/15	06:45		07:46	16:37-16:43/6	07:53	12:11-12:40/29	08:43	14:41-14:55/14
	21:56		20:57	06:44-07:01/17	19:37		18:17		16:08		15:38	12:12-13:00/48
16	04:48	20:26-21:02/36	05:45	20:11-20:23/12	06:47		07:48	16:33-16:48/15	07:55	12:11-12:42/31	08:44	14:42-14:54/12
	21:55		20:54	06:42-07:02/20	19:34		18:14		16:06		15:38	12:12-13:01/49
17	04:49	20:26-21:01/35	05:47	20:11-20:19/8	06:49		07:50	16:30-16:50/20	07:57	12:09-12:43/34	08:45	14:43-14:55/12
	21:54		20:52	06:41-07:03/22	19:31		18:12		16:04		15:38	12:13-13:01/48
18	04:51	20:27-21:01/34	05:49	20:12-20:17/5	06:51		07:52	16:28-16:52/24	07:59	12:08-12:44/36	08:46	14:43-14:55/12
	21:52		20:49	06:39-07:03/24	19:28		18:09		16:02		15:38	12:14-13:02/48
19	04:53	20:27-21:00/33	05:51	20:14-20:15/1	06:53		07:54	16:26-16:53/27	08:01	14:39-14:43/4	08:47	14:43-14:54/11
	21:51		20:47	06:39-07:03/24	19:26		18:07		16:01	12:08-12:46/38	15:38	12:13-13:01/48
20	04:54	20:28-21:00/32	05:53	06:38-07:04/26	06:55		07:57	16:26-16:54/28	08:03	14:36-14:46/10	08:48	14:44-14:55/11
	21:49		20:44		19:23		18:04		15:59	12:07-12:46/39	15:39	12:14-13:02/48
21	04:56	20:28-20:59/31	05:55	06:38-07:04/26	06:57		07:59	16:24-16:54/30	08:05	14:35-14:48/13	08:48	14:44-14:55/11
	21:48		20:42		19:20		18:02		15:58	12:06-12:47/41	15:39	12:14-13:02/48
22	04:57	20:30-20:59/29	05:57	06:37-07:04/27	06:59		08:01	16:23-16:55/32	08:07	14:34-14:49/15	08:49	14:45-14:56/11
	21:46		20:40		19:18		17:59		15:56	12:07-12:49/42	15:39	12:15-13:03/48
23	04:59	20:30-20:57/27	05:59	06:37-07:04/27	07:01		08:03	16:23-16:56/33	08:09	14:34-14:51/17	08:49	14:45-14:56/11
	21:44		20:37		19:15		17:57		15:55	12:06-12:49/43	15:40	12:15-13:03/48
24	05:01	20:32-20:57/25	06:01	06:37-07:04/27	07:03		08:05	16:22-16:56/34	08:11	14:33-14:52/19	08:50	14:46-14:57/11
	21:43		20:34		19:12		17:55		15:53	12:06-12:50/44	15:41	12:16-13:04/48
25	05:03	20:32-20:55/23	06:03	06:37-07:03/26	07:05		07:07	15:22-15:55/33	08:13	14:33-14:52/19	08:50	14:46-14:58/12
	21:41		20:32		19:10		16:52		15:52	12:06-12:50/44	15:41	12:16-13:05/49
26	05:05	20:34-20:54/20	06:05	06:38-07:03/25	07:07		07:09	15:21-15:55/34	08:15	14:32-14:53/21	08:50	14:47-14:58/11
	21:39		20:29		19:07		16:50		15:51	12:05-12:51/46	15:42	12:17-13:05/48
27	05:06	20:37-20:52/15	06:07	06:37-07:01/24	07:09		07:12	15:22-15:55/33	08:17	14:32-14:54/22	08:51	14:47-14:59/12
	21:37		20:27		19:04		16:47		15:49	12:05-12:51/46	15:43	12:17-13:05/48
28	05:08	20:39-20:48/9	06:09	06:39-07:00/21	07:11		07:14	15:22-15:55/33	08:19	14:32-14:54/22	08:51	14:47-15:00/13
	21:35		20:24		19:02		16:45		15:48	12:06-12:53/47	15:44	12:18-13:06/48
29	05:10		06:11	06:41-06:58/17	07:13		07:16	15:23-15:55/32	08:20	14:34-14:56/22	08:51	14:48-15:01/13
	21:34		20:22		18:59		16:43		15:47	12:06-12:53/47	15:45	12:18-13:07/49
30	05:12		06:13	06:43-06:57/14	07:15		07:18	15:23-15:54/31	08:22	14:34-14:56/22	08:51	14:48-15:03/15
	21:32		20:19		18:56		16:40		15:46	12:07-12:54/47	15:46	12:19-13:07/48
31	05:14		06:15	06:45-06:54/9			07:20	15:23-15:53/30			08:51	14:48-15:03/15
	21:30		20:16				16:38				15:47	12:19-13:07/48
Potential sun hours	529		469		384		324		248		216	
Sum of minutes with flicker	941		622		0		475		1066		1973	

Table 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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B3 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (103)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B3 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (103)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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)	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B4 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (104)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B4 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (104)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B5 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (105)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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		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 16:40		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

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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B7 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (106)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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
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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 05:23/4.0.531

SHADOW - Calendar per WTG

WTG: B9 - Siemens Gamesa SG 6.6-170 6600 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (107)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	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	08:12 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
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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