

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B1 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (101)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January	February	March	April	May	June
1	08:51 12:38-13:10/32 15:48 10:18-11:20/62	08:15 16:45	07:11 08:07-08:13/6 08:15-08:31/16 17:47 07:37-07:55/18	06:49 19:53	05:32 06:19-07:18/59 20:55 06:00-06:04/4	04:36 21:52
2	08:50 12:40-13:11/31 15:49 10:19-11:21/62	08:13 08:43-08:45/2 16:47	07:08 07:34-07:55/21 17:50 08:18-08:28/10	06:46 19:55	05:30 05:58-06:06/8 20:57 06:20-07:17/57	04:35 21:54
3	08:50 12:40-13:10/30 10:38-11:21/43 15:50 10:19-10:37/18	08:11 08:41-08:48/7 16:50	07:06 07:34-07:56/22 17:52	06:43 19:57	05:28 05:56-06:08/12 20:59 06:21-07:17/56	04:33 21:55
4	08:50 12:40-13:10/30 10:38-11:21/43 15:52 10:20-10:37/17	08:09 08:39-08:50/11 16:52	07:03 07:33-07:56/23 17:54	06:41 07:20-07:33/13 19:59	05:25 05:54-06:08/14 21:02 06:23-07:16/53	04:32 21:57
5	08:49 12:42-13:11/29 10:39-11:22/43 15:53 10:22-10:37/15	08:07 08:37-08:51/14 16:54	07:00 07:32-07:56/24 17:56	06:38 07:15-07:35/20 20:01	05:23 05:52-06:09/17 21:04 06:24-07:16/52	04:32 21:58
6	08:49 12:42-13:11/29 10:40-11:23/43 15:55 10:23-10:37/14	08:05 08:34-08:51/17 16:56	06:58 07:33-07:56/23 17:58	06:35 07:13-07:38/25 20:03	05:21 05:50-06:09/19 21:06 06:25-07:15/50	04:31 21:59
7	08:48 12:43-13:11/28 10:40-11:23/43 15:56 10:24-10:36/12	08:03 08:32-08:52/20 16:58	06:55 07:32-07:56/24 18:00	06:33 07:10-07:39/29 20:05	05:19 05:48-06:10/22 21:08 06:25-07:14/49	04:30 22:00
8	08:47 12:44-13:11/27 10:40-11:23/43 15:58 10:25-10:36/11	08:00 08:32-08:53/21 17:01	06:53 07:32-07:55/23 18:03	06:30 07:08-07:40/32 20:07	05:17 05:46-06:10/24 21:10 06:25-07:13/48	04:29 22:01
9	08:47 12:45-13:10/25 10:41-11:24/43 15:59 10:27-10:34/7	07:58 08:31-08:53/22 17:03	06:50 07:33-07:54/21 18:05	06:27 07:07-07:41/34 20:10	05:15 05:44-06:10/26 21:12 06:25-07:11/46	04:28 22:02
10	08:46 12:46-13:10/24 16:01 10:41-11:24/43	07:56 08:31-08:54/23 17:05	06:47 07:34-07:53/19 18:07	06:25 07:05-07:41/36 20:12	05:12 05:42-06:09/27 21:14 06:26-07:10/44	04:28 22:03
11	08:45 12:48-13:10/22 16:03 10:42-11:25/43	07:54 08:32-08:54/22 17:07	06:45 07:34-07:51/17 18:09	06:22 07:05-07:42/37 20:14	05:10 05:41-06:09/28 21:16 06:26-07:08/42	04:27 22:04
12	08:44 12:49-13:10/21 16:04 10:43-11:25/42	07:52 08:21-08:28/7 17:10 08:31-08:53/22	06:42 07:37-07:49/12 18:11	06:20 07:03-07:42/39 20:16	05:08 05:40-06:08/28 21:18 06:27-07:06/39	04:27 22:05
13	08:43 12:50-13:08/18 16:06 10:43-11:25/42	07:49 08:18-08:53/35 17:12	06:39 07:40-07:45/5 18:13	06:17 07:00-07:43/43 20:18	05:06 05:40-06:08/28 21:20 06:27-07:03/36	04:26 22:06
14	08:42 12:53-13:07/14 16:08 10:44-11:25/41	07:47 08:15-08:52/37 17:14	06:37 07:37-07:49/12 18:15	06:14 06:54-07:42/48 20:20	05:04 05:41-06:08/27 21:22 06:29-06:59/30	04:26 22:07
15	08:41 12:56-13:06/10 16:10 10:45-11:26/41	07:45 08:13-08:52/39 17:16	06:34 07:37-07:49/12 18:17	06:12 06:52-07:43/51 20:22	05:02 05:41-06:07/26 21:23 06:30-06:55/25	04:25 22:07
16	08:40 10:45-11:25/40 16:12	07:43 08:10-08:50/40 17:19	06:31 07:37-07:49/12 18:19	06:09 06:35-07:42/67 20:24	05:00 05:41-06:06/25 21:25 06:30-06:53/23	04:25 22:08
17	08:39 10:46-11:26/40 16:14	07:40 08:08-08:49/41 17:21	06:29 07:37-07:49/12 18:22	06:07 06:33-07:42/69 20:26	04:59 05:42-06:06/24 21:27 06:32-06:53/21	04:25 22:08
18	08:37 10:46-11:25/39 16:15	07:38 08:05-08:37/32 17:23 08:38-08:45/7	06:26 07:37-07:49/12 18:24	06:04 06:30-07:41/71 20:28	04:57 05:42-06:04/22 21:29 06:34-06:50/16	04:25 22:09
19	08:36 10:46-11:25/39 16:17	07:35 08:03-08:38/35 17:25	06:23 07:37-07:49/12 18:26	06:02 06:28-07:41/73 20:30	04:55 05:42-06:03/21 21:31 06:35-06:48/13	04:25 22:09
20	08:35 10:48-11:25/37 16:19	07:33 08:01-08:38/37 17:28	06:21 07:37-07:49/12 18:28	05:59 06:25-07:40/75 20:32	04:53 05:44-06:01/17 21:33 06:40-06:45/5	04:25 22:10
21	08:33 10:49-11:25/36 16:22	07:31 08:01-08:39/38 17:30	06:18 07:37-07:49/12 18:30	05:57 06:23-07:40/77 20:35	04:51 05:44-05:56/12 21:35	04:25 22:10
22	08:32 10:49-11:24/35 16:24	07:28 08:00-08:38/38 17:32	06:15 07:37-07:49/12 18:32	05:54 06:21-07:39/78 20:37	04:50 05:46-05:55/9 21:36	04:25 22:10
23	08:30 10:50-11:23/33 16:26	07:26 08:00-08:38/38 17:34	06:13 07:37-07:49/12 18:34	05:52 06:18-07:38/80 20:39	04:48 05:50-05:53/3 21:38	04:26 22:10
24	08:29 10:52-11:23/31 16:28	07:23 08:00-08:37/37 17:36	06:10 07:37-07:49/12 18:36	05:49 06:18-07:37/79 20:41	04:47 05:42-06:04/22 21:40	04:26 22:10
25	08:27 10:53-11:22/29 16:30	07:21 08:01-08:36/35 17:39	06:07 07:37-07:49/12 18:38	05:47 06:18-07:36/78 20:43	04:45 05:44-06:01/17 21:42	04:26 22:10
26	08:25 10:55-11:21/26 16:32	07:18 08:01-08:36/35 17:41 07:45-07:48/3	06:05 07:37-07:49/12 18:40	05:44 06:17-07:34/77 20:45	04:44 05:42-06:04/22 21:43	04:27 22:10
27	08:24 10:57-11:20/23 16:34	07:16 08:02-08:34/32 17:43 07:42-07:51/9	06:02 07:37-07:49/12 18:42	05:42 06:17-07:32/75 20:47	04:42 05:42-06:04/22 21:45	04:27 22:10
28	08:22 10:59-11:18/19 16:36	07:13 08:04-08:34/30 17:45 07:40-07:54/14	05:59 07:37-07:49/12 18:45	05:39 06:18-07:31/73 20:49	04:41 05:42-06:04/22 21:47	04:28 22:10
29	08:20 11:02-11:15/13 16:38	07:11 08:04-08:34/30 17:47	05:57 07:37-07:49/12 19:47	05:37 06:18-07:28/70 20:51	04:39 05:42-06:04/22 21:48	04:28 22:10
30	08:18 16:41	07:09 08:04-08:34/30 17:49	05:54 07:37-07:49/12 19:49	05:35 06:18-07:24/66 20:53	04:38 05:42-06:04/22 21:50	04:29 22:09
31	08:17 16:43	07:07 08:04-08:34/30 17:51	05:51 07:37-07:49/12 19:51	05:33 06:18-07:24/66 20:55	04:37 05:42-06:04/22 21:51	04:29 22:09
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	1581	800	284	1528	1207	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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Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	04:30 22:09	05:15 05:51-06:19/28 21:28 06:37-07:17/40	06:17 07:03-07:41/38 20:14	07:17 08:17-08:27/10 18:53	07:22 08:01-08:23/22 16:36	08:24 12:30-12:52/22 15:45 10:24-11:07/43
2	04:31 22:08	05:17 05:51-06:19/28 21:26 06:36-07:19/43	06:19 07:04-07:40/36 20:11	07:19 08:14-08:29/15 18:51	07:25 08:01-08:23/22 16:34	08:26 12:29-12:53/24 15:44 10:25-11:07/42
3	04:31 22:08	05:19 05:53-06:20/27 21:24 06:36-07:21/45	06:21 07:05-07:39/34 20:09	07:21 08:12-08:30/18 18:48	07:27 08:01-08:23/22 16:31	08:27 12:28-12:53/25 10:25-11:08/43 15:43 10:11-10:18/7
4	04:32 22:07	05:21 05:55-06:20/25 21:22 06:36-07:22/46	06:23 07:06-07:38/32 20:06	07:23 08:11-08:31/20 18:45	07:29 08:02-08:22/20 16:29	08:29 12:28-12:55/27 10:25-11:07/42 15:42 10:09-10:20/11
5	04:33 22:07	05:23 05:56-06:19/23 21:19 06:34-07:22/48	06:25 07:06-07:35/29 20:03	07:25 08:10-08:31/21 18:43	07:31 08:05-08:22/17 16:27	08:31 12:28-12:56/28 10:25-11:08/43 15:41 10:09-10:21/12
6	04:34 22:06	05:25 05:58-06:19/21 21:17 06:34-07:23/49	06:27 07:08-07:33/25 20:01	07:27 08:09-08:32/23 18:40	07:33 08:07-08:21/14 16:25	08:32 12:29-12:57/28 10:26-11:09/43 15:41 10:09-10:23/14
7	04:36 22:05	05:27 06:00-06:19/19 21:15 06:34-07:24/50	06:29 07:10-07:31/21 19:58	07:29 08:08-08:31/23 18:38	07:36 08:09-08:19/10 16:23	08:34 12:28-12:57/29 10:26-11:09/43 15:40 10:08-10:23/15
8	04:37 22:04	05:29 06:02-06:18/16 21:13 06:34-07:25/51	06:31 07:14-07:27/13 19:55	07:31 08:07-08:31/24 18:35	07:38 08:12-08:18/6 16:21	08:35 12:28-12:58/30 10:26-11:09/43 15:40 10:08-10:25/17
9	04:38 22:03	05:31 06:04-06:18/14 21:11 06:32-07:26/54	06:33 19:53	07:34 08:08-08:32/24 18:32	07:40 08:14-08:15/1 16:19	08:37 12:28-12:59/31 10:27-11:10/43 15:39 10:08-10:26/18
10	04:39 22:02	05:33 06:06-06:17/11 21:08 06:30-07:25/55	06:35 19:50	07:36 08:08-08:31/23 18:30	07:42 16:17	08:38 12:29-13:00/31 15:39 10:08-11:10/62
11	04:40 22:01	05:35 06:07-06:14/7 21:06 06:28-07:26/58	06:37 19:47	07:38 08:08-08:30/22 18:27 08:56-08:58/2	07:44 16:15	08:39 12:28-13:00/32 15:38 10:08-11:10/62
12	04:42 22:00	05:37 06:27-07:26/59 21:04 06:09-06:12/3	06:39 19:45	07:40 08:09-08:29/20 18:25 08:50-09:03/13	07:46 16:13	08:40 12:29-13:01/32 10:29-11:11/42 15:38 10:09-10:28/19
13	04:43 21:59	05:39 06:26-07:34/68 21:01	06:41 19:42	07:42 08:38-09:05/27 18:22 08:11-08:27/16	07:48 10:34-10:47/13 16:11	08:41 12:29-13:02/33 15:38 10:09-11:12/63
14	04:45 21:58	05:41 06:25-07:36/71 20:59	06:43 19:39	07:44 08:35-09:06/31 18:19 08:13-08:25/12	07:51 10:31-10:50/19 16:09	08:43 12:30-13:02/32 15:38 10:09-11:12/63
15	04:46 21:57	05:43 06:25-07:39/74 20:57	06:45 19:37	07:46 08:35-09:08/33 18:17 08:16-08:23/7	07:53 10:28-10:52/24 16:07	08:44 12:30-13:03/33 15:38 10:09-11:12/63
16	04:48 21:55	05:45 06:25-07:40/75 20:54	06:47 19:34	07:48 08:33-09:08/35 18:14	07:55 10:28-10:54/26 16:06	08:45 12:30-13:03/33 15:38 10:09-11:13/64
17	04:49 21:54	05:47 06:25-07:41/76 20:52	06:49 19:31	07:50 08:32-09:09/37 18:12	07:57 10:26-10:55/29 16:04	08:45 12:31-13:04/33 15:38 10:10-11:13/63
18	04:51 21:52	05:49 06:24-07:42/78 20:49	06:51 19:28	07:52 08:31-09:09/38 18:09	07:59 10:26-10:57/31 16:02	08:46 12:31-13:05/34 15:38 10:10-11:14/64
19	04:52 21:51	05:51 06:24-07:43/79 20:47	06:53 19:26	07:54 08:32-09:10/38 18:07	08:01 10:25-10:58/33 16:01	08:47 12:32-13:05/33 15:38 10:11-11:14/63
20	04:54 21:49	05:53 06:24-07:43/79 20:45	06:55 19:23	07:57 08:31-09:09/38 18:04	08:03 10:24-10:59/35 15:59	08:48 12:32-13:05/33 15:38 10:11-11:14/63
21	04:56 05:57-06:04/7 21:48	05:55 06:26-07:44/78 20:42	06:57 19:20	07:59 08:31-09:09/38 18:02	08:05 10:24-11:00/36 15:57	08:48 12:33-13:06/33 15:39 10:12-11:15/63
22	04:57 05:56-06:07/11 21:46	05:57 06:28-07:44/76 20:40	06:59 19:18	08:01 08:31-09:08/37 17:59	08:07 10:24-11:01/37 15:56	08:49 12:32-13:06/34 15:39 10:12-11:15/63
23	04:59 05:54-06:09/15 21:45	05:59 06:30-07:45/75 20:37	07:01 19:15	08:03 08:34-09:08/34 17:57	08:09 10:24-11:02/38 15:55	08:49 12:34-13:07/33 15:40 10:13-11:16/63
24	05:01 05:54-06:13/19 21:43 06:48-06:57/9	06:01 06:32-07:45/73 20:35	07:03 19:12	08:05 08:36-09:07/31 17:54 09:08-09:17/9	08:11 10:23-11:02/39 15:53	08:50 12:34-13:07/33 15:40 10:13-11:16/63
25	05:03 05:53-06:15/22 21:41 06:45-06:59/14	06:03 06:34-07:45/71 20:32	07:05 19:10	07:07 07:38-08:19/41 16:52	08:13 10:23-11:03/40 15:52	08:50 12:34-13:08/34 15:41 10:13-11:17/64
26	05:04 05:52-06:15/23 21:39 06:43-07:02/19	06:05 06:36-07:44/68 20:29	07:07 19:07	07:09 07:41-08:21/40 16:50	08:15 10:24-11:04/40 15:50	08:51 12:34-13:08/34 15:42 10:14-11:17/63
27	05:06 05:52-06:17/25 21:37 06:42-07:03/21	06:07 06:37-07:44/67 20:27	07:09 19:04	07:12 07:44-08:22/38 16:47	08:17 12:35-12:45/10 15:49 10:24-11:05/41	08:51 12:35-13:08/33 15:43 10:14-11:17/63
28	05:08 05:51-06:17/26 21:36 06:40-07:04/24	06:09 06:53-07:44/51 20:24 06:39-06:47/8	07:11 19:02	07:14 07:45-08:22/37 16:45	08:19 12:33-12:47/14 15:48 10:24-11:05/41	08:51 12:36-13:09/33 15:43 10:15-11:18/63
29	05:10 05:51-06:17/26 21:34 06:39-07:06/27	06:11 06:55-07:43/48 20:22 06:41-06:45/4	07:13 18:59	07:16 07:48-08:23/35 16:43	08:21 12:31-12:49/18 15:47 10:24-11:06/42	08:51 12:36-13:09/33 15:44 10:15-11:19/64
30	05:12 05:51-06:18/27 21:32 06:39-07:12/33	06:13 07:00-07:43/43 20:19	07:15 18:56	07:18 07:52-07:56/4 16:40 08:01-08:23/22	08:22 12:30-12:51/21 15:46 10:24-11:06/42	08:51 12:37-13:10/33 15:45 10:16-11:19/63
31	05:14 05:51-06:19/28 21:30 06:38-07:16/38	06:15 07:03-07:42/39 20:16		07:20 08:01-08:24/23 16:38		08:51 12:38-13:10/32 15:46 10:17-11:20/63
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	414	2121	228	959	803	2833

Table 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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5	08:49 15:53	08:07 08:36-08:37/1 16:54 08:58-09:39/41	07:00 17:56	06:38 07:23-07:57/34 20:01	05:23 21:03	04:32 21:58
6	08:48 15:55	08:04 08:34-08:39/5 16:56 08:59-09:39/40	06:58 17:58	06:35 07:23-07:58/35 20:03	05:21 21:05	04:31 21:59
7	08:48 15:56	08:02 08:32-08:41/9 16:58 08:59-09:39/40	06:55 18:00	06:33 07:22-07:57/35 20:05	05:19 21:07	04:30 22:00
8	08:47 15:58	08:00 08:30-08:42/12 17:01 09:00-09:39/39	06:52 18:02	06:30 07:22-07:56/34 20:07	05:17 21:09	04:29 22:01
9	08:46 15:59	07:58 08:27-08:42/15 17:03 09:00-09:37/37	06:50 18:05	06:27 07:23-07:56/33 20:09	05:15 21:11	04:28 22:02
10	08:46 16:01	07:56 08:25-08:42/17 17:05 09:00-09:37/37	06:47 18:07	06:25 07:22-07:54/32 20:11	05:12 21:13	04:28 22:03
11	08:45 16:03	07:54 08:23-08:42/19 17:07 09:00-09:34/34	06:45 18:09	06:22 07:23-07:54/31 20:14	05:10 21:15	04:27 22:04
12	08:44 16:04	07:51 08:20-08:42/22 17:10 09:02-09:33/31	06:42 18:11	06:19 07:24-07:52/28 20:16	05:08 21:17	04:27 22:05
13	08:43 16:06	07:49 08:18-08:42/24 17:12 09:03-09:30/27	06:39 18:13	06:17 07:25-07:51/26 20:18	05:06 21:19	04:26 22:06
14	08:42 16:08	07:47 08:17-08:41/24 17:14 09:04-09:25/21	06:37 18:15	06:14 07:26-07:49/23 20:20	05:04 21:21	04:26 22:06
15	08:41 16:10	07:45 08:18-08:40/22 17:16 09:06-09:23/17	06:34 18:17	06:12 07:28-07:47/19 20:22	05:02 21:23	04:26 22:07
16	08:40 09:15-09:16/1 16:12	07:42 08:18-08:37/19 17:19 09:08-09:20/12	06:31 18:19	06:09 07:30-07:43/13 20:24	05:00 21:25	04:25 22:08
17	08:38 09:13-09:17/4 16:14	07:40 08:20-08:31/11 17:21	06:29 18:22	06:07 20:26	04:59 21:27	04:25 22:08
18	08:37 09:12-09:19/7 16:16	07:38 08:21-08:29/8 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09
19	08:36 09:10-09:25/15 16:17	07:35 17:25	06:23 06:49-06:54/5 18:26	06:02 20:30	04:55 21:31	04:25 22:09
20	08:34 09:09-09:28/19 16:19	07:33 17:28	06:21 06:46-06:55/9 18:28	05:59 20:32	04:53 21:33	04:25 22:09
21	08:33 09:07-09:30/23 16:22	07:30 17:30	06:18 06:43-06:56/13 18:30	05:57 20:34	04:51 21:34	04:25 22:10
22	08:32 09:05-09:32/27 16:24	07:28 17:32	06:15 06:41-06:57/16 18:32	05:54 20:36	04:50 21:36	04:25 22:10
23	08:30 09:04-09:33/29 16:26	07:26 17:34	06:13 06:38-06:57/19 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 09:04-09:34/30 16:28	07:23 17:36	06:10 06:38-06:56/18 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 09:05-09:35/30 16:30	07:21 17:39	06:07 06:37-06:55/18 18:38	05:47 20:43	04:45 21:41	04:26 22:10
26	08:25 09:04-09:37/33 16:32	07:18 17:41	06:05 06:38-06:55/17 18:40	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 09:03-09:37/34 16:34	07:16 17:43	06:02 06:35-06:54/19 18:42	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 09:02-09:38/36 16:36	07:13 17:45	05:59 06:32-06:53/21 18:44	05:39 20:49	04:41 21:46	04:28 22:10
29	08:20 09:01-09:39/38 16:38		06:57 07:30-07:55/25 19:47	05:37 20:51	04:39 21:48	04:28 22:09
30	08:18 09:00-09:38/38 16:41		06:54 07:28-07:56/28 19:49	05:35 20:53	04:38 21:49	04:29 22:09
31	08:16 08:59-09:39/40 16:43		06:51 07:27-07:56/29 19:51		04:37 21:51	
Potential sun hours		235	266	426	508	528
Sum of minutes with flicker		404	747	237	475	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B11 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (98)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December
1	04:30 22:09	05:15 21:28	06:17 07:22-07:53/31 20:14	07:17 18:53	07:22 07:55-08:12/17 16:36 08:30-09:06/36	08:24 15:45
2	04:31 22:08	05:17 21:26	06:19 07:21-07:53/32 20:11	07:19 18:51	07:24 07:57-08:11/14 16:34 08:29-09:07/38	08:26 15:44
3	04:32 22:08	05:19 21:23	06:21 07:21-07:54/33 20:08	07:21 18:48	07:27 08:00-08:11/11 16:31 08:28-09:07/39	08:27 15:43
4	04:32 22:07	05:21 21:21	06:23 07:19-07:53/34 20:06	07:23 18:45	07:29 08:02-08:10/8 16:29 08:29-09:09/40	08:29 15:42
5	04:33 22:06	05:23 21:19	06:25 07:18-07:53/35 20:03	07:25 18:43	07:31 08:04-08:09/5 16:27 08:28-09:09/41	08:30 15:41
6	04:35 22:06	05:25 21:17	06:27 07:18-07:53/35 20:01	07:27 18:40	07:33 08:07-08:08/1 16:25 08:29-09:10/41	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 07:18-07:52/34 19:58	07:29 18:37	07:35 08:29-09:10/41 16:23	08:33 15:40
8	04:37 22:04	05:29 21:13	06:31 07:18-07:52/34 19:55	07:31 18:35	07:38 08:29-09:10/41 16:21	08:35 15:40
9	04:38 22:03	05:31 21:10	06:33 07:18-07:52/34 19:53	07:33 18:32	07:40 08:30-09:10/40 16:19	08:36 15:39
10	04:39 22:02	05:33 21:08	06:35 07:18-07:51/33 19:50	07:35 18:30	07:42 08:30-09:10/40 16:17	08:38 15:39
11	04:41 22:01	05:35 21:06	06:37 07:18-07:50/32 19:47	07:38 18:27	07:44 08:31-09:11/40 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:39 07:19-07:49/30 19:45	07:40 18:24	07:46 08:32-09:10/38 16:13	08:40 15:38
13	04:43 21:59	05:39 21:01	06:41 07:20-07:48/28 19:42	07:42 18:22	07:48 08:33-09:11/38 16:11	08:41 15:38
14	04:45 21:58	05:41 20:59	06:43 07:21-07:46/25 19:39	07:44 18:19	07:50 08:34-09:10/36 16:09	08:42 15:38
15	04:46 21:56	05:43 20:57	06:45 07:22-07:44/22 19:36	07:46 18:17	07:53 08:35-09:09/34 16:07	08:43 15:38
16	04:48 21:55	05:45 20:54	06:47 07:24-07:43/19 19:34	07:48 18:14	07:55 08:37-09:10/33 16:06	08:44 15:38
17	04:49 21:54	05:47 20:52	06:49 07:27-07:44/17 19:31	07:50 18:12	07:57 08:38-09:09/31 16:04	08:45 15:38
18	04:51 21:52	05:49 20:49	06:51 07:26-07:44/18 19:28	07:52 18:09	07:59 08:38-09:08/30 16:02	08:46 15:38
19	04:52 21:51	05:51 20:47	06:53 07:25-07:44/19 19:26	07:54 18:07	08:01 08:39-09:08/29 16:01	08:47 15:38
20	04:54 21:49	05:53 20:44	06:55 07:24-07:42/18 19:23	07:56 18:04	08:03 08:40-09:07/27 15:59	08:48 15:38
21	04:56 21:48	05:55 20:42	06:57 07:25-07:42/17 19:20	07:59 18:02	08:05 08:42-09:05/23 15:57	08:48 15:39
22	04:57 21:46	05:57 20:39	06:59 07:27-07:41/14 19:18	08:01 17:59	08:07 08:45-09:04/19 15:56	08:49 15:39
23	04:59 21:44	05:59 20:37	07:01 07:29-07:39/10 19:15	08:03 08:54-08:57/3 17:57	08:09 08:47-09:02/15 15:55	08:49 15:40
24	05:01 21:43	06:01 20:34	07:03 07:31-07:38/7 19:12	08:05 08:51-09:00/9 17:54	08:11 08:49-08:56/7 15:53	08:50 15:40
25	05:03 21:41	06:03 20:32	07:05 07:33-07:34/1 19:09	07:07 07:49-08:01/12 16:52 08:41-08:47/6	08:13 08:51-08:55/4 15:52	08:50 15:41
26	05:04 21:39	06:05 20:29	07:07 19:07	07:09 07:48-08:08/20 16:50 08:37-08:52/15	08:15 08:53-08:54/1 15:50	08:50 15:42
27	05:06 21:37	06:07 07:31-07:45/14 20:27	07:09 19:04	07:11 07:47-08:10/23 16:47 08:35-08:53/18	08:17 15:49	08:50 15:43
28	05:08 21:35	06:09 07:28-07:48/20 20:24	07:11 19:01	07:14 07:47-08:10/23 16:45 08:33-08:55/22	08:19 15:48	08:51 15:44
29	05:10 21:33	06:11 07:26-07:50/24 20:22	07:13 18:59	07:16 07:48-08:12/24 16:43 08:32-09:01/29	08:20 15:47	08:51 15:44
30	05:12 21:32	06:13 07:25-07:51/26 20:19	07:15 18:56	07:18 07:50-08:12/22 16:40 08:31-09:03/32	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 07:23-07:52/29 20:16		07:20 07:52-08:11/19 16:38 08:30-09:04/34		08:51 15:47
Potential sun hours		529	469	385	324	216
Sum of minutes with flicker		0	113	612	311	858

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B12 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (99)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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	07:47-08:15/28	06:49		05:32	20:04-20:21/17	04:36	21:06-21:14/8
	15:48		16:45		17:47	07:37-07:41/4	19:53		20:55		21:52	05:47-06:02/15
2	08:50	09:29-09:54/25	08:12		07:08	07:46-08:15/29	06:46		05:30	20:04-20:21/17	04:35	21:06-21:15/9
	15:49		16:47		17:49	07:34-07:42/8	19:55		20:57		21:54	05:48-06:01/13
3	08:50	09:29-09:55/26	08:11		07:05	07:46-08:15/29	06:43		05:28	20:05-20:21/16	04:34	21:05-21:16/11
	15:51		16:50		17:52	07:32-07:43/11	19:57		20:59		21:55	05:49-06:00/11
4	08:49	09:28-09:55/27	08:09		07:03	07:46-08:15/29	06:41		05:25	20:06-20:20/14	04:33	21:05-21:17/12
	15:52		16:52		17:54	07:29-07:43/14	19:59		21:01		21:56	05:51-05:58/7
5	08:49	09:27-09:55/28	08:06		07:00	07:45-08:14/29	06:38		05:23	20:07-20:19/12	04:32	21:06-21:19/13
	15:53		16:54		17:56	07:26-07:43/17	20:01		21:03		21:57	05:54-05:57/3
6	08:48	09:28-09:57/29	08:04		06:58	07:46-08:14/28	06:35		05:21	20:08-20:17/9	04:31	21:05-21:20/15
	15:55		16:56		17:58	07:27-07:43/16	20:03		21:05	05:51-05:57/6	21:59	
7	08:48	09:28-09:57/29	08:02		06:55	07:46-08:12/26	06:33		05:19	20:11-20:14/3	04:30	21:05-21:20/15
	15:56		16:58		18:00	07:27-07:42/15	20:05		21:07	05:48-06:00/12	22:00	05:05-05:06/1
8	08:47	09:28-09:58/30	08:00		06:52	07:47-08:11/24	06:30		05:17	20:35-20:36/1	04:29	21:06-21:22/16
	15:58		17:01		18:02	07:27-07:41/14	20:07		21:09	05:46-06:02/16	22:01	05:05-05:08/3
9	08:46	09:28-09:58/30	07:58		06:50	07:48-08:10/22	06:27		05:15	20:34-20:38/4	04:28	21:05-21:22/17
	15:59		17:03		18:05	07:29-07:40/11	20:09		21:11	05:44-06:03/19	22:02	05:04-05:09/5
10	08:46	09:29-09:59/30	07:56		06:47	07:49-08:07/18	06:25		05:12	20:32-20:40/8	04:28	21:06-21:23/17
	16:01		17:05		18:07	07:31-07:36/5	20:11		21:13	05:42-06:04/22	22:03	05:04-05:10/6
11	08:45	09:29-09:59/30	07:54		06:45	07:51-08:04/13	06:22		05:10	20:32-20:41/9	04:27	21:06-21:24/18
	16:03		17:07		18:09		20:14		21:15	05:40-06:04/24	22:04	05:03-05:10/7
12	08:44	09:28-09:59/31	07:51		06:42		06:19		05:08	20:31-20:43/12	04:27	21:06-21:25/19
	16:04		17:10		18:11		20:16		21:17	05:38-06:05/27	22:05	05:03-05:11/8
13	08:43	09:29-10:00/31	07:49		06:39		06:17		05:06	20:30-20:45/15	04:26	21:07-21:26/19
	16:06		17:12		18:13		20:18		21:19	05:36-06:05/29	22:06	05:03-05:12/9
14	08:42	09:29-10:00/31	07:47		06:37		06:14		05:04	20:30-20:46/16	04:26	21:06-21:26/20
	16:08		17:14		18:15		20:20		21:21	05:36-06:06/30	22:06	05:03-05:13/10
15	08:41	09:29-10:00/31	07:45		06:34		06:12		05:02	20:31-20:48/17	04:26	21:06-21:26/20
	16:10		17:16		18:17		20:22		21:23	05:36-06:06/30	22:07	05:02-05:13/11
16	08:40	09:30-10:00/30	07:42		06:31		06:09		05:00	20:31-20:48/17	04:25	21:07-21:27/20
	16:12		17:19		18:19		20:24		21:25	05:36-06:06/30	22:08	05:02-05:13/11
17	08:38	09:30-10:00/30	07:40		06:29		06:07		04:59	20:30-20:47/17	04:25	21:07-21:28/21
	16:14		17:21		18:21		20:26		21:27	05:38-06:07/29	22:08	05:02-05:14/12
18	08:37	09:31-10:00/29	07:38		06:26		06:04		04:57	20:31-20:48/17	04:25	21:07-21:28/21
	16:16		17:23		18:24		20:28		21:29	05:38-06:06/28	22:09	05:02-05:14/12
19	08:36	09:31-10:00/29	07:35		06:23		06:02		04:55	20:31-20:47/16	04:25	21:07-21:28/21
	16:18		17:25		18:26		20:30		21:31	05:38-06:06/28	22:09	05:02-05:14/12
20	08:34	09:31-09:59/28	07:33		06:21		05:59		04:53	20:32-20:47/15	04:25	21:07-21:29/22
	16:20		17:28		18:28		20:32		21:33	05:40-06:06/26	22:09	05:02-05:14/12
21	08:33	09:33-09:59/26	07:30		06:18		05:57		04:52	20:33-20:46/13	04:25	21:08-21:29/21
	16:22		17:30		18:30		20:34		21:34	05:40-06:06/26	22:10	05:03-05:15/12
22	08:32	09:33-09:58/25	07:28	07:59-08:05/6	06:15		05:54		04:50	20:34-20:46/12	04:25	21:09-21:30/21
	16:24		17:32		18:32		20:36		21:36	05:41-06:06/25	22:10	05:03-05:15/12
23	08:30	09:34-09:57/23	07:26	07:55-08:09/14	06:13		05:52		04:48	20:35-20:44/9	04:26	21:08-21:29/21
	16:26		17:34		18:34		20:39		21:38	05:42-06:06/24	22:10	05:03-05:15/12
24	08:28	09:35-09:54/19	07:23	07:53-08:11/18	06:10		05:49		04:47	20:37-20:43/6	04:26	21:08-21:29/21
	16:28		17:36		18:36		20:41		21:40	05:42-06:05/23	22:10	05:04-05:16/12
25	08:27	09:36-09:51/15	07:21	07:50-08:12/22	06:07		05:47	20:08-20:11/3	04:45	05:42-06:05/23	04:26	21:09-21:30/21
	16:30		17:39		18:38		20:43		21:41		22:10	05:04-05:16/12
26	08:25	09:39-09:50/11	07:18	07:50-08:14/24	06:05		05:44	20:07-20:13/6	04:44	05:43-06:05/22	04:27	21:09-21:29/20
	16:32		17:41		18:40		20:45		21:43		22:10	05:04-05:15/11
27	08:24	09:42-09:48/6	07:16	07:48-08:14/26	06:02		05:42	20:06-20:15/9	04:42	05:43-06:04/21	04:27	21:10-21:30/20
	16:34		17:43		18:42		20:47		21:45		22:10	05:05-05:16/11
28	08:22		07:13	07:47-08:14/27	05:59		05:39	20:05-20:18/13	04:41	21:08-21:09/1	04:28	21:09-21:29/20
	16:36		17:45		18:44		20:49		21:46	05:44-06:04/20	22:10	05:05-05:15/10
29	08:20				06:57		05:37	20:04-20:19/15	04:39	21:07-21:10/3	04:28	21:10-21:29/19
	16:38				19:47		20:51		21:48	05:45-06:04/19	22:09	05:06-05:16/10
30	08:18				06:54		05:35	20:04-20:21/17	04:38	21:07-21:11/4	04:29	21:10-21:29/19
	16:41				19:49		20:53		21:49	05:45-06:03/18	22:09	05:07-05:16/9
31	08:16				06:51				04:37	21:06-21:13/7		
	16:43				19:51				21:51	05:46-06:02/16		
Potential sun hours	235		266		366		426		508		528	
Sum of minutes with flicker	703		137		390		63		900		816	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B12 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (99)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December
1	04:30 21:10-21:28/18 22:09 05:07-05:15/8	05:16 20:41-20:53/12 21:28 05:49-06:15/26	06:17 20:14 18:53	07:17 18:53	07:22 16:36	08:24 09:10-09:40/30 15:45
2	04:31 21:10-21:28/18 22:08 05:08-05:15/7	05:17 20:42-20:51/9 21:25 05:51-06:14/23	06:19 20:11 18:51	07:19 08:31-08:41/10 18:51	07:24 16:34	08:26 09:11-09:41/30 15:44
3	04:32 21:11-21:28/17 22:08 05:09-05:14/5	05:19 20:43-20:49/6 21:23 05:53-06:14/21	06:21 20:08 18:48	07:21 08:28-08:44/16 18:48	07:27 16:31	08:27 09:11-09:41/30 15:43
4	04:33 21:11-21:27/16 22:07 05:10-05:14/4	05:21 20:43-20:47/4 21:21 05:55-06:13/18	06:23 20:06 18:45	07:23 08:26-08:46/20 08:07-08:16/9	07:29 16:29	08:29 09:12-09:42/30 15:42
5	04:34 21:11-21:27/16 22:06 05:11-05:13/2	05:23 05:56-06:10/14 21:19	06:25 20:03 18:43	07:25 08:24-08:47/23 08:05-08:17/12	07:31 16:27	08:30 09:13-09:42/29 15:41
6	04:35 21:12-21:26/14 22:06	05:25 20:19-20:25/6 21:17 05:58-06:08/10	06:27 20:01 18:40	07:27 08:23-08:48/25 08:03-08:18/15	07:33 16:25	08:32 09:14-09:43/29 15:41
7	04:36 21:12-21:26/14 22:05	05:27 20:17-20:27/10 21:15	06:29 20:01 19:58	07:29 08:22-08:49/27 18:37 08:02-08:18/16	07:35 16:23	08:33 09:14-09:43/29 15:40
8	04:37 21:12-21:25/13 22:04 05:59-06:05/6	05:29 20:16-20:29/13 21:13	06:31 19:55	07:31 08:21-08:49/28 18:35 08:01-08:18/17	07:37 16:21	08:35 09:16-09:43/27 15:40
9	04:38 21:13-21:24/11 22:03 05:57-06:07/10	05:31 20:14-20:28/14 21:10	06:33 19:53	07:33 08:20-08:49/29 18:32 08:02-08:18/16	07:40 16:19	08:36 09:17-09:43/26 15:39
10	04:39 21:13-21:23/10 22:02 05:56-06:08/12	05:33 20:13-20:29/16 21:08	06:35 19:50	07:35 08:20-08:50/30 18:30 08:05-08:18/13	07:42 16:17	08:38 09:19-09:44/25 15:39
11	04:41 21:13-21:22/9 22:01 05:55-06:09/14	05:35 20:13-20:30/17 21:06	06:37 19:47	07:38 08:20-08:49/29 18:27 08:07-08:17/10	07:44 16:15	08:39 09:20-09:44/24 15:38
12	04:42 21:14-21:21/7 22:00 05:55-06:11/16	05:37 20:13-20:30/17 21:04	06:39 19:44	07:40 08:20-08:49/29 18:24 08:09-08:15/6	07:46 16:13	08:40 09:21-09:44/23 15:38
13	04:43 21:15-21:21/6 21:59 05:54-06:11/17	05:39 20:13-20:29/16 21:01	06:41 19:42	07:42 08:20-08:48/28 18:22 08:11-08:13/2	07:48 16:11	08:41 09:23-09:45/22 15:38
14	04:45 21:16-21:19/3 21:57 05:53-06:12/19	05:41 20:13-20:27/14 20:59	06:43 19:39	07:44 08:20-08:47/27 18:19	07:50 16:09	08:42 09:24-09:45/21 15:38
15	04:46 21:16-21:18/2 21:56 05:53-06:12/19	05:43 20:13-20:25/12 20:56	06:45 19:36	07:46 08:20-08:46/26 18:17	07:52 09:13-09:20/7 16:07	08:43 09:25-09:45/20 15:38
16	04:48 05:53-06:14/21 21:55	05:45 20:12-20:22/10 20:54	06:47 19:34	07:48 08:22-08:45/23 18:14	07:55 09:12-09:23/11 16:06	08:44 09:26-09:45/19 15:38
17	04:49 05:52-06:14/22 21:54	05:47 20:13-20:19/6 20:52	06:49 19:31	07:50 08:23-08:44/21 18:12	07:57 09:10-09:25/15 16:04	08:45 09:27-09:46/19 15:38
18	04:51 05:52-06:15/23 21:52	05:49 20:15-20:17/2 20:49	06:51 19:28	07:52 08:25-08:42/17 18:09	07:59 09:09-09:28/19 16:02	08:46 09:28-09:46/18 15:38
19	04:52 20:48-20:51/3 21:51 05:51-06:15/24	05:51 20:47 05:53	06:53 19:26	07:54 08:27-08:39/12 18:07	08:01 09:09-09:32/23 16:01	08:47 09:28-09:46/18 15:38
20	04:54 20:45-20:53/8 21:49 05:52-06:16/24	05:53 20:44 05:55	06:55 19:23	07:56 18:04	08:03 09:08-09:33/25 15:59	08:47 09:29-09:47/18 15:38
21	04:56 20:44-20:55/11 21:48 05:51-06:16/25	05:55 20:42 05:57	06:57 19:20	07:59 18:02	08:05 09:08-09:34/26 15:57	08:48 09:29-09:47/18 15:39
22	04:57 20:44-20:56/12 21:46 05:51-06:17/26	05:57 20:39 05:59	06:59 19:18	08:01 17:59	08:07 09:07-09:35/28 15:56	08:49 09:30-09:47/17 15:39
23	04:59 20:43-20:57/14 21:44 05:51-06:16/25	05:59 20:37 06:01	07:01 19:15	08:03 17:57	08:09 09:08-09:37/29 15:55	08:49 09:30-09:48/18 15:40
24	05:01 20:42-20:58/16 21:43 05:50-06:17/27	06:01 20:34 06:03	07:03 19:12	08:05 17:54	08:11 09:08-09:37/29 15:53	08:50 09:31-09:49/18 15:40
25	05:03 20:41-20:57/16 21:41 05:49-06:16/27	06:03 20:32 06:05	07:05 19:09	07:07 16:52	08:13 09:08-09:38/30 15:52	08:50 09:31-09:49/18 15:41
26	05:04 20:41-20:58/17 21:39 05:48-06:17/29	06:05 20:29 06:07	07:07 19:07	07:09 16:50	08:15 09:08-09:38/30 15:51	08:50 09:31-09:50/19 15:42
27	05:06 20:42-20:59/17 21:37 05:48-06:17/29	06:07 20:27 06:09	07:09 19:04	07:11 16:47	08:17 09:08-09:39/31 15:49	08:50 09:31-09:50/19 15:43
28	05:08 20:41-20:58/17 21:35 05:48-06:16/28	06:09 20:24 06:11	07:11 19:01	07:14 16:45	08:18 09:08-09:39/31 15:48	08:51 09:31-09:51/20 15:44
29	05:10 20:41-20:58/17 21:33 05:47-06:16/29	06:11 20:22 06:13	07:13 18:59	07:16 16:43	08:20 09:10-09:41/31 15:47	08:51 09:31-09:51/20 15:44
30	05:12 20:41-20:57/16 21:31 05:47-06:16/29	06:13 20:19 06:15	07:15 18:56	07:18 16:40	08:22 09:10-09:41/31 15:46	08:51 09:31-09:52/21 15:45
31	05:14 20:41-20:54/13 21:30 05:48-06:16/28	06:15 20:16 06:17	07:17 16:38	07:20 16:38	08:24 09:10-09:41/31 15:45	08:51 09:30-09:52/22 15:47
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	906	296	0	536	396	697

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B14 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (100)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January	February	March	April	May	June
1	08:51 14:14-14:46/32 15:48 09:31-10:28/57 2 08:50 14:16-14:46/30 15:49 09:30-10:29/59 3 08:50 14:16-14:46/30 15:51 09:29-10:29/60 4 08:50 14:17-14:46/29 15:52 09:28-10:29/61 5 08:49 14:19-14:47/28 15:53 09:28-10:30/62 6 08:49 14:20-14:47/27 15:55 09:27-10:31/64 7 08:48 14:21-14:47/26 15:56 09:26-10:31/65 8 08:47 14:23-14:47/24 15:58 09:25-10:32/67 9 08:47 14:28-14:47/19 16:00 09:24-10:32/68 10 08:46 09:23-10:32/69 16:01 14:29-14:47/18 11 08:45 09:22-10:33/71 16:03 14:31-14:47/16 12 08:44 09:21-10:33/72 16:05 14:32-14:45/13 13 08:43 09:19-10:33/74 16:06 14:35-14:44/9 14 08:42 09:18-10:34/76 16:08 15 08:41 09:17-10:33/76 16:10 16 08:40 09:15-10:34/79 16:12 17 08:39 09:14-10:34/80 16:14 15:30-15:34/4 18 08:37 09:12-10:34/82 16:16 15:30-15:37/7 19 08:36 09:10-10:33/83 16:18 15:29-15:39/10 20 08:35 09:09-10:34/85 16:20 15:29-15:42/13 21 08:33 09:07-10:33/86 16:22 15:28-15:44/16 22 08:32 09:05-10:32/87 16:24 15:28-15:46/18 23 08:30 09:03-10:31/88 16:26 15:28-15:48/20 24 08:29 09:02-10:31/89 16:28 15:27-15:50/23 25 08:27 09:00-10:30/90 16:30 15:28-15:54/26 26 08:25 08:58-10:28/90 16:32 15:29-15:56/27 27 08:24 08:57-10:27/90 16:34 15:29-15:58/29 28 08:22 08:57-10:27/90 16:37 15:29-15:59/30 29 08:20 08:57-10:27/90 15:30-16:00/30 16:39 08:52-08:53/1 30 08:18 08:57-10:27/90 15:30-16:00/30 16:41 08:50-08:54/4 31 08:17 09:21-10:27/66 08:48-08:55/7 16:43 08:58-09:18/20 15:30-15:59/29	08:15 09:20-10:26/66 08:45-08:56/11 16:45 08:58-09:16/18 15:32-15:59/27 08:13 09:20-10:26/66 08:43-08:56/13 16:48 08:58-09:16/18 15:33-15:59/26 08:11 09:20-10:25/65 08:41-08:56/15 16:50 09:00-09:16/16 15:36-15:59/23 08:09 09:21-10:25/64 08:39-08:57/18 16:52 09:01-09:15/14 15:44-15:58/14 08:07 09:21-10:24/63 08:37-08:57/20 16:54 09:03-09:14/11 15:45-15:56/11 08:05 09:21-10:22/61 08:34-08:56/22 16:56 09:06-09:10/4 15:48-15:54/6 08:03 09:21-10:21/60 16:59 08:32-08:56/24 08:00 09:22-10:20/58 17:01 08:30-08:56/26 07:58 09:22-10:17/55 17:03 08:27-08:54/27 07:56 08:25-08:53/28 17:05 09:23-10:13/50 07:54 08:23-08:52/29 17:08 09:24-10:03/39 07:52 08:20-08:49/29 17:10 09:24-10:00/36 07:49 08:18-08:47/29 17:12 09:26-09:57/31 07:47 08:15-08:44/29 17:14 09:27-09:55/28 07:45 08:13-08:43/30 17:17 09:29-09:54/25 07:43 08:10-08:38/28 17:19 09:30-09:51/21 07:40 08:08-08:34/26 17:21 09:33-09:49/16 07:38 08:05-08:31/26 17:23 09:39-09:42/3 07:35 08:03-08:27/24 17:26 07:33 08:00-08:23/23 17:28 07:31 07:58-08:22/24 17:30 07:28 07:55-08:22/27 17:32 07:26 07:53-08:23/30 17:34 07:23 07:50-08:23/33 17:37 07:21 07:48-08:24/36 17:39 07:18 07:45-08:23/38 17:41 07:16 07:42-08:23/41 17:43 07:13 07:40-08:23/43 17:45 07:10 07:37-07:58/1 18:01 08:06-08:09/3 08:53 07:18-08:01/43 18:03 07:16-08:00/44 18:05 06:47 07:13-07:57/44 18:07 17:27-17:37/10 06:45 07:10-07:56/46 18:09 17:23-17:39/16 06:42 07:08-07:56/48 18:11 17:22-17:42/20 06:40 07:05-07:54/49 18:13 17:20-17:42/22 06:37 07:02-07:53/51 18:15 17:19-17:42/23 06:34 07:00-07:53/53 18:18 17:18-17:43/25 06:32 06:58-07:51/53 18:20 17:18-17:43/25 06:29 06:56-07:49/53 18:22 17:17-17:43/26 06:26 06:55-07:46/51 18:24 17:17-17:42/25 06:24 06:55-07:43/48 17:17-17:42/25 18:26 17:57-17:58/1 06:21 06:54-07:34/40 17:17-17:41/24 18:28 17:54-18:00/6 06:18 06:54-07:33/39 17:17-17:40/23 18:30 17:53-18:02/9 06:16 06:54-07:33/39 17:19-17:40/21 18:32 17:52-18:04/12 06:13 06:54-07:32/38 17:19-17:38/19 18:34 17:52-18:06/14 06:10 06:54-07:31/37 17:20-17:35/15 18:36 17:51-18:08/17 06:07 06:55-07:30/35 17:23-17:32/9 18:38 17:51-18:07/16 06:05 06:55-07:28/33 18:41 17:52-18:06/14 06:02 06:56-07:26/30 18:43 17:53-18:04/11 05:59 06:58-07:24/26 18:45 17:54-18:02/8 06:57 07:59-08:20/21 19:47 06:54 08:04-08:06/2 19:49 06:51 07:17-07:24/7 19:51	06:49 07:14-07:26/12 19:53 06:46 07:11-07:26/15 19:55 06:43 07:09-07:28/19 19:57 06:41 07:06-07:28/22 19:59 06:38 07:03-07:27/24 20:01 06:35 07:01-07:28/27 20:03 06:33 06:58-07:27/29 20:05 06:30 06:56-07:27/31 20:08 06:28 06:53-07:26/33 20:10 06:25 06:50-07:25/35 20:12 06:22 06:48-07:24/36 20:14 06:20 06:45-07:22/37 20:16 06:17 06:44-07:21/37 20:18 06:15 06:43-07:17/34 20:20 06:12 06:42-07:13/31 20:22 06:09 06:41-07:13/32 20:24 06:07 06:41-07:14/33 20:26 06:04 06:40-07:14/34 20:28 06:02 06:31-07:15/44 20:30 06:28-06:29/1 05:59 06:26-07:16/50 05:57 06:23-07:15/52 05:54 06:21-07:16/55 05:52 06:19-07:15/56 20:39 05:49 06:16-07:15/59 20:41 05:47 06:14-07:15/61 20:43 05:44 06:12-07:14/62 20:45 05:42 06:09-07:14/65 20:47 05:40 06:07-07:14/67 20:49 05:37 06:05-07:13/68 20:51 05:35 06:03-07:13/70 20:53	05:33 06:00-07:11/71 20:55 05:30 05:58-07:10/72 20:57 05:28 05:56-07:09/73 20:59 20:25-20:27/2 05:26 06:19-07:08/49 20:24-20:29/5 21:02 05:54-06:17/23 05:23 06:20-07:07/47 20:23-20:31/8 21:04 05:52-06:17/25 05:21 06:20-07:05/45 20:23-20:33/10 21:06 05:50-06:19/29 05:19 06:21-07:03/42 20:23-20:35/12 21:08 05:48-06:20/32 05:17 05:47-07:01/74 21:10 06:20-07:06/58 05:38-05:41/3 05:15 06:23-07:01/38 20:22-20:38/16 21:12 05:47-06:22/35 05:13 06:24-07:00/36 20:22-20:38/16 21:14 05:47-06:23/36 05:11 06:26-06:59/33 20:23-20:37/14 21:16 05:47-06:24/37 05:09 06:27-06:58/31 05:38-05:41/3 21:18 05:47-06:24/37 20:23-20:36/13 05:07 05:48-06:25/37 06:28-06:58/30 21:20 05:37-05:43/6 20:24-20:35/11 05:05 05:49-06:25/36 06:29-06:57/28 21:22 05:35-05:43/8 20:26-20:35/9 05:03 05:49-06:25/36 06:30-06:55/25 21:23 05:33-05:43/10 20:27-20:33/6 05:01 05:50-06:25/35 06:30-06:54/24 21:25 05:31-05:43/12 04:59 05:50-06:26/36 06:32-06:53/21 21:27 05:30-05:44/14 04:57 05:28-05:44/16 06:34-06:51/17 21:29 05:50-06:26/36 04:55 05:27-05:44/17 06:36-06:50/14 21:31 05:50-06:27/37 04:53 05:25-05:44/19 06:39-06:46/7 21:33 05:50-06:26/36 04:52 05:24-05:44/20 21:35 05:50-06:27/37 04:50 05:22-05:43/21 21:36 05:50-06:26/36 04:48 05:21-05:43/22 21:38 05:51-06:26/35 04:47 05:19-05:42/23 21:40 05:50-06:26/36 04:45 05:18-05:42/24 21:42 05:51-06:26/35 04:44 05:17-05:41/24 21:43 05:51-06:26/35 04:42 05:17-05:40/23 21:45 05:52-06:26/34 04:41 05:16-05:38/22 21:46 05:51-06:25/34 04:40 05:16-05:37/21 21:48 05:52-06:25/33 04:38 05:16-05:37/21 21:50 05:52-06:25/33 04:37 05:16-05:38/22 21:51 05:53-06:25/32	04:36 05:16-05:38/22 21:52 05:53-06:25/32 04:35 05:16-05:38/22 05:09-05:10/1 21:54 05:54-06:24/29 04:34 05:17-05:39/22 05:09-05:12/3 21:55 05:54-06:24/30 04:33 05:17-05:39/22 05:08-05:13/5 21:56 05:55-06:25/30 04:32 05:17-05:39/22 05:07-05:13/6 21:58 05:55-06:24/29 04:31 05:17-05:38/21 05:06-05:14/8 21:59 05:56-06:24/28 04:30 05:18-05:39/21 05:06-05:15/9 22:00 05:57-06:24/27 04:29 05:18-05:39/21 05:05-05:15/10 22:01 05:57-06:23/26 04:29 05:19-05:39/20 05:05-05:16/11 22:02 05:57-06:23/26 04:28 05:18-05:39/21 05:04-05:16/12 22:03 05:58-06:23/25 04:27 05:19-05:39/20 05:04-05:17/13 22:04 05:59-06:23/24 04:27 05:19-05:39/20 05:03-05:17/14 22:05 05:59-06:23/24 04:26 05:20-05:39/19 05:03-05:17/14 22:06 06:00-06:23/23 04:26 05:20-05:39/19 05:03-05:18/15 22:07 06:00-06:23/23 04:26 05:21-05:40/19 05:03-05:18/15 22:07 06:01-06:23/22 04:26 05:21-05:40/19 05:03-05:19/16 22:08 06:00-06:22/22 04:25 05:20-05:39/19 05:02-05:18/16 22:08 06:01-06:22/21 04:25 05:21-05:39/18 05:02-05:18/16 22:09 06:01-06:22/21 04:25 05:22-05:40/18 05:03-05:20/17 22:09 06:02-06:22/20 04:25 05:22-05:40/18 05:03-05:20/17 22:10 06:03-06:23/20 04:25 05:22-05:40/18 05:03-05:20/17 22:10 06:03-06:23/20 04:26 05:23-05:41/18 05:04-05:20/16 22:10 06:03-06:24/21 04:26 05:22-05:41/19 05:04-05:20/16 22:10 06:03-06:24/21 04:27 05:23-05:42/19 05:05-05:21/16 22:10 06:04-06:25/21 04:27 05:23-05:42/19 05:05-05:20/15 22:10 06:03-06:25/22 04:28 05:23-05:43/20 05:06-05:21/15 22:10 06:04-06:26/22 04:29 05:23-05:43/20 05:07-05:21/14 22:09 06:03-06:27/24	
Potential sun hours	235			426	508	528
Sum of minutes with flicker	3011	1744	366	1701	2184	1684

Potential sun hours
Sum of minutes with flicker

3011

1744

1701

426

1231

508

2184

528

1684

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B14 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (100)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December
1	04:30 05:24-05:43/19 05:08-05:21/13 22:09 06:03-06:27/24	05:16 06:37-07:09/32 05:50-05:52/2 21:28 05:58-06:35/37 20:33-20:47/14	06:17 06:47-07:23/36 20:14	07:17 07:46-08:35/49 18:54 18:01-18:21/20	07:23 07:55-08:23/28 16:36 08:53-09:44/51	08:24 09:04-10:15/71 15:45 14:13-14:29/16
2	04:31 05:23-05:43/20 05:09-05:21/12 22:08 06:02-06:27/25	05:18 06:35-07:10/35 20:33-20:48/15 21:26 05:57-06:34/37	06:19 06:49-07:24/35 20:11	07:19 07:48-08:35/47 18:51 18:02-18:19/17	07:25 08:52-09:47/55 16:34 07:57-08:24/27	08:26 09:06-10:16/70 15:44 14:12-14:30/18
3	04:32 05:23-05:44/21 05:09-05:21/12 22:08 06:02-06:28/26	05:20 06:34-07:10/36 20:33-20:48/15 21:24 05:57-06:33/36	06:21 06:51-07:24/33 20:09	07:21 07:50-08:35/45 18:48 18:03-18:17/14	07:27 08:52-09:50/58 16:32 08:00-08:25/25	08:27 14:11-14:30/19 15:43 09:08-10:15/67
4	04:33 05:23-05:44/21 05:10-05:21/11 22:07 06:02-06:29/27	05:21 06:33-07:11/38 20:33-20:48/15 21:22 05:57-06:32/35	06:23 06:53-07:24/31 20:06	07:23 07:52-08:36/44 18:46 18:07-18:13/6	07:29 08:51-09:51/60 16:29 08:02-08:25/23	08:29 14:08-14:31/23 15:42 09:09-10:16/67
5	04:34 05:23-05:44/21 05:11-05:21/10 22:07 06:02-06:29/27	05:23 05:58-07:12/74 21:19 20:32-20:45/13	06:25 06:55-07:24/29 20:03	07:25 07:54-08:38/44 18:43	07:31 08:50-09:52/62 08:05-08:27/22 16:27 08:36-08:41/5 15:17-15:24/7	08:31 14:06-14:32/26 15:42 09:11-10:16/65
6	04:35 05:23-05:45/22 05:12-05:20/8 22:06 06:02-06:30/28	05:25 06:30-07:13/43 20:32-20:43/11 21:17 05:58-06:29/31	06:27 06:57-07:24/27 20:01	07:27 07:56-08:39/43 18:40	07:33 08:51-09:54/63 08:07-08:27/20 16:26 08:32-08:44/12 15:16-15:27/11	08:32 14:06-14:33/27 15:41 09:13-10:17/64
7	04:36 05:24-05:45/21 05:13-05:20/7 22:05 06:02-06:30/28	05:27 06:30-07:15/45 20:32-20:41/9 21:15 06:00-06:28/28	06:29 06:58-07:23/25 19:58	07:29 07:58-08:48/50 18:38	07:36 08:51-09:55/64 08:09-08:27/18 16:23 08:31-08:45/14 15:14-15:28/14	08:34 14:05-14:33/28 15:40 09:14-10:17/63
8	04:37 05:24-05:45/21 05:14-05:20/6 22:04 06:02-06:31/29	05:29 06:29-07:17/48 20:33-20:40/7 21:13 06:02-06:26/24	06:31 07:00-07:22/22 19:55	07:32 08:00-08:51/51 18:35	07:38 08:51-09:56/65 08:12-08:27/15 16:21 08:30-08:47/17 15:06-15:30/24	08:35 14:05-14:34/29 15:40 09:16-10:17/61
9	04:38 05:24-05:45/21 05:15-05:19/4 22:03 06:01-06:31/30	05:31 06:29-07:18/49 20:34-20:38/4 21:11 06:04-06:27/23	06:33 07:02-07:21/19 19:53	07:34 08:03-08:53/50 18:32	07:40 08:51-09:56/65 08:14-08:27/13 16:19 08:29-08:47/18 15:04-15:30/26	08:36 14:04-14:34/30 15:39 09:18-10:17/59
10	04:39 05:24-05:45/21 05:16-05:18/2 22:02 06:01-06:32/31	05:33 06:06-07:19/73 21:08 20:34-20:35/1	06:35 07:04-07:20/16 19:50	07:36 08:05-08:54/49 18:30	07:42 08:51-09:57/66 08:17-08:27/10 16:17 08:29-08:48/19 15:02-15:30/28	08:38 14:05-14:36/31 15:39 09:19-10:18/59
11	04:41 05:24-05:46/22 22:01 06:02-06:33/31	05:35 06:08-07:20/72 21:06	06:37 07:06-07:18/12 19:47	07:38 08:07-08:55/48 18:27	07:44 08:52-09:58/66 08:19-08:26/7 16:15 08:29-08:49/20 15:02-15:31/29	08:39 14:05-14:36/31 15:39 09:20-10:18/58
12	04:42 05:24-05:46/22 22:00 06:01-06:33/32	05:37 06:09-07:20/71 21:04	06:39 07:08-07:16/8 19:45	07:40 08:09-08:55/46 18:25	07:46 08:28-09:58/90 15:01-15:31/30 16:13 08:21-08:25/4	08:40 14:05-14:37/32 15:38 09:23-10:19/56
13	04:43 05:24-05:46/22 21:59 06:01-06:33/32	05:39 06:11-07:21/70 21:01	06:41 07:10-07:11/1 19:42	07:42 08:11-08:55/44 18:22	07:48 08:29-09:59/90 15:02-15:32/30 16:11 08:24-08:25/1	08:41 14:05-14:37/32 15:38 09:23-10:19/56
14	04:45 05:24-05:46/22 21:58 06:00-06:34/34	05:41 06:13-07:21/68 20:59	06:43 07:50-08:10/20 19:39	07:44 08:13-08:55/42 18:20	07:51 08:29-09:59/90 16:09 15:01-15:31/30	08:43 14:06-14:38/32 15:38 09:24-10:21/57
15	04:46 05:25-05:46/21 21:56 06:01-06:35/34	05:43 06:15-07:21/66 20:57	06:45 07:47-08:13/26 19:37 18:45-18:51/6	07:46 08:16-08:56/40 18:17	07:53 08:30-09:59/89 16:08 15:01-15:30/29	08:44 14:06-14:38/32 15:38 09:25-10:22/57
16	04:48 05:25-05:48/23 21:55 06:01-06:35/34	05:45 06:17-07:22/65 20:54	06:47 07:45-08:15/30 19:34 18:43-18:54/11	07:48 08:18-08:55/37 18:14	07:55 08:31-10:01/90 16:06 15:01-15:29/28	08:45 14:06-14:39/33 15:38 09:26-10:23/57
17	04:49 05:26-05:50/24 21:54 06:00-06:35/35	05:47 06:19-07:22/63 20:52	06:49 07:44-08:16/32 19:31 18:41-18:55/14	07:50 08:20-08:55/35 18:12	07:57 08:33-10:03/90 16:04 15:01-15:27/26	08:45 14:06-14:39/33 15:38 09:27-10:24/57
18	04:51 05:27-05:51/24 21:52 06:00-06:36/36	05:49 06:21-07:22/61 20:49	06:51 07:42-08:17/35 18:12-18:19/7 19:29 18:40-18:55/15	07:52 08:22-08:54/32 18:09	07:59 08:36-10:05/89 16:02 15:01-15:24/23	08:46 14:07-14:40/33 15:38 09:28-10:24/56
19	04:53 05:28-05:52/24 21:51 06:00-06:35/35	05:51 06:22-07:21/59 20:47	06:53 07:41-08:18/37 18:09-18:22/13 19:26 18:38-18:54/16	07:55 08:25-08:54/29 18:07	08:01 08:38-10:06/88 16:01 15:03-15:23/20	08:47 14:07-14:39/32 15:38 09:28-10:25/57
20	04:54 05:30-05:53/23 21:49 06:00-06:36/36	05:53 06:24-07:21/57 20:45	06:55 07:40-08:19/39 18:05-18:23/18 19:23 18:37-18:52/15	07:57 08:27-08:53/26 18:04	08:03 08:40-10:07/87 15:59 15:03-15:21/18	08:48 14:07-14:40/33 15:39 09:29-10:25/56
21	04:56 05:31-05:53/22 21:48 06:00-06:36/36	05:55 06:26-07:20/54 20:42	06:57 07:40-08:19/39 18:03-18:24/21 19:20 18:37-18:50/13	07:59 08:29-08:53/24 18:02	08:05 08:43-10:08/85 15:58 15:03-15:19/16	08:48 14:08-14:41/33 15:39 09:30-10:26/56
22	04:58 05:33-05:54/21 21:46 06:00-06:36/36	05:57 06:28-07:20/52 20:40	06:59 07:39-08:19/40 18:02-18:25/23 19:18 18:37-18:47/10	08:01 08:31-08:56/25 17:59	08:07 08:45-10:10/85 15:56 15:05-15:18/13	08:49 14:08-14:41/33 15:40 09:30-10:26/56
23	04:59 05:35-05:54/19 21:45 06:00-06:36/36	05:59 06:30-07:19/49 20:37	07:01 07:39-08:19/40 18:01-18:25/24 19:15 18:38-18:44/6	08:03 08:34-08:58/24 17:57	08:09 08:47-10:10/83 15:55 15:06-15:16/10	08:49 14:09-14:42/33 15:40 09:31-10:27/56
24	05:01 05:36-05:54/18 06:48-06:58/10 21:43 06:00-06:36/36	06:01 06:36-07:19/43 20:35 06:32-06:33/1	07:03 07:39-08:25/46 18:00-18:25/25 19:12 18:39-18:42/3	08:05 08:36-09:01/25 17:55 10:06-10:15/9	08:11 08:49-10:11/82 15:53 15:07-15:14/7	08:50 14:10-14:42/32 15:41 09:31-10:27/56
25	05:03 05:38-05:55/17 06:46-07:01/15 21:41 06:01-06:37/36	06:03 06:44-07:18/34 20:32	07:05 07:39-08:29/50 19:10 17:59-18:25/26	07:07 07:38-08:04/26 16:52 09:02-09:19/17	08:13 08:51-10:11/80 15:52 15:08-15:12/4	08:50 14:10-14:43/33 15:41 09:31-10:27/56
26	05:05 06:00-06:36/36 06:43-07:02/19 21:39 05:39-05:54/15	06:05 06:44-07:17/33 20:29	07:07 07:39-08:31/52 19:07 17:59-18:25/26	07:09 07:41-08:08/27 16:50 09:00-09:22/22	08:15 08:54-10:12/78 15:51 15:10-15:11/1	08:50 14:10-14:43/33 15:42 09:31-10:28/57
27	05:06 06:01-06:36/35 06:42-07:04/22 21:37 05:41-05:54/13	06:07 06:44-07:16/32 20:27	07:09 07:39-08:32/53 19:04 17:59-18:24/25	07:12 07:43-08:13/30 16:47 08:58-09:24/26	08:17 08:56-10:13/77 15:49	08:51 14:11-14:43/32 15:43 09:31-10:28/57
28	05:08 06:01-06:36/35 06:41-07:06/25 21:36 05:43-05:54/11	06:09 06:43-07:13/30 20:24	07:11 07:40-08:33/53 19:02 17:59-18:24/25	07:14 07:45-08:14/29 16:45 08:56-09:25/29	08:19 08:58-10:14/76 15:48	08:51 14:11-14:44/33 15:44 09:31-10:28/57
29	05:10 05:59-06:36/37 06:39-07:06/27 21:34 05:44-05:53/9 20:37-20:44/7	06:11 06:43-07:18/35 20:22	07:13 07:42-08:34/52 18:59 18:00-18:24/24	07:16 07:48-08:17/29 16:43 08:55-09:27/32	08:21 09:00-10:14/74 15:47 14:16-14:25/9	08:51 14:12-14:44/32 15:45 09:31-10:28/57
30	05:12 05:59-06:35/36 06:39-07:07/28 21:32 05:46-05:53/7 20:35-20:46/11	06:13 06:44-07:21/37 20:19	07:15 07:44-08:34/50 18:56 18:00-18:23/23	07:18 07:50-08:19/29 16:41 08:54-09:30/36	08:22 09:02-10:15/73 15:46 14:14-14:27/13	08:51 14:13-14:45/32 15:46 09:31-10:27/56
31	05:14 05:59-06:35/36 06:38-07:09/31 21:30 05:48-05:53/5 20:35-20:47/12	06:15 06:45-07:22/37 20:17	07:17 07:46-08:35/49 18:54 18:01-18:21/20	07:20 07:53-08:22/29 16:38 08:53-09:33/40	08:24 09:04-10:15/71 15:45 14:13-14:29/16	08:51 14:14-14:46/32 15:47 09:32-10:28/56
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1893	1919	1377	1416	3035	2761

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B15 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (92)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January		February		March	April		May		June	
1	08:51	09:37-09:53/16	08:15	07:11		06:49	07:18-07:42/24	05:32		04:36	05:16-05:48/32
	15:48		16:45	17:47		19:53		20:55		21:52	
2	08:50	09:38-09:54/16	08:13	07:08		06:46	07:17-07:42/25	05:30		04:34	05:16-05:48/32
	15:49		16:47	17:49		19:55		20:57		21:54	
3	08:50	09:38-09:54/16	08:11	07:05		06:43	07:16-07:42/26	05:28		04:33	05:17-05:49/32
	15:50		16:49	17:52		19:57		20:59		21:55	
4	08:50	09:39-09:54/15	08:09	07:03		06:41	07:06-07:11/5	05:25		04:32	05:17-05:50/33
	15:52		16:52	17:54		19:59	07:16-07:42/26	21:01		21:56	
5	08:49	09:40-09:55/15	08:07	07:00		06:38	07:03-07:12/9	05:23		04:31	05:18-05:51/33
	15:53		16:54	17:56		20:01	07:15-07:42/27	21:03		21:58	
6	08:49	09:41-09:55/14	08:05	06:58		06:35	07:01-07:13/12	05:21		04:31	05:18-05:51/33
	15:55		16:56	17:58		20:03	07:15-07:42/27	21:05		21:59	
7	08:48	09:41-09:54/13	08:02	06:55		06:33	06:58-07:14/16	05:19		04:30	05:18-05:51/33
	15:56		16:58	18:00		20:05	07:15-07:41/26	21:07		22:00	
8	08:47	09:42-09:54/12	08:00	06:52		06:30	06:55-07:14/19	05:17		04:29	05:18-05:52/34
	15:58		17:01	18:02		20:07	07:15-07:39/24	21:10		22:01	
9	08:47	09:43-09:54/11	07:58	06:50		06:27	06:55-07:14/19	05:14		04:28	05:18-05:52/34
	15:59		17:03	18:05		20:09	07:16-07:39/23	21:12		22:02	
10	08:46	09:45-09:54/9	07:56	06:47		06:25	06:54-07:14/20	05:12		04:28	05:18-05:53/35
	16:01		17:05	18:07		20:11	07:16-07:37/21	21:14		22:03	
11	08:45	09:46-09:53/7	07:54	06:45		06:22	06:54-07:14/20	05:10		04:27	05:17-05:53/36
	16:03		17:07	18:09		20:14	07:17-07:36/19	21:16		22:04	
12	08:44	09:50-09:51/1	07:52	06:42		06:19	06:54-07:13/19	05:08		04:27	05:18-05:54/36
	16:04		17:10	18:11		20:16	07:18-07:33/15	21:18		22:05	
13	08:43		07:49	06:39		06:17	06:54-07:13/19	05:06		04:26	05:18-05:54/36
	16:06		17:12	18:13		20:18	07:21-07:31/10	21:19		22:06	
14	08:42		07:47	06:37		06:14	06:54-07:11/17	05:04		04:26	05:17-05:54/37
	16:08		17:14	18:15		20:20		21:21		22:06	
15	08:41		07:45	06:34		06:12	06:56-07:10/14	05:02		04:25	05:18-05:54/36
	16:10		17:16	18:17		20:22		21:23		22:07	
16	08:40		07:42	06:31		06:09	06:57-07:07/10	05:00		04:25	05:18-05:55/37
	16:12		17:19	18:19		20:24		21:25		22:08	
17	08:39		07:40	06:29		06:07	07:01-07:04/3	04:59		04:25	05:18-05:55/37
	16:13		17:21	18:22		20:26		21:27		22:08	
18	08:37		07:38	06:26		06:04		04:57		04:25	05:18-05:56/38
	16:15		17:23	18:24		20:28		21:29		22:09	
19	08:36		07:35	06:23		06:01		04:55	05:26-05:28/2	04:25	05:18-05:56/38
	16:17		17:25	18:26		20:30		21:31		22:09	
20	08:35		07:33	06:21	06:46-06:49/3	05:59		04:53	05:25-05:29/4	04:25	05:18-05:56/38
	16:19		17:28	18:28		20:32		21:33		22:09	
21	08:33		07:30	06:18	06:43-06:49/6	05:56		04:51	05:23-05:29/6	04:25	05:19-05:56/37
	16:21		17:30	18:30		20:34		21:35		22:10	
22	08:32		07:28	06:15	06:41-06:51/10	05:54		04:50	05:22-05:30/8	04:25	05:20-05:57/37
	16:23		17:32	18:32		20:36		21:36		22:10	
23	08:30		07:26	06:13	06:38-06:50/12	05:51		04:48	05:21-05:31/10	04:25	05:19-05:57/38
	16:26		17:34	18:34		20:39		21:38		22:10	
24	08:29		07:23	06:10	06:35-06:50/15	05:49		04:47	05:19-05:31/12	04:26	05:19-05:57/38
	16:28		17:36	18:36		20:41		21:40		22:10	
25	08:27		07:21	06:07	06:32-06:49/17	05:47		04:45	05:18-05:31/13	04:26	05:20-05:57/37
	16:30		17:39	18:38		20:43		21:41		22:10	
26	08:25		07:18	06:05	06:30-06:49/19	05:44		04:43	05:17-05:39/22	04:27	05:20-05:57/37
	16:32		17:41	18:40		20:45		21:43		22:10	
27	08:24		07:16	06:02	06:27-06:47/20	05:42		04:42	05:15-05:41/26	04:27	05:21-05:58/37
	16:34		17:43	18:42		20:47		21:45		22:10	
28	08:22		07:13	05:59	06:24-06:44/20	05:39		04:41	05:15-05:43/28	04:28	05:21-05:57/36
	16:36		17:45	18:44		20:49		21:46		22:10	
29	08:20			06:57	07:24-07:42/18	05:37		04:39	05:15-05:45/30	04:28	05:21-05:58/37
	16:38			19:47		20:51		21:48		22:10	
30	08:18			06:54	07:21-07:40/19	05:35		04:38	05:15-05:46/31	04:29	05:22-05:58/36
	16:41			19:49		20:53		21:49		22:09	
31	08:16			06:51	07:19-07:41/22			04:37	05:16-05:47/31		
	16:43			19:51				21:51			
Potential sun hours	235		266	366		426		508		529	1070
Sum of minutes with flicker		145	0	181		495		223		1070	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B15 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (92)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December
1	04:30 05:22-05:57/35 22:09	05:15 21:28	06:17 06:53-07:13/20 20:14 07:16-07:35/19	07:17 18:53	07:22 16:36	08:24 09:29-09:35/6 15:45
2	04:31 05:22-05:58/36 22:08	05:17 21:26	06:19 06:53-07:13/20 20:11 07:15-07:36/21	07:19 18:51	07:25 16:34	08:26 09:28-09:37/9 15:44
3	04:31 05:23-05:58/35 22:08	05:19 21:24	06:21 06:53-07:12/19 20:09 07:14-07:37/23	07:21 18:48	07:27 16:31	08:27 09:26-09:37/11 15:43
4	04:32 05:23-05:58/35 22:07	05:21 21:21	06:23 06:53-07:12/19 20:06 07:13-07:37/24	07:23 18:45	07:29 16:29	08:29 09:26-09:38/12 15:42
5	04:33 05:24-05:58/34 22:06	05:23 21:19	06:25 06:54-07:10/16 20:03 07:11-07:37/26	07:25 18:43	07:31 16:27	08:31 09:26-09:40/14 15:41
6	04:34 05:25-05:58/33 22:06	05:25 21:17	06:27 06:56-07:09/13 20:01 07:10-07:37/27	07:27 18:40	07:33 16:25	08:32 09:27-09:41/14 15:41
7	04:36 05:25-05:57/32 22:05	05:27 21:15	06:29 06:58-07:07/9 19:58 07:10-07:37/27	07:29 18:37	07:35 16:23	08:34 09:26-09:41/15 15:40
8	04:37 05:25-05:57/32 22:04	05:29 21:13	06:31 07:00-07:05/5 19:55 07:10-07:36/26	07:31 18:35	07:38 16:21	08:35 09:27-09:42/15 15:40
9	04:38 05:24-05:57/33 22:03	05:31 21:10	06:33 07:10-07:36/26 19:53	07:33 18:32	07:40 16:19	08:36 09:27-09:42/15 15:39
10	04:39 05:24-05:56/32 22:02	05:33 21:08	06:35 07:10-07:35/25 19:50	07:35 18:30	07:42 16:17	08:38 09:27-09:43/16 15:39
11	04:40 05:24-05:56/32 22:01	05:35 21:06	06:37 07:11-07:34/23 19:47	07:38 18:27	07:44 16:15	08:39 09:27-09:43/16 15:38
12	04:42 05:24-05:55/31 22:00	05:37 21:04	06:39 07:11-07:33/22 19:45	07:40 18:24	07:46 16:13	08:40 09:28-09:44/16 15:38
13	04:43 05:24-05:55/31 21:59	05:39 21:01	06:41 07:12-07:32/20 19:42	07:42 18:22	07:48 16:11	08:41 09:28-09:45/17 15:38
14	04:45 05:24-05:54/30 21:58	05:41 20:59	06:43 07:14-07:32/18 19:39	07:44 18:19	07:50 16:09	08:42 09:29-09:45/16 15:38
15	04:46 05:23-05:52/29 21:56	05:43 20:57	06:45 07:15-07:34/19 19:36	07:46 18:17	07:53 16:07	08:43 09:29-09:46/17 15:38
16	04:48 05:24-05:52/28 21:55	05:45 20:54	06:47 07:16-07:36/20 19:34	07:48 18:14	07:55 16:06	08:44 09:29-09:46/17 15:38
17	04:49 05:25-05:50/25 21:54	05:47 20:52	06:49 07:18-07:37/19 19:31	07:50 18:12	07:57 16:04	08:45 09:30-09:47/17 15:38
18	04:51 05:27-05:47/20 21:52	05:49 20:49	06:51 07:20-07:37/17 19:28	07:52 18:09	07:59 16:02	08:46 09:31-09:47/16 15:38
19	04:52 05:28-05:41/13 21:51	05:51 20:47	06:53 07:22-07:37/15 19:26	07:54 18:07	08:01 16:01	08:47 09:31-09:48/17 15:38
20	04:54 05:30-05:41/11 21:49	05:53 20:44	06:55 07:24-07:37/13 19:23	07:56 18:04	08:03 15:59	08:48 09:31-09:48/17 15:38
21	04:56 05:31-05:40/9 21:48	05:55 20:42	06:57 07:26-07:36/10 19:20	07:59 18:02	08:05 15:57	08:48 09:32-09:49/17 15:39
22	04:57 05:33-05:40/7 21:46	05:57 20:39	06:59 07:27-07:34/7 19:18	08:01 17:59	08:07 15:56	08:49 09:32-09:49/17 15:39
23	04:59 05:34-05:39/5 21:44	05:59 20:37	07:01 07:29-07:33/4 19:15	08:03 17:57	08:09 15:54	08:49 09:33-09:50/17 15:40
24	05:01 05:36-05:39/3 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 09:33-09:50/17 15:40
25	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	08:13 15:52	08:50 09:33-09:50/17 15:41
26	05:04 21:39	06:05 07:02-07:06/4 20:29	07:07 19:07	07:09 16:50	08:15 15:50	08:50 09:34-09:50/16 15:42
27	05:06 21:37	06:07 06:58-07:09/11 20:27	07:09 19:04	07:11 16:47	08:17 15:49	08:51 09:34-09:51/17 15:43
28	05:08 21:35	06:09 06:57-07:11/14 20:24	07:11 19:01	07:14 16:45	08:19 15:48	08:51 09:35-09:51/16 15:43
29	05:10 21:34	06:11 06:55-07:12/17 20:22	07:13 18:59	07:16 16:43	08:20 15:47	08:51 09:35-09:52/17 15:44
30	05:12 21:32	06:13 06:54-07:13/19 20:19 07:20-07:31/11	07:15 18:56	07:18 16:40	08:22 15:46	08:51 09:36-09:52/16 15:45
31	05:14 21:30	06:15 06:54-07:13/19 20:16 07:18-07:33/15		07:20 16:38		08:51 09:37-09:53/16 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	611	110	572	0	0	476

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B17 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (108)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January		February		March		April		May		June	
1	08:51	14:08-14:16/8	08:15	07:11	06:49	07:14-07:30/16	05:32	07:24-08:44/80	04:36	07:38-08:24/46		
	15:48	10:51-11:32/41	16:45	17:47	19:53		20:55	06:31-07:12/41	21:53	05:10-05:28/18		
2	08:50	14:10-14:15/5	08:13	07:08	06:46	07:11-07:30/19	05:30	07:24-08:43/79	04:34	07:38-08:24/46		
	15:49	10:52-11:33/41	16:47	17:50	19:55		20:57	06:31-07:12/41	21:54	05:09-05:28/19		
3	08:50	10:52-11:33/41	08:11	07:06	06:43	08:03-08:19/16	05:28	07:24-08:43/79	04:33	07:39-08:23/44		
	15:50		16:49	17:52	19:57	07:11-07:29/18	20:59	06:31-07:11/40	21:55	05:08-05:28/20		
4	08:50	10:52-11:33/41	08:09	07:03	06:41	07:58-08:25/27	05:25	07:24-08:43/79	04:32	07:40-08:22/42		
	15:52		16:52	17:54	19:59	07:06-07:07/1	21:02	06:32-07:11/39	21:57	05:07-05:29/22		
5	08:49	10:53-11:34/41	08:07	07:00	06:38	07:54-08:28/34	05:23	07:25-08:42/77	04:31	07:41-08:22/41		
	15:53		16:54	17:56	20:01	07:03-07:08/5	21:04	06:32-07:10/38	21:58	05:07-05:30/23		
6	08:49	10:53-11:34/41	08:05	06:58	06:35	07:51-08:31/40	05:21	07:25-08:42/77	04:31	07:42-08:21/39		
	15:55		16:56	17:58	20:03	07:01-07:09/8	21:06	06:32-07:10/38	21:59	05:06-05:29/23		
7	08:48	10:54-11:34/40	08:03	06:55	06:33	07:48-08:33/45	05:19	07:25-08:42/77	04:30	07:42-08:20/38		
	15:56		16:58	18:00	20:05	06:58-07:10/12	21:08	06:33-07:09/36	22:00	05:05-05:29/24		
8	08:47	10:54-11:35/41	08:00	06:53	06:30	07:45-08:34/49	05:17	07:25-08:41/76	04:29	07:44-08:20/36		
	15:58		17:01	18:02	20:07	06:55-07:09/14	21:10	06:33-07:09/36	22:01	05:05-05:30/25		
9	08:47	10:55-11:35/40	07:58	06:50	06:27	07:44-08:36/52	05:14	07:25-08:40/75	04:28	07:44-08:19/35		
	15:59		17:03	18:05	20:10	06:53-07:10/17	21:12	06:34-07:08/34	22:02	05:04-05:30/26		
10	08:46	10:55-11:35/40	07:56	06:47	06:25	07:41-08:37/56	05:12	07:25-08:40/75	04:28	07:45-08:19/33		
	16:01		17:05	18:07	20:12	06:52-07:09/17	21:14	06:34-07:07/33	22:03	05:04-05:31/27		
11	08:45	10:56-11:36/40	07:54	06:45	06:22	07:40-08:39/59	05:10	07:25-08:39/74	04:27	07:46-08:18/32		
	16:02		17:07	18:09	20:14	06:53-07:09/16	21:16	06:35-07:06/31	22:04	05:03-05:30/27		
12	08:44	10:57-11:36/39	07:52	06:42	06:19	07:38-08:40/62	05:08	07:25-08:38/73	04:26	07:47-08:18/31		
	16:04		17:10	18:11	20:16	06:53-07:07/14	21:18	06:36-07:04/28	22:05	05:03-05:31/28		
13	08:43	10:57-11:36/39	07:49	06:39	06:17	07:37-08:41/64	05:06	07:26-08:38/72	04:26	07:48-08:17/29		
	16:06		17:12	18:13	20:18	06:54-07:06/12	21:20	06:37-07:03/26	22:06	05:03-05:31/28		
14	08:42	10:58-11:36/38	07:47	06:37	06:14	07:35-08:41/66	05:04	07:26-08:37/71	04:26	07:48-08:16/28		
	16:08		17:14	18:15	20:20	06:55-07:03/8	21:22	06:39-07:02/23	22:07	05:02-05:30/28		
15	08:41	10:59-11:37/38	07:45	06:34	06:12	07:34-08:43/69	05:02	07:27-08:37/70	04:25	07:49-08:16/27		
	16:10		17:16	18:17	20:22	06:38-06:59/21	21:24	06:40-07:00/20	22:07	05:02-05:31/29		
16	08:40	10:59-11:36/37	07:42	06:31	06:09	07:33-08:43/70	05:00	07:27-08:36/69	04:25	07:49-08:16/27		
	16:12		17:19	18:19	20:24	06:35-07:03/28	21:25	06:42-06:58/16	22:08	05:02-05:31/29		
17	08:39	11:00-11:36/36	07:40	06:29	06:07	07:32-08:44/72	04:58	07:27-08:35/68	04:25	07:50-08:16/26		
	16:13		17:21	18:22	20:26	06:33-07:06/33	21:27	06:44-06:55/11	22:08	05:02-05:31/29		
18	08:37	11:00-11:36/36	07:38	06:26	06:04	07:31-08:43/72	04:57	07:28-08:35/67	04:25	07:51-08:16/25		
	16:15		17:23	18:24	20:28	06:30-07:07/37	21:29		22:09	05:02-05:32/30		
19	08:36	11:01-11:35/34	07:35	06:23	06:02	07:30-08:44/74	04:55	07:28-08:34/66	04:25	07:51-08:16/25		
	16:17		17:25	18:26	20:30	06:28-07:09/41	21:31		22:09	05:02-05:32/30		
20	08:35	11:03-11:35/32	07:33	06:21	05:59	07:29-08:44/75	04:53	07:29-08:33/64	04:25	07:51-08:16/25		
	16:19		17:28	18:28	20:32	06:25-07:09/44	21:33		22:10	05:02-05:32/30		
21	08:33	11:03-11:35/32	07:31	06:18	05:56	07:29-08:45/76	04:51	07:29-08:32/63	04:25	07:51-08:16/25		
	16:21		17:30	18:30	20:35	06:24-07:10/46	21:35		22:10	05:02-05:32/30		
22	08:32	11:04-11:34/30	07:28	06:15	05:54	07:27-08:44/77	04:50	07:31-08:32/61	04:25	07:52-08:17/25		
	16:23		17:32	18:32	20:37	06:25-07:11/46	21:36		22:10	05:03-05:33/30		
23	08:30	11:05-11:33/28	07:26	06:13	05:51	07:27-08:44/77	04:48	07:31-08:31/60	04:25	07:52-08:17/25		
	16:26		17:34	18:34	20:39	06:24-07:11/47	21:38		22:10	05:03-05:33/30		
24	08:29	11:08-11:33/25	07:23	06:10	05:49	07:27-08:45/78	04:46	07:32-08:30/58	04:26	07:52-08:17/25		
	16:28		17:36	18:36	20:41	06:25-07:12/47	21:40	05:19-05:21/2	22:10	05:03-05:33/30		
25	08:27	11:10-11:31/21	07:21	06:07	05:47	07:26-08:44/78	04:45	07:33-08:30/57	04:26	07:52-08:18/26		
	16:30		17:39	18:38	20:43	06:27-07:13/46	21:42	05:18-05:23/5	22:10	05:04-05:33/29		
26	08:25	11:12-11:29/17	07:18	06:05	05:44	07:25-08:44/79	04:43	07:33-08:28/55	04:27	07:52-08:18/26		
	16:32		17:41	18:40	20:45	06:28-07:12/44	21:43	05:17-05:25/8	22:10	05:04-05:33/29		
27	08:24	11:15-11:26/11	07:16	06:02	05:42	07:25-08:45/80	04:42	07:33-08:28/55	04:27	07:52-08:19/27		
	16:34		17:43	18:42	20:47	06:32-07:12/40	21:45	05:15-05:25/10	22:10	05:05-05:34/29		
28	08:22		07:13	05:59	05:39	07:25-08:45/80	04:41	07:34-08:27/53	04:28	07:51-08:19/28		
	16:36		17:45	18:45	20:49	06:32-07:13/41	21:47	05:14-05:26/12	22:10	05:05-05:34/29		
29	08:20			06:57	05:37	07:24-08:44/80	04:39	07:35-08:27/52	04:28	07:51-08:20/29		
	16:38			19:47	20:51	06:31-07:12/41	21:48	05:13-05:27/14	22:10	05:06-05:34/28		
30	08:18			06:54	05:35	07:24-08:44/80	04:38	07:36-08:26/50	04:29	07:50-08:21/31		
	16:41			19:49	20:53	06:31-07:12/41	21:50	05:12-05:27/15	22:09	05:07-05:35/28		
31	08:17			06:51			04:37	07:37-08:25/48				
	16:43			19:51			21:51	05:11-05:28/17				
Potential sun hours	235		266	366	426		508		529			
Sum of minutes with flicker	953		0	401	2696		2694		1749			

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B17 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (108)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December
1	04:30 07:50-08:22/32 22:09 05:07-05:34/27	05:15 07:36-08:49/73 21:28 06:46-07:15/29	06:17 07:39-08:38/59 20:14 06:52-07:08/16	07:17 08:03-08:30/27 18:53	07:22 16:36	08:24 10:38-11:18/40 15:45
2	04:31 07:50-08:23/33 22:08 05:08-05:35/27	05:17 07:35-08:50/75 21:26 06:45-07:16/31	06:19 07:40-08:36/56 20:11 06:51-07:08/17	07:19 08:02-08:30/28 18:51	07:25 16:34	08:26 10:38-11:19/41 15:44
3	04:31 07:50-08:24/34 22:08 05:09-05:35/26	05:19 07:35-08:50/75 21:24 06:44-07:17/33	06:21 07:42-08:35/53 20:09 06:51-07:08/17	07:21 08:02-08:29/27 18:48	07:27 16:31	08:28 10:39-11:19/40 15:43
4	04:32 07:49-08:25/36 22:07 05:10-05:35/25	05:21 07:34-08:50/76 21:22 06:44-07:18/34	06:23 07:42-08:31/49 07:13-07:20/7 20:06 06:53-07:07/14	07:23 08:02-08:29/27 18:45	07:29 16:29	08:29 10:38-11:19/41 15:42
5	04:33 07:49-08:26/37 22:07 05:11-05:36/25	05:23 07:34-08:51/77 21:19 06:42-07:18/36	06:25 07:44-08:29/45 07:09-07:21/12 20:03 06:55-07:07/12	07:25 08:02-08:28/26 18:43	07:31 16:27	08:31 10:39-11:20/41 15:41
6	04:34 07:49-08:27/38 22:06 05:12-05:36/24	05:25 07:34-08:51/77 21:17 06:42-07:19/37	06:27 07:46-08:26/40 07:08-07:22/14 20:01 06:56-07:05/9	07:27 08:02-08:27/25 18:40	07:33 16:25	08:32 10:39-11:20/41 15:41
7	04:35 07:48-08:28/40 22:05 05:13-05:36/23	05:27 07:34-08:52/78 21:15 06:41-07:19/38	06:29 07:49-08:23/34 07:06-07:23/17 19:58 06:58-07:03/5	07:29 08:02-08:26/24 18:38	07:36 16:23	08:34 10:39-11:20/41 15:40
8	04:37 07:48-08:29/41 22:04 05:14-05:36/22	05:29 07:34-08:52/78 21:13 06:41-07:20/39	06:31 07:52-08:19/27 07:05-07:23/18 19:55 07:00-07:01/1	07:31 08:03-08:24/21 18:35	07:38 16:21	08:35 10:40-11:21/41 15:39
9	04:38 07:47-08:30/43 22:03 05:15-05:36/21	05:31 07:34-08:52/78 21:11 06:41-07:20/39	06:33 07:57-08:14/17 19:53 07:05-07:23/18	07:33 08:05-08:24/19 18:32	07:40 16:19	08:37 10:41-11:22/41 15:39
10	04:39 07:46-08:31/45 22:02 05:16-05:36/20	05:33 07:33-08:52/79 21:08 06:40-07:20/40	06:35 07:04-07:23/19 19:50	07:36 08:06-08:21/15 18:30	07:42 16:17	08:38 13:59-14:04/5 15:39 10:41-11:22/41
11	04:40 07:46-08:31/45 22:01 05:17-05:36/19	05:35 07:33-08:52/79 21:06 06:39-07:20/41	06:37 07:06-07:23/17 19:47	07:38 08:09-08:18/9 18:27	07:44 16:15	08:39 13:58-14:06/8 15:38 10:41-11:22/41
12	04:42 07:45-08:32/47 22:00 05:19-05:36/17	05:39 07:33-08:52/79 21:04 06:39-07:20/41	06:39 07:08-07:22/14 19:45	07:40 18:24	07:46 16:13	08:40 13:58-14:08/10 15:38 10:42-11:23/41
13	04:43 07:45-08:34/49 21:59 05:20-05:36/16	05:41 07:33-08:52/79 21:01 06:39-07:20/41	06:41 07:10-07:21/11 19:42	07:42 18:22	07:48 16:11	08:42 13:58-14:08/10 15:38 10:42-11:23/41
14	04:45 07:44-08:35/51 21:58 05:21-05:35/14	05:43 07:33-08:52/79 20:59 06:39-07:20/41	06:43 07:12-07:19/7 19:39	07:44 18:19	07:51 16:09	08:43 13:58-14:09/11 15:38 10:42-11:24/42
15	04:46 07:43-08:35/52 21:57 05:22-05:35/13	05:45 07:32-08:51/79 20:57 06:39-07:20/41	06:45 07:14-07:17/3 19:37	07:46 18:17	07:53 10:47-10:59/12 16:07	08:44 13:58-14:10/12 15:38 10:43-11:24/41
16	04:47 07:43-08:37/54 21:55 05:24-05:35/11	05:47 07:32-08:51/79 20:54 06:39-07:20/41	06:47 19:34	07:48 18:14	07:55 10:45-11:02/17 16:06	08:45 13:58-14:11/13 15:38 10:43-11:24/41
17	04:49 07:43-08:37/54 21:54 05:25-05:34/9	05:49 07:32-08:51/79 20:52 06:34-07:18/44	06:49 19:31	07:50 18:12	07:57 10:42-11:04/22 16:04	08:46 13:58-14:11/13 15:38 10:44-11:25/41
18	04:51 07:42-08:38/56 21:52 05:27-05:34/7	05:51 07:32-08:50/78 20:49 06:32-07:18/46	06:51 19:28	07:52 18:09	07:59 10:42-11:07/25 16:02	08:46 13:59-14:12/13 15:38 10:45-11:26/41
19	04:52 07:42-08:39/57 21:51 05:28-05:32/4	05:51 07:32-08:50/78 20:47 06:31-07:17/46	06:53 19:26	07:54 18:07	08:01 10:40-11:08/28 16:01	08:47 13:59-14:13/14 15:38 10:45-11:26/41
20	04:54 07:41-08:40/59 21:49 05:30-05:31/1	05:53 07:33-08:50/77 20:45 06:30-07:17/47	06:55 19:23	07:57 18:04	08:03 10:39-11:09/30 15:59	08:48 13:59-14:13/14 15:38 10:45-11:26/41
21	04:55 07:41-08:41/60 21:48 20:42 06:29-07:16/47	05:55 07:33-08:50/77 20:42 06:29-07:16/47	06:57 19:20	07:59 18:02	08:05 10:38-11:10/32 15:57	08:48 14:00-14:14/14 15:39 10:46-11:27/41
22	04:57 07:41-08:43/62 21:46 20:40 06:29-07:15/46	05:57 07:33-08:49/76 20:40 06:29-07:15/46	06:59 19:18	08:01 17:59	08:07 10:39-11:11/32 15:56	08:49 14:00-14:14/14 15:39 10:46-11:27/41
23	04:59 07:39-08:43/64 21:45 20:37 06:30-07:14/44	05:59 07:34-08:49/75 20:37 06:30-07:14/44	07:01 19:15	08:03 17:57	08:09 10:38-11:12/34 15:54	08:50 14:01-14:15/14 15:40 10:47-11:28/41
24	05:01 07:39-08:44/65 21:43 20:35 06:32-07:12/40	06:01 07:34-08:48/74 20:35 06:32-07:12/40	07:03 08:16-08:20/4 19:12	08:05 17:54	08:11 10:38-11:13/35 15:53	08:50 14:01-14:15/14 15:40 10:47-11:28/41
25	05:02 07:38-08:44/66 21:41 20:32 06:34-07:10/36	06:03 07:34-08:46/72 20:32 06:34-07:10/36	07:05 08:11-08:24/13 19:10	08:07 16:52	08:13 10:37-11:13/36 15:52	08:50 14:01-14:15/14 15:41 10:47-11:28/41
26	05:04 07:38-08:45/67 21:39 06:58-07:03/5	06:05 07:34-08:45/71 20:29 06:35-07:07/32	07:07 08:08-08:26/18 19:07	08:09 16:50	08:15 10:38-11:15/37 15:50	08:51 14:02-14:15/13 15:42 10:48-11:29/41
27	05:06 07:38-08:46/68 21:37 06:54-07:07/13	06:07 07:35-08:44/69 20:27 06:37-07:05/28	07:09 08:07-08:28/21 19:04	07:12 16:47	08:17 10:38-11:16/38 15:49	08:51 14:03-14:16/13 15:42 10:48-11:29/41
28	05:08 07:37-08:46/69 21:36 06:51-07:09/18	06:09 07:35-08:43/68 20:24 06:39-07:00/21	07:11 08:06-08:29/23 19:01	07:14 16:45	08:19 10:38-11:16/38 15:48	08:51 14:03-14:16/13 15:43 10:49-11:30/41
29	05:10 07:37-08:47/70 21:34 06:50-07:11/21	06:11 07:36-08:42/66 06:41-06:52/11 20:22 06:56-07:04/8	07:13 08:05-08:30/25 18:59	07:16 16:43	08:21 10:38-11:17/39 15:47	08:51 14:04-14:16/12 15:44 10:49-11:30/41
30	05:12 07:37-08:48/71 21:32 06:49-07:13/24	06:13 07:37-08:41/64 06:43-06:50/7 20:19 06:54-07:06/12	07:15 08:04-08:30/26 18:56	07:18 16:40	08:22 10:38-11:17/39 15:46	08:51 14:05-14:16/11 15:45 10:50-11:31/41
31	05:13 07:36-08:48/72 21:30 06:47-07:14/27	06:15 07:38-08:40/62 06:45-06:47/2 20:16 06:52-07:07/15	 16:38	07:20 16:38	 15:46	08:51 14:07-14:16/9 15:46 10:51-11:32/41
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	2096	3461	758	248	494	1534

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B18 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (93)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 16:45	07:11 07:52-08:16/24 17:47 07:37-07:42/5	06:49 07:35-08:28/53 19:53	05:32 06:11-06:27/16 20:55	04:36 05:14-05:26/12 21:52
2	08:50 15:49	08:13 16:47	07:08 07:52-08:15/23 17:49 07:34-07:42/8	06:46 07:34-08:27/53 19:55	05:30 06:12-06:26/14 20:57	04:35 05:13-05:28/15 21:54
3	08:50 15:50	08:11 16:49	07:05 07:53-08:15/22 17:52 07:32-07:43/11	06:43 07:33-08:26/53 19:57	05:28 06:13-06:25/12 20:59	04:33 05:12-05:28/16 21:55
4	08:50 15:52	08:09 16:52	07:03 07:53-08:13/20 17:54 07:29-07:43/14	06:41 07:32-08:27/55 19:59	05:25 06:15-06:23/8 21:01	04:32 05:11-05:29/18 21:56
5	08:49 15:53	08:07 16:54	07:00 07:54-08:12/18 17:56 07:27-07:42/15	06:38 07:31-08:26/55 20:01	05:23 21:03	04:32 05:11-05:31/20 21:58
6	08:49 15:55	08:04 16:56	06:58 07:24-07:26/2 07:28-07:42/14 17:58 07:56-08:10/14	06:35 07:32-08:26/54 20:03	05:21 21:05	04:31 05:10-05:31/21 21:59
7	08:48 15:56	08:02 16:58	06:55 07:21-07:40/19 18:00 07:58-08:07/9	06:33 07:31-08:25/54 20:05	05:19 21:07	04:30 05:10-05:31/21 22:00
8	08:47 15:58	08:00 17:01	06:52 07:18-07:38/20 18:02	06:30 07:30-08:23/53 20:07	05:17 21:09	04:29 05:10-05:33/23 22:01
9	08:47 15:59	07:58 17:03	06:50 07:16-07:31/15 18:05	06:27 07:31-08:23/52 20:09	05:15 21:12	04:28 05:09-05:33/24 22:02
10	08:46 16:01	07:56 17:05	06:47 07:13-07:32/19 18:07	06:25 07:30-08:21/51 20:11	05:12 21:14	04:28 05:10-05:34/24 22:03
11	08:45 16:03	07:54 17:07	06:45 07:10-07:31/21 18:09	06:22 07:31-08:21/50 20:14	05:10 21:15	04:27 05:09-05:33/24 22:04
12	08:44 16:04	07:52 17:10	06:42 07:08-07:32/24 18:11	06:19 07:31-08:19/48 20:16	05:08 21:17	04:27 05:09-05:34/25 22:05
13	08:43 16:06	07:49 17:12	06:39 07:07-07:31/24 18:13	06:17 07:32-08:18/46 20:18	05:06 21:19	04:26 05:10-05:35/25 22:06
14	08:42 16:08	07:47 17:14	06:37 07:07-07:30/23 18:15	06:14 07:32-08:15/43 20:20	05:04 21:21	04:26 05:09-05:34/25 22:06
15	08:41 16:10	07:45 17:16	06:34 07:07-07:29/22 18:17	06:12 07:33-08:14/41 20:22	05:02 21:23	04:26 05:09-05:35/26 22:07
16	08:40 16:12	07:42 17:19	06:31 07:08-07:29/21 18:19	06:09 07:33-08:11/38 20:24	05:00 21:25	04:25 05:09-05:35/26 22:08
17	08:39 16:14	07:40 17:21	06:29 07:08-07:26/18 18:22	06:07 07:35-08:07/32 20:26	04:59 21:27	04:25 05:09-05:36/27 22:08
18	08:37 16:15	07:38 17:23	06:26 07:09-07:23/14 18:24	06:04 07:35-08:01/26 20:28	04:57 21:29	04:25 05:10-05:36/26 22:09
19	08:36 16:17	07:35 17:25	06:23 18:26	06:02 07:38-07:59/21 20:30	04:55 21:31	04:25 05:10-05:36/26 22:09
20	08:35 16:19	07:33 08:00-08:09/9 17:28	06:21 18:28	05:59 07:40-07:55/15 20:32	04:53 21:33	04:25 05:10-05:36/26 22:09
21	08:33 16:21	07:30 07:58-08:12/14 17:30	06:18 07:01-07:17/16 18:30	05:56 07:45-07:50/5 20:34	04:51 21:34	04:25 05:11-05:37/26 22:10
22	08:32 16:24	07:28 07:56-08:13/17 17:32	06:15 06:57-07:19/22 18:32	05:54 06:21-06:27/6 20:36	04:50 21:36	04:25 05:11-05:37/26 22:10
23	08:30 16:26	07:26 07:55-08:15/20 17:34	06:13 06:55-07:22/27 18:34	05:52 06:18-06:28/10 20:39	04:48 21:38	04:26 05:11-05:37/26 22:10
24	08:29 16:28	07:23 07:54-08:15/21 17:36	06:10 06:53-07:23/30 18:36	05:49 06:16-06:29/13 20:41	04:47 21:40	04:26 05:11-05:37/26 22:10
25	08:27 16:30	07:21 07:53-08:16/23 17:39	06:07 06:49-07:24/35 18:38	05:47 06:14-06:29/15 20:43	04:45 21:41	04:26 05:11-05:38/27 22:10
26	08:25 16:32	07:18 07:53-08:16/23 17:41	06:05 06:46-07:26/40 18:40	05:44 06:11-06:29/18 20:45	04:44 21:43	04:27 05:11-05:38/27 22:10
27	08:24 16:34	07:16 07:52-08:16/24 17:43	06:02 06:43-07:26/43 18:42	05:42 06:10-06:29/19 20:47	04:42 21:45	04:27 05:12-05:38/26 22:10
28	08:22 16:36	07:13 07:52-08:17/25 17:45	05:59 06:40-07:26/46 18:44	05:39 06:10-06:29/19 20:49	04:41 21:46	04:28 05:12-05:38/26 22:10
29	08:20 16:38	07:11 07:40-07:41/1 17:43	06:57 07:39-08:27/48 19:47	05:37 06:11-06:29/18 20:51	04:39 21:48	04:28 05:13-05:38/25 22:09
30	08:18 16:41	07:09 07:37-08:27/50 19:49	06:54 07:37-08:27/50 19:49	05:35 06:10-06:27/17 20:53	04:38 05:18-05:22/4 21:49	04:29 05:13-05:38/25 22:09
31	08:16 16:43	07:07 07:36-08:27/51 19:51	06:51 07:36-08:27/51 19:51		04:37 05:15-05:25/10 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	0	177	847	1035	64	710

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B18 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (93)

Assumptions for shadow calculations

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December
1	04:30 05:13-05:38/25 22:09	05:15 21:28	06:17 07:30-08:20/50 20:14	07:17 07:47-08:11/24 18:53	07:22 16:36	08:24 15:45
2	04:31 05:14-05:38/24 22:08	05:17 21:26	06:19 07:29-08:20/51 20:11	07:19 07:48-08:11/23 18:51	07:24 16:34	08:26 15:44
3	04:32 05:14-05:38/24 22:08	05:19 21:23	06:21 07:29-08:21/52 20:08	07:21 07:50-08:10/20 18:48	07:27 16:31	08:27 15:43
4	04:32 05:15-05:38/23 22:07	05:21 21:21	06:23 07:27-08:20/53 20:06	07:23 07:52-08:09/17 18:45	07:29 16:29	08:29 15:42
5	04:33 05:16-05:38/22 22:06	05:23 21:19	06:25 07:27-08:21/54 20:03	07:25 07:54-08:14/20 18:43	07:31 16:27	08:31 15:41
6	04:34 05:17-05:38/21 22:06	05:25 21:17	06:27 07:27-08:21/54 20:01	07:27 07:56-08:16/20 18:40	07:33 16:25	08:32 15:41
7	04:36 05:17-05:37/20 22:05	05:27 21:15	06:29 07:27-08:21/54 19:58	07:29 07:58-08:03/5 08:04-08:17/13 18:37	07:35 16:23	08:34 15:40
8	04:37 05:18-05:37/19 22:04	05:29 21:13	06:31 07:27-08:21/54 19:55	07:31 08:30-08:46/16 18:35	07:38 16:21	08:35 15:40
9	04:38 05:19-05:36/17 22:03	05:31 06:24-06:33/9 21:10	06:33 07:27-08:21/54 19:53	07:33 08:28-08:47/19 18:32	07:40 16:19	08:36 15:39
10	04:39 05:20-05:35/15 22:02	05:33 06:21-06:33/12 21:08	06:35 07:27-08:20/53 19:50	07:35 08:28-08:49/21 18:30	07:42 16:17	08:38 15:39
11	04:40 05:21-05:34/13 22:01	05:35 06:20-06:35/15 21:06	06:37 07:27-08:20/53 19:47	07:38 08:26-08:49/23 18:27	07:44 16:15	08:39 15:38
12	04:42 05:23-05:34/11 22:00	05:37 06:19-06:36/17 21:04	06:39 07:28-08:19/51 19:45	07:40 08:26-08:49/23 18:24	07:46 16:13	08:40 15:38
13	04:43 05:25-05:32/7 21:59	05:39 06:19-06:36/17 21:01	06:41 07:28-08:19/51 19:42	07:42 08:25-08:49/24 18:22	07:48 16:11	08:41 15:38
14	04:45 21:58	05:41 06:18-06:36/18 20:59	06:43 07:29-08:18/49 19:39	07:44 08:24-08:49/25 18:19	07:50 16:09	08:42 15:38
15	04:46 21:56	05:43 06:18-06:37/19 20:57	06:45 07:30-08:17/47 19:36	07:46 08:24-08:49/25 18:17	07:53 16:07	08:43 15:38
16	04:48 21:55	05:45 06:18-06:37/19 20:54	06:47 07:32-08:16/44 19:34	07:48 08:25-08:48/23 18:14	07:55 16:06	08:44 15:38
17	04:49 21:54	05:47 06:18-06:35/17 20:52	06:49 07:34-08:14/40 19:31	07:50 08:25-08:47/22 18:12	07:57 16:04	08:45 15:38
18	04:51 21:52	05:49 06:20-06:35/15 20:49	06:51 07:35-08:12/37 19:28	07:52 08:25-08:46/21 18:09	07:59 16:02	08:46 15:38
19	04:52 21:51	05:51 06:22-06:34/12 20:47	06:53 07:39-08:10/31 19:26	07:54 08:26-08:45/19 18:07	08:01 16:01	08:47 15:38
20	04:54 21:49	05:53 06:24-06:33/9 20:44	06:55 07:40-08:08/28 19:23	07:56 08:28-08:44/16 18:04	08:03 15:59	08:48 15:38
21	04:56 21:48	05:55 06:26-06:32/6 20:42	06:57 07:42-08:06/24 19:20	07:59 08:29-08:42/13 18:02	08:05 15:57	08:48 15:39
22	04:57 21:46	05:57 07:48-07:56/8 20:39	06:59 07:45-08:02/17 19:18	08:01 08:32-08:38/6 17:59	08:07 15:56	08:49 15:39
23	04:59 21:44	05:59 07:44-08:00/16 20:37	07:01 07:50-07:57/7 19:15	08:03 17:57	08:09 15:54	08:49 15:40
24	05:01 21:43	06:01 07:41-08:03/22 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	05:03 21:41	06:03 07:38-08:04/26 20:32	07:05 07:53-08:04/11 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	05:04 21:39	06:05 07:36-08:10/34 20:29	07:07 07:51-08:07/16 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	05:06 21:37	06:07 07:35-08:13/38 20:27	07:09 07:49-08:09/20 19:04	07:11 16:47	08:17 15:49	08:51 15:43
28	05:08 21:35	06:09 07:34-08:15/41 20:24	07:11 07:49-08:11/22 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	05:10 21:34	06:11 07:32-08:16/44 20:22	07:13 07:48-08:11/23 18:59	07:16 16:43	08:20 15:47	08:51 15:44
30	05:12 21:32	06:13 07:31-08:18/47 20:19	07:15 07:47-08:11/24 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 07:31-08:19/48 20:16		07:20 16:38		08:51 15:46
Potential sun hours		529	385	324	247	216
Sum of minutes with flicker		241	510	1124	515	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B2 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (102)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January	February	March	April	May	June
1	08:51 15:48	08:15 09:00-09:28/28 16:45	07:11 07:56-08:18/22 17:47	06:49 19:53	05:32 20:55	04:36 21:52
2	08:50 15:49	08:13 09:00-09:29/29 16:47	07:08 07:56-08:16/20 17:49	06:46 19:55	05:30 20:57	04:34 21:54
3	08:50 15:50	08:11 09:00-09:30/30 16:49 08:41-08:45/4	07:05 07:58-08:15/17 17:52	06:43 19:57	05:28 20:59	04:33 21:55
4	08:50 15:52	08:09 09:00-09:30/30 16:52 08:39-08:46/7	07:03 07:59-08:13/14 17:54	06:41 19:59	05:25 21:01	04:32 21:56
5	08:49 15:53	08:07 09:00-09:30/30 16:54 08:37-08:48/11	07:00 08:02-08:09/7 17:56	06:38 07:03-07:04/1 20:01	05:23 05:52-05:54/2 21:04	04:31 21:58
6	08:49 15:55	08:05 09:00-09:30/30 16:56 08:34-08:47/13	06:58 17:58	06:35 07:01-07:07/6 20:03	05:21 05:50-05:55/5 21:06	04:31 21:59
7	08:48 15:56	08:02 09:00-09:30/30 16:58 08:32-08:48/16	06:55 18:00	06:33 06:58-07:08/10 20:05	05:19 05:48-05:56/8 21:08	04:30 22:00
8	08:47 15:58	08:00 09:01-09:30/29 17:01 08:31-08:49/18	06:53 18:02	06:30 06:55-07:08/13 20:07	05:17 05:46-05:57/11 21:10	04:29 22:01
9	08:47 15:59	07:58 09:01-09:29/28 17:03 08:30-08:48/18	06:50 07:16-07:19/3 18:05	06:27 06:53-07:09/16 20:09	05:14 05:44-05:57/13 21:12	04:28 22:02
10	08:46 16:01	07:56 09:02-09:29/27 17:05 08:31-08:48/17	06:47 07:13-07:19/6 18:07	06:25 06:50-07:09/19 20:12	05:12 05:42-05:57/15 21:14	04:28 22:03
11	08:45 16:03	07:54 09:03-09:28/25 17:07 08:32-08:48/16	06:45 07:10-07:19/9 18:09	06:22 06:48-07:09/21 20:14	05:10 05:40-05:57/17 21:16	04:27 22:04
12	08:44 16:04	07:52 09:04-09:27/23 17:10 08:32-08:46/14	06:42 07:08-07:20/12 18:11	06:19 06:45-07:08/23 20:16	05:08 05:38-05:57/19 21:18	04:27 22:05
13	08:43 16:06	07:49 09:05-09:26/21 17:12 08:34-08:45/11	06:39 07:05-07:20/15 18:13	06:17 06:43-07:08/25 20:18	05:06 05:36-05:57/21 21:20	04:26 22:06
14	08:42 16:08	07:47 09:06-09:24/18 17:14 08:36-08:42/6	06:37 07:03-07:19/16 18:15	06:14 06:40-07:06/26 20:20	05:04 05:35-05:57/22 21:22	04:26 22:07
15	08:41 16:10	07:45 09:09-09:22/13 17:16	06:34 07:03-07:18/15 18:17	06:12 06:38-07:05/27 20:22	05:02 05:33-05:57/24 21:23	04:25 22:07
16	08:40 16:12	07:42 17:19	06:31 07:05-07:17/12 18:19	06:09 06:35-07:03/28 20:24	05:00 05:31-05:56/25 21:25	04:25 05:02-05:03/1 22:08
17	08:39 16:13	07:40 17:21	06:29 07:06-07:15/9 18:22	06:07 06:33-06:57/24 20:26	04:58 05:32-05:56/24 21:27	04:25 05:02-05:04/2 22:08
18	08:37 16:15	07:38 08:05-08:13/8 17:23	06:26 18:24	06:04 06:32-06:56/24 20:28	04:57 05:31-05:55/24 21:29	04:25 05:02-05:04/2 22:09
19	08:36 16:17	07:35 08:03-08:16/13 17:25	06:23 18:26	06:01 06:32-06:55/23 20:30	04:55 05:31-05:54/23 21:31	04:25 05:02-05:04/2 22:09
20	08:35 16:19	07:33 08:00-08:17/17 17:28	06:21 18:28	05:59 06:32-06:53/21 20:32	04:53 05:32-05:53/21 21:33	04:25 05:02-05:05/3 22:10
21	08:33 16:21	07:31 07:58-08:18/20 17:30	06:18 18:30	05:56 06:32-06:51/19 20:34	04:51 05:32-05:51/19 21:35	04:25 05:03-05:06/3 22:10
22	08:32 16:23	07:28 07:56-08:19/23 17:32	06:15 18:32	05:54 06:34-06:47/13 20:37	04:50 05:33-05:48/15 21:36	04:25 05:03-05:06/3 22:10
23	08:30 09:08-09:16/8 16:26	07:26 07:56-08:20/24 17:34	06:13 18:34	05:51 06:34-06:45/11 20:39	04:48 05:33-05:47/14 21:38	04:25 05:03-05:05/2 22:10
24	08:29 09:07-09:20/13 16:28	07:23 07:55-08:19/24 17:36	06:10 18:36	05:49 06:37-06:42/5 20:41	04:46 05:34-05:47/13 21:40	04:26 05:03-05:05/2 22:10
25	08:27 09:05-09:22/17 16:30	07:21 07:55-08:19/24 17:39	06:07 18:38	05:47 20:43	04:45 05:35-05:47/12 21:42	04:26 05:04-05:06/2 22:10
26	08:25 09:04-09:23/19 16:32	07:18 07:55-08:20/25 17:41	06:05 18:40	05:44 20:45	04:43 05:37-05:46/9 21:43	04:27 05:04-05:05/1 22:10
27	08:24 09:03-09:25/22 16:34	07:16 07:55-08:19/24 17:43	06:02 18:42	05:42 20:47	04:42 05:38-05:44/6 21:45	04:27 05:05-05:06/1 22:10
28	08:22 09:02-09:26/24 16:36	07:13 07:56-08:19/23 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:10
29	08:20 09:01-09:27/26 16:38		06:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10
30	08:18 09:01-09:28/27 16:41		06:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09
31	08:16 09:01-09:29/28 16:43		06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	184	767	177	355	362	24

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B2 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (102)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December		
1	04:30 22:09	05:15 05:49-06:07/18 21:28	06:17 06:47-07:08/21 20:14	07:17 07:46-07:59/13 18:53	07:22 08:31-08:58/27 16:36 08:01-08:18/17	08:24 15:45		
2	04:31 22:08	05:17 05:51-06:07/16 21:26	06:19 06:49-07:08/19 20:11	07:19 07:48-07:59/11 18:51	07:25 08:30-08:59/29 16:34 08:00-08:17/17	08:26 15:44		
3	04:31 22:08	05:19 05:53-06:07/14 21:24	06:21 06:51-07:07/16 20:09	07:21 07:50-07:58/8 18:48	07:27 08:31-09:00/29 16:31 08:00-08:18/18	08:27 15:43		
4	04:32 22:07	05:21 05:55-06:07/12 21:21	06:23 06:53-07:06/13 20:06	07:23 07:52-07:56/4 18:45	07:29 08:30-09:00/30 16:29 08:02-08:18/16	08:29 15:42		
5	04:33 22:07	05:23 05:56-06:06/10 21:19	06:25 06:54-07:04/10 20:03	07:25 18:43	07:31 08:29-08:59/30 16:27 08:05-08:18/13	08:31 15:41		
6	04:34 22:06	05:25 05:58-06:05/7 21:17	06:27 06:56-07:03/7 20:01	07:27 18:40	07:33 08:30-09:00/30 16:25 08:07-08:17/10	08:32 15:41		
7	04:35 22:05	05:27 06:00-06:04/4 21:15	06:29 06:58-07:00/2 19:58	07:29 18:37	07:35 08:30-09:00/30 16:23 08:09-08:16/7	08:34 15:40		
8	04:37 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 08:31-09:00/29 16:21 08:12-08:16/4	08:35 15:39		
9	04:38 22:03	05:31 21:11	06:33 19:53	07:33 08:35-08:46/11 18:32	07:40 08:30-09:00/30 16:19	08:36 15:39		
10	04:39 22:02	05:33 21:08	06:35 19:50	07:36 08:33-08:49/16 18:30	07:42 08:30-08:59/29 16:17	08:38 15:39		
11	04:40 22:01	05:35 21:06	06:37 19:47	07:38 08:31-08:50/19 18:27	07:44 08:32-08:59/27 16:15	08:39 15:38		
12	04:42 22:00	05:37 21:04	06:39 19:45	07:40 08:30-08:51/21 18:24	07:46 08:32-08:59/27 16:13	08:40 15:38		
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 08:28-08:51/23 18:22	07:48 08:33-08:59/26 16:11	08:41 15:38		
14	04:45 21:58	05:41 20:59	06:43 19:39	07:44 08:27-08:51/24 18:19	07:51 08:34-08:58/24 16:09	08:43 15:38		
15	04:46 21:56	05:43 20:57	06:45 19:36	07:46 08:28-08:52/24 18:17	07:53 08:35-08:56/21 16:07	08:44 15:38		
16	04:47 05:48-05:52/4 21:55	05:45 20:54	06:47 19:34	07:48 08:27-08:52/25 18:14	07:55 08:37-08:56/19 16:06	08:45 15:38		
17	04:49 05:46-05:54/8 21:54	05:47 20:52	06:49 19:31	07:50 08:27-08:51/24 18:12	07:57 08:38-08:55/17 16:04	08:45 15:38		
18	04:51 05:45-05:56/11 21:52	05:49 20:49	06:51 19:28	07:52 08:26-08:50/24 18:09	07:59 08:41-08:54/13 16:02	08:46 15:38		
19	04:52 05:44-05:56/12 21:51	05:51 06:42-06:48/6 20:47	06:53 19:26	07:54 08:27-08:51/24 18:07	08:01 08:43-08:51/8 16:01	08:47 15:38		
20	04:54 05:44-05:58/14 21:49	05:53 06:40-06:50/10 20:44	06:55 19:23	07:57 08:28-08:50/22 18:04	08:03 15:59	08:48 15:38		
21	04:56 05:43-05:58/15 21:48	05:55 06:38-06:52/14 20:42	06:57 19:20	07:59 08:29-08:48/19 18:02	08:05 15:57	08:48 15:39		
22	04:57 05:43-06:01/18 21:46	05:57 06:37-06:56/19 20:39	06:59 19:18	08:01 08:31-08:47/16 17:59	08:07 15:56	08:49 15:39		
23	04:59 05:42-06:02/20 21:44	05:59 06:36-06:58/22 20:37	07:01 19:15	08:03 08:34-08:46/12 17:57	08:09 15:54	08:49 15:40		
24	05:01 05:42-06:04/22 21:43	06:01 06:36-06:59/23 20:34	07:03 19:12	08:05 08:36-08:43/7 17:54	08:11 15:53	08:50 15:40		
25	05:02 05:41-06:05/24 21:41	06:03 06:35-07:00/25 20:32	07:05 19:10	07:07 16:52	08:13 15:52	08:50 15:41		
26	05:04 05:42-06:06/24 21:39	06:05 06:35-06:59/24 20:29	07:07 07:50-07:56/6 19:07	07:09 08:42-08:48/6 16:50	08:15 15:50	08:50 15:42		
27	05:06 05:42-06:07/25 21:37	06:07 06:37-07:05/28 20:27	07:09 07:47-07:58/11 19:04	07:12 08:38-08:52/14 16:47	08:17 15:49	08:51 15:42		
28	05:08 05:42-06:06/24 21:36	06:09 06:39-07:06/27 20:24	07:11 07:46-07:59/13 19:01	07:14 08:35-08:54/19 16:45 08:05-08:12/7	08:19 15:48	08:51 15:43		
29	05:10 05:44-06:07/23 21:34	06:11 06:41-07:07/26 20:22	07:13 07:44-08:00/16 18:59	07:16 08:34-08:56/22 16:43 08:03-08:15/12	08:21 15:47	08:51 15:44		
30	05:12 05:46-06:08/22 21:32	06:13 06:43-07:08/25 20:19	07:15 07:44-08:00/16 18:56	07:18 08:33-08:57/24 16:40 08:02-08:16/14	08:22 15:46	08:51 15:45		
31	05:13 05:48-06:08/20 21:30	06:15 06:45-07:08/23 20:16		07:20 08:31-08:57/26 16:38 08:02-08:17/15		08:51 15:46		
Potential sun hours		529	469	385	324	247	577	0
Sum of minutes with flicker		286	353	150	506	577		

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B22 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (94)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January	February	March	April	May	June
1	08:51 09:38-11:02/84 13:02-13:08/6 15:48 13:26-14:31/65 2 08:50 09:28-11:03/85 15:49 13:27-14:33/66 3 08:50 09:33-11:02/89 15:51 13:27-14:33/66 4 08:50 09:31-11:02/91 15:52 13:27-14:34/67 5 08:49 09:31-11:04/93 15:53 13:28-14:35/67 6 08:49 09:30-11:04/94 15:55 13:28-14:36/68 7 08:48 09:30-11:04/94 15:56 13:28-14:37/69 8 08:47 09:29-11:04/95 15:58 13:28-14:38/70 9 08:47 09:29-11:04/95 15:59 13:28-14:39/71 10 08:46 09:28-11:04/96 16:01 13:29-14:40/71 11 08:45 09:28-11:05/97 16:03 13:29-14:41/72 12 08:44 09:28-11:05/97 16:05 13:29-14:41/72 13 08:43 09:27-11:04/97 16:06 13:29-14:42/73 14 08:42 09:28-11:04/96 16:08 13:30-14:43/73 15 08:41 09:28-11:04/96 16:10 13:29-14:43/74 16 08:40 09:27-11:03/96 16:12 13:30-14:44/74 17 08:39 09:28-11:03/95 16:14 13:30-14:44/74 18 08:37 09:28-11:02/94 16:16 13:31-14:45/74 19 08:36 09:27-11:01/94 16:18 13:31-14:45/74 20 08:35 09:28-11:00/92 09:09-09:13/4 16:20 13:32-14:47/75 21 08:33 09:28-10:47/79 09:07-09:16/9 16:22 13:32-14:47/75 10:48-10:58/10 22 08:32 09:28-10:47/79 09:05-09:17/12 16:24 13:32-14:47/75 23 08:30 09:28-10:47/79 09:03-09:18/15 16:26 13:33-14:47/74 24 08:29 09:29-10:48/79 09:02-09:21/19 16:28 13:33-14:47/74 25 08:27 09:30-10:48/78 09:00-09:21/21 16:30 13:34-14:48/74 26 08:25 09:30-10:48/78 08:58-09:22/24 16:32 13:35-14:49/74 27 08:24 09:31-10:48/77 08:56-09:23/27 16:34 13:36-14:49/73 28 08:22 09:31-10:48/77 08:54-09:24/30 16:36 13:37-14:49/72 29 08:20 09:32-10:48/76 08:52-09:24/32 16:39 13:37-14:49/72 30 08:18 09:33-10:47/74 08:50-09:24/34 16:41 13:39-14:49/70 31 08:17 09:34-10:47/73 08:48-09:25/37 16:43 13:39-14:48/69	08:15 09:35-10:45/70 08:46-09:24/38 16:45 13:40-14:48/68 08:13 09:36-10:45/69 08:44-09:24/40 16:47 13:42-14:47/65 08:11 09:36-10:44/68 08:45-09:24/39 16:50 13:44-14:47/63 08:09 09:37-10:43/66 08:46-09:24/38 16:52 13:46-14:47/61 08:07 09:37-10:41/64 08:47-09:24/37 16:54 13:49-14:46/57 08:05 09:37-10:38/61 08:46-09:23/37 16:56 13:51-14:44/53 08:34-08:36/2 08:03 09:38-10:35/57 08:44-09:24/40 16:59 14:02-14:43/41 08:32-08:38/6 08:00 09:39-10:25/46 08:43-09:26/43 17:01 14:04-14:42/38 08:30-08:39/9 07:58 08:27-08:39/12 14:06-14:40/34 17:03 09:39-10:23/44 08:40-09:26/46 07:56 08:25-08:39/14 14:08-14:37/29 17:05 09:41-10:22/41 08:40-09:27/47 07:54 08:23-09:28/65 14:12-14:32/20 17:08 09:42-10:21/39 07:52 08:20-09:27/67 17:10 09:43-10:18/35 07:49 08:18-09:28/70 17:12 09:45-10:16/31 07:47 08:15-09:28/73 17:14 09:47-10:12/25 07:45 08:13-09:28/75 16:17-16:25/8 17:17 09:51-10:09/18 07:43 08:10-09:27/77 09:54-10:04/10 17:19 16:12-16:29/17 07:40 08:08-09:28/80 16:38-16:49/11 17:21 16:10-16:32/22 07:38 08:06-09:27/81 16:35-16:51/16 17:23 16:07-16:33/26 07:35 08:04-09:27/83 17:25 16:06-16:54/48 07:33 08:04-09:26/82 17:28 16:04-16:55/51 07:31 16:04-16:56/52 17:30 08:05-09:25/80 17:28 16:02-16:56/54 08:05-08:35/30 17:32 07:55-07:57/2 08:36-09:24/48 07:26 07:53-07:59/6 08:06-08:34/28 17:34 16:02-16:57/55 08:37-09:23/46 07:23 07:50-07:59/9 08:19-08:32/13 08:07-08:17/10 17:37 16:01-16:57/56 08:37-09:21/44 07:21 07:48-08:00/12 08:22-08:30/8 17:39 16:00-16:57/57 08:38-09:20/42 07:18 07:45-08:00/15 08:39-09:17/38 17:41 16:00-16:57/57 07:16 07:42-07:59/17 08:39-09:13/34 17:43 15:59-16:56/57 07:13 07:40-08:00/20 08:42-09:03/21 17:45 15:59-16:56/57	07:11 07:37-07:59/22 08:44-09:00/16 17:47 15:59-16:55/56 07:08 07:34-07:57/23 08:47-08:56/9 17:50 15:59-16:54/55 07:06 07:32-07:56/24 17:52 15:59-16:54/55 07:03 07:29-07:52/23 17:54 15:59-16:53/54 07:00 07:26-07:47/21 17:56 15:59-16:52/53 06:58 07:24-07:46/22 17:58 16:00-16:52/52 06:55 07:21-07:44/23 18:00 16:00-16:51/51 06:53 07:19-07:42/23 18:03 16:01-16:50/49 06:50 07:16-07:17/1 16:03-16:49/46 18:05 07:20-07:41/21 06:47 07:13-07:19/6 16:04-16:47/43 18:07 07:20-07:38/18 06:45 07:10-07:19/9 16:05-16:45/40 18:09 07:21-07:35/14 06:42 07:08-07:20/12 07:23-07:33/10 18:11 16:08-16:44/36 06:39 07:05-07:22/17 16:11-16:24/13 18:13 16:27-16:40/13 07:25-07:30/5 06:37 07:02-07:23/21 18:15 06:34 07:00-07:25/25 18:17 06:32 06:57-07:26/29 18:20 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06:50-07:31/41 20:12 06:22 06:48-07:32/44 20:14 06:20 06:45-07:32/47 20:16 06:17 06:43-07:32/49 20:18 06:14 06:40-07:31/51 20:20 06:12 06:38-07:31/53 20:22 06:09 06:35-07:30/55 20:24 06:07 06:33-07:30/57 20:26 06:04 06:30-07:29/59 20:28 06:02 06:28-07:28/60 20:30 05:59 06:26-07:27/61 20:32 05:57 06:23-07:26/63 20:35 05:54 06:21-07:25/64 20:37 05:52 06:45-07:22/37 20:39 06:18-06:43/25 05:49 06:16-06:41/25 20:41 06:46-07:20/34 05:47 06:14-06:40/26 20:43 06:47-07:16/29 05:44 06:11-06:38/27 20:45 06:47-07:08/21 05:42 06:09-06:37/28 20:47 06:49-07:06/17 05:40 06:07-06:35/28 20:49 06:51-07:04/13 05:37 06:05-06:33/28 20:51 06:55-07:01/6 05:35 06:03-06:32/29 20:53 20:19-20:21/2 21:51	05:32 06:00-06:30/30 20:55 20:16-20:23/7 05:30 05:58-06:28/30 20:57 20:15-20:25/10 05:28 05:56-06:20/24 20:59 20:14-20:27/13 05:26 05:54-06:19/25 21:02 20:13-20:29/16 05:23 05:52-06:18/26 21:04 20:12-20:31/19 05:21 05:50-06:18/28 21:06 20:12-20:33/21 05:19 05:48-06:17/29 21:08 20:11-20:33/22 05:17 05:47-06:16/29 21:10 20:11-20:33/22 05:15 05:48-06:01/13 06:02-06:15/13 21:12 20:11-20:33/22 05:13 05:48-06:00/12 05:42-05:43/1 21:14 20:11-20:33/22 06:03-06:13/10 05:11 05:49-05:59/10 05:40-05:44/4 21:16 20:11-20:33/22 06:06-06:09/3 05:08 05:51-05:57/6 05:38-05:44/6 21:18 20:11-20:32/21 05:06 20:12-20:32/20 21:20 05:37-05:46/9 05:04 20:13-20:32/19 21:22 05:35-05:46/11 05:03 20:14-20:31/17 21:23 05:33-05:46/13 05:01 20:14-20:30/16 21:25 05:31-05:45/14 21:27 05:30-05:45/14 05:02 20:14-20:31/17 21:29 05:29-05:45/16 04:55 20:19-20:26/7 21:31 05:30-05:46/16 04:53 05:30-05:45/15 21:33 05:25-05:28/3 04:52 05:24-05:29/5 21:35 05:31-05:45/14 04:50 05:22-05:25/64 21:36 05:32-05:44/12 04:48 05:21-05:31/10 21:38 05:33-05:43/10 04:47 05:19-05:31/12 21:40 05:34-05:41/7 04:45 05:18-05:32/14 21:42 05:36-05:40/4 04:44 05:17-05:33/16 21:43 04:42 05:16-05:33/17 21:45 04:41 05:14-05:33/19 21:46 04:40 05:13-05:33/20 21:48 04:38 05:12-05:33/21 04:37 05:11-05:34/23 21:51	04:36 05:10-05:34/24 21:52 04:35 05:09-05:34/25 21:54 04:34 05:08-05:34/26 21:55 04:33 05:08-05:35/27 21:57 04:32 05:07-05:34/27 21:58 04:31 05:06-05:34/28 21:59 04:30 05:06-05:35/29 22:00 04:29 05:05-05:34/29 22:01 05:04-05:34/30 22:02 04:28 05:04-05:34/30 22:03 04:27 05:04-05:35/31 22:04 04:27 05:03-05:34/31 22:05 21:03-21:09/6 04:26 05:03-05:35/32 22:06 21:02-21:11/9 04:26 05:03-05:35/32 22:07 21:02-21:13/11 04:26 05:03-05:35/32 22:07 21:00-21:14/14 04:25 05:02-05:35/33 22:08 21:00-21:15/15 04:25 05:02-05:35/33 22:09 21:00-21:15/15 04:25 05:02-05:35/33 22:10 21:01-21:16/15 04:25 05:03-05:36/33 22:10 21:01-21:16/15 04:26 05:04-05:37/33 22:10 21:02-21:16/14 04:26 05:05-05:37/32 22:10 21:03-21:16/13 04:28 05:06-05:38/32 22:10 21:03-21:15/12 04:29 05:06-05:38/32 22:10 21:05-21:15/10 04:29 05:07-05:38/31 22:09 21:06-21:14/8

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B22 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (94)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December
1	04:30 05:08-05:39/31 22:09 21:08-21:12/4	05:16 06:01-06:09/8 05:50-05:55/5 21:28 20:22-20:43/21	06:17 06:47-07:31/44 20:14	07:17 07:46-08:00/14 08:03-08:11/8 18:54 16:48-17:22/34	07:23 07:55-08:56/61 13:38-14:07/29 16:36 09:10-09:52/42	08:24 09:10-10:47/97 15:45 13:11-14:23/72
2	04:31 05:08-05:39/31 22:08	05:18 05:59-06:10/11 05:51-05:54/3 21:26 20:21-20:43/22 06:15-06:22/7	06:19 06:49-07:30/41 20:11	07:19 07:48-07:59/11 16:45-17:24/39 18:51 08:00-08:13/13	07:25 07:57-08:08/11 13:35-14:10/35 16:34 09:09-09:53/44 08:10-08:55/45	08:26 09:12-10:47/95 15:44 13:12-14:23/71
3	04:32 05:09-05:39/30 22:08	05:19 05:58-06:11/13 06:13-06:24/11 21:24 20:21-20:44/23	06:21 06:51-07:29/38 20:09	07:21 07:50-07:57/7 16:42-17:25/43 18:48 07:59-08:15/16	07:27 07:58-08:18/21 16:32 13:34-14:12/38 08:00-08:08/8	08:27 09:13-10:47/94 15:43 13:11-14:22/71
4	04:33 05:10-05:40/30 22:07	05:21 05:58-06:26/28 21:22 20:21-20:44/23	06:23 06:53-07:28/35 20:06	07:23 07:52-07:55/3 16:40-17:26/46 18:46 07:57-08:17/20	07:29 09:08-10:06/58 08:14-08:54/40 16:29 13:32-14:13/41 08:02-08:07/5	08:29 09:13-10:48/95 15:42 13:12-14:22/70
5	04:34 05:11-05:40/29 22:07	05:23 05:57-06:27/30 21:19 20:21-20:43/22	06:25 06:55-07:27/32 20:03	07:25 07:57-08:18/21 18:43 16:39-17:26/47	07:31 09:07-10:08/61 08:16-08:54/38 16:27 13:20-14:14/54 08:05-08:07/2	08:31 09:15-10:49/94 15:42 13:13-14:22/69
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7	04:36 05:13-05:41/28 22:05	05:27 06:00-06:27/29 21:15 20:21-20:41/20	06:29 06:58-07:22/24 19:58	07:29 07:58-08:20/22 18:38 16:36-17:27/51	07:36 09:06-10:13/67 08:15-08:54/39 16:23 13:15-14:16/61	08:34 09:17-10:50/93 15:40 13:14-14:22/68
8	04:37 05:14-05:41/27 22:04	05:29 06:02-06:28/26 21:13 20:22-20:40/18	06:31 07:03-07:20/17 19:55 07:00-07:01/1	07:32 08:01-08:22/21 18:35 16:35-17:27/52	07:38 09:07-10:15/68 08:16-08:55/39 16:21 13:14-14:18/64	08:35 09:19-10:51/92 15:40 13:15-14:22/67
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10	04:39 05:16-05:41/25 22:02	05:33 06:06-06:30/24 21:08 20:22-20:35/13	06:35 07:56-07:58/2 18:49-18:55/6 19:50 07:44-07:47/3	06:36 08:05-08:29/24 18:30 16:34-17:28/54	07:42 09:07-10:17/70 08:17-08:56/39 16:17 13:11-14:18/67	08:38 09:21-10:52/88 15:39 13:16-14:22/66
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12	04:42 05:19-05:42/23 22:00	05:37 06:09-06:39/30 21:04 20:25-20:31/6	06:39 07:36-08:06/30 18:44-18:59/15 19:45 07:18-07:26/8	07:40 08:09-08:31/22 09:19-09:32/13 18:25 16:32-17:28/56	07:46 09:04-10:18/74 08:21-08:55/34 16:13 13:09-14:20/71	08:40 09:29-10:53/84 12:52-13:00/8 15:38 13:18-14:22/64
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16	04:48 05:24-05:42/18 21:55	05:45 06:17-06:45/28 20:54 06:56-07:14/18	06:47 07:31-08:09/38 18:38-19:00/22 19:34 07:16-07:29/13	07:48 08:18-08:32/14 09:10-09:50/40 18:14 16:32-17:29/57	07:55 09:03-10:21/78 08:31-08:55/24 16:06 13:08-14:22/74	08:45 09:30-10:54/81 09:34-09:41/7 12:28-12:35/7 15:38 13:20-14:23/63 12:51-13:05/14
17	04:49 05:25-05:41/16 21:54	05:47 06:19-06:46/27 20:52 06:54-07:16/22	06:49 07:31-08:09/38 18:37-19:00/23 19:31 07:18-07:29/11	07:50 08:20-08:31/11 08:52-09:02/10 08:41-08:47/6 18:12 16:32-17:29/57 09:09-09:52/43	07:57 09:03-10:21/78 08:33-08:54/21 16:04 13:07-14:21/74	08:46 09:30-10:55/82 09:35-09:41/6 12:28-12:37/9 15:38 13:20-14:23/63 12:51-13:05/14
18	04:51 05:27-05:42/15 21:52	05:49 06:21-06:47/26 20:49 06:52-07:23/31	06:51 07:30-08:10/40 18:35-18:58/23 19:29 07:20-07:28/8	07:52 08:22-08:30/8 08:38-09:04/26 07:54 08:25-08:29/4 08:37-09:06/29	07:59 09:03-10:22/79 08:36-08:55/19 16:02 13:07-14:21/74	08:46 09:32-10:56/82 12:51-13:07/16 12:28-12:38/10 15:38 13:21-14:23/62 09:36-09:41/5
19	04:52 05:28-05:41/13 21:51	05:51 06:51-07:26/35 20:47 06:52-06:47/25	06:53 07:30-08:10/40 18:35-18:55/20 19:26 07:22-07:27/5	07:54 08:25-08:29/4 08:37-09:06/29 18:07 16:32-17:27/55 09:08-09:55/48	08:01 09:03-10:22/79 08:38-08:53/15 16:01 13:08-14:22/74	08:47 09:35-10:56/81 12:51-13:07/16 12:27-12:38/11 15:38 13:21-14:23/62 09:38-09:41/5
20	04:54 05:30-05:41/11 21:49	05:53 06:50-07:28/38 20:45 06:24-06:49/25	06:55 07:30-08:10/40 18:35-18:52/17 19:23 07:24-07:25/1	07:57 16:34-17:27/53 09:07-09:55/48 18:04 08:36-09:06/30	08:03 09:03-10:22/79 08:40-08:52/12 15:59 13:07-14:22/75	08:48 09:36-10:57/81 12:51-13:07/16 12:27-12:38/11 15:39 13:22-14:23/61 12:28-12:39/11
21	04:56 05:31-05:40/9 21:48	05:55 06:26-07:29/63 20:42	06:57 07:30-08:11/41 19:20 18:35-18:50/15	07:59 16:34-17:26/52 18:02 08:35-09:56/81	08:05 09:03-10:22/79 08:43-08:52/9 15:58 13:07-14:22/75 10:23-10:33/10	08:49 09:37-10:57/81 12:52-13:07/16 15:39 13:23-14:24/61 12:28-12:40/12
22	04:57 05:33-05:40/7 21:46	05:57 06:28-07:31/63 20:40	06:59 07:30-08:11/41 19:18 18:36-18:47/11	08:01 08:35-09:56/81 17:59 16:35-17:25/50	08:07 09:04-10:20/76 08:45-08:49/4 15:56 13:08-14:23/75	08:49 09:38-10:57/81 12:52-13:07/16 15:39 13:23-14:24/61 12:28-12:40/12
23	04:59 05:40-05:54/14 21:45	05:59 06:30-07:31/61 20:37	07:01 07:30-08:10/40 19:15 18:37-18:44/7	08:03 08:34-09:57/83 17:57 16:37-17:24/47	08:09 09:04-10:20/76 08:45-08:49/4 15:55 13:08-14:22/74	08:49 09:38-10:57/81 12:52-13:07/16 15:40 13:24-14:25/61 12:30-12:41/11
24	05:01 20:31-20:35/4 05:36-05:37/1 21:43	06:01 06:32-07:32/60 20:35	07:03 07:32-08:10/38 19:12 18:39-18:42/3	08:05 08:36-09:57/81 17:06-17:21/15 17:55 16:38-17:03/25	08:11 09:05-10:20/76 08:45-08:49/4 15:53 13:08-14:22/74	08:50 09:40-10:58/81 12:54-13:10/16 12:30-12:41/11 15:41 13:24-14:25/61 09:40-09:42/2
25	05:03 20:28-20:37/9 21:41	06:03 06:34-07:33/59 20:32	07:05 07:34-08:09/35 19:10	07:07 07:38-08:57/79 16:09-16:18/9 16:52 15:40-16:01/21	08:13 09:05-10:40/95 15:52 13:08-14:22/74	08:50 09:41-10:58/81 12:54-13:10/16 12:30-12:41/11 15:41 13:24-14:25/61 09:39-09:44/5
26	05:04 20:27-20:39/12 21:39	06:05 06:36-07:33/57 20:29	07:07 07:36-08:09/33 19:07	07:09 07:41-08:58/77 09:23-09:36/13 16:50 15:43-15:58/15	08:15 09:07-10:42/95 15:51 13:08-14:22/74	08:51 09:42-10:59/82 12:55-13:09/14 12:31-12:41/10 15:42 13:24-14:26/62 09:39-09:45/6
27	05:06 20:26-20:41/15 21:37	06:07 06:38-07:32/54 20:27	07:09 07:38-08:08/30 19:04	07:12 07:43-08:57/74 15:49-15:52/3 16:47 09:19-09:39/20	08:17 09:07-10:43/96 15:49 13:10-14:23/73	08:51 09:48-10:59/81 09:39-09:46/7 12:32-12:40/8 15:43 13:25-14:27/62 12:55-13:09/14
28	05:08 20:24-20:41/17 21:36	06:09 06:39-07:32/53 20:24	07:11 07:40-08:06/26 19:02	07:14 07:45-08:57/72 16:45 09:16-09:43/27	08:19 09:08-10:44/96 15:48 13:10-14:23/73	08:51 09:48-10:59/81 09:39-09:46/7 12:32-12:40/8 15:44 13:25-14:28/63 12:56-13:09/13
29	05:10 20:24-20:42/18 21:34	06:11 06:41-07:32/51 20:22	07:13 07:42-08:05/23 18:59	07:16 07:48-08:57/69 16:43 09:14-09:46/32	08:21 09:09-10:45/96 15:47 13:10-14:23/73	08:51 09:48-10:59/81 09:39-09:46/7 12:32-12:40/8 15:45 13:25-14:29/64 12:35-12:39/14
30	05:12 20:23-20:43/20 21:32	06:13 06:43-07:32/49 20:19	07:15 07:44-08:03/19 16:53-17:02/9 18:56 17:08-17:19/11	07:15 07:50-08:57/67 13:48-13:50/2 16:40 09:12-09:48/36	08:22 09:09-10:46/97 15:46 13:11-14:23/72	08:51 09:48-10:59/81 09:39-09:46/7 12:32-12:40/8 15:47 13:26-14:30/64
31	05:14 06:04-06:06/2 05:48-05:56/8 21:30	06:15 06:45-07:31/46 20:17	07:16 07:53-08:57/64 13:40-14:02/22 16:38 09:11-09:50/39	07:16 07:53-08:57/64 13:40-14:02/22 16:38 09:11-09:50/39	08:23 09:09-10:46/97 15:46 13:11-14:23/72	08:51 09:48-10:59/81 09:39-09:46/7 12:32-12:40/8 15:47 13:27-14:31/64
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	768	1519	1292	3066	4991	5001

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B23 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (97)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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	07:10 17:47	06:48 19:53	07:14-07:27/13 20:55	05:32 21:52
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	07:11-07:28/17 20:57	05:30 21:54
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	07:08-07:28/20 20:59	05:28 21:55
4	08:49 15:52	08:09 16:52	07:03 17:54	06:40 19:59	07:06-07:29/23 21:01	05:25 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	07:03-07:29/26 21:03	05:23 21:58
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	07:03-07:29/26 21:05	05:21 21:59
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	07:01-07:29/28 21:07	05:19 22:00
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	07:01-07:28/27 21:09	05:17 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	07:01-07:28/27 21:11	05:14 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	07:00-07:26/26 21:13	05:12 22:03
11	08:45 16:03	07:54 17:07	06:45 18:09	06:22 20:14	07:01-07:26/25 21:15	05:10 22:04
12	08:44 16:04	07:51 17:10	06:42 18:11	06:19 20:16	07:01-07:24/23 21:17	05:08 22:05
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	07:02-07:22/20 21:19	05:06 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20	07:03-07:18/15 21:21	05:04 22:06
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	07:05-07:15/10 21:23	05:02 22:07
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	05:35-05:54/19 22:08
17	08:38 16:13	07:40 17:21	06:29 18:21	06:07 20:26	04:58 21:27	05:36-05:54/18 22:08
18	08:37 16:15	07:38 17:23	06:26 18:24	06:04 20:28	04:57 21:29	05:36-05:53/17 22:09
19	08:36 16:17	07:35 17:25	06:23 18:26	06:01 20:30	04:55 21:31	05:36-05:53/17 22:09
20	08:34 16:19	07:33 17:27	06:21 18:28	05:59 20:32	04:53 21:33	05:37-05:53/16 22:09
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:34	05:37-05:51/14 22:10
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	05:38-05:51/13 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	05:39-05:50/11 22:10
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:46 21:40	05:41-05:49/8 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	05:44-05:46/2 22:10
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:43 22:10
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:42 22:10
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:41 22:10
29	08:20 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:39 22:09
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	04:38 22:09
31	08:16 16:43		06:51 19:51	07:16-07:24/8	04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	0	0	123	326	245	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B23 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (97)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December
1	04:30 22:09	05:15 05:49-06:04/15 21:28	06:17 07:00-07:25/25 20:14	07:17 07:46-08:00/14 18:53	07:22 16:36	08:24 15:45
2	04:31 22:08	05:17 05:51-06:03/12 21:26	06:19 06:59-07:25/26 20:11	07:19 07:48-07:59/11 18:51	07:24 16:34	08:26 15:44
3	04:31 22:08	05:19 05:53-06:03/10 21:23	06:21 06:59-07:26/27 20:08	07:21 07:50-07:58/8 18:48	07:27 16:31	08:27 15:43
4	04:32 22:07	05:21 05:55-06:02/7 21:21	06:23 06:58-07:25/27 20:06	07:23 07:52-07:56/4 18:45	07:29 16:29	08:29 15:42
5	04:33 22:06	05:23 05:56-06:00/4 21:19	06:25 06:57-07:25/28 20:03	07:25 18:43	07:31 16:27	08:30 15:41
6	04:34 22:06	05:25 05:58-05:59/1 21:17	06:27 06:58-07:25/27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	04:36 22:05	05:27 21:15	06:29 06:58-07:24/26 19:58	07:29 18:37	07:35 16:23	08:33 15:40
8	04:37 22:04	05:29 21:13	06:31 07:00-07:23/23 19:55	07:31 18:35	07:38 16:21	08:35 15:39
9	04:38 22:03	05:31 21:10	06:33 07:02-07:22/20 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	04:39 22:02	05:33 21:08	06:35 07:04-07:21/17 19:50	07:35 18:30	07:42 16:17	08:38 15:39
11	04:40 22:01	05:35 21:06	06:37 07:06-07:20/14 19:47	07:37 18:27	07:44 16:15	08:39 15:38
12	04:42 22:00	05:37 21:04	06:39 07:08-07:17/9 19:44	07:40 18:24	07:46 16:13	08:40 15:38
13	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	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	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	07:53 16:07	08:43 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	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	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	04:52 05:52-05:57/5 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	04:54 05:50-06:00/10 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	04:56 05:49-06:00/11 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:48 15:39
22	04:57 05:48-06:02/14 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	04:59 05:47-06:02/15 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:54	08:49 15:40
24	05:01 05:47-06:03/16 21:43	06:01 20:34	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	05:02 05:46-06:03/17 21:41	06:03 20:32	07:05 07:49-07:56/7 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	05:04 05:46-06:04/18 21:39	06:05 20:29	07:07 07:46-07:58/12 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	05:06 05:46-06:04/18 21:37	06:07 20:27	07:09 07:45-07:59/14 19:04	07:11 16:47	08:17 15:49	08:50 15:43
28	05:08 05:45-06:04/19 21:35	06:09 07:06-07:16/10 20:24	07:11 07:44-07:59/15 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	05:10 05:46-06:04/18 21:33	06:11 07:04-07:19/15 20:22	07:13 07:44-08:01/17 18:59	07:16 16:43	08:20 15:47	08:51 15:44
30	05:12 05:46-06:05/19 21:32	06:13 07:02-07:22/20 20:19	07:15 07:44-08:00/16 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	05:13 05:48-06:05/17 21:30	06:15 07:01-07:24/23 20:16		07:20 16:38		08:51 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	197	117	350	37	0	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B24 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (95)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January	February	March	April	May	June
1	08:51 14:05-14:13/8 15:48 14:33-14:50/17	08:15 08:45-09:19/34 15:28-15:52/24 16:45 16:02-16:10/8	07:11 07:37-07:58/21 17:48 17:13-17:18/5	06:49 07:14-07:50/36 19:53	05:33 06:00-06:14/14 20:55	04:36 05:25-05:59/34 21:52
2	08:50 14:07-14:11/4 15:49 14:33-14:50/17	08:13 08:43-09:19/36 15:27-15:54/27 16:47 16:02-16:13/11	07:08 07:34-07:56/22 17:50 17:09-17:20/11	06:46 07:11-07:48/37 19:55	05:30 05:58-06:14/16 20:57	04:35 05:25-05:59/34 21:54
3	08:50 14:34-14:51/17 15:51	08:11 08:42-09:19/37 15:26-15:56/30 16:50 16:02-16:15/13	07:06 07:32-07:55/23 17:52 17:08-17:23/15	06:43 07:09-07:36/27 19:57	05:28 05:58-06:13/15 20:59	04:34 05:24-06:00/36 21:55
4	08:50 14:34-14:50/16 15:52	08:09 08:42-09:19/37 15:25-15:57/32 16:52 16:02-16:18/16	07:03 07:29-07:54/25 17:54 17:06-17:25/19	06:41 07:08-07:35/27 19:59	05:26 05:59-06:13/14 21:01	04:33 05:25-06:01/36 21:56
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Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	696	1617	862	429	826	1563

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B24 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (95)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December
1	04:30 05:29-06:08/39 22:09 21:17-21:28/11	05:16 20:25-20:48/23 21:28 20:14	06:17 07:09-07:23/14 20:14	07:17 08:01-08:10/9 18:54 17:44-18:02/18	07:22 08:13-08:37/24 14:52-15:31/39 16:36 15:35-15:47/12	08:24 09:04-09:06/2 15:45
2	04:31 05:29-06:07/38 22:08 21:17-21:28/11	05:18 20:25-20:48/23 21:26 20:11	06:19 07:07-07:24/17 20:11	07:19 07:59-08:15/16 18:51 17:43-18:03/20	07:25 08:12-08:42/30 14:52-15:30/38 16:34 15:33-15:48/15	08:26 14:25-14:31/6 15:44
3	04:32 05:29-06:07/38 22:08 21:18-21:28/10	05:20 20:26-20:48/22 21:24 20:09	06:21 07:06-07:25/19 20:09	07:21 07:57-08:17/20 18:48 17:42-18:03/21	07:27 08:12-08:45/33 14:53-15:30/37 16:32 15:32-15:48/16	08:27 14:24-14:33/9 15:43
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Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1080	392	644	1326	1357	883

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B25 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (96)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January		February		March		April		May		June	
1	08:51	14:49-15:05/16	08:15	08:45-08:47/2	07:11		06:49		05:33	20:01-20:20/19	04:36	20:16-20:53/37
	15:48	12:21-13:07/46	16:45		17:47		19:53		20:55		21:52	
2	08:50	14:49-15:06/17	08:13	08:43-08:48/5	07:08		06:46		05:30	20:01-20:20/19	04:35	20:16-20:53/37
	15:49	12:20-13:07/47	16:47		17:50		19:55		20:57		21:54	
3	08:50	14:50-15:08/18	08:11	08:41-08:49/8	07:06		06:43		05:28	20:01-20:20/19	04:34	20:16-20:54/38
	15:51	12:21-13:08/47	16:50		17:52		19:57		20:59		21:55	
4	08:50	14:49-15:09/20	08:09	08:39-08:50/11	07:03		06:41		05:26	20:02-20:20/18	04:33	20:16-20:54/38
	15:52	12:22-13:08/46	16:52		17:54		19:59		21:01		21:56	
5	08:49	14:49-15:10/21	08:07	08:37-08:51/14	07:00		06:38		05:23	20:02-20:19/17	04:32	20:16-20:55/39
	15:53	12:22-13:08/46	16:54	16:02-16:13/11	17:56		20:01		21:03	05:52-05:53/1	21:58	
6	08:49	14:51-15:11/20	08:05	08:34-08:50/16	06:58		06:35		05:21	20:03-20:18/15	04:31	20:16-20:55/39
	15:55	12:23-13:10/47	16:56	16:00-16:16/16	17:58		20:03		21:06	05:50-05:55/5	21:59	
7	08:48	14:51-15:12/21	08:02	08:32-08:51/19	06:55		06:33		05:19	20:04-20:17/13	04:30	20:16-20:55/39
	15:56	12:23-13:10/47	16:59	15:58-16:19/21	18:00		20:05		21:08	05:48-05:55/7	22:00	
8	08:47	14:51-15:12/21	08:00	08:30-08:51/21	06:53		06:30		05:17	20:05-20:16/11	04:29	20:17-20:56/39
	15:58	12:24-13:10/46	17:01	15:56-16:20/24	18:03		20:07		21:10	05:46-05:56/10	22:01	
9	08:47	14:51-15:13/22	07:58	08:27-08:50/23	06:50		06:27		05:15	20:08-20:13/5	04:29	20:16-20:55/39
	15:59	12:24-13:10/46	17:03	15:56-16:21/25	18:05		20:10		21:12	05:44-05:56/12	22:02	
10	08:46	14:52-15:13/21	07:56	08:25-08:49/24	06:47		06:25		05:13	05:42-05:56/14	04:28	20:17-20:56/39
	16:01	12:25-13:11/46	17:05	15:55-16:23/28	18:07		20:12		21:14		22:03	
11	08:45	14:52-15:14/22	07:54	08:24-08:48/24	06:45		06:22		05:11	05:40-05:56/16	04:27	20:16-20:56/40
	16:03	12:25-13:11/46	17:08	15:54-16:23/29	18:09		20:14		21:16		22:04	
12	08:44	14:52-15:13/21	07:52	08:24-08:44/20	06:42		06:20	06:45-06:53/8	05:08	05:39-05:56/17	04:27	20:17-20:56/39
	16:05	12:25-13:11/46	17:10	15:54-16:24/30	18:11		20:16		21:18		22:05	
13	08:43	14:53-15:14/21	07:49	08:25-08:41/16	06:39	07:05-07:09/4	06:17	06:43-06:56/13	05:06	05:40-05:57/17	04:26	20:17-20:57/40
	16:06	12:26-13:11/45	17:12	15:54-16:25/31	18:13		20:18		21:19		22:06	
14	08:42	14:54-15:15/21	07:47	08:25-08:37/12	06:37	07:02-07:09/7	06:14	06:40-06:57/17	05:04	05:40-05:56/16	04:26	20:18-20:57/39
	16:08	12:27-13:12/45	17:14	15:53-16:25/32	18:15		20:20		21:21		22:06	
15	08:41	14:53-15:14/21	07:45	08:27-08:36/9	06:34	07:00-07:10/10	06:12	06:38-06:58/20	05:03	05:40-05:55/15	04:26	20:17-20:57/40
	16:10	12:27-13:11/44	17:17	15:53-16:25/32	18:17		20:22		21:23		22:07	
16	08:40	14:55-15:15/20	07:42	15:52-16:25/33	06:31	06:57-07:10/13	06:09	06:36-06:58/22	05:01	05:41-05:54/13	04:26	20:17-20:57/40
	16:12	12:28-13:12/44	17:19		18:20		20:24		21:25		22:08	
17	08:39	14:55-15:14/19	07:40	15:53-16:25/32	06:29	06:54-07:09/15	06:07	06:36-06:59/23	04:59	05:42-05:54/12	04:25	20:18-20:57/39
	16:14	12:28-13:11/43	17:21		18:22		20:26		21:27	20:28-20:39/11	22:08	
18	08:37	14:56-15:14/18	07:38	15:53-16:24/31	06:26	06:51-07:08/17	06:04	06:34-06:59/25	04:57	05:43-05:53/10	04:25	20:18-20:58/40
	16:16	12:30-13:12/42	17:23		18:24		20:28		21:29	20:25-20:42/17	22:09	
19	08:36	14:57-15:14/17	07:35	15:53-16:25/32	06:23	06:50-07:08/18	06:02	06:34-07:00/26	04:55	05:45-05:52/7	04:25	20:18-20:58/40
	16:18	12:30-13:11/41	17:25		18:26		20:30		21:31	20:23-20:43/20	22:09	
20	08:35	14:58-15:13/15	07:33	15:53-16:24/31	06:21	06:50-07:06/16	05:59	06:34-07:00/26	04:53	20:22-20:45/23	04:25	20:18-20:58/40
	16:20	12:30-13:11/41	17:28		18:28		20:32		21:33		22:09	
21	08:33	15:00-15:12/12	07:31	15:55-16:23/28	06:18	06:43-06:46/3	05:57	06:33-06:59/26	04:52	20:21-20:46/25	04:25	20:19-20:59/40
	16:22	12:32-13:11/39	17:30		18:30	06:50-07:03/13	20:34		21:35		22:10	
22	08:32	15:01-15:10/9	07:28	15:55-16:22/27	06:15	06:41-06:47/6	05:54	06:34-06:59/25	04:50	20:20-20:47/27	04:26	20:19-20:59/40
	16:24	12:33-13:11/38	17:32		18:32	06:52-07:02/10	20:37		21:36		22:10	
23	08:30	15:05-15:07/2	07:26	15:56-16:20/24	06:13	06:38-06:48/10	05:52	06:33-06:58/25	04:48	20:20-20:49/29	04:26	20:19-20:59/40
	16:26	12:34-13:10/36	17:34		18:34	06:55-06:58/3	20:39		21:38		22:10	
24	08:29	12:35-13:09/34	07:23	15:58-16:19/21	06:10	06:35-06:47/12	05:49	06:34-06:57/23	04:47	20:19-20:49/30	04:26	20:19-20:59/40
	16:28		17:37		18:36		20:41		21:40		22:10	
25	08:27	12:36-13:08/32	07:21	15:59-16:17/18	06:07	06:33-06:48/15	05:47	20:07-20:12/5	04:45	20:18-20:50/32	04:26	20:20-21:00/40
	16:30		17:39		18:38		20:43	06:34-06:57/23	21:41		22:10	
26	08:25	12:38-13:08/30	07:18	16:03-16:14/11	06:05	06:31-06:47/16	05:44	20:04-20:13/9	04:44	20:18-20:51/33	04:27	20:20-20:59/39
	16:32		17:41		18:40		20:45	06:34-06:55/21	21:43		22:10	
27	08:24	12:40-13:07/27	07:16		06:02	06:31-06:46/15	05:42	20:03-20:15/12	04:42	20:17-20:51/34	04:27	20:20-21:00/40
	16:34		17:43		18:43		20:47	06:36-06:54/18	21:45		22:10	
28	08:22	12:42-13:06/24	07:13		05:59	06:33-06:45/12	05:40	20:03-20:18/15	04:41	20:17-20:51/34	04:28	20:20-21:00/40
	16:36		17:45		18:45		20:49	06:37-06:53/16	21:46		22:10	
29	08:20	12:45-13:03/18			06:57	07:34-07:43/9	05:37	20:01-20:19/18	04:40	20:17-20:52/35	04:29	20:21-21:00/39
	16:39				19:47		20:51	06:39-06:51/12	21:48		22:09	
30	08:18	12:47-12:59/12			06:54		05:35	20:01-20:20/19	04:38	20:16-20:52/36	04:29	20:21-21:01/40
	16:41				19:49		20:53	06:44-06:46/2	21:49		22:09	
31	08:16				06:51				04:37	20:16-20:53/37		
	16:43				19:51				21:51			
Potential sun hours	235		266		366		426		508		528	
Sum of minutes with flicker	1606		791		224		449		731		1179	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B25 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (96)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July			August			September			October			November			December		
1	04:30	20:21-21:00/39		05:16	05:50-06:07/17		06:17			07:17	07:46-07:48/2		07:22	07:55-08:19/24		08:24	14:33-14:55/22	
	22:09			21:28			20:14			18:54			16:36	15:25-15:52/27		15:45	12:08-12:53/45	
2	04:31	20:21-21:00/39		05:18	05:51-06:07/16		06:19			07:19			07:25	07:57-08:19/22		08:26	14:34-14:55/21	
	22:08			21:26			20:11			18:51			16:34	15:25-15:51/26		15:44	12:07-12:53/46	
3	04:32	20:21-21:01/40		05:19	05:53-06:07/14		06:21			07:21			07:27	08:00-08:20/20		08:27	14:34-14:56/22	
	22:08			21:24			20:09			18:48			16:32	15:26-15:49/23		15:43	12:07-12:54/47	
4	04:33	20:22-21:01/39		05:21	20:17-20:25/8		06:23			07:23			07:29	08:02-08:20/18		08:29	14:35-14:56/21	
	22:07			21:21	05:55-06:06/11		20:06			18:46			16:29	15:28-15:48/20		15:42	12:08-12:54/46	
5	04:34	20:22-21:01/39		05:23	20:14-20:26/12		06:25			07:25			07:31	08:04-08:20/16		08:31	14:36-14:57/21	
	22:06			21:19	05:57-06:06/9		20:03			18:43			16:27	15:30-15:46/16		15:42	12:08-12:55/47	
6	04:35	20:23-21:01/38		05:25	20:13-20:27/14		06:27			07:27			07:33	08:07-08:21/14		08:32	14:37-14:58/21	
	22:06			21:17	05:58-06:04/6		20:01			18:40			16:25	15:33-15:43/10		15:41	12:09-12:56/47	
7	04:36	20:23-21:01/38		05:27	20:12-20:28/16		06:29			07:29			07:35	08:09-08:20/11		08:34	14:37-14:57/20	
	22:05			21:15	06:00-06:04/4		19:58			18:38			16:23			15:40	12:09-12:55/46	
8	04:37	20:23-21:01/38		05:29	20:11-20:29/18		06:31			07:31			07:38	08:12-08:20/8		08:35	14:38-14:58/20	
	22:04			21:13			19:55			18:35			16:21			15:40	12:10-12:56/46	
9	04:38	20:23-21:01/38		05:31	20:11-20:29/18		06:33			07:34			07:40	08:14-08:19/5		08:36	14:38-14:56/18	
	22:03			21:11			19:53			18:32			16:19			15:39	12:10-12:56/46	
10	04:39	20:23-21:01/38		05:33	20:10-20:29/19		06:35			07:36			07:42	08:16-08:18/2		08:38	14:39-14:56/17	
	22:02			21:08			19:50			18:30			16:17			15:39	12:11-12:57/46	
11	04:41	20:24-21:01/37		05:35	20:10-20:29/19		06:37			07:38			07:44			08:39	14:39-14:56/17	
	22:01			21:06			19:47			18:27			16:15			15:39	12:11-12:57/46	
12	04:42	20:25-21:01/36		05:37	20:10-20:29/19		06:39			07:40			07:46	12:19-12:31/12		08:40	14:39-14:55/16	
	22:00			21:04			19:45			18:25			16:13			15:38	12:11-12:57/46	
13	04:43	20:25-21:01/36		05:39	20:10-20:29/19		06:41			07:42			07:48	12:16-12:35/19		08:41	14:41-14:55/14	
	21:59			21:01	06:49-06:56/7		19:42			18:22			16:11			15:38	12:12-12:59/47	
14	04:45	20:25-21:01/36		05:41	20:10-20:27/17		06:43	07:24-07:33/9		07:44			07:51	12:14-12:37/23		08:42	14:41-14:55/14	
	21:58			20:59	06:46-06:59/13		19:39			18:19			16:09			15:38	12:12-12:59/47	
15	04:46	20:25-21:00/35		05:43	20:10-20:25/15		06:45	07:22-07:34/12		07:46	16:38-16:41/3		07:53	12:12-12:39/27		08:43	14:42-14:55/13	
	21:56			20:57	06:44-07:01/17		19:37			18:17			16:08			15:38	12:13-12:59/46	
16	04:48	20:26-21:00/34		05:45	20:11-20:23/12		06:47	07:21-07:35/14		07:48	16:33-16:48/15		07:55	12:11-12:41/30		08:44	14:43-14:54/11	
	21:55			20:54	06:43-07:02/19		19:34			18:14			16:06			15:38	12:13-13:00/47	
17	04:49	20:27-21:00/33		05:47	20:11-20:19/8		06:49	07:20-07:35/15		07:50	16:30-16:50/20		07:57	12:10-12:42/32		08:45	14:43-14:55/12	
	21:54			20:52	06:42-07:03/21		19:31			18:12			16:04			15:38	12:14-13:00/46	
18	04:51	20:28-21:00/32		05:49	20:13-20:17/4		06:51	07:20-07:35/15		07:52	16:28-16:51/23		07:59	12:09-12:43/34		08:46	14:44-14:55/11	
	21:52			20:49	06:40-07:03/23		19:28			18:09			16:02			15:38	12:14-13:01/47	
19	04:53	20:28-20:59/31		05:51	06:39-07:03/24		06:53	07:22-07:35/13		07:54	16:26-16:52/26		08:01	14:40-14:42/2		08:47	14:44-14:54/10	
	21:51			20:47			19:26			18:07			16:01	12:09-12:45/36		15:38	12:14-13:00/46	
20	04:54	20:29-20:59/30		05:53	06:39-07:04/25		06:55	07:24-07:34/10		07:57	16:26-16:54/28		08:03	14:37-14:45/8		08:48	14:45-14:55/10	
	21:49			20:44			19:23			18:04			15:59	12:08-12:46/38		15:39	12:15-13:01/46	
21	04:56	20:29-20:57/28		05:55	06:38-07:04/26		06:57	07:26-07:33/7		07:59	16:25-16:54/29		08:05	14:35-14:47/12		08:48	14:45-14:55/10	
	21:48			20:42			19:20	07:38-07:47/9		18:02			15:58	12:07-12:46/39		15:39	12:15-13:01/46	
22	04:57	20:31-20:57/26		05:57	06:38-07:04/26		06:59	07:28-07:32/4		08:01	16:23-16:54/31		08:07	14:34-14:49/15		08:49	14:46-14:56/10	
	21:46			20:40			19:18	07:36-07:48/12		17:59			15:56	12:07-12:48/41		15:39	12:16-13:02/46	
23	04:59	20:31-20:56/25		05:59	06:38-07:04/26		07:01	07:35-07:50/15		08:03	16:24-16:55/31		08:09	14:34-14:51/17		08:49	14:46-14:56/10	
	21:44			20:37			19:15			17:57			15:55	12:07-12:48/41		15:40	12:16-13:02/46	
24	05:01	05:56-06:00/4		06:01	06:38-07:03/25		07:03	07:34-07:51/17		08:05	16:23-16:55/32		08:11	14:33-14:51/18		08:50	14:47-14:57/10	
	21:43	20:33-20:55/22		20:34			19:12			17:55			15:53	12:07-12:49/42		15:41	12:17-13:03/46	
25	05:03	05:54-06:03/9		06:03	06:38-07:03/25		07:05	07:34-07:52/18		07:07	15:22-15:55/33		08:13	14:33-14:52/19		08:50	14:47-14:58/11	
	21:41	20:34-20:53/19		20:32			19:10			16:52			15:52	12:06-12:49/43		15:41	12:17-13:04/47	
26	05:05	05:52-06:04/12		06:05	06:38-07:02/24		07:07	07:36-07:52/16		07:09	07:59-08:04/5		08:15	14:33-14:53/20		08:50	14:47-14:58/11	
	21:39	20:37-20:51/14		20:29			19:07			16:50	15:22-15:54/32		15:51	12:06-12:50/44		15:42	12:18-13:04/46	
27	05:06	05:52-06:05/13		06:07	06:38-07:00/22		07:09	07:38-07:52/14		07:12	07:56-08:06/10		08:17	14:33-14:53/20		08:51	14:47-14:59/12	
	21:37	20:40-20:48/8		20:27			19:04			16:47	15:22-15:55/33		15:49	12:06-12:50/44		15:43	12:18-13:04/46	
28	05:08	05:52-06:06/14		06:09	06:39-06:59/20		07:11	07:40-07:51/11		07:14	07:54-08:07/13		08:19	14:33-14:54/21		15:44	14:48-15:00/12	
	21:35			20:24			19:02			16:45	15:22-15:54/32		15:48	12:07-12:52/45		15:44	12:19-13:05/46	
29	05:10	05:50-06:06/16		06:11	06:41-06:58/17		07:13	07:42-07:51/9		07:16	07:54-08:11/17		08:20	14:34-14:55/21		08:51	14:48-15:01/13	
	21:34			20:22			18:59			16:43	15:23-15:54/31		15:47	12:07-12:52/45		15:45	12:19-13:06/47	
30	05:12	05:50-06:06/16		06:13	06:43-06:56/13		07:15	07:44-07:49/5		07:18	07:53-08:15/22		08:22	14:34-14:56/22		08:51	14:49-15:03/14	
	21:32			20:19			18:56			16:40	15:23-15:53/30		15:46	12:07-12:53/46		15:46	12:20-13:06/46	
31	05:14	05:50-06:07/17		06:15	06:45-06:52/7					07:20	07:52-08:17/25					08:51	14:48-15:03/15	
	21:30			20:16						16:38	15:23-15:52/29					15:47	12:19-13:06/47	
Potential sun hours	529			469			384			324			248			216		
Sum of minutes with flicker	969			675			225			552			1138			1894		

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B3 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (103)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 15:35-15:56/21 16:45	07:10 16:23-16:53/30 17:47	06:48 19:53	05:32 20:55	04:35 21:52
2	08:50 15:49	08:12 15:36-15:56/20 16:47	07:08 16:22-16:52/30 17:49	06:46 19:55	05:30 20:57	04:34 21:54
3	08:50 15:50	08:11 15:37-15:55/18 16:49	07:05 16:23-16:51/28 17:51	06:43 19:57	05:27 20:59	04:33 21:55
4	08:50 15:51	08:09 15:38-15:55/17 16:51	07:03 16:24-16:50/26 17:54	06:40 19:59	05:25 21:01	04:32 21:56
5	08:49 15:53	08:06 15:39-15:53/14 16:54	07:00 16:24-16:49/25 17:56	06:38 20:01	05:23 21:03	04:31 21:58
6	08:49 15:54	08:04 15:41-15:52/11 16:56	06:58 16:25-16:47/22 17:58	06:35 20:03	05:21 21:05	04:30 21:59
7	08:48 15:56	08:02 15:45-15:49/4 16:58	06:55 16:28-16:46/18 18:00	06:32 20:05	05:19 21:07	04:29 22:00
8	08:47 15:57	08:00 17:00	06:52 16:30-16:43/13 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 17:11-17:36/25 18:04	06:27 20:09	05:14 21:11	04:28 22:02
10	08:46 16:01	07:56 17:05	06:47 17:11-17:38/27 18:07	06:25 20:11	05:12 21:13	04:27 22:03
11	08:45 16:02	07:54 17:07	06:44 17:10-17:40/30 18:09	06:22 20:13	05:10 21:15	04:27 22:04
12	08:44 16:04	07:51 17:09	06:42 17:09-17:40/31 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 17:09-17:40/31 18:13	06:17 20:18	05:06 21:19	04:26 22:06
14	08:42 16:08	07:47 17:14	06:37 17:09-17:41/32 18:15	06:14 20:20	05:04 21:21	04:25 22:06
15	08:41 16:09	07:45 17:16	06:34 17:09-17:41/32 18:17	06:12 20:22	05:02 21:23	04:25 22:07
16	08:40 16:11	07:42 17:18	06:31 17:09-17:40/31 18:19	06:09 20:24	05:00 21:25	04:25 22:08
17	08:38 16:13	07:40 16:49-16:50/1 17:21	06:29 17:11-17:40/29 18:21	06:06 20:26	04:58 21:27	04:25 22:08
18	08:37 16:15	07:38 16:31-16:52/21 17:23	06:26 17:12-17:39/27 18:23	06:04 20:28	04:56 21:29	04:25 22:09
19	08:36 16:17	07:35 16:29-16:54/25 17:25	06:23 17:13-17:38/25 18:26	06:01 20:30	04:55 21:31	04:25 22:09
20	08:35 15:38-15:40/2 16:19	07:33 16:27-16:57/30 17:27	06:21 17:19-17:38/19 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 16:25-16:59/34 17:30	06:18 17:19-17:36/17 18:30	05:56 20:34	04:51 21:34	04:25 22:10
22	08:32 15:36-15:46/10 16:23	07:28 16:25-17:01/36 17:32	06:15 17:21-17:33/12 18:32	05:54 20:36	04:49 21:36	04:25 22:10
23	08:30 15:35-15:48/13 16:25	07:25 16:24-17:01/37 17:34	06:12 17:26-17:27/1 18:34	05:51 20:38	04:48 21:38	04:25 22:10
24	08:29 15:35-15:50/15 16:27	07:23 16:24-17:01/37 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10
25	08:27 15:34-15:52/18 16:30	07:20 16:23-17:00/37 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10
26	08:25 15:34-15:54/20 16:32	07:18 16:23-16:58/35 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10
27	08:24 15:34-15:54/20 16:34	07:15 16:22-16:57/35 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 15:34-15:55/21 16:36	07:13 16:22-16:54/32 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10
29	08:20 15:34-15:55/21 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09
30	08:18 15:34-15:55/21 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09
31	08:16 15:35-15:56/21 16:43		06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	187	473	621	0	0	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B3 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (103)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July	August	September	October	November	December
1	04:29 22:09	05:15 21:28	06:17 20:14	07:17 18:53	17:48-18:20/32 16:36	07:22 15:45
2	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	17:48-18:18/30 16:33	07:24 15:44
3	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	17:48-18:17/29 16:31	07:27 15:43
4	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	17:49-18:15/26 16:29	07:29 15:42
5	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:43	17:09-17:18/9 17:49-18:12/23	07:31 16:27
6	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	17:05-17:21/16 17:50-18:09/19	07:33 16:25
7	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	17:02-17:22/20 17:51-18:06/15	07:35 16:23
8	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	17:00-17:24/24 17:53-18:03/10	07:37 16:21
9	04:38 22:03	05:31 21:10	06:33 19:52	07:33 18:32	16:59-17:24/25 16:19	07:40 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	16:57-17:25/28 16:17	07:42 15:38
11	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	16:56-17:25/29 16:15	07:44 15:38
12	04:42 22:00	05:37 21:04	06:39 19:44	07:40 18:24	16:56-17:26/30 16:13	07:46 15:38
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	16:55-17:26/31 16:11	07:48 15:38
14	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	16:55-17:28/33 16:09	07:50 15:37
15	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	16:54-17:30/36 16:07	07:53 15:37
16	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	16:54-17:31/37 16:05	07:55 15:37
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	16:55-17:32/37 16:04	07:57 15:37
18	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	16:55-17:32/37 16:02	07:59 15:38
19	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	16:55-17:32/37 16:00	08:01 15:38
20	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	16:55-17:31/36 15:59	08:03 15:38
21	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	16:57-17:29/32 15:57	08:05 15:38
22	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	16:58-17:26/28 15:56	08:07 15:39
23	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	16:59-17:23/24 15:54	08:09 15:39
24	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	17:17-17:22/5 17:02-17:16/14	08:11 15:53
25	05:02 21:41	06:03 20:32	07:05 19:09	07:07 16:52	16:06-16:11/5 15:51	08:13 15:41
26	05:04 21:39	06:05 20:29	07:07 19:07	07:09 16:49	17:53-18:22/29 15:50	08:15 15:41
27	05:06 21:37	06:07 20:27	07:09 19:04	07:11 16:47	17:52-18:22/30 15:49	08:17 15:42
28	05:08 21:35	06:09 20:24	07:11 19:01	07:14 16:45	17:50-18:22/32 15:48	08:19 15:43
29	05:10 21:33	06:11 20:21	07:13 18:59	07:16 16:42	17:49-18:21/32 15:47	08:20 15:44
30	05:11 21:32	06:13 20:19	07:15 18:56	07:18 16:40	17:49-18:21/32 15:46	08:22 15:45
31	05:13 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	0	0	250	757	296	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B4 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (104)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	January		February		March		April		May		June	
1	08:51	10:28-10:40/12	08:15		07:11		06:49		05:32		04:36	05:29-06:03/34
	15:48		16:45		17:47		19:53		20:55		21:52	
2	08:50	10:30-10:40/10	08:13		07:08		06:46		05:30		04:35	05:29-06:02/33
	15:49	09:30-09:31/1	16:47		17:50		19:55		20:57		21:54	
3	08:50	10:31-10:39/8	08:11		07:05		06:43		05:28		04:33	05:29-06:02/33
	15:50	09:29-09:32/3	16:49		17:52		19:57		20:59		21:55	
4	08:50	10:32-10:38/6	08:09		07:03		06:41		05:25		04:32	05:28-06:02/34
	15:52	09:28-09:32/4	16:52		17:54		19:59		21:01		21:56	
5	08:49	09:28-09:34/6	08:07		07:00		06:38		05:23		04:31	05:28-06:03/35
	15:53		16:54		17:56		20:01		21:03		21:58	
6	08:49	09:27-09:35/8	08:05		06:58		06:35		05:21		04:31	05:28-06:04/36
	15:55		16:56		17:58		20:03		21:06		21:59	
7	08:48	09:26-09:36/10	08:02		06:55		06:33		05:19		04:30	05:27-06:04/37
	15:56		16:58		18:00		20:05		21:08		22:00	
8	08:47	09:25-09:37/12	08:00		06:53	07:18-07:24/6	06:30		05:17	05:48-05:55/7	04:29	05:27-06:05/38
	15:58		17:01		18:02		20:07		21:10		22:01	
9	08:47	09:24-09:38/14	07:58		06:50	07:16-07:27/11	06:27	06:53-07:01/8	05:15	05:45-05:58/13	04:28	05:27-06:05/38
	15:59		17:03		18:05		20:09		21:12		22:02	
10	08:46	09:23-09:39/16	07:56		06:47	07:13-07:28/15	06:25	06:50-07:03/13	05:12	05:43-05:59/16	04:28	05:27-06:06/39
	16:01		17:05		18:07		20:12		21:14		22:03	
11	08:45	09:22-09:40/18	07:54	08:23-08:25/2	06:45	07:10-07:28/18	06:22	06:48-07:04/16	05:10	05:42-06:00/18	04:27	05:26-06:06/40
	16:03		17:07		18:09		20:14		21:16		22:04	
12	08:44	09:21-09:41/20	07:52	08:20-08:25/5	06:42	07:08-07:29/21	06:20	06:45-07:04/19	05:08	05:40-06:01/21	04:27	05:26-06:06/40
	16:04		17:10		18:11		20:16		21:18		22:05	
13	08:43	09:20-09:41/21	07:49	08:18-08:26/8	06:39	07:05-07:29/24	06:17	06:43-07:05/22	05:06	05:39-06:02/23	04:26	05:27-06:07/40
	16:06		17:12		18:13		20:18		21:20		22:06	
14	08:42	09:20-09:42/22	07:47	08:15-08:26/11	06:37	07:02-07:28/26	06:14	06:40-07:05/25	05:04	05:40-06:03/23	04:26	05:26-06:07/41
	16:08		17:14		18:15		20:20		21:21		22:06	
15	08:41	09:21-09:43/22	07:45	08:13-08:27/14	06:34	06:59-07:27/28	06:12	06:38-07:05/27	05:02	05:37-06:03/26	04:25	05:26-06:07/41
	16:10		17:16		18:17		20:22		21:23		22:07	
16	08:40	09:20-09:43/23	07:42	08:10-08:26/16	06:31	06:57-07:27/30	06:09	06:35-07:05/30	05:00	05:35-06:03/28	04:25	05:26-06:08/42
	16:12		17:19		18:19		20:24		21:25		22:08	
17	08:39	09:21-09:43/22	07:40	08:11-08:26/15	06:29	06:54-07:26/32	06:07	06:33-07:05/32	04:59	05:34-06:04/30	04:25	05:27-06:08/41
	16:14		17:21		18:22		20:26		21:27		22:08	
18	08:37	09:21-09:43/22	07:38	08:11-08:25/14	06:26	06:51-07:24/33	06:04	06:31-07:03/32	04:57	05:33-06:04/31	04:25	05:27-06:08/41
	16:15		17:23		18:24		20:28		21:29		22:09	
19	08:36	09:21-09:43/22	07:35	08:12-08:25/13	06:23	06:49-07:22/33	06:02	06:31-07:03/32	04:55	05:31-06:04/33	04:25	05:27-06:09/42
	16:17		17:25		18:26		20:30		21:31		22:09	
20	08:35	09:22-09:44/22	07:33	08:13-08:22/9	06:21	06:46-07:18/32	05:59	06:30-07:01/31	04:53	05:31-06:05/34	04:25	05:27-06:09/42
	16:19		17:28		18:28		20:32		21:33		22:10	
21	08:33	09:22-09:44/22	07:31		06:18	06:43-07:15/32	05:56	06:30-07:00/30	04:51	05:30-06:04/34	04:25	05:27-06:09/42
	16:21		17:30		18:30		20:34		21:35		22:10	
22	08:32	09:22-09:44/22	07:28		06:15	06:44-07:14/30	05:54	06:31-06:59/28	04:50	05:30-06:05/35	04:25	05:28-06:10/42
	16:24		17:32		18:32		20:37		21:36		22:10	
23	08:30	09:23-09:43/20	07:26		06:13	06:43-07:12/29	05:52	06:30-06:55/25	04:48	05:29-06:04/35	04:25	05:28-06:10/42
	16:26		17:34		18:34		20:39		21:38		22:10	
24	08:29	09:25-09:44/19	07:23		06:10	06:43-07:09/26	05:49	06:31-06:52/21	04:47	05:29-06:04/35	04:26	05:28-06:09/41
	16:28		17:36		18:36		20:41		21:40		22:10	
25	08:27	09:25-09:44/19	07:21		06:07	06:43-07:03/20	05:47	06:32-06:52/20	04:45	05:29-06:04/35	04:26	05:29-06:10/41
	16:30		17:39		18:38		20:43		21:42		22:10	
26	08:25	09:26-09:43/17	07:18		06:05	06:45-07:02/17	05:44	06:32-06:50/18	04:44	05:30-06:05/35	04:27	05:28-06:10/42
	16:32		17:41		18:40		20:45		21:43		22:10	
27	08:24	09:28-09:42/14	07:16		06:02	06:46-07:00/14	05:42	06:34-06:48/14	04:42	05:29-06:04/35	04:27	05:29-06:10/41
	16:34		17:43		18:42		20:47		21:45		22:10	
28	08:22	09:30-09:40/10	07:13		05:59	06:53-06:55/2	05:39	06:37-06:45/8	04:41	05:29-06:04/35	04:28	05:29-06:10/41
	16:36		17:45		18:45		20:49		21:46		22:10	
29	08:20	09:33-09:37/4			06:57		05:37		04:39	05:29-06:03/34	04:28	05:30-06:10/40
	16:38				19:47		20:51		21:48		22:10	
30	08:18				06:54		05:35		04:38	05:29-06:03/34	04:29	05:31-06:11/40
	16:41				19:49		20:53		21:49		22:09	
31	08:16				06:51				04:37	05:29-06:03/34		
	16:43				19:51				21:51			
Potential sun hours	235		266		366		426		508		529	
Sum of minutes with flicker	471		107		479		451		684		1179	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B4 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (104)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

	July		August		September		October		November		December	
1	04:30	05:30-06:10/40	05:15	05:51-06:11/20	06:17	06:47-07:03/16	07:17	07:46-08:08/22	07:22		08:24	09:04-09:22/18
	22:09		21:28		20:14		18:53		16:36		15:45	
2	04:31	05:31-06:10/39	05:17	05:52-06:10/18	06:19	06:49-07:01/12	07:19	07:48-08:07/19	07:25		08:26	09:06-09:22/16
	22:08		21:26		20:11		18:51		16:34		15:44	
3	04:31	05:32-06:10/38	05:19	05:54-06:09/15	06:21	06:51-06:59/8	07:21	07:50-08:06/16	07:27		08:27	09:08-09:22/14
	22:08		21:24		20:09		18:48		16:31		15:43	
4	04:32	05:32-06:10/38	05:21	05:56-06:07/11	06:23		07:23	07:52-08:05/13	07:29		08:29	09:09-09:21/12
	22:07		21:21		20:06		18:45		16:29		15:42	
5	04:33	05:33-06:10/37	05:23	05:59-06:02/3	06:25		07:25	07:54-08:02/8	07:31		08:31	09:11-09:21/10
	22:07		21:19		20:03		18:43		16:27		15:41	
6	04:34	05:34-06:10/36	05:25		06:27		07:27	07:56-07:59/3	07:33		08:32	09:13-09:21/8
	22:06		21:17		20:01		18:40		16:25		15:41	
7	04:36	05:34-06:10/36	05:27		06:29		07:29		07:35		08:34	09:14-09:20/6
	22:05		21:15		19:58		18:38		16:23		15:40	
8	04:37	05:35-06:10/35	05:29		06:31		07:31		07:38		08:35	10:20-10:26/6
	22:04		21:13		19:55		18:35		16:21		15:40	09:16-09:21/5
9	04:38	05:36-06:09/33	05:31		06:33		07:33		07:40		08:36	10:19-10:27/8
	22:03		21:11		19:53		18:32		16:19		15:39	09:18-09:21/3
10	04:39	05:36-06:09/33	05:33		06:35		07:36		07:42		08:38	10:19-10:29/10
	22:02		21:08		19:50		18:30		16:17		15:39	09:19-09:20/1
11	04:40	05:37-06:10/33	05:35		06:37		07:38		07:44		08:39	10:18-10:30/12
	22:01		21:06		19:47		18:27		16:15		15:38	
12	04:42	05:38-06:11/33	05:37		06:39		07:40		07:46		08:40	10:19-10:32/13
	22:00		21:04		19:45		18:24		16:13		15:38	
13	04:43	05:38-06:12/34	05:39		06:41		07:42		07:48	09:05-09:09/4	08:41	10:18-10:32/14
	21:59		21:01		19:42		18:22		16:11		15:38	
14	04:45	05:38-06:12/34	05:41		06:43		07:44		07:51	09:02-09:12/10	08:43	10:18-10:33/15
	21:58		20:59		19:39		18:19		16:09		15:38	
15	04:46	05:37-06:12/35	05:43	06:43-06:53/10	06:45		07:46		07:53	09:00-09:14/14	08:44	10:18-10:34/16
	21:56		20:57		19:36		18:17		16:07		15:38	
16	04:48	05:38-06:13/35	05:45	06:41-06:56/15	06:47	07:36-07:49/13	07:48		07:55	08:59-09:16/17	08:44	10:19-10:34/15
	21:55		20:54		19:34		18:14		16:06		15:38	
17	04:49	05:38-06:13/35	05:47	06:38-06:56/18	06:49	07:33-07:51/18	07:50		07:57	08:58-09:16/18	08:45	10:19-10:35/16
	21:54		20:52		19:31		18:12		16:04		15:38	
18	04:51	05:39-06:14/35	05:49	06:37-06:57/20	06:51	07:32-07:52/20	07:52		07:59	08:59-09:18/19	08:46	10:19-10:36/17
	21:52		20:49		19:28		18:09		16:02		15:38	
19	04:52	05:39-06:14/35	05:51	06:36-06:58/22	06:53	07:31-07:55/24	07:54		08:01	08:58-09:18/20	08:47	10:20-10:37/17
	21:51		20:47		19:26		18:07		16:01		15:38	
20	04:54	05:40-06:15/35	05:53	06:36-07:02/26	06:55	07:30-07:58/28	07:57		08:03	08:58-09:19/21	08:48	10:20-10:37/17
	21:49		20:44		19:23		18:04		15:59		15:38	
21	04:56	05:40-06:14/34	05:55	06:35-07:04/29	06:57	07:29-08:00/31	07:59	08:46-08:51/5	08:05	08:57-09:19/22	08:48	10:21-10:38/17
	21:48		20:42		19:20		18:02		15:57		15:39	
22	04:57	05:41-06:15/34	05:57	06:35-07:05/30	06:59	07:29-07:59/30	08:01	08:43-08:53/10	08:07	08:58-09:20/22	08:49	10:21-10:38/17
	21:46		20:39		19:18		17:59		15:56		15:39	
23	04:59	05:41-06:14/33	05:59	06:35-07:06/31	07:01	07:29-08:00/31	08:03	08:42-08:55/13	08:09	08:58-09:20/22	08:49	10:22-10:39/17
	21:44		20:37		19:15		17:57		15:54		15:40	
24	05:01	05:42-06:15/33	06:01	06:35-07:07/32	07:03	07:31-08:04/33	08:05	08:41-08:56/15	08:11	08:58-09:20/22	08:50	10:22-10:39/17
	21:43		20:34		19:12		17:54		15:53		15:40	
25	05:02	05:42-06:14/32	06:03	06:35-07:07/32	07:05	07:33-08:06/33	07:07	07:40-07:56/16	08:13	08:58-09:21/23	08:50	10:22-10:39/17
	21:41		20:32		19:10		16:52		15:52		15:41	
26	05:04	05:43-06:14/31	06:05	06:35-07:06/31	07:07	07:36-08:08/32	07:09	07:41-07:57/16	08:15	08:59-09:22/23	08:50	10:23-10:39/16
	21:39		20:29		19:07		16:50		15:50		15:42	
27	05:06	05:45-06:14/29	06:07	06:37-07:06/29	07:09	07:38-08:09/31	07:12	07:43-07:56/13	08:17	09:00-09:22/22	08:51	10:23-10:39/16
	21:37		20:27		19:04		16:47		15:49		15:43	
28	05:08	05:46-06:13/27	06:09	06:39-07:06/27	07:11	07:40-08:09/29	07:14	07:45-07:56/11	08:19	09:00-09:22/22	08:51	10:24-10:40/16
	21:36		20:24		19:01		16:45		15:48		15:43	
29	05:10	05:48-06:13/25	06:11	06:41-07:06/25	07:13	07:42-08:09/27	07:16	07:48-07:56/8	08:20	09:01-09:22/21	08:51	10:25-10:40/15
	21:34		20:22		18:59		16:43		15:47		15:44	
30	05:12	05:50-06:13/23	06:13	06:43-07:05/22	07:15	07:44-08:09/25	07:18	07:50-07:54/4	08:22	09:02-09:22/20	08:51	10:26-10:40/14
	21:32		20:19		18:56		16:40		15:46		15:45	
31	05:14	05:51-06:13/22	06:15	06:45-07:04/19			07:20	07:53-07:54/1			08:51	10:27-10:41/14
	21:30		20:16				16:38				15:46	
Potential sun hours	529		469		385		324		247		216	
Sum of minutes with flicker	1032		485		441		193		342		445	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B5 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (105)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B7 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (106)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle 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	06:07-06:26/19	04:36 21:52	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 16:36
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	06:08-06:25/17	04:34 21:54	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:24 16:33
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	06:09-06:23/14	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	07:27 16:31
4	08:49 15:52	08:09 16:52	07:03 17:54	06:40 19:59	05:25 21:01	06:11-06:20/9	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 16:29
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	06:14-06:17/3	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:43	07:31 16:27
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
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
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	06:22-06:28/6	06:31 19:55	07:31 18:35
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	06:20-06:31/11	06:33 19:52	07:33 18:32
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	06:17-06:32/15	06:35 19:50	07:35 18:30
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	06:16-06:33/17	06:37 19:47	07:37 18:27
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	06:16-06:34/18	06:39 19:44	07:40 18:24
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	06:15-06:35/20	06:41 19:42	07:42 18:22
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	06:15-06:35/20	06:43 19:39	07:44 18:19
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	06:15-06:35/20	06:45 19:36	07:46 18:17
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	06:17-06:35/18	06:47 19:34	07:48 18:14
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	06:18-06:34/16	06:49 19:31	07:50 18:12
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	06:20-06:34/14	06:51 19:28	07:52 18:09
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	06:22-06:33/11	06:53 19:26	07:54 18:07
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	06:24-06:32/8	06:55 19:23	07:56 18:04
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	06:23-06:24/1		04:25 22:10	04:55 21:48	05:55 20:42	06:26-06:30/4	06:57 19:20	07:59 18:02
22	08:32 16:23	07:28 17:32	06:15 18:32	05:54 20:36	06:21-06:26/5		04:25 22:10	04:57 21:46	05:57 20:39		06:59 19:17	08:01 17:59
23	08:30 16:25	07:25 17:34	06:13 18:34	05:51 20:39	06:18-06:26/8		04:25 22:10	04:59 21:44	05:59 20:37		07:01 19:15	08:03 17:57
24	08:29 16:28	07:23 17:36	06:10 18:36	05:49 20:41	06:16-06:27/11		04:26 22:10	05:01 21:43	06:01 20:34		07:03 19:12	08:05 17:54
25	08:27 16:30	07:21 17:38	06:07 18:38	05:47 20:43	06:14-06:28/14		04:26 22:10	05:02 21:41	06:03 20:32		07:05 19:09	08:13 16:52
26	08:25 16:32	07:18 17:41	06:04 18:40	05:44 20:45	06:11-06:28/17		04:27 22:10	05:04 21:39	06:05 20:29		07:07 19:07	08:15 16:50
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	06:09-06:28/19		04:27 22:10	05:06 21:37	06:07 20:27		07:09 19:04	08:17 16:47
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	06:07-06:28/21		04:28 22:10	05:08 21:35	06:09 20:24		07:11 19:01	08:19 16:45
29	08:20 16:38		06:56 19:46	05:37 20:51	06:07-06:27/20		04:28 22:09	05:10 21:33	06:11 20:22		07:13 18:59	08:20 16:42
30	08:18 16:41		06:54 19:49	05:35 20:53	06:07-06:26/19		04:29 22:09	05:12 21:32	06:13 20:19		07:15 18:56	08:22 16:40
31	08:16 16:43		06:51 19:51					05:13 21:30	06:15 20:16		07:20 16:38	
Potential sun hours	235	266	366	426	508		529	529	469	385	324	247
Sum of minutes with flicker	0	0	0	135	62		0	0	198	0	0	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

10/04/2024 04:58/4.0.531

SHADOW - Calendar per WTG

WTG: B9 - GE WIND ENERGY 6.0-164 6000 164.0 !O! hub: 167.0 m (TOT: 249.0 m) (107)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
441	466	538	463	488	780	784	937	1,214	1,078	832	556	8,577

Idle 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	07:14-07:26/12	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	07:11-07:26/15	05:30 20:57	04:34 21:54	04:31 22:08	05:17 21:25	06:19 20:11	07:05-07:14/9	07:19 18:51	07:24 16:33
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	07:08-07:26/18	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:23	06:21 20:08	07:03-07:17/14	07:21 18:48	07:27 16:31
4	08:49 15:52	08:09 16:52	07:03 17:54	06:40 19:59	07:06-07:26/20	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:01-07:18/17	07:23 18:45	07:29 16:29
5	08:49 15:53	08:06 16:54	07:00 17:56	06:38 20:01	07:04-07:25/21	05:23 21:03	04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03	07:00-07:19/19	07:25 18:43	07:31 16:27
6	08:48 15:55	08:04 16:56	06:58 17:58	06:35 20:03	07:04-07:25/21	05:21 21:05	04:31 21:59	04:34 22:06	05:25 21:17	06:27 20:00	06:59-07:20/21	07:27 18:40	07:33 16:25
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	07:04-07:23/19	05:19 21:07	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	06:59-07:20/21	07:29 18:37	07:35 16:23
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	07:04-07:21/17	05:17 21:09	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:00-07:20/20	07:31 18:35	07:37 16:21
9	08:46 15:59	07:58 17:03	06:50 18:04	06:27 20:09	07:05-07:19/14	05:14 21:11	04:28 22:02	04:38 22:03	05:31 21:10	06:33 19:52	07:02-07:20/18	07:33 18:32	07:40 16:19
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:11	07:06-07:15/9	05:12 21:13	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:04-07:19/15	07:35 18:30	07:42 16:17
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	07:06-07:19/13	07:37 18:27	07:44 16:15
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	07:08-07:17/9	07:40 18:24	07:46 16:13
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18		05:06 21:19	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:10-07:16/6	07:42 18:22	07:48 16:11
14	08:42 16:08	07:47 17:14	06:37 18:15	06:14 20:20		05:04 21:21	04:26 22:06	04:45 21:58	05:41 20:59	06:43 19:39	07:12-07:13/1	07:44 18:19	07:50 16:09
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
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
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
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
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
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
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
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
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
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
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		08:07 16:52	08:13 15:52
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		08:09 16:50	08:15 15:50
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		08:11 16:47	08:17 15:49
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		08:18 16:45	08:24 15:48
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		08:20 16:43	08:31 15:47
30	08:18 16:41		06:54 19:49	05:35 20:53	07:19-07:24/5	04:38 21:49	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56		08:22 16:40	08:51 15:46
31	08:16 16:43		06:51 19:51		07:16-07:25/9	04:37 21:51		05:13 21:30	06:15 20:16			08:51 16:38	
Potential sun hours	235	266	366	426		508	529	529	469	385	324	247	216
Sum of minutes with flicker	0	0	14	166		0	0	0	0	183	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