

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C1 - NORDEX N175/6.X 6800 175.0 I-! hub: 179.0 m (TOT: 266.5 m) (75)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January	February	March	April	May	June
1	08:51 12:36-13:12/36 15:48 10:16-11:22/66	08:15 11:00-11:18/18 16:45	07:11 08:04-08:35/31 17:47 07:37-07:55/18	06:49 19:53	05:32 06:18-07:31/73 20:55	04:36 21:52
2	08:50 12:37-13:13/36 15:49 10:17-11:23/66	08:13 11:05-11:14/9 16:47	07:08 08:06-08:33/27 17:50 07:35-07:56/21	06:46 19:55	05:30 05:58-06:03/5 20:57 06:19-07:29/70	04:35 21:54
3	08:50 12:37-13:13/36 15:50 10:17-11:23/66	08:11 08:41-08:47/6 16:50	07:06 07:35-07:57/22 17:52 08:17-08:31/14	06:43 19:57	05:28 05:56-06:05/9 20:59 06:19-07:25/66	04:33 21:55
4	08:50 12:37-13:13/36 15:52 10:18-11:23/65	08:09 08:39-08:50/11 16:52	07:03 07:34-07:57/23 17:54 08:20-08:27/7	06:41 19:59	05:25 05:54-06:07/13 21:02 06:21-07:20/59	04:32 21:57
5	08:49 12:39-13:14/35 15:53 10:19-11:24/65	08:07 08:37-08:52/15 16:54	07:00 07:33-07:57/24 17:56	06:38 07:19-07:35/16 20:01	05:23 05:52-06:08/16 21:04 06:22-07:20/58	04:32 21:58
6	08:49 12:39-13:14/35 15:55 10:20-11:24/64	08:05 08:34-08:52/18 16:56	06:58 07:33-07:58/25 17:58	06:35 07:15-07:38/23 20:03	05:21 05:50-06:09/19 21:06 06:25-07:19/54	04:31 21:59
7	08:48 12:40-13:14/34 15:56 10:21-11:25/64	08:03 08:33-08:53/20 16:58	06:55 07:32-07:57/25 18:00	06:33 07:12-07:40/28 20:05	05:19 05:49-06:09/20 21:08 06:25-07:19/54	04:30 22:00
8	08:47 12:40-13:14/34 15:58 10:22-11:25/63	08:00 08:32-08:54/22 17:01	06:53 07:32-07:57/25 18:03	06:30 07:10-07:41/31 20:07	05:17 05:48-06:10/22 21:10 06:25-07:18/53	04:29 22:01
9	08:47 12:41-13:14/33 15:59 10:23-11:26/63	07:58 08:31-08:54/23 17:03	06:50 07:33-07:57/24 18:05	06:27 07:08-07:42/34 20:10	05:15 05:48-06:10/22 21:12 06:25-07:17/52	04:28 22:02
10	08:46 12:42-13:14/32 10:41-11:26/45 16:01 10:24-10:39/15	07:56 08:31-08:55/24 17:05	06:47 07:33-07:56/23 18:07	06:25 07:07-07:43/36 20:12	05:12 05:48-06:10/22 21:14 06:25-07:16/51	04:28 22:03
11	08:45 12:43-13:14/31 10:41-11:27/46 16:03 10:26-10:39/13	07:54 08:32-08:56/24 17:07	06:45 07:33-07:54/21 18:09	06:22 07:06-07:44/38 20:14	05:10 05:47-06:10/23 21:16 06:25-07:15/50	04:27 22:04
12	08:44 12:44-13:14/30 10:42-11:27/45 16:04 10:28-10:38/10	07:52 08:31-08:55/24 17:10	06:42 07:35-07:53/18 18:11	06:20 07:04-07:44/40 20:16	05:08 05:47-06:10/23 21:18 06:25-07:13/48	04:27 22:05
13	08:43 12:45-13:13/28 10:41-11:27/46 16:06 10:29-10:36/7	07:49 08:21-08:31/10 17:12 08:32-08:55/23	06:39 07:36-07:51/15 18:13	06:17 07:04-07:45/41 20:18	05:06 05:47-06:09/22 21:20 06:26-07:12/46	04:26 22:06
14	08:42 12:46-13:13/27 16:08 10:42-11:28/46	07:47 08:17-08:54/37 17:14	06:37 07:38-07:47/9 18:15	06:14 06:59-07:45/46 20:20	05:04 05:48-06:10/22 21:22 06:27-07:11/44	04:26 22:07
15	08:41 12:48-13:13/25 16:10 10:43-11:28/45	07:45 08:16-08:54/38 17:16	06:34 18:17	06:12 06:55-07:45/50 20:22	05:02 05:48-06:09/21 21:23 06:28-07:09/41	04:25 22:07
16	08:40 12:49-13:12/23 16:12 10:43-11:28/45	07:43 08:10-08:53/43 17:19	06:31 18:19	06:09 06:52-07:45/53 20:24	05:00 05:48-06:08/20 21:25 06:28-07:07/39	04:25 22:08
17	08:39 12:51-13:11/20 16:14 10:44-11:29/45	07:40 08:08-08:52/44 17:21	06:29 18:22	06:07 06:43-07:45/62 20:26	04:59 05:50-06:09/19 21:27 06:29-07:05/36	04:25 22:08
18	08:37 12:53-13:09/16 16:15 10:44-11:28/44	07:38 08:05-08:50/45 17:23	06:26 18:24	06:04 06:39-07:44/65 20:28	04:57 05:50-06:08/18 21:29 06:30-06:57/27	04:25 22:09
19	08:36 12:55-13:07/12 16:17 10:44-11:28/44	07:35 08:03-08:48/45 17:25	06:23 18:26	06:02 06:38-07:44/66 20:30 06:28-06:35/7	04:55 05:50-06:06/16 21:31 06:31-06:56/25	04:25 22:09
20	08:35 10:46-11:29/43 16:19	07:33 08:01-08:39/38 17:28	06:21 18:28	05:59 06:25-07:43/78 20:32	04:53 05:52-06:06/14 21:33 06:32-06:55/23	04:25 22:10
21	08:33 10:46-11:28/42 16:22	07:31 08:01-08:40/39 17:30	06:18 18:30	05:57 06:23-07:43/80 20:35	04:51 05:53-06:04/11 21:35 06:33-06:53/20	04:25 22:10
22	08:32 10:47-11:28/41 16:24	07:28 08:00-08:40/40 17:32	06:15 18:32	05:54 06:21-07:43/82 20:37	04:50 05:55-06:03/8 21:36 06:35-06:52/17	04:25 22:10
23	08:30 10:47-11:27/40 16:26	07:26 08:01-08:40/39 17:34	06:13 18:34	05:52 06:19-07:42/83 20:39	04:48 06:37-06:50/13 21:38	04:26 22:10
24	08:29 10:49-11:28/39 16:28	07:23 08:00-08:40/40 17:36	06:10 18:36	05:49 06:19-07:41/82 20:41	04:47 06:40-06:47/7 21:40	04:26 22:10
25	08:27 10:50-11:27/37 16:30	07:21 08:01-08:39/38 17:39	06:07 18:38	05:47 06:18-07:41/83 20:43	04:45 21:42	04:26 22:10
26	08:25 10:51-11:27/36 16:32	07:18 08:01-08:39/38 17:41	06:05 18:40	05:44 06:17-07:39/82 20:45	04:44 21:43	04:27 22:10
27	08:24 10:52-11:26/34 16:34	07:16 08:01-08:38/37 17:43 07:42-07:51/9	06:02 18:42	05:42 06:17-07:38/81 20:47	04:42 21:45	04:27 22:10
28	08:22 10:53-11:25/32 16:36	07:13 08:03-08:37/34 17:45 07:40-07:54/14	05:59 18:45	05:39 06:17-07:37/80 20:49	04:41 21:47	04:28 22:10
29	08:20 10:54-11:24/30 16:38		06:57 19:47	05:37 06:18-07:36/78 20:51	04:39 21:48	04:28 22:10
30	08:18 10:56-11:23/27 16:41		06:54 19:49	05:35 06:17-07:33/76 20:53	04:38 21:50	04:29 22:09
31	08:17 10:58-11:21/23 16:43		06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	2061	865	372	1521	1391	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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Operational time

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

	July	August	September	October	November	December
1	04:30	05:15 05:58-06:20/22	06:17 07:05-07:43/38	07:17 08:14-08:32/18	07:22 08:01-08:24/23	08:24 12:25-12:56/31 10:23-11:09/46
2	22:09	21:28 06:36-07:24/48	20:14	18:53	16:36	15:45 10:08-10:21/13
3	04:31	05:17 05:58-06:20/22	06:19 07:06-07:42/36	07:19 08:13-08:33/20	07:25 08:01-08:24/23	08:26 12:25-12:57/32 10:24-11:09/45
4	22:08	21:26 06:35-07:25/50	20:11	18:51	16:34	15:44 10:07-10:23/16
5	04:31	05:19 05:58-06:20/22	06:21 07:06-07:41/35	07:21 08:11-08:33/22	07:27 08:02-08:24/22	08:27 12:24-12:57/33
6	22:08	21:24 06:35-07:26/51	20:09	18:48	16:31	15:43 10:07-11:10/63
7	04:32	05:21 05:58-06:20/22	06:23 07:08-07:39/31	07:23 08:10-08:34/24	07:29 08:02-08:23/21	08:29 12:25-12:58/33
8	22:07	21:22 06:35-07:27/52	20:06	18:45	16:29	15:42 10:06-11:09/63
9	04:33	05:23 05:58-06:19/21	06:25 07:08-07:36/28	07:25 08:09-08:34/25	07:31 08:05-08:23/18	08:31 12:25-12:59/34
10	22:07	21:19 06:34-07:27/53	20:03	18:43	16:27	15:41 10:06-11:10/64
11	04:34	05:25 05:59-06:19/20	06:27 07:10-07:34/24	07:27 08:08-08:34/26	07:33 08:07-08:21/14	08:32 12:25-13:00/35
12	22:06	21:17 06:34-07:28/54	20:01	18:40	16:25	15:41 10:06-11:11/65
13	04:36	05:27 06:00-06:18/18	06:29 07:14-07:30/16	07:29 08:08-08:33/25	07:36 08:09-08:19/10	08:34 12:25-13:00/35
14	22:05	21:15 06:33-07:29/56	19:58	18:38	16:23	15:40 10:05-11:10/65
15	04:37	05:29 06:02-06:17/15	06:31 07:21-07:24/3	07:31 08:08-08:33/25	07:38 08:12-08:18/6	08:35 12:25-13:01/36
16	22:04	21:13 06:31-07:29/58	19:55	18:35	16:21	15:40 10:06-11:11/65
17	04:38	05:31 06:04-06:16/12	06:33	07:34 08:09-08:33/24	07:40 10:35-10:45/10	08:37 12:25-13:01/36
18	22:03	21:11 06:30-07:30/60	19:53	18:32	16:19	15:39 10:07-11:12/65
19	04:39	05:33 06:06-06:14/8	06:35	07:36 08:09-08:32/23	07:42 10:31-10:49/18	08:38 12:26-13:02/36
20	22:02	21:08 06:29-07:35/66	19:50	18:30 08:53-09:04/11	16:17	15:39 10:06-11:12/66
21	04:40	05:35 06:07-06:10/3	06:37	07:38 08:43-08:46/3 08:49-09:06/17	07:44 10:29-10:52/23	08:39 12:26-13:02/36
22	22:01	21:06 06:27-07:38/71	19:47	18:27 08:09-08:31/22	16:15	15:38 10:06-11:12/66
23	04:42	05:37 06:26-07:40/74	06:39	07:40 08:38-09:08/30	07:46 10:27-10:54/27	08:40 12:27-13:04/37
24	22:00	21:04	19:45	18:25 08:10-08:30/20	16:13	15:38 10:07-11:13/66
25	04:43	05:39 06:26-07:42/76	06:41	07:42 08:36-09:09/33	07:48 10:26-10:56/30	08:41 12:27-13:04/37
26	21:59	21:01	19:42	18:22 08:11-08:28/17	16:11	15:38 10:07-11:13/66
27	04:45	05:41 06:25-07:43/78	06:43	07:44 08:34-09:10/36	07:51 10:25-10:57/32	08:43 12:27-13:04/37
28	21:58	20:59	19:39	18:19 08:13-08:25/12	16:09	15:38 10:07-11:13/66
29	04:46	05:43 06:25-07:45/80	06:45	07:46 08:34-09:11/37	07:53 10:24-10:58/34	08:44 12:27-13:05/38
30	21:57	20:57	19:37	18:17 08:16-08:22/6	16:07	15:38 10:08-11:13/65
31	04:48	05:45 06:25-07:46/81	06:47	07:48 08:33-09:11/38	07:55 10:24-11:00/36	08:45 12:28-13:05/37
32	21:55	20:54	19:34	18:14	16:06	15:38 10:08-11:14/66
33	04:49	05:47 06:25-07:46/81	06:49	07:50 08:32-09:11/39	07:57 10:23-11:00/37	08:45 12:28-13:06/38
34	21:54	20:52	19:31	18:12	16:04	15:38 10:08-11:14/66
35	04:51	05:49 06:24-07:46/82	06:51	07:52 08:31-09:11/40	07:59 10:23-11:02/39	08:46 12:29-13:06/37
36	21:52	20:49	19:28	18:09	16:02	15:38 10:09-11:15/66
37	04:52	05:51 06:24-07:47/83	06:53	07:54 08:32-09:12/40	08:01 10:22-11:02/40	08:47 12:30-13:07/37
38	21:51	20:47	19:26	18:07	16:01	15:38 10:10-11:16/66
39	04:54	05:53 06:25-07:47/82	06:55	07:57 08:31-09:11/40	08:03 10:22-11:03/41	08:48 12:29-13:07/38
40	21:49	20:45	19:23	18:04	15:59	15:38 10:10-11:15/65
41	04:56	05:55 06:26-07:48/82	06:57	07:59 08:31-09:10/39	08:05 10:21-11:03/42	08:48 12:30-13:08/38
42	21:48	20:42	19:20	18:02	15:57	15:39 10:10-11:16/66
43	04:57	05:57 06:28-07:48/80	06:59	08:01 08:32-09:15/43	08:07 10:22-11:05/43	08:49 12:30-13:08/38
44	21:46	20:40	19:18	17:59	15:56	15:39 10:10-11:16/66
45	04:59	05:59 06:30-07:48/78	07:01	08:03 08:34-09:20/46	08:09 12:32-12:44/12	08:49 12:31-13:09/38
46	21:45	20:37	19:15	17:57	15:55 10:22-11:05/43	15:40 10:11-11:17/66
47	05:01	06:02-06:17/15	06:01 06:42-07:48/66	07:03	08:05 08:36-09:21/45	08:11 12:30-12:46/16
48	21:43	20:35 06:32-06:38/6	19:12	17:54	15:53 10:21-11:05/44	08:50 12:31-13:09/38
49	05:03	06:01-06:18/17	06:03 06:43-07:48/65	07:05	08:13 12:28-12:48/20	15:40 10:12-11:18/66
50	21:41	20:32	19:10	17:52 07:38-08:22/44	08:13 12:28-12:48/20	08:50 12:32-13:09/37
51	05:04	06:00-06:18/18	06:05 06:45-07:47/62	07:07	15:52 10:21-11:06/45	15:41 10:12-11:18/66
52	21:39	20:29	19:07	07:09 07:41-08:24/43	08:15 12:27-12:50/23	08:51 12:32-13:10/38
53	05:06	06:00-06:19/19	06:07 06:54-07:46/52	07:12	15:50 10:22-11:07/45	15:42 10:12-11:18/66
54	21:37	20:27	19:04	16:47 07:46-08:24/38	08:17 12:27-12:52/25	08:51 12:33-13:10/37
55	05:08	05:58-06:19/21	06:09 06:56-07:46/50	07:14	15:49 10:22-11:07/45	15:43 10:13-11:19/66
56	21:36	20:24	19:02	16:45 07:47-08:24/37	08:19 12:26-12:53/27	08:51 12:33-13:11/38
57	05:10	05:58-06:20/22	06:11 07:00-07:46/46	07:16	15:48 10:22-11:08/46	15:43 10:13-11:19/66
58	21:34	20:22	18:59	16:43 07:51-08:00/9	08:21 12:26-12:54/28 10:23-11:08/45	08:51 12:34-13:11/37
59	05:12	05:58-06:20/22	06:13 07:04-07:45/41	07:18	15:47 10:11-10:16/5	15:44 10:14-11:20/66
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61	05:14	05:58-06:21/23	06:15 07:04-07:44/40	07:20	15:46 10:09-10:19/10	15:45 10:15-11:21/66
62	21:30	20:16	18:58	16:38 08:01-08:25/24		08:51 12:35-13:12/37
63	Potential sun hours	529	469	385	247	1546 10:16-11:21/65
64	Sum of minutes with flicker	543	2189	229	1142	3145

Table 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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6	08:49 15:55	08:04 16:56	06:58 07:43-08:31/48 17:58	06:35 20:03	05:21 21:05	04:31 05:41-06:17/36 21:59
7	08:48 15:56	08:02 16:58	06:55 07:41-08:31/50 18:00	06:33 20:05	05:19 21:07	04:30 05:41-06:17/36 22:00
8	08:47 15:58	08:00 08:30-08:41/11 17:01	06:52 07:39-08:31/52 18:02	06:30 20:07	05:17 21:09	04:29 05:42-06:17/35 22:01
9	08:47 15:59	07:58 08:28-08:42/14 17:03	06:50 07:39-08:32/53 18:05	06:27 20:09	05:15 21:11	04:28 05:42-06:17/35 22:02
10	08:46 16:01	07:56 08:26-08:44/18 17:05	06:47 07:37-08:32/55 18:07	06:25 20:11	05:12 05:53-06:02/9 21:13	04:28 05:42-06:18/36 22:03
11	08:45 16:03	07:54 08:25-08:45/20 17:07	06:45 07:36-08:31/55 18:09	06:22 20:14	05:10 05:50-06:05/15 21:15	04:27 05:42-06:17/35 22:04
12	08:44 16:04	07:52 08:24-08:46/22 17:10	06:42 07:35-08:31/56 18:11	06:19 20:16	05:08 05:47-06:07/20 21:17	04:27 05:43-06:18/35 22:05
13	08:43 16:06	07:49 08:24-08:47/23 17:12	06:39 07:35-08:31/56 18:13	06:17 20:18	05:06 05:46-06:08/22 21:19	04:26 05:43-06:18/35 22:06
14	08:42 16:08	07:47 08:23-08:47/24 17:14	06:37 07:34-08:30/56 18:15	06:14 20:20	05:04 05:45-06:10/25 21:21	04:26 05:43-06:17/34 22:06
15	08:41 16:10	07:45 08:23-08:48/25 17:16	06:34 07:33-08:29/56 18:17	06:12 20:22	05:02 05:44-06:11/27 21:23	04:26 05:43-06:18/35 22:07
16	08:40 16:12	07:42 08:23-08:47/24 17:19	06:31 07:34-08:29/55 18:19	06:09 20:24	05:00 05:43-06:11/28 21:25	04:25 05:44-06:18/34 22:08
17	08:38 16:14	07:40 08:23-08:48/25 17:21	06:29 07:33-08:28/55 18:22	06:07 20:26	04:59 05:43-06:13/30 21:27	04:25 05:44-06:18/34 22:08
18	08:37 16:15	07:38 08:23-08:47/24 17:23	06:26 07:33-08:26/53 18:24	06:04 20:28	04:57 05:42-06:13/31 21:29	04:25 05:44-06:18/34 22:09
19	08:36 16:17	07:35 08:24-08:47/23 17:25	06:23 07:33-08:26/53 18:26	06:02 20:30	04:55 05:41-06:13/32 21:31	04:25 05:45-06:18/33 22:09
20	08:35 16:19	07:33 08:24-08:46/22 17:28	06:21 07:33-08:24/51 18:28	05:59 20:32	04:53 05:41-06:14/33 21:33	04:25 05:45-06:18/33 22:09
21	08:33 16:21	07:30 08:25-08:46/21 17:30	06:18 07:33-08:22/49 18:30	05:56 20:34	04:51 05:40-06:14/34 21:34	04:25 05:46-06:19/33 22:10
22	08:32 16:24	07:28 08:26-08:44/18 17:32	06:15 07:33-08:20/47 18:32	05:54 20:36	04:50 05:40-06:15/35 21:36	04:25 05:46-06:19/33 22:10
23	08:30 16:26	07:26 08:28-08:43/15 17:34	06:13 07:35-08:18/43 18:34	05:52 20:39	04:48 05:39-06:14/35 21:38	04:26 05:46-06:19/33 22:10
24	08:29 16:28	07:23 08:30-08:39/9 17:36	06:10 07:35-08:15/40 18:36	05:49 20:41	04:47 05:40-06:15/35 21:40	04:26 05:45-06:19/34 22:10
25	08:27 16:30	07:21 17:39	06:07 07:36-08:10/34 18:38	05:47 20:43	04:45 05:40-06:16/36 21:41	04:26 05:46-06:20/34 22:10
26	08:25 16:32	07:18 08:06-08:19/13 17:41	06:05 07:38-08:06/28 18:40	05:44 20:45	04:44 05:40-06:16/36 21:43	04:27 05:46-06:20/34 22:10
27	08:24 16:34	07:16 08:02-08:22/20 17:43	06:02 07:39-08:03/24 18:42	05:42 20:47	04:42 05:39-06:16/37 21:45	04:27 05:47-06:21/34 22:10
28	08:22 16:36	07:13 07:59-08:24/25 17:45	05:59 07:41-07:59/18 18:44	05:39 20:49	04:41 05:39-06:16/37 21:46	04:28 05:46-06:20/34 22:10
29	08:20 16:38		06:57 08:46-08:55/9 19:47	05:37 20:51	04:39 05:40-06:16/36 21:48	04:28 05:47-06:21/34 22:09
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 05:40-06:16/36 21:49	04:29 05:47-06:22/35 22:09
31	08:16 16:43		06:51 19:51		04:37 05:40-06:17/37 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	0	396	1285	0	666	1041

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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C10 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (84)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	July	August	September	October	November	December
1	04:30 05:46-06:21/35 22:09	05:15 05:58-06:16/18 21:28	06:17 20:14	07:17 08:15-09:11/56 18:53	07:22 07:56-08:14/18 16:36	08:24 15:45
2	04:31 05:47-06:22/35 22:08	05:17 06:01-06:14/13 21:26	06:19 20:11	07:19 08:15-09:10/55 18:51	07:24 07:57-08:12/15 16:34	08:26 15:44
3	04:32 05:47-06:22/35 22:08	05:19 06:05-06:11/6 21:23	06:21 20:08	07:21 08:15-09:10/55 18:48	07:27 08:01-08:10/9 16:31	08:27 15:43
4	04:32 05:47-06:23/36 22:07	05:21 21:21	06:23 20:06	07:23 08:15-09:09/54 18:45	07:29 16:29	08:29 15:42
5	04:33 05:47-06:23/36 22:06	05:23 21:19	06:25 20:03	07:25 08:16-09:09/53 18:43	07:31 16:27	08:30 15:41
6	04:35 05:48-06:23/35 22:06	05:25 21:17	06:27 20:01	07:27 08:16-09:08/52 18:40	07:33 16:25	08:32 15:41
7	04:36 05:48-06:24/36 22:05	05:27 21:15	06:29 19:58	07:29 08:17-09:07/50 18:37	07:35 16:23	08:34 15:40
8	04:37 05:48-06:24/36 22:04	05:29 21:13	06:31 19:55	07:31 08:19-09:06/47 18:35	07:38 16:21	08:35 15:40
9	04:38 05:48-06:24/36 22:03	05:31 21:10	06:33 19:53	07:33 08:20-09:05/45 18:32	07:40 16:19	08:36 15:39
10	04:39 05:48-06:24/36 22:02	05:33 21:08	06:35 19:50	07:35 08:23-09:04/41 18:30	07:42 16:17	08:38 15:39
11	04:40 05:48-06:24/36 22:01	05:35 21:06	06:37 19:47	07:38 08:27-09:03/36 18:27	07:44 16:15	08:39 15:38
12	04:42 05:48-06:25/37 22:00	05:37 21:04	06:39 19:45	07:40 08:30-09:01/31 18:24	07:46 16:13	08:40 15:38
13	04:43 05:48-06:25/37 21:59	05:39 21:01	06:41 19:42	07:42 08:31-08:59/28 18:22	07:48 16:11	08:41 15:38
14	04:45 05:48-06:25/37 21:58	05:41 20:59	06:43 08:38-08:44/6 19:39	07:44 08:32-08:56/24 18:19	07:50 16:09	08:42 15:38
15	04:46 05:48-06:25/37 21:56	05:43 20:57	06:45 08:32-08:49/17 19:36	07:46 08:35-08:53/18 18:17	07:53 16:07	08:43 15:38
16	04:48 05:49-06:25/36 21:55	05:45 20:54	06:47 08:29-08:52/23 19:34	07:48 08:40-08:49/9 18:14	07:55 16:06	08:44 15:38
17	04:49 05:49-06:25/36 21:54	05:47 20:52	06:49 08:26-08:54/28 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	04:51 05:49-06:25/36 21:52	05:49 20:49	06:51 08:23-08:56/33 19:28	07:52 09:00-09:12/12 18:09	07:59 16:02	08:46 15:38
19	04:52 05:49-06:25/36 21:51	05:51 20:47	06:53 08:22-09:00/38 19:26	07:54 08:58-09:13/15 18:07	08:01 16:01	08:47 15:38
20	04:54 05:50-06:25/35 21:49	05:53 20:44	06:55 08:20-09:03/43 19:23	07:56 08:57-09:15/18 18:04	08:03 15:59	08:48 15:38
21	04:56 05:50-06:25/35 21:48	05:55 20:42	06:57 08:19-09:05/46 19:20	07:59 08:55-09:16/21 18:02	08:05 15:57	08:48 15:39
22	04:57 05:51-06:25/34 21:46	05:57 20:39	06:59 08:18-09:06/48 19:18	08:01 08:54-09:16/22 17:59	08:07 15:56	08:49 15:39
23	04:59 05:51-06:24/33 21:44	05:59 20:37	07:01 08:17-09:07/50 19:15	08:03 08:54-09:18/24 17:57	08:09 15:55	08:49 15:40
24	05:01 05:51-06:24/33 21:43	06:01 20:34	07:03 08:16-09:08/52 19:12	08:05 08:53-09:17/24 17:54	08:11 15:53	08:50 15:40
25	05:03 05:51-06:23/32 21:41	06:03 20:32	07:05 08:16-09:09/53 19:09	07:07 07:52-08:17/25 16:52	08:13 15:52	08:50 15:41
26	05:04 05:52-06:23/31 21:39	06:05 20:29	07:07 08:15-09:09/54 19:07	07:09 07:53-08:18/25 16:50	08:15 15:50	08:50 15:42
27	05:06 05:53-06:23/30 21:37	06:07 20:27	07:09 08:14-09:10/56 19:04	07:11 07:53-08:17/24 16:47	08:17 15:49	08:51 15:43
28	05:08 05:54-06:21/27 21:35	06:09 20:24	07:11 08:14-09:10/56 19:01	07:14 07:53-08:16/23 16:45	08:19 15:48	08:51 15:43
29	05:10 05:55-06:21/26 21:33	06:11 20:22	07:13 08:14-09:10/56 18:59	07:16 07:54-08:17/23 16:43	08:20 15:47	08:51 15:44
30	05:12 05:56-06:20/24 21:32	06:13 20:19	07:15 08:15-09:11/56 18:56	07:18 07:54-08:15/21 16:40	08:22 15:46	08:51 15:45
31	05:14 05:58-06:19/21 21:30	06:15 20:16		07:20 07:54-08:14/20 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1045	37	715	951	42	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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C11 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (85)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 09:00-09:41/41 16:45	07:11 17:47	06:49 07:27-07:59/32 19:53	05:32 20:55	04:36 21:52
2	08:50 15:49	08:13 09:00-09:41/41 16:47	07:08 17:49	06:46 07:26-07:59/33 19:55	05:30 20:57	04:35 21:54
3	08:50 15:51	08:11 09:00-09:42/42 16:49	07:05 17:52	06:43 07:24-07:59/35 19:57	05:28 20:59	04:34 21:55
4	08:49 15:52	08:09 09:00-09:42/42 16:52	07:03 17:54	06:41 07:24-08:00/36 19:59	05:25 21:01	04:33 21:56
5	08:49 15:53	08:07 08:59-09:41/42 16:54	07:00 17:56	06:38 07:23-08:00/37 20:01	05:23 21:03	04:32 21:58
6	08:48 15:55	08:04 08:59-09:42/43 16:56	06:58 17:58	06:35 07:23-08:00/37 20:03	05:21 21:05	04:31 21:59
7	08:48 15:56	08:02 08:59-09:42/43 16:58	06:55 18:00	06:33 07:23-07:59/36 20:05	05:19 21:07	04:30 22:00
8	08:47 15:58	08:00 09:00-09:42/42 17:01	06:52 18:02	06:30 07:22-07:59/37 20:07	05:17 21:09	04:29 22:01
9	08:46 15:59	07:58 08:59-09:41/42 17:03	06:50 18:05	06:27 07:22-07:59/37 20:09	05:15 21:11	04:28 22:02
10	08:46 16:01	07:56 09:00-09:40/40 17:05	06:47 18:07	06:25 07:22-07:57/35 20:11	05:12 21:13	04:28 22:03
11	08:45 16:03	07:54 08:59-09:39/40 17:07	06:45 18:09	06:22 07:23-07:57/34 20:14	05:10 21:15	04:27 22:04
12	08:44 16:04	07:51 09:00-09:38/38 17:10	06:42 18:11	06:19 07:22-07:56/34 20:16	05:08 21:17	04:27 22:05
13	08:43 16:06	07:49 09:01-09:37/36 17:12	06:39 18:13	06:17 07:23-07:55/32 20:18	05:06 21:19	04:26 22:06
14	08:42 16:08	07:47 09:02-09:34/32 17:14	06:37 18:15	06:14 07:24-07:53/29 20:20	05:04 21:21	04:26 22:06
15	08:41 16:10	07:45 09:03-09:32/29 17:16	06:34 18:17	06:12 07:25-07:52/27 20:22	05:02 21:23	04:26 22:07
16	08:40 16:12	07:42 09:04-09:26/22 17:19	06:31 18:19	06:09 07:26-07:50/24 20:24	05:00 21:25	04:25 22:08
17	08:38 16:14	07:40 09:06-09:25/19 17:21	06:29 18:22	06:07 07:28-07:48/20 20:26	04:59 21:27	04:25 22:08
18	08:37 16:16	07:38 09:08-09:21/13 17:23	06:26 18:24	06:04 07:30-07:45/15 20:28	04:57 21:29	04:25 22:09
19	08:36 16:17	07:35 17:25	06:23 18:26	06:02 07:35-07:39/4 20:30	04:55 21:31	04:25 22:09
20	08:34 09:18-09:26/8 16:19	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09
21	08:33 09:16-09:29/13 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:51 21:34	04:25 22:10
22	08:32 09:14-09:31/17 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10
23	08:30 09:13-09:33/20 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 09:12-09:34/22 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 09:09-09:35/26 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10
26	08:25 09:07-09:37/30 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 09:05-09:38/33 16:34	07:16 17:43	06:02 06:39-06:51/12 18:42	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 09:04-09:39/35 16:36	07:13 17:45	05:59 06:35-06:54/19 18:44	05:39 20:49	04:41 21:46	04:28 22:10
29	08:20 09:03-09:40/37 16:38		06:57 07:32-07:56/24 19:47	05:37 20:51	04:39 21:48	04:28 22:09
30	08:18 09:01-09:40/39 16:41		06:54 07:30-07:57/27 19:49	05:35 20:53	04:38 21:49	04:29 22:09
31	08:16 09:00-09:40/40 16:43		06:51 07:28-07:58/30 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	320	647	112	574	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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C11 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (85)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	July	August	September	October	November	December
1	04:30 22:09	05:15 21:28	06:17 07:22-07:56/34 20:14	07:17 18:53	07:22 08:29-09:10/41 16:36	08:24 15:45
2	04:31 22:08	05:17 21:26	06:19 07:21-07:56/35 20:11	07:19 18:51	07:24 08:29-09:10/41 16:34	08:26 15:44
3	04:32 22:08	05:19 21:23	06:21 07:20-07:57/37 20:08	07:21 18:48	07:27 08:28-09:10/42 16:31	08:27 15:43
4	04:32 22:07	05:21 21:21	06:23 07:19-07:56/37 20:06	07:23 18:45	07:29 08:29-09:11/42 16:29	08:29 15:42
5	04:33 22:06	05:23 21:19	06:25 07:19-07:55/36 20:03	07:25 18:43	07:31 08:28-09:11/43 16:27	08:30 15:41
6	04:35 22:06	05:25 21:17	06:27 07:18-07:55/37 20:01	07:27 18:40	07:33 08:29-09:12/43 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 07:18-07:55/37 19:58	07:29 18:37	07:35 08:29-09:12/43 16:23	08:33 15:40
8	04:37 22:04	05:29 21:13	06:31 07:18-07:54/36 19:55	07:31 18:35	07:38 08:29-09:12/43 16:21	08:35 15:40
9	04:38 22:03	05:31 21:10	06:33 07:19-07:53/34 19:53	07:33 18:32	07:40 08:31-09:12/41 16:19	08:36 15:39
10	04:39 22:02	05:33 21:08	06:35 07:19-07:53/34 19:50	07:35 18:30	07:42 08:31-09:12/41 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 07:19-07:52/33 19:47	07:38 18:27	07:44 08:32-09:12/40 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:39 07:20-07:50/30 19:45	07:40 18:24	07:46 08:33-09:12/39 16:13	08:40 15:38
13	04:43 21:59	05:39 21:01	06:41 07:21-07:49/28 19:42	07:42 18:22	07:48 08:35-09:12/37 16:11	08:41 15:38
14	04:45 21:58	05:41 20:59	06:43 07:23-07:47/24 19:39	07:44 18:19	07:50 08:36-09:11/35 16:09	08:42 15:38
15	04:46 21:56	05:43 20:57	06:45 07:24-07:45/21 19:36	07:46 18:17	07:53 08:37-09:10/33 16:07	08:43 15:38
16	04:48 21:55	05:45 20:54	06:47 07:27-07:41/14 19:34	07:48 18:14	07:55 08:40-09:10/30 16:06	08:44 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 08:43-09:09/26 16:04	08:45 15:38
18	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 08:46-09:08/22 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 08:48-09:08/20 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 08:49-09:06/17 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 08:51-09:04/13 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 08:54-09:02/8 15:56	08:49 15:39
23	04:59 21:44	05:59 20:37	07:01 19:15	08:03 09:42-09:49/7 17:57	08:09 15:55	08:49 15:40
24	05:01 21:43	06:01 07:38-07:44/6 20:34	07:03 19:12	08:05 09:38-09:53/15 17:54	08:11 15:53	08:50 15:40
25	05:03 21:41	06:03 07:32-07:48/16 20:32	07:05 19:09	07:07 08:35-08:55/20 16:52	08:13 15:52	08:50 15:41
26	05:04 21:39	06:05 07:29-07:50/21 20:29	07:07 19:07	07:09 08:34-08:57/23 16:50	08:15 15:50	08:50 15:42
27	05:06 21:37	06:07 07:27-07:52/25 20:27	07:09 19:04	07:11 08:32-09:02/30 16:47	08:17 15:49	08:50 15:43
28	05:08 21:35	06:09 07:26-07:53/27 20:24	07:11 19:01	07:14 08:31-09:04/33 16:45	08:19 15:48	08:51 15:44
29	05:10 21:33	06:11 07:24-07:54/30 20:22	07:13 18:59	07:16 08:31-09:07/36 16:43	08:20 15:47	08:51 15:44
30	05:12 21:32	06:13 07:23-07:55/32 20:19	07:15 18:56	07:18 08:30-09:08/38 16:40	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 07:22-07:56/34 20:16		07:20 08:29-09:08/39 16:38		08:51 15:47
Potential sun hours		529	469	385	324	216
Sum of minutes with flicker		0	191	507	241	740

Table 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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C12 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (86)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January		February		March		April	May	June	
1	08:50	09:30-09:54/24	08:14		07:10	07:47-08:16/29	06:49	05:32		04:36 05:45-06:06/21
	15:48		16:45		17:47		19:53	20:55		21:52
2	08:50	09:29-09:54/25	08:12		07:08	07:46-08:16/30	06:46	05:30		04:35 05:46-06:05/19
	15:49		16:47		17:49		19:55	20:57		21:54
3	08:50	09:29-09:55/26	08:11		07:05	07:46-08:17/31	06:43	05:28		04:34 05:46-06:05/19
	15:51		16:50		17:52		19:57	20:59		21:55
4	08:49	09:28-09:56/28	08:09		07:03	07:46-08:17/31	06:41	05:25		04:33 05:47-06:04/17
	15:52		16:52		17:54		19:59	21:01		21:56
5	08:49	09:28-09:56/28	08:06		07:00	07:45-08:16/31	06:38	05:23		04:32 05:48-06:04/16
	15:53		16:54		17:56		20:01	21:03		21:57
6	08:48	09:29-09:58/29	08:04		06:58	07:46-08:16/30	06:35	05:21		04:31 05:49-06:04/15
	15:55		16:56		17:58		20:03	21:05		21:59
7	08:48	09:29-09:58/29	08:02		06:55	07:46-08:15/29	06:33	05:19 05:50-05:59/9		04:30 05:49-06:03/14
	15:56		16:58		18:00		20:05	21:07		22:00
8	08:47	09:29-09:59/30	08:00		06:52	07:46-08:14/28	06:30	05:17 05:48-06:02/14		04:29 05:51-06:03/12
	15:58		17:01		18:02		20:07	21:09		22:01
9	08:46	09:29-09:59/30	07:58		06:50	07:47-08:13/26	06:27	05:15 05:46-06:03/17		04:28 05:04-05:08/4
	15:59		17:03		18:05		20:09	21:11		22:02 05:52-06:01/9
10	08:46	09:29-10:00/31	07:56		06:47	07:47-08:12/25	06:25	05:12 05:45-06:04/19		04:28 05:04-05:10/6
	16:01		17:05		18:07		20:11	21:13		22:03 05:53-06:01/8
11	08:45	09:29-10:01/32	07:54		06:45	07:48-08:09/21	06:22	05:10 05:43-06:05/22		04:27 05:03-05:10/7
	16:03		17:07		18:09		20:14	21:15		22:04 05:54-05:59/5
12	08:44	09:29-10:00/31	07:51		06:42	07:49-08:07/18	06:19	05:08 05:42-06:06/24		04:27 05:03-05:11/8
	16:04		17:10		18:11		20:16	21:17		22:05
13	08:43	09:29-10:01/32	07:49		06:39	07:53-08:03/10	06:17	05:06 05:42-06:06/24		04:26 05:03-05:12/9
	16:06		17:12		18:13		20:18	21:19		22:06
14	08:42	09:30-10:02/32	07:47		06:37		06:14	05:04 05:42-06:07/25		04:26 05:03-05:13/10
	16:08		17:14		18:15		20:20	21:21		22:06
15	08:41	09:29-10:01/32	07:45		06:34		06:12	05:02 05:41-06:08/27		04:26 05:02-05:13/11
	16:10		17:16		18:17		20:22	21:23		22:07
16	08:40	09:30-10:02/32	07:42		06:31		06:09	05:00 05:41-06:08/27		04:25 05:02-05:13/11
	16:12		17:19		18:19		20:24	21:25		22:08
17	08:38	09:30-10:02/32	07:40		06:29		06:07	04:59 05:41-06:08/27		04:25 05:02-05:14/12
	16:14		17:21		18:21		20:26	21:27		22:08
18	08:37	09:31-10:02/31	07:38		06:26		06:04	04:57 05:41-06:08/27		04:25 05:02-05:14/12
	16:16		17:23		18:24		20:28	21:29		22:09
19	08:36	09:31-10:02/31	07:35		06:23		06:02	04:55 05:40-06:08/28		04:25 05:02-05:14/12
	16:18		17:25		18:26		20:30	21:31		22:09
20	08:34	09:31-10:01/30	07:33		06:21		05:59	04:53 05:41-06:08/27		04:25 05:02-05:15/13
	16:20		17:28		18:28		20:32	21:33		22:09
21	08:33	09:32-10:02/30	07:30		06:18		05:57	04:52 05:40-06:08/28		04:25 05:03-05:16/13
	16:22		17:30		18:30		20:34	21:34		22:10
22	08:32	09:32-10:01/29	07:28		06:15		05:54	04:50 05:41-06:08/27		04:25 05:03-05:16/13
	16:24		17:32		18:32		20:36	21:36		22:10
23	08:30	09:33-10:00/27	07:26 07:58-08:08/10		06:13		05:52	04:48 05:41-06:09/28		04:26 05:03-05:15/12
	16:26		17:34		18:34		20:39	21:38		22:10
24	08:28	09:33-09:59/26	07:23 07:55-08:11/16		06:10		05:49	04:47 05:41-06:08/27		04:26 05:04-05:16/12
	16:28		17:36		18:36		20:41	21:40		22:10
25	08:27	09:34-09:58/24	07:21 07:52-08:13/21		06:07		05:47	04:45 05:42-06:08/26		04:26 05:04-05:16/12
	16:30		17:39		18:38		20:43	21:41		22:10
26	08:25	09:36-09:57/21	07:18 07:51-08:15/24		06:05		05:44	04:44 05:42-06:08/26		04:27 05:04-05:15/11
	16:32		17:41		18:40		20:45	21:43		22:10
27	08:24	09:38-09:53/15	07:16 07:49-08:15/26		06:02		05:42	04:42 05:42-06:07/25		04:27 05:05-05:16/11
	16:34		17:43		18:42		20:47	21:45		22:10
28	08:22	09:40-09:52/12	07:13 07:48-08:15/27		05:59		05:39	04:41 05:43-06:07/24		04:28 05:05-05:15/10
	16:36		17:45		18:44		20:49	21:46		22:10
29	08:20	09:43-09:49/6			06:57		05:37	04:39 05:43-06:07/24		04:28 05:06-05:15/9
	16:38				19:47		20:51	21:48		22:09
30	08:18				06:54		05:35	04:38 05:44-06:07/23		04:29 05:07-05:16/9
	16:41				19:49		20:53	21:49		22:09
31	08:16				06:51			04:37 05:44-06:06/22		
	16:43				19:51			21:51		
Potential sun hours	235		266		366		426	508		528
Sum of minutes with flicker	785		124		339		0	597		382

Table 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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C12 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (86)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	July	August	September	October	November	December
1	04:30 05:07-05:14/7 22:09 05:59-06:03/4	05:16 05:53-06:16/23 21:28	06:17 20:14	07:17 08:30-08:45/15 18:53	07:22 16:36	08:24 09:10-09:42/32 15:45
2	04:31 05:08-05:14/6 22:08 05:58-06:05/7	05:17 05:54-06:15/21 21:25	06:19 20:11	07:19 08:28-08:48/20 18:51	07:24 16:34	08:26 09:11-09:42/31 15:44
3	04:32 05:09-05:14/5 22:08 05:57-06:06/9	05:19 05:55-06:14/19 21:23	06:21 20:08	07:21 08:26-08:49/23 18:48	07:27 16:31	08:27 09:12-09:42/30 15:43
4	04:33 05:10-05:12/2 22:07 05:57-06:08/11	05:21 05:57-06:13/16 21:21	06:23 20:06	07:23 08:24-08:50/26 18:45	07:29 16:29	08:29 09:13-09:43/30 15:42
5	04:34 05:56-06:09/13 22:06	05:23 05:58-06:10/12 21:19	06:25 20:03	07:25 08:23-08:51/28 18:43	07:31 16:27	08:30 09:14-09:43/29 15:41
6	04:35 05:55-06:10/15 22:06	05:25 06:01-06:07/6 21:17	06:27 20:01	07:27 08:22-08:51/29 18:40	07:33 16:25	08:32 09:15-09:44/29 15:41
7	04:36 05:55-06:11/16 22:05	05:27 21:15	06:29 19:58	07:29 08:21-08:51/30 18:37	07:35 16:23	08:33 09:15-09:43/28 15:40
8	04:37 05:54-06:11/17 22:04	05:29 21:13	06:31 19:55	07:31 08:21-08:51/30 18:35	07:37 16:21	08:35 09:17-09:44/27 15:40
9	04:38 05:54-06:12/18 22:03	05:31 21:10	06:33 19:53	07:33 08:20-08:51/31 18:32	07:40 16:19	08:36 09:17-09:44/27 15:39
10	04:39 05:53-06:13/20 22:02	05:33 21:08	06:35 19:50	07:35 08:21-08:51/30 18:30	07:42 16:17	08:38 09:19-09:44/25 15:39
11	04:41 05:53-06:13/20 22:01	05:35 21:06	06:37 19:47	07:38 08:20-08:51/31 18:27	07:44 16:15	08:39 09:20-09:44/24 15:38
12	04:42 05:53-06:15/22 22:00	05:37 21:04	06:39 19:44	07:40 08:20-08:50/30 18:24	07:46 16:13	08:40 09:21-09:44/23 15:38
13	04:43 05:53-06:15/22 21:59	05:39 21:01	06:41 19:42	07:42 08:21-08:49/28 18:22	07:48 09:14-09:21/7 16:11	08:41 09:23-09:45/22 15:38
14	04:45 05:52-06:15/23 21:57	05:41 20:59	06:43 19:39	07:44 08:21-08:48/27 18:19	07:50 09:11-09:23/12 16:09	08:42 09:24-09:45/21 15:38
15	04:46 05:51-06:15/24 21:56	05:43 20:56	06:45 19:36	07:46 08:22-08:47/25 18:17	07:52 09:10-09:25/15 16:07	08:43 09:25-09:45/20 15:38
16	04:48 05:52-06:17/25 21:55	05:45 20:54	06:47 19:34	07:48 08:24-08:46/22 18:14	07:55 09:09-09:30/21 16:06	08:44 09:26-09:46/20 15:38
17	04:49 05:51-06:17/26 21:54	05:47 20:52	06:49 19:31	07:50 08:25-08:44/19 18:12	07:57 09:08-09:32/24 16:04	08:45 09:27-09:46/19 15:38
18	04:51 05:52-06:18/26 21:52	05:49 20:49	06:51 19:28	07:52 08:27-08:42/15 18:09	07:59 09:07-09:33/26 16:02	08:46 09:28-09:46/18 15:38
19	04:52 05:51-06:18/27 21:51	05:51 20:47	06:53 19:26	07:54 08:30-08:38/8 18:07	08:01 09:08-09:35/27 16:01	08:47 09:28-09:46/18 15:38
20	04:54 05:51-06:18/27 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 09:07-09:36/29 15:59	08:47 09:29-09:47/18 15:38
21	04:56 05:51-06:18/27 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 09:07-09:37/30 15:57	08:48 09:29-09:47/18 15:39
22	04:57 05:51-06:19/28 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 09:07-09:38/31 15:56	08:49 09:30-09:48/18 15:39
23	04:59 05:50-06:18/28 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 09:08-09:39/31 15:55	08:49 09:30-09:48/18 15:40
24	05:01 05:51-06:19/28 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 09:08-09:39/31 15:53	08:50 09:31-09:49/18 15:40
25	05:03 05:50-06:18/28 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 09:08-09:40/32 15:52	08:50 09:31-09:49/18 15:41
26	05:04 05:51-06:18/27 21:39	06:05 20:29	07:07 19:07	07:09 16:50	08:15 09:08-09:40/32 15:51	08:50 09:31-09:50/19 15:42
27	05:06 05:51-06:19/28 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 09:08-09:40/32 15:49	08:50 09:31-09:50/19 15:43
28	05:08 05:51-06:18/27 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:18 09:09-09:41/32 15:48	08:51 09:31-09:51/20 15:44
29	05:10 05:52-06:18/26 21:33	06:11 20:22	07:13 18:59	07:16 16:43	08:20 09:10-09:42/32 15:47	08:51 09:31-09:52/21 15:44
30	05:12 05:52-06:18/26 21:31	06:13 20:19	07:15 08:35-08:41/6 18:56	07:18 16:40	08:22 09:11-09:42/31 15:46	08:51 09:31-09:53/22 15:45
31	05:14 05:53-06:17/24 21:30	06:15 20:16		07:20 16:38		08:51 09:30-09:53/23 15:47
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	689	97	6	467	475	705

Table 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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C13 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (87)

Assumptions for shadow calculations

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Operational time

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

	July	August	September	October	November	December
1	04:30 05:08-05:38/30 22:09 20:31-21:07/36	05:16 06:08-06:28/20 21:28	06:17 06:47-07:41/54 20:14	07:17 07:53-08:17/24 18:54 16:56-17:29/33	07:23 09:45-10:24/39 07:59-08:20/21 16:36 13:48-14:38/50 08:29-09:29/60	08:24 09:28-11:15/107 15:45 13:42-14:38/56
2	04:31 05:08-05:37/29 22:08 20:31-21:07/36	05:18 06:08-06:28/20 21:26	06:19 06:49-07:40/51 20:11	07:19 07:54-08:15/21 18:51 16:53-17:30/37	07:25 13:45-14:39/54 07:59-08:19/20 16:34 09:43-10:25/42 08:29-09:28/59	08:26 09:29-11:16/107 15:44 13:43-14:38/55
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Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1041	1795	1211	2532	5629	5713

Table 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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C14 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (88)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January	February	March	April	May	June
1	08:51 09:33-10:29/56 15:48	08:15 09:20-10:29/69 16:45	07:11 07:37-08:24/47 17:48	06:49 07:14-07:26/12 19:53	05:33 06:19-07:15/56 20:55	04:36 05:16-05:39/23 21:52
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28	08:22 09:22-10:31/69 16:37	07:13 07:40-08:25/45 17:45	05:59 06:56-07:29/33 18:45	05:40 06:20-07:17/57 20:49	04:41 05:16-05:38/22 21:46	04:28 05:23-05:45/22 22:10
29	08:20 09:22-10:30/68 16:39		06:57 07:56-08:27/31 19:47	05:37 06:20-07:17/57 20:51	04:40 05:16-05:38/22 21:48	04:29 05:22-05:44/22 22:10
30	08:18 09:21-10:30/69 16:41		06:54 07:58-08:24/26 19:49	05:35 06:20-07:17/57 20:53	04:38 05:16-05:39/23 21:50	04:29 05:23-05:45/22 22:09
31	08:17 09:21-10:30/69 16:43		06:51 07:17-07:24/7 19:51		04:37 05:16-05:39/23 21:51	04:29 05:23-05:45/22 22:09
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	2012	1351	1828	1188	2022	1609

Table 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:
09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C14 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (88)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	July	August	September	October	November	December
1	04:30 05:23-05:46/23 22:09 06:01-06:33/32	05:16 06:04-07:13/69 21:28 20:14	06:17 06:47-07:26/39 20:11	07:17 07:46-08:38/52 18:54 18:00-18:20/20	07:23 08:51-09:52/61 16:36	08:24 09:14-10:17/63 15:45
2	04:31 05:22-05:45/23 22:08 06:00-06:32/32	05:18 06:04-07:14/70 21:26	06:19 06:50-07:26/36 20:11	07:19 07:48-08:38/50 18:51 18:01-18:18/17	07:25 08:51-09:54/63 16:34	08:26 09:15-10:17/62 15:44
3	04:32 05:23-05:45/22 22:08 06:01-06:33/32	05:20 06:05-07:15/70 21:24	06:21 06:51-07:26/35 20:09	07:21 07:50-08:39/49 18:48 18:03-18:15/12	07:27 08:51-09:56/65 16:32	08:27 09:15-10:17/62 15:43
4	04:33 05:23-05:46/23 22:07 06:01-06:33/32	05:21 06:06-07:17/71 21:22	06:23 06:53-07:26/33 20:06	07:23 07:52-08:40/48 18:46	07:29 08:50-09:56/66 16:29	08:29 09:16-10:17/61 15:42
5	04:34 05:23-05:46/23 22:07 06:01-06:34/33	05:23 06:08-07:19/71 21:19	06:25 06:55-07:26/31 20:03	07:25 07:54-08:48/54 18:43	07:31 08:50-09:57/67 16:27	08:31 09:17-10:18/61 15:42
6	04:35 05:23-05:46/23 22:06 06:01-06:34/33	05:25 06:08-07:20/72 21:17	06:27 06:57-07:26/29 20:01	07:27 07:56-08:52/56 18:40	07:33 08:51-09:58/67 16:25	08:32 09:18-10:18/60 15:41
7	04:36 05:23-05:47/24 22:05 06:01-06:35/34	05:27 06:29-07:21/52 21:15	06:29 06:58-07:24/26 19:58	07:29 07:58-08:54/56 18:38	07:36 08:50-09:59/69 16:23	08:34 09:19-10:18/59 15:40
8	04:37 05:23-05:47/24 22:04 06:00-06:35/35	05:29 06:29-07:22/53 21:13	06:31 07:00-07:23/23 19:55	07:32 08:00-08:55/55 18:35	07:38 08:51-10:00/69 16:21	08:35 09:20-10:19/59 15:40
9	04:38 05:24-05:47/23 22:03 06:00-06:35/35	05:31 06:28-07:23/55 21:11	06:33 07:02-07:22/20 19:53	07:34 08:03-08:57/54 18:32	07:40 08:51-10:00/69 16:19	08:36 09:21-10:18/57 15:39
10	04:39 05:24-05:47/23 22:02 06:00-06:36/36	05:33 06:28-07:23/55 21:08	06:35 07:04-07:20/16 19:50	07:36 08:05-08:57/52 18:30	07:42 08:51-10:00/69 16:17	08:38 09:23-10:19/56 15:39
11	04:41 05:25-05:48/23 22:01 06:01-06:37/36	05:35 06:28-07:24/56 21:06	06:37 07:06-07:18/12 19:47	07:38 08:07-08:58/51 18:27	07:44 08:52-10:01/69 16:15	08:39 09:23-10:19/56 15:39
12	04:42 05:25-05:48/23 22:00 06:00-06:37/37	05:37 06:27-07:24/57 21:04	06:39 07:08-07:16/8 19:45	07:40 08:09-08:58/49 18:25	07:46 08:52-10:01/69 16:13	08:40 09:38-10:20/42 15:38
13	04:43 05:25-05:47/22 21:59 06:00-06:37/37	05:39 06:27-07:24/57 21:01	06:41 07:49-08:15/26 19:42	07:42 08:11-08:57/46 18:22	07:48 08:54-10:02/68 16:11	08:41 09:39-10:20/41 15:38
14	04:45 05:25-05:47/22 21:58 06:00-06:37/37	05:41 06:27-07:24/57 20:59	06:43 07:47-08:17/30 19:39	07:44 08:13-08:57/44 18:20	07:51 08:54-10:03/69 16:09	08:43 09:39-10:20/41 15:38
15	04:46 05:26-05:48/22 21:56 06:00-06:38/38	05:43 06:28-07:25/57 20:57	06:45 07:45-08:19/34 19:37	07:46 08:16-08:58/42 18:17	07:53 08:54-10:05/71 16:08	08:44 09:40-10:21/41 15:38
16	04:48 05:26-05:47/21 21:55 06:00-06:38/38	05:45 06:28-07:25/57 20:54	06:47 07:44-08:20/36 19:34	07:48 08:18-08:57/39 18:14	07:55 08:56-10:07/71 16:06	08:45 09:40-10:21/41 15:38
17	04:49 05:27-05:47/20 21:54 06:00-06:38/38	05:47 06:28-07:25/57 20:52	06:49 07:43-08:20/37 19:31	07:50 08:20-08:56/36 18:12	07:57 08:56-10:08/72 16:04	08:46 09:41-10:21/40 15:38
18	04:51 05:27-05:47/20 21:52 06:00-06:39/39	05:49 06:29-07:25/56 20:49	06:51 07:42-08:21/39 19:29	07:52 08:22-08:56/34 18:09	07:59 08:58-10:09/71 16:02	08:47 09:42-10:22/40 15:38
19	04:53 05:28-05:46/18 06:51-06:56/5 21:51 06:00-06:38/38	05:51 06:29-07:23/54 20:47	06:53 07:41-08:21/40 19:26	07:55 08:25-08:55/30 18:07	08:01 08:59-10:10/71 16:01	08:47 09:42-10:22/40 15:38
20	04:54 05:30-05:46/16 06:48-07:00/12 21:49 06:00-06:39/39	05:53 06:30-07:23/53 20:45	06:55 07:40-08:22/42 19:23	07:57 08:27-08:54/27 18:04	08:03 09:00-10:11/71 15:59	08:48 09:42-10:22/40 15:39
21	04:56 05:31-05:45/14 06:46-07:02/16 21:48 06:00-06:39/39	05:55 06:31-07:23/52 20:42	06:57 07:40-08:22/42 19:20	07:59 08:29-08:53/24 18:02	08:05 09:01-10:11/70 15:58	08:48 09:43-10:23/40 15:39
22	04:58 05:33-05:44/11 06:44-07:04/20 21:46 06:00-06:39/39	05:57 06:33-07:22/49 20:40	06:59 07:39-08:21/42 17:59-18:25/26 19:18	08:01 08:31-08:51/20 17:59	08:07 09:04-10:13/69 15:56	08:49 09:43-10:23/40 15:40
23	04:59 05:35-05:43/8 06:43-07:05/22 21:45 06:00-06:39/39	05:59 06:35-07:21/46 20:37	07:01 07:39-08:31/52 19:15	08:03 10:02-10:23/21 17:57	08:09 09:05-10:13/68 15:55	08:49 09:44-10:24/40 15:40
24	05:01 05:36-05:41/5 06:42-07:07/25 21:43 06:01-06:39/38	06:01 06:45-07:21/36 20:35	07:03 07:39-08:33/54 19:12	08:05 09:59-10:25/26 17:55	08:11 09:07-10:13/66 15:53	08:50 09:45-10:25/40 15:41
25	05:03 06:01-06:39/38 21:41 06:41-07:08/27	06:03 06:44-07:20/36 20:32	07:05 07:39-08:34/55 19:10	08:07 08:57-09:26/29 16:52	08:13 09:09-10:14/65 15:52	08:50 09:45-10:25/40 15:41
26	05:05 06:01-06:38/37 21:39 06:40-07:09/29	06:05 06:44-07:18/34 20:29	07:07 07:40-08:35/55 19:07	08:09 08:56-09:28/32 16:50	08:15 09:10-10:14/64 15:51	08:50 09:45-10:25/40 15:42
27	05:06 06:01-07:10/69 21:37	06:07 06:45-07:17/32 20:27	07:09 07:40-08:36/56 19:04	08:12 08:55-09:30/35 16:47	08:17 09:11-10:15/64 15:49	08:51 09:45-10:26/41 15:43
28	05:08 06:02-07:11/69 21:36	06:09 06:44-07:21/37 20:24	07:11 07:41-08:37/56 19:02	08:14 08:53-09:33/40 16:45	08:19 09:12-10:16/64 15:48	08:51 09:46-10:26/40 15:44
29	05:10 06:02-07:11/69 21:34	06:11 06:44-07:23/39 20:22	07:13 07:42-08:37/55 18:59	08:16 08:53-09:44/51 16:43	08:21 09:12-10:16/64 15:47	08:51 09:46-10:27/41 15:45
30	05:12 06:02-07:12/70 21:32	06:13 06:45-07:24/39 20:19	07:15 07:44-08:37/53 18:56	08:18 08:52-09:48/56 16:41	08:22 09:13-10:16/63 15:46	08:51 09:47-10:28/41 15:46
31	05:14 06:03-07:13/70 21:30	06:15 06:46-07:25/39 20:17	07:17 07:45-08:38/54 18:54	08:20 08:51-09:50/59 16:38	08:24 09:14-10:17/63 15:45	08:51 09:47-10:29/42 15:47
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1920	1668	1464	1407	2024	1546

Table 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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C15 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (89)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January	February	March	April	May	June
1	08:51 13:49-14:25/36 15:48	08:15 08:45-09:13/28 16:45	07:11 15:36-16:14/38 17:48	06:49 07:22-07:50/28 19:53	05:33 20:55	04:36 20:26-20:45/19 21:52
2	08:50 14:05-14:24/19 15:49 13:49-14:03/14	08:13 08:43-09:14/31 16:47	07:08 15:36-16:12/36 17:50	06:46 07:21-07:48/27 19:55	05:30 20:57	04:35 20:27-20:44/17 21:54
3	08:50 14:06-14:25/19 15:51 13:51-14:04/13	08:11 08:41-09:15/34 16:50	07:06 15:38-16:12/34 17:52	06:43 07:09-07:14/5 19:57 07:22-07:47/25	05:28 20:59	04:34 05:24-05:29/5 21:55 20:28-20:44/16
4	08:50 14:06-14:25/19 15:52 13:52-14:03/11	08:09 08:39-09:15/36 16:52	07:03 15:39-16:10/31 17:54	06:41 07:06-07:17/11 19:59 07:22-07:45/23	05:26 21:01	04:33 05:22-05:33/11 21:56 20:28-20:43/15
5	08:49 14:08-14:26/18 15:53 13:54-14:03/9	08:07 08:37-09:16/39 16:54	07:00 15:40-16:07/27 17:56	06:38 07:03-07:18/15 20:01 07:22-07:42/20	05:23 21:04	04:32 05:20-05:34/14 21:58 20:30-20:43/13
6	08:49 14:09-14:25/16 15:55 13:56-14:01/5	08:05 08:36-09:15/39 16:56 15:52-15:57/5	06:58 17:19-17:30/11 17:58 15:43-16:06/23	06:35 07:01-07:20/19 20:03 07:23-07:42/19	05:21 21:06	04:31 05:19-05:35/16 21:59 20:31-20:42/11
7	08:48 14:09-14:25/16 15:56	08:03 08:35-09:15/40 16:59 15:48-16:03/15	06:55 17:16-17:32/16 18:00 15:46-16:02/16	06:33 06:59-07:20/21 20:05 07:24-07:39/15	05:19 21:08	04:30 05:19-05:37/18 22:00 20:31-20:41/10
8	08:47 14:11-14:25/14 15:58	08:00 08:35-09:15/40 17:01 15:45-16:06/21	06:53 17:14-17:33/19 18:03	06:30 06:59-07:21/22 20:07 07:26-07:38/12	05:17 21:10	04:29 05:18-05:38/20 22:01 20:33-20:41/8
9	08:47 14:12-14:24/12 16:00	07:58 08:35-09:14/39 17:03 15:42-16:08/26	06:50 17:13-17:34/21 18:05	06:28 06:57-07:21/24 20:10	05:15 20:30-20:38/8 21:12	04:29 05:17-05:38/21 22:02 20:34-20:39/5
10	08:46 14:14-14:24/10 16:01	07:56 08:35-09:14/39 17:05 15:41-16:10/29	06:47 17:12-17:35/23 18:07	06:25 06:57-07:20/23 20:12	05:13 20:28-20:40/12 21:14	04:28 05:17-05:39/22 22:03
11	08:45 14:16-14:23/7 16:03	07:54 08:35-09:13/38 17:08 15:39-16:11/32	06:45 17:11-17:34/23 18:09	06:22 06:57-07:20/23 20:14	05:11 20:26-20:41/15 21:16	04:27 05:17-05:40/23 22:04
12	08:44 16:05	07:52 08:35-09:11/36 17:10 15:38-16:13/35	06:42 17:10-17:34/24 18:11	06:20 06:56-07:19/23 20:16	05:09 20:25-20:43/18 21:18	04:27 05:16-05:40/24 22:05
13	08:43 16:06	07:49 08:35-09:10/35 17:12 15:38-16:14/36	06:39 17:10-17:35/25 18:13	06:17 06:57-07:19/22 20:18	05:07 20:24-20:44/20 21:20	04:26 05:16-05:41/25 22:06
14	08:42 16:08	07:47 08:35-09:06/31 17:14 15:36-16:14/38	06:37 17:10-17:34/24 18:15	06:14 06:57-07:18/21 20:20	05:05 20:24-20:45/21 21:21	04:26 05:16-05:42/26 22:06
15	08:41 16:10	07:45 08:37-09:01/24 17:17 15:36-16:16/40	06:34 17:10-17:33/23 18:17	06:12 06:58-07:17/19 20:22	05:03 20:23-20:46/23 21:23	04:26 05:16-05:43/27 22:07
16	08:40 16:12	07:43 08:37-08:57/20 17:19 15:35-16:16/41	06:32 17:11-17:33/22 18:20	06:09 06:58-07:15/17 20:24	05:01 20:22-20:46/24 21:25	04:26 05:16-05:42/26 22:08
17	08:39 16:14	07:40 08:39-08:56/17 17:21 15:35-16:17/42	06:29 17:11-17:31/20 18:22	06:07 07:00-07:14/14 20:26	04:59 20:23-20:47/24 21:27	04:25 05:16-05:43/27 22:08
18	08:37 16:16	07:38 08:40-08:54/14 17:23 15:34-16:17/43	06:26 17:12-17:30/18 18:24	06:04 07:02-07:10/8 20:28	04:57 20:22-20:47/25 21:29	04:25 05:16-05:43/27 22:09
19	08:36 16:18	07:35 08:43-08:51/8 17:26 15:34-16:17/43	06:24 17:14-17:28/14 18:26	06:02 20:30	04:55 20:21-20:46/25 21:31	04:25 05:16-05:43/27 22:09
20	08:35 16:20	07:33 15:33-16:17/44 17:28	06:21 17:16-17:25/9 18:28	05:59 20:32	04:53 20:22-20:47/25 21:33	04:25 05:17-05:44/27 22:10
21	08:33 16:22	07:31 15:34-16:18/44 17:30	06:18 18:30	05:57 20:35	04:52 20:22-20:46/24 21:35	04:25 05:17-05:45/28 22:10
22	08:32 16:24	07:28 15:33-16:17/44 17:32	06:15 06:41-06:47/6 18:32	05:54 20:37	04:50 20:22-20:47/25 21:36	04:26 05:17-05:45/28 22:10
23	08:30 16:26	07:26 15:34-16:18/44 17:34	06:13 06:38-06:49/11 18:34	05:52 20:39	04:48 20:23-20:47/24 21:38	04:26 05:17-05:44/27 22:10
24	08:29 16:28	07:23 15:33-16:17/44 17:37	06:10 06:35-06:50/15 18:36	05:49 20:41	04:47 20:22-20:47/25 21:40	04:26 05:18-05:45/27 22:10
25	08:27 16:30	07:21 15:33-16:16/43 17:39	06:07 06:33-06:52/19 18:38	05:47 20:43	04:45 20:23-20:47/24 21:42	04:26 05:18-05:45/27 22:10
26	08:25 08:58-09:06/8 16:32	07:18 15:34-16:16/42 17:41	06:05 06:30-06:52/22 18:40	05:44 20:45	04:44 20:24-20:47/23 21:43	04:27 05:18-05:44/26 22:10
27	08:24 08:56-09:08/12 16:34	07:16 15:34-16:15/41 17:43	06:02 06:27-06:52/25 18:43	05:42 20:47	04:42 20:23-20:46/23 21:45	04:27 05:19-05:45/26 22:10
28	08:22 08:54-09:10/16 16:36	07:13 15:35-16:15/40 17:45	05:59 06:25-06:52/27 18:45	05:40 20:49	04:41 20:24-20:46/22 21:46	04:28 05:19-05:45/26 22:10
29	08:20 08:52-09:11/19 16:39		06:57 07:24-07:52/28 19:47	05:37 20:51	04:40 20:24-20:46/22 21:48	04:29 05:19-05:45/26 22:10
30	08:18 08:50-09:12/22 16:41		06:54 07:23-07:51/28 19:49	05:35 20:53	04:38 20:25-20:45/20 21:49	04:29 05:20-05:45/25 22:09
31	08:17 08:48-09:13/25 16:43		06:51 07:23-07:51/28 19:51		04:37 20:26-20:45/19 21:51	
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	340	1420	706	456	491	766

Table 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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C15 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (89)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	July	August	September	October	November	December
1	04:30 05:21-05:45/24 22:09	05:16 20:35-20:53/18 21:28	06:17 06:56-07:19/23 20:14	07:17 17:50-18:14/24 18:54	07:22 08:04-08:43/39 16:36 15:11-15:39/28	08:24 13:58-14:04/6 15:45
2	04:31 05:21-05:44/23 22:08	05:18 20:37-20:51/14 21:26	06:19 06:56-07:19/23 20:11	07:19 17:50-18:14/24 18:51	07:25 08:04-08:44/40 16:34 15:12-15:37/25	08:26 13:56-14:06/10 15:44
3	04:32 05:22-05:44/22 22:08	05:20 20:39-20:49/10 21:24	06:21 06:55-07:19/24 20:09	07:21 17:50-18:13/23 18:48	07:27 08:05-08:45/40 16:32 15:15-15:36/21	08:27 13:55-14:07/12 15:43
4	04:33 05:23-05:43/20 22:07	05:21 20:42-20:48/6 21:22	06:23 06:56-07:18/22 20:06	07:23 17:50-18:12/22 18:46	07:29 08:05-08:45/40 16:29 15:18-15:32/14	08:29 13:55-14:09/14 15:42
5	04:34 05:24-05:43/19 22:07	05:23 20:37-20:49/12 21:19	06:25 06:56-07:17/21 20:03	07:25 17:51-18:11/20 18:43	07:31 08:06-08:45/39 16:27	08:31 13:55-14:10/15 15:42
6	04:35 05:25-05:42/17 22:06	05:25 20:37-20:48/11 21:17	06:27 06:57-07:16/19 20:01	07:27 17:51-18:09/18 18:40	07:33 08:07-08:45/38 16:25	08:32 13:55-14:11/16 15:41
7	04:36 05:26-05:41/15 22:05	05:27 20:37-20:49/12 21:15	06:29 06:58-07:13/15 19:58	07:29 17:53-18:06/13 18:38	07:36 08:09-08:45/36 16:23	08:34 13:54-14:12/18 15:40
8	04:37 05:28-05:40/12 22:04	05:29 20:36-20:50/14 21:13	06:31 07:00-07:11/11 19:55	07:32 17:55-18:03/8 18:35	07:38 08:12-08:45/33 16:21	08:35 13:54-14:13/19 15:40
9	04:38 05:30-05:38/8 22:03	05:31 20:35-20:51/16 21:11	06:33 07:02-07:08/6 19:53	07:34 16:14-16:43/29 18:32	07:40 08:14-08:45/31 16:19	08:36 13:54-14:13/19 15:39
10	04:39 20:35-20:51/16 22:02	05:33 21:08 21:08	06:35 07:15-07:41/26 19:50	07:36 16:13-16:45/32 18:30	07:42 08:16-08:44/28 16:17	08:38 13:55-14:14/19 15:39
11	04:41 20:34-20:52/18 22:01	05:35 21:06 21:06	06:37 07:14-07:42/28 19:47	07:38 16:11-16:46/35 18:27	07:44 08:19-08:44/25 16:15	08:39 13:55-14:15/20 15:39
12	04:42 20:34-20:53/19 22:00	05:37 21:04 21:04	06:39 07:14-07:42/28 19:45	07:40 16:10-16:47/37 18:25	07:46 08:21-08:43/22 16:13	08:40 13:39-14:15/36 15:38
13	04:43 20:34-20:54/20 21:59	05:39 21:01 21:01	06:41 07:14-07:42/28 19:42	07:42 16:08-16:47/39 18:22	07:48 08:24-08:43/19 16:11	08:41 13:40-14:16/36 15:38
14	04:45 20:33-20:54/21 21:58	05:41 20:59 20:59	06:43 07:14-07:42/28 19:39	07:44 16:07-16:47/40 18:19	07:51 08:26-08:42/16 16:09	08:42 13:40-14:17/37 15:38
15	04:46 20:33-20:54/21 21:56	05:43 20:57 20:57	06:45 07:15-07:42/27 19:37	07:46 16:07-16:48/41 18:17	07:53 08:28-08:40/12 16:08	08:44 13:40-14:17/37 15:38
16	04:48 20:33-20:55/22 21:55	05:45 20:54 20:54	06:47 07:16-07:41/25 19:34	07:48 16:06-16:48/42 18:14	07:55 08:31-08:39/8 16:06	08:44 13:40-14:18/38 15:38
17	04:49 20:32-20:55/23 21:54	05:47 20:52 20:52	06:49 07:18-07:41/23 19:31	07:50 16:05-16:48/43 18:12	07:57 16:04 16:04	08:45 13:40-14:19/39 15:38
18	04:51 20:33-20:56/23 21:52	05:49 20:49 20:49	06:51 07:20-07:39/19 19:29	07:52 16:04-16:48/44 18:09	07:59 16:02 16:02	08:46 13:41-14:19/38 15:38
19	04:53 20:32-20:56/24 21:51	05:51 20:47 20:47	06:53 07:22-07:38/16 19:26	07:54 16:04-16:48/44 18:07	08:01 16:01 16:01	08:47 13:40-14:19/39 15:38
20	04:54 20:33-20:57/24 21:49	05:53 20:45 20:45	06:55 07:24-07:36/12 19:23	07:57 16:04-16:48/44 18:04	08:03 15:59 15:59	08:48 13:41-14:20/39 15:39
21	04:56 20:32-20:57/25 21:48	05:55 20:42 20:42	06:57 07:26-07:33/7 19:20	07:59 16:04-16:48/44 18:02	08:05 15:58 15:58	08:48 13:42-14:21/39 15:39
22	04:58 20:32-20:57/25 21:46	05:57 20:40 20:40	06:59 19:18 19:18	08:01 16:04-16:47/43 17:59	08:07 15:56 15:56	08:49 13:42-14:21/39 15:39
23	04:59 20:32-20:57/25 21:44	05:59 20:37 20:37	07:01 18:01-18:07/6 19:15	08:03 09:12-09:22/10 17:57	08:09 15:55 15:55	08:49 13:42-14:21/39 15:40
24	05:01 20:32-20:57/25 21:43	06:01 20:35 20:35	07:03 17:57-18:10/13 19:12	08:05 09:10-09:24/14 17:55	08:11 15:53 15:53	08:50 13:43-14:22/39 15:41
25	05:03 20:32-20:57/25 21:41	06:03 07:05-07:14/9 20:32	07:05 17:55-18:12/17 19:10	08:07 08:08-08:26/18 16:52	08:13 15:52 15:52	08:50 13:44-14:22/38 15:41
26	05:05 20:32-20:57/25 21:39	06:05 07:03-07:17/14 20:29	07:07 17:53-18:13/20 19:07	08:09 08:07-08:29/22 16:50	08:15 15:51 15:51	08:50 13:44-14:22/38 15:42
27	05:06 20:33-20:57/24 21:37	06:07 07:01-07:18/17 20:27	07:09 17:52-18:14/22 19:04	08:12 08:06-08:31/25 16:47	08:17 15:49 15:49	08:51 13:45-14:23/38 15:43
28	05:08 20:33-20:56/23 21:36	06:09 06:59-07:18/19 20:24	07:11 17:51-18:14/23 19:02	08:14 08:05-08:37/32 16:45	08:19 15:48 15:48	08:51 13:45-14:23/38 15:44
29	05:10 20:33-20:56/23 21:34	06:11 06:58-07:19/21 20:22	07:13 17:50-18:14/24 18:59	08:16 08:05-08:40/35 16:43	08:20 15:47 15:47	08:51 13:46-14:24/38 15:45
30	05:12 20:34-20:55/21 21:32	06:13 06:57-07:19/22 20:19	07:15 17:50-18:15/25 18:56	08:18 08:04-08:41/37 16:41	08:22 15:46 15:46	08:51 13:47-14:24/37 15:46
31	05:14 20:35-20:55/20 21:30	06:15 06:56-07:19/23 20:17		08:20 08:04-08:42/38 16:38	15:09-15:40/31	08:51 13:47-14:24/37 15:47
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	725	173	696	1342	554	991

Table 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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C16 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (90)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January		February		March	April		May		June		
1	08:51	12:54-13:40/46	08:15	13:16-13:39/23	07:11	06:49		05:33	06:35-06:57/22	04:36	20:01-20:38/37	
	15:48		16:45		17:47	19:53		20:55		21:52		
2	08:50	12:54-13:40/46	08:13	13:19-13:37/18	07:08	06:46		05:30	06:36-06:56/20	04:35	20:01-20:38/37	
	15:49		16:47		17:50	19:55		20:57		21:54		
3	08:50	12:55-13:41/46	08:11	13:23-13:33/10	07:06	06:43		05:28	06:38-06:54/16	04:34	20:01-20:38/37	
	15:51		16:50		17:52	19:57		20:59		21:55		
4	08:50	12:55-13:41/46	08:09		07:03	06:41		05:26	06:40-06:52/12	04:33	20:01-20:38/37	
	15:52		16:52		17:54	19:59		21:01		21:56		
5	08:49	12:55-13:41/46	08:07		07:00	06:38		05:23	06:45-06:47/2	04:32	20:02-20:39/37	
	15:53		16:54		17:56	20:01		21:03		21:58		
6	08:49	12:56-13:43/47	08:05		06:58	06:35		05:21		04:31	20:02-20:38/36	
	15:55		16:56		17:58	20:03		21:06		21:59		
7	08:48	12:57-13:43/46	08:02		06:55	06:33		05:19		04:30	20:02-20:38/36	
	15:56		16:59		18:00	20:05		21:08		22:00		
8	08:47	12:57-13:44/47	08:00	16:14-16:20/6	06:53	06:30		05:17	20:12-20:25/13	04:29	20:03-20:39/36	
	15:58		17:01		18:03	20:07		21:10		22:01		
9	08:47	12:57-13:44/47	07:58	16:10-16:24/14	06:50	06:27		05:15	20:10-20:27/17	04:29	20:03-20:38/35	
	15:59		17:03		18:05	20:10		21:12		22:02		
10	08:46	12:58-13:45/47	07:56	16:08-16:27/19	06:47	06:25		05:13	20:08-20:29/21	04:28	20:04-20:39/35	
	16:01		17:05		18:07	20:12		21:14		22:03		
11	08:45	12:58-13:45/47	07:54	16:06-16:28/22	06:45	06:22		05:11	20:06-20:30/24	04:27	20:04-20:38/34	
	16:03		17:08		18:09	20:14		21:16		22:04		
12	08:44	12:58-13:45/47	07:52	16:06-16:30/24	06:42	06:20		05:08	20:05-20:31/26	04:27	20:04-20:39/35	
	16:05		17:10		18:11	20:16		21:18		22:05		
13	08:43	12:59-13:45/46	07:49	16:05-16:31/26	06:39	06:17	06:47-06:54/7	05:06	20:03-20:32/29	04:26	20:05-20:39/34	
	16:06		17:12		18:13	20:18		21:20		22:06		
14	08:42	12:59-13:46/47	07:47	16:04-16:32/28	06:37	06:14		06:43-06:57/14	05:05	20:03-20:34/31	04:26	20:06-20:39/33
	16:08		17:14		18:15	20:20		21:21		22:06		
15	08:41	12:59-13:46/47	07:45	16:03-16:33/30	06:34	06:12	06:41-06:59/18	05:03	20:02-20:34/32	04:26	20:05-20:39/34	
	16:10		17:17		18:17	20:22		21:23		22:07		
16	08:40	13:00-13:46/46	07:42	16:02-16:33/31	06:31	06:09	06:38-07:00/22	05:01	20:01-20:34/33	04:26	20:05-20:39/34	
	16:12		17:19		18:20	20:24		21:25		22:08		
17	08:39	13:00-13:46/46	07:40	16:03-16:33/30	06:29	06:07		06:37-07:02/25	04:59	20:02-20:36/34	04:25	20:06-20:39/33
	16:14		17:21		18:22	20:26		21:27		22:08		
18	08:37	13:01-13:47/46	07:38	16:02-16:33/31	06:26	06:04	06:36-07:02/26	04:57	20:01-20:36/35	04:25	20:06-20:39/33	
	16:16		17:23		18:24	20:28		21:29		22:09		
19	08:36	13:01-13:47/46	07:35	16:02-16:34/32	06:23	06:02	06:35-07:03/28	04:55	20:00-20:36/36	04:25	20:06-20:39/33	
	16:18		17:25		18:26	20:30		21:31		22:09		
20	08:35	13:02-13:46/44	07:33	16:02-16:33/31	06:21	05:59		06:35-07:03/28	04:53	20:00-20:37/37	04:25	20:06-20:39/33
	16:20		17:28		18:28	20:32		21:33		22:09		
21	08:33	13:03-13:47/44	07:31	16:03-16:33/30	06:18	05:57	06:33-07:03/30	04:52	20:00-20:36/36	04:25	20:08-20:40/32	
	16:22		17:30		18:30	20:34		21:35		22:10		
22	08:32	13:03-13:47/44	07:28	16:02-16:32/30	06:15	05:54	06:33-07:03/30	04:50	20:00-20:37/37	04:26	20:07-20:40/33	
	16:24		17:32		18:32	20:37		21:36		22:10		
23	08:30	13:04-13:46/42	07:26	16:03-16:31/28	06:13	05:52	06:32-07:03/31	04:48	20:00-20:38/38	04:26	20:07-20:40/33	
	16:26		17:34		18:34	20:39		21:38		22:10		
24	08:29	13:05-13:46/41	07:23	16:04-16:31/27	06:10	05:49	06:33-07:03/30	04:47	20:00-20:37/37	04:26	20:07-20:40/33	
	16:28		17:37		18:36	20:41		21:40		22:10		
25	08:27	13:05-13:45/40	07:21	16:04-16:29/25	06:07	05:47	06:33-07:03/30	04:45	20:00-20:38/38	04:26	20:08-20:41/33	
	16:30		17:39		18:38	20:43		21:41		22:10		
26	08:25	13:07-13:46/39	07:18	16:06-16:28/22	06:05	05:44	06:32-07:01/29	04:44	20:00-20:38/38	04:27	20:08-20:41/33	
	16:32		17:41		18:40	20:45		21:43		22:10		
27	08:24	13:08-13:45/37	07:16	16:07-16:26/19	06:02	05:42	06:33-07:01/28	04:42	20:00-20:37/37	04:27	20:08-20:42/34	
	16:34		17:43		18:43	20:47		21:45		22:10		
28	08:22	13:10-13:45/35	07:13	16:10-16:23/13	05:59	05:40	06:33-07:01/28	04:41	20:00-20:38/38	04:28	20:08-20:41/33	
	16:36		17:45		18:45	20:49		21:46		22:10		
29	08:20	13:11-13:44/33			06:57	05:37	06:34-07:00/26	04:40	20:00-20:38/38	04:29	20:08-20:42/34	
	16:39				19:47	20:51		21:48		22:10		
30	08:18	13:11-13:42/31			06:54	05:35	06:35-06:59/24	04:38	20:00-20:38/38	04:29	20:09-20:43/34	
	16:41				19:49	20:53		21:49		22:09		
31	08:16	13:13-13:41/28			06:51			04:37	20:01-20:38/37			
	16:43				19:51			21:51				
Potential sun hours	235		266		366	426		508		528		
Sum of minutes with flicker		1340		569	0	454		852		1031		

Table 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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C16 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (90)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	July		August		September		October		November		December	
1	04:30	20:08-20:42/34	05:16	20:15-20:41/26	06:17	07:17			07:22	15:38-15:56/18	08:24	12:40-13:27/47
	22:09		21:28		20:14	18:54			16:36		15:45	
2	04:31	20:08-20:43/35	05:18	20:17-20:40/23	06:19	07:19			07:25	15:40-15:53/13	08:26	12:40-13:27/47
	22:08		21:26		20:11	18:51			16:34		15:44	
3	04:32	20:08-20:43/35	05:20	20:19-20:39/20	06:21	07:21			07:27	15:45-15:48/3	08:27	12:40-13:27/47
	22:08		21:24		20:09	18:48			16:32		15:43	
4	04:33	20:09-20:44/35	05:21	20:21-20:37/16	06:23	07:23			07:29		08:29	12:41-13:28/47
	22:07		21:21		20:06	18:46			16:29		15:42	
5	04:34	20:09-20:44/35	05:23	20:23-20:33/10	06:25	07:25			07:31		08:31	12:42-13:28/46
	22:06		21:19		20:03	18:43			16:27		15:42	
6	04:35	20:09-20:45/36	05:25		06:27	07:27			07:33		08:32	12:42-13:29/47
	22:06		21:17		20:01	18:40			16:25		15:41	
7	04:36	20:09-20:45/36	05:27		06:29	07:29			07:35		08:34	12:42-13:29/47
	22:05		21:15		19:58	18:38			16:23		15:40	
8	04:37	20:09-20:45/36	05:29	06:52-06:59/7	06:31	07:31			07:38	12:54-13:04/10	08:35	12:43-13:29/46
	22:04		21:13		19:55	18:35			16:21		15:40	
9	04:38	20:09-20:45/36	05:31	06:49-07:02/13	06:33	07:34			07:40	12:49-13:08/19	08:36	12:43-13:29/46
	22:03		21:11		19:53	18:32			16:19		15:39	
10	04:39	20:09-20:46/37	05:33	06:47-07:04/17	06:35	07:36			07:42	12:46-13:10/24	08:38	12:44-13:30/46
	22:02		21:08		19:50	18:30			16:17		15:39	
11	04:41	20:08-20:46/38	05:35	06:44-07:05/21	06:37	07:38			07:44	12:45-13:12/27	08:39	12:44-13:30/46
	22:01		21:06		19:47	18:27			16:15		15:39	
12	04:42	20:09-20:47/38	05:37	06:43-07:06/23	06:39	07:40			07:46	12:43-13:14/31	08:40	12:45-13:30/45
	22:00		21:04		19:45	18:25			16:13		15:38	
13	04:43	20:09-20:47/38	05:39	06:42-07:07/25	06:41	07:42	16:46-16:54/8		07:48	12:43-13:16/33	08:41	12:46-13:31/45
	21:59		21:01		19:42	18:22			16:11		15:38	
14	04:45	20:09-20:46/37	05:41	06:41-07:08/27	06:43	07:44	16:41-16:57/16		07:51	12:41-13:17/36	08:42	12:46-13:31/45
	21:58		20:59		19:39	18:19			16:09		15:38	
15	04:46	20:08-20:46/38	05:43	06:41-07:08/27	06:45	07:46	16:39-16:59/20		07:53	12:40-13:17/37	08:43	12:47-13:32/45
	21:56		20:57		19:37	18:17			16:08		15:38	
16	04:48	20:09-20:47/38	05:45	06:40-07:09/29	06:47	07:48	16:38-17:01/23		07:55	12:40-13:19/39	08:44	12:47-13:32/45
	21:55		20:54		19:34	18:14			16:06		15:38	
17	04:49	20:09-20:47/38	05:47	06:40-07:09/29	06:49	07:50	16:36-17:02/26		07:57	12:39-13:19/40	08:45	12:48-13:33/45
	21:54		20:52		19:31	18:12			16:04		15:38	
18	04:51	20:10-20:47/37	05:49	06:38-07:08/30	06:51	07:52	16:35-17:02/27		07:59	12:39-13:20/41	08:46	12:49-13:33/44
	21:52		20:49		19:28	18:09			16:02		15:38	
19	04:53	20:09-20:47/38	05:51	06:38-07:08/30	06:53	07:54	16:34-17:02/28		08:01	12:39-13:21/42	08:47	12:48-13:33/45
	21:51		20:47		19:26	18:07			16:01		15:38	
20	04:54	20:10-20:47/37	05:53	06:38-07:08/30	06:55	07:57	16:34-17:04/30		08:03	12:38-13:22/44	08:48	12:49-13:34/45
	21:49		20:44		19:23	18:04			15:59		15:39	
21	04:56	20:10-20:47/37	05:55	06:38-07:08/30	06:57	07:59	16:33-17:03/30		08:05	12:38-13:22/44	08:48	12:49-13:34/45
	21:48		20:42		19:20	18:02			15:58		15:39	
22	04:58	20:10-20:47/37	05:57	06:38-07:08/30	06:59	08:01	16:32-17:03/31		08:07	12:39-13:23/44	08:49	12:50-13:35/45
	21:46		20:40		19:18	17:59			15:56		15:39	
23	04:59	20:10-20:46/36	05:59	06:38-07:07/29	07:01	08:03	16:33-17:04/31		08:09	12:38-13:24/46	08:49	12:50-13:35/45
	21:44		20:37		19:15	17:57			15:55		15:40	
24	05:01	20:11-20:47/36	06:01	06:39-07:06/27	07:03	08:05	16:32-17:03/31		08:11	12:38-13:24/46	08:50	12:51-13:36/45
	21:43		20:34		19:12	17:55			15:53		15:41	
25	05:03	20:10-20:46/36	06:03	06:39-07:05/26	07:05	07:07	15:32-16:03/31		08:13	12:38-13:24/46	08:50	12:51-13:36/45
	21:41		20:32		19:10	16:52			15:52		15:41	
26	05:05	20:11-20:46/35	06:05	06:40-07:04/24	07:07	07:09	15:32-16:02/30		08:15	12:38-13:24/46	08:50	12:52-13:36/44
	21:39		20:29		19:07	16:50			15:51		15:42	
27	05:06	20:12-20:46/34	06:07	06:40-07:02/22	07:09	07:12	15:33-16:02/29		08:17	12:38-13:25/47	08:51	12:52-13:37/45
	21:37		20:27		19:04	16:47			15:49		15:43	
28	05:08	20:12-20:44/32	06:09	06:42-07:00/18	07:11	07:14	15:33-16:01/28		08:19	12:39-13:26/47	08:51	12:53-13:37/44
	21:35		20:24		19:02	16:45			15:48		15:44	
29	05:10	20:13-20:44/31	06:11	06:44-06:58/14	07:13	07:16	15:35-16:01/26		08:20	12:40-13:26/46	08:51	12:53-13:38/45
	21:34		20:22		18:59	16:43			15:47		15:45	
30	05:12	20:14-20:44/30	06:13	06:47-06:54/7	07:15	07:18	15:35-15:59/24		08:22	12:40-13:27/47	08:51	12:54-13:39/45
	21:32		20:19		18:56	16:40			15:46		15:46	
31	05:14	20:15-20:43/28	06:15			07:20	15:36-15:57/21				08:51	12:53-13:39/46
	21:30		20:16			16:38					15:47	
Potential sun hours	529		469		384	324			248		216	
Sum of minutes with flicker	1104		630		0	490			916		1410	

Table 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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C17 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (91)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January		February		March		April		May		June	
1	08:51	10:50-11:33/43	08:15	07:11			06:49		05:32	07:25-08:49/84	04:36	07:33-08:36/63
	15:48		16:45	17:47			19:53		20:55	06:31-07:15/44	21:53	
2	08:50	10:51-11:34/43	08:13	07:08			06:46		05:30	07:25-08:49/84	04:34	07:34-08:35/61
	15:49		16:47	17:50			19:55		20:57	06:31-07:15/44	21:54	
3	08:50	10:51-11:34/43	08:11	07:06	07:36-07:45/9		06:43		05:28	07:25-08:49/84	04:33	07:34-08:35/61
	15:50		16:49	17:52			19:57		20:59	06:31-07:15/44	21:55	
4	08:50	10:51-11:35/44	08:09	07:03	07:32-07:48/16		06:41	08:12-08:18/6	05:25	07:25-08:49/84	04:32	07:34-08:34/60
	15:52		16:52	17:54			19:59		21:02	06:31-07:15/44	21:57	
5	08:49	10:52-11:36/44	08:07	07:00	07:30-07:49/19		06:38	08:02-08:26/24	05:23	07:25-08:49/84	04:31	07:36-08:34/58
	15:53		16:54	17:56			20:01		21:04	06:31-07:14/43	21:58	
6	08:49	10:52-11:36/44	08:05	06:58	07:29-07:51/22		06:35	07:58-08:30/32	05:21	07:25-08:49/84	04:31	07:36-08:34/58
	15:55		16:56	17:58			20:03		21:06	06:32-07:14/42	21:59	
7	08:48	10:53-11:36/43	08:03	06:55	07:27-07:52/25		06:33	07:54-08:33/39	05:19	07:25-08:48/83	04:30	07:36-08:33/57
	15:56		16:58	18:00			20:05		21:08	06:32-07:13/41	22:00	
8	08:47	10:53-11:37/44	08:00	06:53	07:25-07:52/27		06:30	07:51-08:35/44	05:17	07:25-08:48/83	04:29	07:37-08:33/56
	15:58		17:01	18:02			20:07		21:10	06:32-07:13/41	22:01	
9	08:47	10:53-11:37/44	07:58	06:50	07:25-07:53/28		06:27	07:49-08:38/49	05:14	07:25-08:47/82	04:28	07:37-08:33/56
	15:59		17:03	18:05			20:10		21:12	06:33-07:12/39	22:02	
10	08:46	10:54-11:38/44	07:56	06:47	07:24-07:53/29		06:25	07:46-08:39/53	05:12	07:25-08:47/82	04:28	07:38-08:33/55
	16:01		17:05	18:07			20:12		21:14	06:33-07:12/39	22:03	
11	08:45	10:55-11:38/43	07:54	06:45	07:24-07:52/28		06:22	07:44-08:41/57	05:10	07:25-08:46/81	04:27	07:38-08:32/54
	16:02		17:07	18:09			20:14		21:16	06:33-07:11/38	22:04	
12	08:44	10:55-11:39/44	07:52	06:42	07:24-07:53/29		06:19	07:42-08:42/60	05:08	07:25-08:46/81	04:26	07:39-08:32/53
	16:04		17:10	18:11			20:16	06:45-06:46/1	21:18	06:34-07:10/36	22:05	
13	08:43	10:55-11:38/43	07:49	06:39	07:23-07:52/29		06:17	07:41-08:44/63	05:06	07:25-08:45/80	04:26	07:40-08:32/52
	16:06		17:12	18:13			20:18	06:43-06:50/7	21:20	06:34-07:09/35	22:06	
14	08:42	10:56-11:39/43	07:47	06:37	07:23-07:51/28		06:14	07:39-08:44/65	05:04	07:25-08:44/79	04:26	07:40-08:31/51
	16:08		17:14	18:15			20:20	06:40-06:52/12	21:22	06:36-07:09/33	22:07	
15	08:41	10:57-11:39/42	07:45	06:34	07:23-07:50/27		06:12	07:38-08:46/68	05:02	07:26-08:45/79	04:25	07:40-08:32/52
	16:10		17:16	18:17			20:22	06:38-06:53/15	21:24	06:36-07:07/31	22:07	
16	08:40	10:57-11:39/42	07:42	06:31	07:24-07:50/26		06:09	07:36-08:46/70	05:00	07:26-08:44/78	04:25	07:41-08:32/51
	16:12		17:19	18:19			20:24	06:35-07:02/27	21:25	06:37-07:06/29	22:08	
17	08:39	10:58-11:39/41	07:40	06:29	07:24-07:48/24		06:07	07:35-08:47/72	04:58	07:26-08:43/77	04:25	07:41-08:32/51
	16:13		17:21	18:22			20:26	06:33-07:06/33	21:27	06:38-07:04/26	22:08	
18	08:37	10:58-11:39/41	07:38	06:26	07:25-07:47/22		06:04	07:34-08:47/73	04:57	07:27-08:43/76	04:25	07:41-08:32/51
	16:15		17:23	18:24			20:28	06:32-07:08/36	21:29	06:40-07:04/24	22:09	
19	08:36	10:59-11:39/40	07:35	06:23	07:27-07:45/18		06:02	07:33-08:48/75	04:55	07:26-08:42/76	04:25	07:42-08:32/50
	16:17		17:25	18:26			20:30	06:32-07:10/38	21:31	06:41-07:02/21	22:09	
20	08:35	11:00-11:39/39	07:33	06:21	07:29-07:42/13		05:59	07:31-08:48/77	04:53	07:27-08:42/75	04:25	07:42-08:32/50
	16:19		17:28	18:28			20:32	06:31-07:10/39	21:33	06:43-07:00/17	22:10	
21	08:33	11:00-11:39/39	07:31	06:18	07:34-07:36/2		05:56	07:31-08:49/78	04:51	07:27-08:41/74	04:25	07:42-08:32/50
	16:21		17:30	18:30			20:35	06:32-07:12/40	21:35	06:45-06:57/12	22:10	
22	08:32	11:01-11:38/37	07:28	06:15			05:54	07:29-08:48/79	04:50	07:28-08:41/73	04:25	07:43-08:33/50
	16:23		17:32	18:32			20:37	06:32-07:13/41	21:36	06:51-06:53/2	22:10	
23	08:30	11:02-11:38/36	07:26	06:13			05:51	07:29-08:49/80	04:48	07:28-08:40/72	04:25	07:43-08:33/50
	16:26		17:34	18:34			20:39	06:32-07:13/41	21:38		22:10	
24	08:29	11:04-11:38/34	07:23	06:10			05:49	07:29-08:50/81	04:46	07:29-08:40/71	04:26	07:43-08:33/50
	16:28		17:36	18:36			20:41	06:33-07:14/41	21:40		22:10	
25	08:27	11:05-11:37/32	07:21	06:07			05:47	07:27-08:49/82	04:45	07:30-08:40/70	04:26	07:43-08:34/51
	16:30		17:39	18:38			20:43	06:34-07:15/41	21:42		22:10	
26	08:25	11:06-11:36/30	07:18	06:05			05:44	07:27-08:49/82	04:43	07:29-08:38/69	04:27	07:43-08:34/51
	16:32		17:41	18:40			20:45	06:33-07:14/41	21:43		22:10	
27	08:24	11:07-11:35/28	07:16	06:02			05:42	07:27-08:50/83	04:42	07:30-08:38/68	04:27	07:43-08:35/52
	16:34		17:43	18:42			20:47	06:33-07:15/42	21:45		22:10	
28	08:22	11:09-11:34/25	07:13	05:59			05:39	07:27-08:50/83	04:41	07:31-08:38/67	04:28	07:43-08:34/51
	16:36		17:45	18:45			20:49	06:32-07:15/43	21:47		22:10	
29	08:20	11:11-11:32/21		06:57			05:37	07:26-08:49/83	04:39	07:31-08:37/66	04:28	07:43-08:35/52
	16:38			19:47			20:51	06:31-07:15/44	21:48		22:10	
30	08:18	11:14-11:30/16		06:54			05:35	07:25-08:49/84	04:38	07:32-08:37/65	04:29	07:42-08:35/53
	16:41			19:49			20:53	06:31-07:15/44	21:50		22:09	
31	08:17	11:19-11:25/6		06:51					04:37	07:33-08:36/63		
	16:43			19:51					21:51			
Potential sun hours	235		266	366			426		508		529	1610
Sum of minutes with flicker		1158	0	421			2368		3099			

Table 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:
09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C17 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (91)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	July	August	September	October	November	December
1	04:30 07:43-08:36/53 22:09	05:15 07:35-08:56/81 21:28 06:44-07:20/36	06:17 07:43-08:40/57 20:14	07:17 08:03-08:32/29 18:53	07:22 16:36	08:24 10:37-11:20/43 15:45
2	04:31 07:43-08:37/54 22:08	05:17 07:35-08:57/82 21:26 06:43-07:21/38	06:19 07:45-08:38/53 20:11	07:19 08:03-08:32/29 18:51	07:25 16:34	08:26 10:37-11:21/44 15:44
3	04:31 07:43-08:38/55 22:08	05:19 07:35-08:57/82 21:24 06:43-07:22/39	06:21 07:47-08:36/49 20:09	07:21 08:02-08:31/29 18:48	07:27 16:31	08:28 10:38-11:21/43 15:43
4	04:32 07:43-08:38/55 22:07	05:21 07:34-08:57/83 21:22 06:43-07:23/40	06:23 07:48-08:32/44 20:06	07:23 08:02-08:30/28 18:45	07:29 16:29	08:29 10:37-11:21/44 15:42
5	04:33 07:43-08:39/56 22:07	05:23 07:34-08:57/83 21:19 06:41-07:22/41	06:25 07:50-08:29/39 20:03	07:25 08:02-08:29/27 18:43	07:31 16:27	08:31 10:38-11:21/43 15:41
6	04:34 07:43-08:40/57 22:06	05:25 07:34-08:58/84 21:17 06:41-07:23/42	06:27 07:53-08:26/33 20:01	07:27 08:03-08:28/25 18:40	07:33 16:25	08:32 10:39-11:22/43 15:41
7	04:35 07:42-08:41/59 22:05	05:27 07:34-08:58/84 21:15 06:41-07:23/42	06:29 07:57-08:21/24 19:58	07:29 08:03-08:27/24 18:38	07:36 16:23	08:34 10:38-11:22/44 15:40
8	04:37 07:42-08:41/59 22:04	05:29 07:34-08:58/84 21:13 06:41-07:24/43	06:31 08:04-08:13/9 19:55	07:31 08:04-08:25/21 18:35	07:38 16:21	08:35 10:39-11:23/44 15:39
9	04:38 07:42-08:42/60 22:03	05:31 07:34-08:58/84 21:11 06:41-07:24/43	06:33 19:53	07:33 08:06-08:24/18 18:32	07:40 16:19	08:37 10:40-11:23/43 15:39
10	04:39 07:41-08:43/62 22:02	05:33 07:33-08:58/85 21:08 06:40-07:23/43	06:35 19:50	07:36 08:08-08:21/13 18:30	07:42 16:17	08:38 10:40-11:23/43 15:39
11	04:40 07:41-08:43/62 22:01	05:35 07:34-08:58/84 21:06 06:40-07:23/43	06:37 19:47	07:38 18:27	07:44 10:49-10:57/8 16:15	08:39 10:40-11:23/43 15:38
12	04:42 07:40-08:44/64 22:00	05:37 07:34-08:58/84 21:04 06:40-07:23/43	06:39 19:45	07:40 18:24	07:46 10:45-11:01/16 16:13	08:40 10:41-11:25/44 15:38
13	04:43 07:41-08:45/64 21:59	05:39 07:34-08:58/84 21:01 06:40-07:23/43	06:41 19:42	07:42 18:22	07:48 10:43-11:04/21 16:11	08:42 10:42-11:25/43 15:38
14	04:45 07:40-08:46/66 21:58	05:41 07:34-08:58/84 20:59 06:40-07:23/43	06:43 19:39	07:44 18:19	07:51 10:41-11:06/25 16:09	08:43 10:42-11:25/43 15:38
15	04:46 07:40-08:46/66 21:57	05:43 07:34-08:57/83 20:57 06:40-07:23/43	06:45 19:37	07:46 18:17	07:53 10:39-11:07/28 16:07	08:44 10:42-11:25/43 15:38
16	04:47 07:40-08:47/67 21:55	05:45 07:33-08:56/83 20:54 06:40-07:22/42	06:47 19:34	07:48 18:14	07:55 10:39-11:09/30 16:06	08:45 10:43-11:26/43 15:38
17	04:49 07:39-08:48/69 21:54	05:47 07:34-08:56/82 20:52 06:40-07:21/41	06:49 19:31	07:50 18:12	07:57 10:38-11:10/32 16:04	08:46 10:44-11:26/42 15:38
18	04:51 07:39-08:48/69 21:52	05:49 07:34-08:56/82 20:49 06:39-07:20/41	06:51 19:28	07:52 18:09	07:59 10:38-11:12/34 16:02	08:46 10:44-11:27/43 15:38
19	04:52 07:39-08:49/70 21:51	05:51 07:34-08:55/81 20:47 06:38-07:19/41	06:53 19:26	07:54 18:07	08:01 10:37-11:13/36 16:01	08:47 10:45-11:27/42 15:38
20	04:54 07:38-08:49/71 21:49	05:53 07:35-08:55/80 20:45 06:37-07:19/42	06:55 19:23	07:57 18:04	08:03 10:36-11:13/37 15:59	08:48 10:45-11:27/42 15:38
21	04:55 07:38-08:51/73 21:48	05:55 07:35-08:54/79 20:42 06:37-07:18/41	06:57 19:20	07:59 18:02	08:05 10:35-11:14/39 15:57	08:48 10:46-11:28/42 15:39
22	04:57 07:38-08:52/74 21:46	05:57 07:36-08:53/77 20:40 06:36-07:16/40	06:59 19:18	08:01 17:59	08:07 10:36-11:15/39 15:56	08:49 10:46-11:28/42 15:39
23	04:59 07:37-08:52/75 21:45	05:59 07:36-08:53/77 20:37 06:36-07:15/39	07:01 08:14-08:25/11 19:15	08:03 17:57	08:09 10:36-11:16/40 15:54	08:50 10:47-11:29/42 15:40
24	05:01 07:38-08:53/75 21:43	06:01 07:37-08:52/75 20:35 06:36-07:13/37	07:03 08:11-08:27/16 19:12	08:05 17:54	08:11 10:35-11:16/41 15:53	08:50 10:47-11:29/42 15:40
25	05:02 07:37-08:53/76 21:41	06:03 07:36-08:50/74 20:32 06:36-07:10/34	07:05 08:08-08:29/21 19:10	07:07 16:52	08:13 10:35-11:17/42 15:52	08:50 10:47-11:30/43 15:41
26	05:04 07:37-08:54/77 21:39	06:05 07:37-08:49/72 20:29 06:35-07:07/32	07:07 08:07-08:30/23 19:07	07:09 16:50	08:15 10:36-11:18/42 15:50	08:51 10:47-11:30/43 15:42
27	05:06 07:37-08:55/78 21:37	06:07 07:38-08:48/70 20:27 06:37-07:03/26	07:09 08:06-08:32/26 19:04	07:12 16:47	08:17 10:36-11:18/42 15:49	08:51 10:48-11:30/42 15:42
28	05:08 07:36-08:54/78 21:36	06:09 07:39-08:46/67 20:24 06:39-06:54/15	07:11 08:05-08:32/27 19:01	07:14 16:45	08:19 10:36-11:19/43 15:48	08:51 10:48-11:31/43 15:43
29	05:10 07:36-08:55/79 21:34	06:11 07:40-08:45/65 20:22 06:41-06:52/11	07:13 08:04-08:32/28 18:59	07:16 16:43	08:21 10:36-11:19/43 15:47	08:51 10:49-11:32/43 15:44
30	05:12 07:36-08:56/80 21:32	06:13 07:41-08:43/62 20:19 06:43-06:50/7	07:15 08:03-08:32/29 18:56	07:18 16:40	08:22 10:36-11:20/44 15:46	08:51 10:49-11:32/43 15:45
31	05:13 07:35-08:56/81 21:30	06:15 07:42-08:42/60 20:16		07:20 16:38		08:51 10:50-11:33/43 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	2330	3548	489	243	682	1330

Table 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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C2 - NORDEX N175/6.X 6800 175.0 I-! hub: 179.0 m (TOT: 266.5 m) (76)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 09:00-09:29/29 16:45	07:11 07:55-08:20/25 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 08:30-09:01/31 16:36	08:24 15:45
2	08:50 15:49	08:13 09:00-09:30/30 16:47	07:08 07:55-08:19/24 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 08:30-09:01/31 16:34	08:26 15:44
3	08:50 15:50	08:11 09:00-09:31/31 16:49	07:05 07:56-08:18/22 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 08:30-09:02/32 16:31	08:27 15:43
4	08:50 15:52	08:09 09:00-09:32/32 16:52	07:03 07:57-08:17/20 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 08:30-09:02/32 16:29	08:29 15:42
5	08:49 15:53	08:07 09:00-09:32/32 16:54	07:00 07:58-08:14/16 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 08:29-09:01/32 16:27	08:31 15:41
6	08:49 15:55	08:05 09:00-09:32/32 16:56	06:58 08:01-08:12/11 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 08:30-09:02/32 16:25	08:32 15:41
7	08:48 15:56	08:02 09:00-09:32/32 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 08:38-08:46/8 18:37	07:35 08:30-09:01/31 16:23	08:34 15:40
8	08:47 15:58	08:00 09:01-09:32/31 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 08:34-08:49/15 18:35	07:38 08:31-09:02/31 16:21	08:35 15:39
9	08:47 15:59	07:58 09:00-09:31/31 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 08:32-08:50/18 18:32	07:40 08:31-09:01/30 16:19	08:36 15:39
10	08:46 16:01	07:56 09:01-09:32/31 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 08:31-08:52/21 18:30	07:42 08:31-09:00/29 16:17	08:38 15:39
11	08:45 16:03	07:54 09:02-09:31/29 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 08:30-08:53/23 18:27	07:44 08:32-09:00/28 16:15	08:39 15:38
12	08:44 16:04	07:52 09:02-09:30/28 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 08:29-08:53/24 18:24	07:46 08:33-08:59/26 16:13	08:40 15:38
13	08:43 16:06	07:49 09:03-09:30/27 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 08:28-08:53/25 18:22	07:48 08:35-08:59/24 16:11	08:41 15:38
14	08:42 16:08	07:47 09:04-09:28/24 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 08:27-08:53/26 18:19	07:51 08:35-08:58/23 16:09	08:43 15:38
15	08:41 16:10	07:45 09:06-09:27/21 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 08:28-08:54/26 18:17	07:53 08:36-08:57/21 16:07	08:44 15:38
16	08:40 16:12	07:42 09:07-09:25/18 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 08:27-08:53/26 18:14	07:55 08:39-08:56/17 16:06	08:45 15:38
17	08:39 16:13	07:40 09:10-09:23/13 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 08:27-08:53/26 18:12	07:57 08:40-08:54/14 16:04	08:45 15:38
18	08:37 16:15	07:38 08:05-08:12/7 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 08:27-08:52/25 18:09	07:59 08:44-08:52/8 16:02	08:46 15:38
19	08:36 16:17	07:35 08:03-08:16/13 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 08:28-08:52/24 18:07	08:01 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 08:29-08:50/21 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 07:59-08:19/20 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 16:23	07:28 07:57-08:20/23 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 16:26	07:26 07:57-08:21/24 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 09:10-09:18/8 16:28	07:23 07:56-08:21/25 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 09:43-09:49/6 17:54	08:11 15:53	08:50 15:40
25	08:27 09:07-09:21/14 16:30	07:21 07:55-08:21/26 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 08:38-08:53/15 16:52	08:13 15:52	08:50 15:41
26	08:25 09:06-09:23/17 16:32	07:18 07:55-08:21/26 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 08:37-08:56/19 16:50	08:15 15:50	08:50 15:42
27	08:24 09:04-09:25/21 16:34	07:16 07:55-08:21/26 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 08:35-08:57/22 16:47	08:17 15:49	08:51 15:42
28	08:22 09:03-09:26/23 16:36	07:13 07:55-08:21/26 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 08:33-08:58/25 16:45	08:19 15:48	08:51 15:43
29	08:20 09:03-09:27/24 16:38	07:11 07:55-08:21/26 17:45	05:57 18:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 08:33-08:59/26 16:43	08:21 15:47	08:51 15:44
30	08:18 09:02-09:29/27 16:41	07:11 07:55-08:21/26 17:45	05:54 18:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 08:31-09:00/29 16:40	08:22 15:46	08:51 15:45
31	08:16 09:02-09:30/28 16:43	07:11 07:55-08:21/26 17:45	05:51 19:51	05:32 21:51	04:37 21:51	04:30 22:10	05:13 21:30	06:15 20:16	07:20 16:38	07:20 08:30-09:00/30 16:38	08:24 15:46	08:51 15:46
Potential sun hours	235	266	366	426	508	529	529	469	385	324	247	216
Sum of minutes with flicker	162	704	118	0	0	0	0	0	0	533	472	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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C3 - NORDEX N175/6.X 6800 175.0 I-! hub: 179.0 m (TOT: 266.5 m) (77)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 15:34-15:56/22 16:45	07:10 16:20-16:53/33 17:47	06:48 19:53	05:32 20:55	04:35 21:52
2	08:50 15:49	08:12 15:34-15:56/22 16:47	07:08 16:20-16:52/32 17:49	06:46 19:55	05:30 20:57	04:34 21:54
3	08:50 15:50	08:11 15:35-15:56/21 16:49	07:05 16:20-16:51/31 17:51	06:43 19:57	05:27 20:59	04:33 21:55
4	08:50 15:51	08:09 15:36-15:56/20 16:51	07:03 16:21-16:51/30 17:54	06:40 19:59	05:25 21:01	04:32 21:56
5	08:49 15:53	08:06 15:36-15:54/18 16:54	07:00 16:21-16:50/29 17:56	06:38 20:01	05:23 21:03	04:31 21:58
6	08:49 15:54	08:04 15:37-15:54/17 16:56	06:58 16:21-16:49/28 17:58	06:35 20:03	05:21 21:05	04:30 21:59
7	08:48 15:56	08:02 15:39-15:53/14 16:58	06:55 16:23-16:48/25 18:00	06:32 20:05	05:19 21:07	04:29 22:00
8	08:47 15:57	08:00 15:41-15:50/9 17:00	06:52 16:24-16:46/22 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 16:26-16:44/18 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 16:29-16:41/12 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 17:08-17:39/31 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 17:08-17:39/31 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 17:07-17:40/33 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 17:07-17:41/34 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 17:07-17:41/34 18:17	06:12 20:22	05:02 21:23	04:25 22:07
16	08:40 16:11	07:42 17:18	06:31 17:07-17:40/33 18:19	06:09 20:24	05:00 21:25	04:25 22:08
17	08:38 16:13	07:40 17:21	06:29 17:08-17:41/33 18:21	06:06 20:26	04:58 21:27	04:25 22:08
18	08:37 16:15	07:38 16:31-16:43/12 17:23	06:26 17:08-17:40/32 18:23	06:04 20:28	04:56 21:29	04:25 22:09
19	08:36 16:17	07:35 16:29-16:47/18 17:25	06:23 17:09-17:39/30 18:26	06:01 20:30	04:55 21:31	04:25 22:09
20	08:35 16:19	07:33 16:27-16:48/21 17:27	06:21 17:12-17:38/26 18:28	05:59 20:32	04:53 21:33	04:25 22:09
21	08:33 15:38-15:43/5 16:21	07:30 16:25-16:49/24 17:30	06:18 17:14-17:37/23 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 16:24-16:51/27 17:32	06:15 17:17-17:35/18 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 16:22-16:51/29 17:34	06:12 17:18-17:33/15 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 16:22-16:52/30 17:36	06:10 17:22-17:30/8 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 16:21-16:52/31 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10
26	08:25 15:33-15:53/20 16:32	07:18 16:21-16:53/32 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10
27	08:24 15:33-15:54/21 16:34	07:15 16:20-16:53/33 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 15:33-15:54/21 16:36	07:13 16:20-16:52/32 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10
29	08:20 15:33-15:55/22 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09
30	08:18 15:33-15:55/22 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09
31	08:16 15:33-15:56/23 16:43		06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	191	432	741	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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C3 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (77)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	July	August	September	October	November	December
1	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	17:46-18:19/33 16:36	07:22 15:45
2	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	17:46-18:17/31 16:33	07:24 15:44
3	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	17:08-17:16/8 17:46-18:15/29	07:27 16:31
4	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	17:05-17:20/15 17:48-18:14/26	07:29 16:29
5	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:43	17:02-17:22/20 17:48-18:10/22	07:31 16:27
6	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	17:00-17:24/24 17:49-18:07/18	07:33 16:25
7	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	16:58-17:24/26 17:50-18:05/15	07:35 16:23
8	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	16:57-17:25/28 17:53-18:02/9	07:37 16:21
9	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	16:55-17:25/30 16:54-17:25/31	07:40 16:19
10	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	16:54-17:25/31 16:53-17:25/32	07:42 16:17
11	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	16:53-17:25/32 16:52-17:24/32	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:44	07:40 18:24	16:54-17:26/32 16:53-17:26/33	07:46 16:13
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	16:53-17:26/33 16:53-17:25/32	07:48 16:11
14	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	16:53-17:25/32 16:52-17:25/33	07:50 16:09
15	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	16:52-17:25/33 16:52-17:24/32	07:53 16:07
16	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	16:52-17:24/32 16:53-17:24/31	07:55 16:05
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	16:53-17:24/31 16:53-17:23/30	07:57 16:04
18	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	16:53-17:23/30 16:54-17:22/28	07:59 16:02
19	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	16:54-17:22/28 16:54-17:21/27	08:01 16:00
20	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	16:54-17:21/27 16:56-17:20/24	08:03 15:59
21	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	16:56-17:20/24 16:57-17:18/21	08:05 15:57
22	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	16:57-17:18/21 16:59-17:15/16	08:07 15:56
23	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	16:59-17:15/16 17:03-17:12/9	08:09 15:54
24	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	17:03-17:12/9 17:52-18:22/30	08:11 15:53
25	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	17:52-18:22/30 17:50-18:22/32	08:13 15:51
26	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	17:50-18:22/32 17:49-18:22/33	08:15 15:50
27	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	17:49-18:22/33 17:48-18:22/34	08:17 15:49
28	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	17:48-18:22/34 17:47-18:21/34	08:19 15:48
29	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:42	17:47-18:21/34 17:47-18:20/33	08:20 15:47
30	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	17:47-18:20/33 17:46-18:19/33	08:22 15:46
31	05:13 21:30	06:15 20:16		07:20 16:38	17:46-18:19/33 16:36	08:24 15:45
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	0	0	306	745	338	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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C4 - NORDEX N175/6.X 6800 175.0 I-! hub: 179.0 m (TOT: 266.5 m) (78)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January			February			March			April			May			June		
1	08:51	10:25-10:44/19	15:48	08:15	16:45	17:47	07:11	17:47	19:53	05:32	21:52	04:36	05:30-06:06/36					
2	08:50	10:26-10:44/18	15:49	08:13	16:47	17:50	07:08	17:52	06:46	05:30	21:54	04:35	05:30-06:06/36					
3	08:50	10:27-10:44/17	15:50	08:11	16:49	17:52	07:05	17:52	06:43	05:28	21:55	04:33	05:30-06:05/35					
4	08:50	10:27-10:43/16	15:52	08:09	16:52	17:54	07:03	17:54	06:41	05:25	21:56	04:32	05:29-06:05/36					
5	08:49	10:29-10:44/15	15:53	08:07	16:54	17:56	07:00	17:56	06:38	05:23	21:58	04:31	05:30-06:05/35					
6	08:49	10:30-10:43/13	15:55	08:05	16:56	17:58	06:58	17:58	06:35	05:21	21:59	04:31	05:30-06:05/35					
7	08:48	10:32-10:43/11	15:56	08:02	16:58	18:00	06:55	18:00	06:33	05:19	22:00	04:30	05:30-06:05/35					
8	08:47	10:33-10:42/9	15:58	08:00	17:01	18:02	06:53	18:02	06:30	05:17	22:01	04:29	05:30-06:06/36					
9	08:47	10:37-10:39/2	15:59	07:58	17:03	18:05	06:50	18:05	06:27	05:15	22:02	04:28	05:29-06:06/37					
10	08:46	09:23-09:39/16	16:01	07:56	17:05	18:07	07:13	18:07	06:25	05:12	22:03	04:28	05:29-06:07/38					
11	08:45	09:22-09:40/18	16:03	07:54	17:07	18:09	07:10	18:09	06:22	05:10	22:04	04:27	05:29-06:07/38					
12	08:44	09:21-09:41/20	16:04	07:52	17:10	18:11	07:08	18:11	06:20	05:08	22:05	04:27	05:29-06:08/39					
13	08:43	09:20-09:41/21	16:06	07:49	17:12	18:13	07:05	18:13	06:17	05:06	22:06	04:26	05:29-06:09/40					
14	08:42	09:20-09:42/22	16:08	07:47	17:14	18:15	07:02	18:15	06:14	05:04	22:06	04:26	05:28-06:08/40					
15	08:41	09:21-09:43/22	16:10	07:45	17:16	18:17	06:59	18:17	06:12	05:02	22:07	04:25	05:28-06:09/41					
16	08:40	09:20-09:44/24	16:12	07:42	17:19	18:19	06:57	18:19	06:09	05:00	22:08	04:25	05:29-06:09/40					
17	08:39	09:21-09:45/24	16:14	07:40	17:21	18:22	06:54	18:22	06:07	04:59	22:08	04:25	05:29-06:10/41					
18	08:37	09:21-09:45/24	16:15	07:38	17:23	18:24	06:51	18:24	06:04	04:57	22:09	04:25	05:29-06:10/41					
19	08:36	09:21-09:45/24	16:17	07:35	17:25	18:26	06:49	18:26	06:02	04:55	22:09	04:25	05:29-06:10/41					
20	08:35	09:22-09:46/24	16:19	07:33	17:28	18:28	06:47	18:28	05:59	04:53	22:10	04:25	05:29-06:10/41					
21	08:33	09:22-09:46/24	16:21	07:31	17:30	18:30	06:46	18:30	05:56	04:51	22:10	04:25	05:29-06:10/41					
22	08:32	09:22-09:46/24	16:24	07:28	17:32	18:32	06:47	18:32	05:54	04:50	22:10	04:25	05:30-06:11/41					
23	08:30	09:22-09:45/23	16:26	07:26	17:34	18:34	06:46	18:34	05:52	04:48	22:10	04:25	05:30-06:11/41					
24	08:29	09:24-09:46/22	16:28	07:23	17:36	18:36	06:46	18:36	05:49	04:47	22:10	04:26	05:30-06:11/41					
25	08:27	09:24-09:46/22	16:30	07:21	17:39	18:38	06:46	18:38	05:47	04:45	22:10	04:26	05:31-06:12/41					
26	08:25	09:25-09:45/20	16:32	07:18	17:41	18:40	06:05	18:40	05:44	04:44	22:10	04:27	05:31-06:12/41					
27	08:24	09:26-09:45/19	16:34	07:16	17:43	18:42	06:02	18:42	05:42	04:42	22:10	04:27	05:31-06:12/41					
28	08:22	09:27-09:44/17	16:36	07:13	17:45	18:45	06:48	18:45	05:39	04:41	22:10	04:28	05:31-06:12/41					
29	08:20	09:29-09:43/14	16:38	07:11	17:47	18:47	07:52	18:47	05:37	04:39	22:10	04:28	05:32-06:12/40					
30	08:18	09:31-09:41/10	16:41	07:09	17:49	18:49	06:54	18:49	05:35	04:38	22:09	04:29	05:33-06:12/39					
31	08:16	09:35-09:38/3	16:43	07:07	17:51	18:51	06:51	18:51	05:33	04:37	22:09	04:29	05:33-06:12/39					
Potential sun hours	235			266			366		426			529				529		
Sum of minutes with flicker	613			0			525		515			688				1168		

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

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		First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

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Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

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

	July	August	September	October	November	December
1	04:30 05:33-06:12/39 22:09	05:15 05:52-06:12/20 21:28	06:17 06:47-07:04/17 20:14	07:17 07:46-08:09/23 18:53	07:22 16:36	08:24 09:04-09:22/18 15:45
2	04:31 05:33-06:12/39 22:08	05:17 05:54-06:11/17 21:26	06:19 06:49-07:02/13 20:11	07:19 07:49-08:08/19 18:51	07:25 16:34	08:26 09:06-09:22/16 15:44
3	04:31 05:34-06:12/38 22:08	05:19 05:56-06:09/13 21:24	06:21 06:51-06:59/8 20:09	07:21 07:50-08:07/17 18:48	07:27 16:31	08:27 10:20-10:22/2 15:43 09:08-09:22/14
4	04:32 05:35-06:12/37 22:07	05:21 05:59-06:06/7 21:21	06:23 20:06	07:23 07:52-08:05/13 18:45	07:29 16:29	08:29 10:18-10:25/7 15:42 09:09-09:21/12
5	04:33 05:36-06:12/36 22:07	05:23 21:19	06:25 20:03	07:25 07:54-08:03/9 18:43	07:31 16:27	08:31 10:17-10:28/11 15:41 09:11-09:21/10
6	04:34 05:36-06:11/35 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 10:16-10:29/13 15:41 09:13-09:21/8
7	04:36 05:37-06:12/35 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:34 10:15-10:30/15 15:40 09:14-09:20/6
8	04:37 05:37-06:12/35 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 10:16-10:31/15 15:40 09:16-09:20/4
9	04:38 05:37-06:12/35 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:36 10:15-10:32/17 15:39 09:18-09:20/2
10	04:39 05:37-06:13/36 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 10:16-10:33/17 15:39
11	04:40 05:37-06:13/36 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 09:05-09:09/4 16:15	08:39 10:15-10:34/19 15:38
12	04:42 05:38-06:14/36 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 09:02-09:12/10 16:13	08:40 10:16-10:35/19 15:38
13	04:43 05:38-06:15/37 21:59	05:39 06:46-06:53/7 21:01	06:41 19:42	07:42 18:22	07:48 09:01-09:15/14 16:11	08:41 10:16-10:36/20 15:38
14	04:45 05:38-06:15/37 21:58	05:41 06:42-06:56/14 20:59	06:43 07:44-07:47/3 19:39	07:44 18:19	07:51 08:59-09:16/17 16:09	08:43 10:16-10:36/20 15:38
15	04:46 05:38-06:15/37 21:56	05:43 06:41-06:58/17 20:57	06:45 07:39-07:51/12 19:36	07:46 18:17	07:53 08:58-09:17/19 16:07	08:44 10:16-10:37/21 15:38
16	04:48 05:39-06:16/37 21:55	05:45 06:39-06:59/20 20:54	06:47 07:37-07:52/15 19:34	07:48 18:14	07:55 08:58-09:18/20 16:06	08:44 10:17-10:37/20 15:38
17	04:49 05:39-06:16/37 21:54	05:47 06:37-06:59/22 20:52	06:49 07:35-07:53/18 19:31	07:50 18:12	07:57 08:57-09:19/22 16:04	08:45 10:17-10:38/21 15:38
18	04:51 05:40-06:16/36 21:52	05:49 06:37-07:01/24 20:49	06:51 07:34-07:58/24 19:28	07:52 18:09	07:59 08:58-09:20/22 16:02	08:46 10:18-10:39/21 15:38
19	04:52 05:40-06:16/36 21:51	05:51 06:36-07:04/28 20:47	06:53 07:33-08:00/27 19:26	07:54 18:07	08:01 08:57-09:20/23 16:01	08:47 10:18-10:40/22 15:38
20	04:54 05:41-06:17/36 21:49	05:53 06:36-07:06/30 20:44	06:55 07:33-08:01/28 19:23	07:57 18:04	08:03 08:57-09:21/24 15:59	08:48 10:18-10:39/21 15:38
21	04:56 05:41-06:16/35 21:48	05:55 06:35-07:07/32 20:42	06:57 07:32-08:02/30 19:20	07:59 18:02	08:05 08:57-09:21/24 15:57	08:48 10:19-10:40/21 15:39
22	04:57 05:42-06:17/35 21:46	05:57 06:35-07:08/33 20:39	06:59 07:31-08:02/31 19:18	08:01 17:59	08:07 08:58-09:22/24 15:56	08:49 10:19-10:40/21 15:39
23	04:59 05:42-06:16/34 21:44	05:59 06:35-07:09/34 20:37	07:01 07:31-08:06/35 19:15	08:03 17:57	08:09 08:58-09:22/24 15:54	08:49 10:20-10:41/21 15:40
24	05:01 05:43-06:17/34 21:43	06:01 06:35-07:09/34 20:34	07:03 07:31-08:08/37 19:12	08:05 17:54	08:11 08:58-09:22/24 15:53	08:50 10:20-10:42/22 15:40
25	05:02 05:44-06:16/32 21:41	06:03 06:36-07:09/33 20:32	07:05 07:33-08:09/36 19:10	07:07 16:52	08:13 08:58-09:22/24 15:52	08:50 10:20-10:42/22 15:41
26	05:04 05:45-06:16/31 21:39	06:05 06:35-07:08/33 20:29	07:07 07:36-08:10/34 19:07	07:09 16:50	08:15 09:00-09:23/23 15:50	08:50 10:21-10:42/21 15:42
27	05:06 05:47-06:16/29 21:37	06:07 06:37-07:08/31 20:27	07:09 07:38-08:11/33 19:04	07:12 16:47	08:17 09:00-09:23/23 15:49	08:51 10:21-10:42/21 15:43
28	05:08 05:48-06:15/27 21:36	06:09 06:39-07:08/29 20:24	07:11 07:41-08:11/30 19:01	07:14 16:45	08:19 09:00-09:22/22 15:48	08:51 10:22-10:43/21 15:43
29	05:10 05:50-06:14/24 21:34	06:11 06:41-07:07/26 20:22	07:13 07:42-08:10/28 18:59	07:16 16:43	08:20 09:01-09:22/21 15:47	08:51 10:23-10:43/20 15:44
30	05:12 05:51-06:14/23 21:32	06:13 06:43-07:06/23 20:19	07:15 07:44-08:10/26 18:56	07:18 16:40	08:22 09:02-09:22/20 15:46	08:51 10:24-10:44/20 15:45
31	05:14 05:52-06:13/21 21:30	06:15 06:45-07:05/20 20:16		07:20 16:38		08:51 10:25-10:44/19 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1055	547	485	81	404	620

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Project:

Mezares_AB211223

Licensed user:

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LV-1010 Riga

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Anna / anna@environment.lv

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	January	February	March	April	May	June	July	August	September	October	November	December
1	08:50 15:48	08:14 16:45	07:10 17:47	06:48 19:53	05:32 20:55	04:35 21:52	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:24 16:33	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:54	08:04 16:56	06:58 17:58	06:35 20:03	05:21 21:05	04:30 21:59	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:32 20:05	05:19 21:07	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:57	08:00 17:01	06:52 18:02	06:30 20:07	05:16 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:04	06:27 20:09	05:14 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:30	07:42 16:17	08:38 15:38
11	08:45 16:02	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:15	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:16	05:08 21:17	04:26 22:05	04:42 22:00	05:37 21:04	06:39 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	04:26 22:06	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:37
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 18:17	07:53 16:07	08:43 15:37
16	08:40 16:11	07:42 17:18	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:05	08:44 15:37
17	08:38 16:13	07:40 17:21	06:29 18:21	06:06 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:00	08:47 15:38
20	08:35 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	04:25 22:10	04:55 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:48 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:25	07:25 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	08:15 15:50	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 15:42
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:10	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38	07:11 17:46	05:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09	05:10 21:33	06:11 20:22	07:13 18:59	07:16 16:42	08:20 15:47	08:51 15:44
30	08:18 16:40	07:04 17:49	05:54 19:49	05:35 20:53	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	08:16 16:43	07:01 17:51	05:51 19:51	05:37 20:51	04:37 21:51	05:13 21:30	06:15 20:16	07:20 16:38	07:20 16:38	07:20 16:38	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:
09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C6 - NORDEX N175/6.X 6800 175.0 I-! hub: 179.0 m (TOT: 266.5 m) (80)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	06:33-06:39/6 06:46-07:01/15	04:36 21:52	04:30 22:09	05:15 21:28	06:17 20:14	06:53-07:05/12	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	06:48-06:58/10	04:34 21:54	04:31 22:08	05:17 21:26	06:19 20:11		07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59		04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09		07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:01		04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06		07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03		04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03		07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05		04:31 21:59	04:34 22:06	05:25 21:17	06:27 20:01		07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:08		04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58		07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:10		04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55		07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:14 21:12		04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53		07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14		04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:01-07:02/1	07:35 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	06:54-07:06/12	04:27 22:04	04:40 22:01	05:35 21:06	06:56-07:08/12	06:37	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	06:50-07:08/18	04:27 22:05	04:42 22:00	05:37 21:04	06:41-06:49/8	06:39	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	06:49-07:10/21	04:26 22:06	04:43 21:59	05:39 21:01	06:38-06:51/13	06:41	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	06:46-07:10/24	04:26 22:06	04:45 21:58	05:41 21:06	06:37-07:13/36	06:43	07:44 18:22	07:50 16:11	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	06:38-06:43/5	04:25 22:07	04:46 21:56	05:43 21:06	06:36-07:14/38	06:45	07:46 18:17	07:53 16:07	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	06:45-07:11/26	04:25 22:08	04:48 21:55	05:45 21:06	06:35-07:15/40	06:47	07:48 18:14	07:55 16:06	08:44 15:38
17	08:39 16:13	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	06:33-07:12/39	04:25 22:08	04:49 21:54	05:47 21:06	06:33-07:15/42	06:49	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	06:30-07:12/42	04:25 22:09	04:51 21:52	05:49 21:07	06:33-07:15/42	06:51	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	06:29-07:12/43	04:25 22:09	04:52 21:51	05:51 21:07	06:32-07:16/44	06:53	07:54 18:07	08:01 16:01	08:47 15:38
20	08:35 16:19	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	06:28-07:11/43	04:25 22:10	04:54 21:49	05:53 21:08	06:32-07:16/44	06:55	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	06:27-07:12/45	04:25 22:10	04:56 21:48	05:55 21:09	06:32-07:16/44	06:57	07:59 18:02	08:05 15:57	08:48 15:39
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:37	04:50 21:36	06:27-07:12/45	04:25 22:10	04:57 21:46	05:57 21:09	06:32-07:16/44	06:59	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	06:26-07:10/44	04:25 22:10	04:59 21:44	05:59 21:07	06:32-07:16/44	07:01	08:03 17:57	08:09 15:54	08:49 15:40
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	06:27-07:10/43	04:26 22:10	05:01 21:43	06:01 21:06	06:33-07:16/43	07:03	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	06:27-07:10/43	04:26 22:10	05:02 21:41	06:03 21:06	06:34-07:14/40	07:05	08:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	06:27-07:08/41	04:27 22:10	05:04 21:39	06:05 21:07	06:35-07:14/39	07:07	08:09 16:50	08:15 15:50	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	06:28-07:07/39	04:27 22:10	05:06 21:37	06:07 21:07	06:37-07:13/36	07:09	08:11 16:47	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	06:28-07:06/38	04:28 22:10	05:08 21:35	06:09 21:06	06:39-06:44/5	07:11	08:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	06:30-07:04/34	04:28 22:10	05:10 21:34	06:11 21:06	06:47-07:11/24	07:13	08:16 16:43	08:20 15:47	08:51 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	06:30-06:42/12	04:29 22:09	05:12 21:32	06:13 21:09	06:49-07:09/20	07:15	08:18 16:40	08:22 15:46	08:51 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51	06:44-07:03/19		05:14 21:30	06:15 21:06	06:50-07:07/17		08:20 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	712	31		0	0	739	12		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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C7 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (81)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

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

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

Day in month	Sun rise (hh:mm)	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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C8 - NORDEX N175/6.X 6800 175.0 I-! hub: 179.0 m (TOT: 266.5 m) (82)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	07:36-07:52/16 20:55	05:32 21:52
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	07:38-07:49/11 20:57	05:30 21:54
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	07:41-07:45/4 20:59	05:28 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:01	06:17-07:06/49 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	06:16-07:07/51 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	06:15-07:07/52 21:59
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	06:15-07:08/53 22:00
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:10	06:14-07:08/54 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:14 21:12	06:13-07:08/55 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	05:12 21:14	06:13-07:08/55 22:03
11	08:45 16:03	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	06:12-07:08/56 22:04
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:17	06:12-07:08/56 22:05
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	06:12-07:08/56 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	05:04 21:21	06:12-07:09/57 22:07
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	06:12-07:09/57 22:08
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	06:11-07:08/57 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	06:11-07:08/57 22:09
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	06:12-07:08/56 22:10
19	08:36 16:17	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	06:11-07:08/57 22:10
20	08:35 16:19	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	06:12-07:08/56 22:10
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	06:12-07:07/55 22:10
22	08:32 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	06:12-07:08/56 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	06:12-07:07/55 22:10
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	06:42-06:50/8 21:40	06:13-07:07/54 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	06:37-06:55/18 21:41	06:13-07:07/54 22:10
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	06:33-06:57/24 21:43	06:13-07:06/53 22:10
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	06:30-06:59/29 21:45	06:14-07:06/52 22:10
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	06:27-07:01/34 21:46	06:14-07:06/52 22:10
29	08:20 16:38		06:57 19:47	05:37 20:51	06:24-07:02/38 21:48	06:15-07:06/51 22:09
30	08:18 16:41		06:54 19:49	05:35 20:53	06:22-07:03/41 21:49	06:15-07:05/50 22:09
31	08:16 16:43		06:51 19:51		06:16-07:05/49 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	0	0	614	223	1653	1218

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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C8 - NORDEX N175/6.X 6800 175.0 I-! hub: 179.0 m (TOT: 266.5 m) (82)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

	July	August	September	October	November	December
1	04:30 06:25-07:06/41 22:09	05:15 06:22-07:18/56 21:28	06:17 20:14	07:17 07:52-08:16/24 18:53	07:22 16:36	08:24 15:45
2	04:31 06:25-07:07/42 22:08	05:17 06:23-07:19/56 21:26	06:19 20:11	07:19 07:53-08:15/22 18:51	07:25 16:34	08:26 15:44
3	04:31 06:25-07:07/42 22:08	05:19 06:23-07:19/56 21:24	06:21 20:09	07:21 07:55-08:13/18 18:48	07:27 16:31	08:27 15:43
4	04:32 06:25-07:08/43 22:07	05:21 06:24-07:18/54 21:21	06:23 20:06	07:23 07:56-08:10/14 18:45	07:29 16:29	08:29 15:42
5	04:33 06:25-07:09/44 22:06	05:23 06:23-07:17/54 21:19	06:25 20:03	07:25 08:00-08:06/6 18:43	07:31 16:27	08:31 15:41
6	04:34 06:25-07:09/44 22:06	05:25 06:24-07:17/53 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	04:36 06:25-07:10/45 22:05	05:27 06:25-07:17/52 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	04:37 06:25-07:11/46 22:04	05:29 06:26-07:16/50 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	04:38 06:24-07:11/47 22:03	05:31 06:27-07:16/49 21:10	06:33 07:36-07:38/2 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	04:39 06:24-07:12/48 22:02	05:33 06:27-07:14/47 21:08	06:35 07:31-07:42/11 19:50	07:35 18:30	07:42 16:17	08:38 15:39
11	04:40 06:24-07:12/48 22:01	05:35 06:28-07:13/45 21:06	06:37 07:29-07:44/15 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	04:42 06:23-07:12/49 22:00	05:37 06:29-07:12/43 21:04	06:39 07:27-07:45/18 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	04:43 06:24-07:14/50 21:59	05:39 06:31-07:11/40 21:01	06:41 07:26-07:46/20 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	04:45 06:23-07:14/51 21:58	05:41 06:33-07:10/37 20:59	06:43 07:25-07:46/21 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	04:46 06:23-07:14/51 21:56	05:43 06:35-07:08/33 20:57	06:45 07:24-07:46/22 19:36	07:46 18:17	07:53 16:07	08:43 15:38
16	04:48 06:23-07:15/52 21:55	05:45 06:39-07:06/27 20:54	06:47 07:24-07:46/22 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	04:49 06:23-07:15/52 21:54	05:47 06:40-07:03/23 20:52	06:49 07:24-07:46/22 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	04:51 06:23-07:16/53 21:52	05:49 06:43-07:00/17 20:49	06:51 07:24-07:45/21 19:28	07:52 18:09	07:59 16:02	08:46 15:38
19	04:52 06:23-07:16/53 21:51	05:51 06:49-06:54/5 20:47	06:53 07:24-07:44/20 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	04:54 06:23-07:17/54 21:49	05:53 20:44	06:55 07:23-07:42/19 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	04:56 06:22-07:17/55 21:48	05:55 20:42	06:57 07:25-07:41/16 19:20	07:59 18:02	08:05 15:57	08:48 15:39
22	04:57 06:23-07:18/55 21:46	05:57 20:39	06:59 07:27-07:38/11 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	04:59 06:22-07:18/56 21:44	05:59 20:37	07:01 07:29-07:35/6 19:15	08:03 17:57	08:09 15:54	08:49 15:40
24	05:01 06:22-07:18/56 21:43	06:01 20:34	07:03 07:52-08:20/28 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	05:02 06:22-07:18/56 21:41	06:03 20:32	07:05 07:51-08:20/29 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	05:04 06:22-07:19/57 21:39	06:05 20:29	07:07 07:51-08:19/28 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	05:06 06:22-07:19/57 21:37	06:07 20:27	07:09 07:51-08:19/28 19:04	07:11 16:47	08:17 15:49	08:51 15:43
28	05:08 06:22-07:18/56 21:35	06:09 20:24	07:11 07:51-08:18/27 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	05:10 06:22-07:19/57 21:34	06:11 20:22	07:13 07:52-08:19/27 18:59	07:16 16:43	08:20 15:47	08:51 15:44
30	05:12 06:22-07:19/57 21:32	06:13 20:19	07:15 07:52-08:18/26 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	05:14 06:22-07:18/56 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	1573	797	575	84	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:

09/04/2024 19:39/4.0.531

SHADOW - Calendar per WTG

WTG: C9 - NORDEX N175/6.X 6800 175.0 !-! hub: 179.0 m (TOT: 266.5 m) (83)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

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

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

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

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

Day in month	Sun rise (hh:mm)	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