

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C1 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (75)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	
1	08:51 12:36-13:12/36 15:48 10:16-11:21/65	08:15 11:05-11:13/8 16:45	07:11 08:04-08:34/30 17:47 07:37-07:55/18	06:49 19:53	05:32 06:18-07:28/70 20:55	04:36 21:52	
2	08:50 12:37-13:12/35 15:49 10:18-11:22/64	08:13 16:47	07:08 08:07-08:13/6 08:15-08:32/17 17:50 07:35-07:56/21	06:46 19:55	05:30 05:58-06:03/5 20:57 06:19-07:25/66	04:35 21:54	
3	08:50 12:38-13:12/34 15:50 10:18-11:22/64	08:11 08:41-08:47/6 16:50	07:06 07:34-07:57/23 17:52 08:18-08:29/11	06:43 19:57	05:28 05:56-06:05/9 20:59 06:20-07:20/60	04:33 21:55	
4	08:50 12:38-13:12/34 15:52 10:18-11:22/64	08:09 08:39-08:50/11 16:52	07:03 07:33-07:57/24 17:54	06:41 07:24-07:31/7 19:59	05:25 05:54-06:07/13 21:02 06:21-07:19/58	04:32 21:57	
5	08:49 12:39-13:13/34 15:53 10:20-11:24/64	08:07 08:37-08:52/15 16:54	07:00 07:32-07:57/25 17:56	06:38 07:17-07:35/18 20:01	05:23 05:52-06:08/16 21:04 06:23-07:19/56	04:32 21:58	
6	08:49 12:40-13:13/33 15:55 10:21-11:24/63	08:05 08:34-08:52/18 16:56	06:58 07:33-07:58/25 17:58	06:35 07:14-07:38/24 20:03	05:21 05:50-06:09/19 21:06 06:24-07:18/54	04:31 21:59	
7	08:48 12:41-13:13/32 15:56 10:21-11:24/63	08:03 08:32-08:53/21 16:58	06:55 07:32-07:57/25 18:00	06:33 07:11-07:40/29 20:05	05:19 05:49-06:09/20 21:08 06:25-07:17/52	04:30 22:00	
8	08:47 12:41-13:13/32 10:40-11:25/45 15:58 10:22-10:39/17	08:00 08:32-08:54/22 17:01	06:53 07:32-07:56/24 18:03	06:30 07:09-07:41/32 20:07	05:17 05:48-06:09/21 21:10 06:25-07:16/51	04:29 22:01	
9	08:47 12:42-13:13/31 10:40-11:25/45 15:59 10:24-10:39/15	07:58 08:31-08:54/23 17:03	06:50 07:33-07:56/23 18:05	06:27 07:08-07:42/34 20:10	05:15 05:48-06:10/22 21:12 06:25-07:15/50	04:28 22:02	
10	08:46 12:43-13:13/30 10:41-11:26/45 16:01 10:25-10:38/13	07:56 08:31-08:55/24 17:05	06:47 07:33-07:55/22 18:07	06:25 07:06-07:42/36 20:12	05:12 05:48-06:10/22 21:14 06:25-07:14/49	04:28 22:03	
11	08:45 12:44-13:13/29 10:41-11:26/45 16:03 10:27-10:37/10	07:54 08:32-08:55/23 17:07	06:45 07:33-07:53/20 18:09	06:22 07:05-07:44/39 20:14	05:10 05:47-06:09/22 21:16 06:25-07:13/48	04:27 22:04	
12	08:44 12:46-13:13/27 10:42-11:27/45 16:04 10:30-10:35/5	07:52 08:31-08:54/23 17:10	06:42 07:35-07:52/17 18:11	06:20 07:04-07:44/40 20:16	05:08 05:47-06:09/22 21:18 06:26-07:11/45	04:27 22:05	
13	08:43 12:46-13:12/26 16:06 10:42-11:26/44	07:49 08:20-08:55/35 17:12	06:39 07:37-07:49/12 18:13	06:17 07:03-07:44/41 20:18	05:06 05:47-06:09/22 21:20 06:26-07:10/44	04:26 22:06	
14	08:42 12:48-13:12/24 16:08 10:43-11:27/44	07:47 08:17-08:54/37 17:14	06:37 07:41-07:44/3 18:15	06:14 06:57-07:44/47 20:20	05:04 05:48-06:09/21 21:22 06:28-07:09/41	04:26 22:07	
15	08:41 12:50-13:11/21 16:10 10:43-11:27/44	07:45 08:15-08:54/39 17:16	06:34 18:17	06:12 06:54-07:45/51 20:22	05:02 05:48-06:09/21 21:23 06:28-07:06/38	04:25 22:07	
16	08:40 12:51-13:10/19 16:12 10:43-11:27/44	07:43 08:10-08:52/42 17:19	06:31 18:19	06:09 06:47-07:44/57 20:24	05:00 05:49-06:08/19 21:25 06:29-07:03/34	04:25 22:08	
17	08:39 12:53-13:09/16 16:14 10:45-11:28/43	07:40 08:08-08:51/43 17:21	06:29 18:22	06:07 06:42-07:44/62 20:26	04:59 05:50-06:08/18 21:27 06:30-06:57/27	04:25 22:08	
18	08:37 12:56-13:06/10 16:15 10:45-11:27/42	07:38 08:05-08:49/44 17:23	06:26 18:24	06:04 06:38-07:43/65 20:28	04:57 05:50-06:07/17 21:29 06:31-06:55/24	04:25 22:09	
19	08:36 10:45-11:27/42 16:17	07:35 08:03-08:47/44 17:25	06:23 18:26	06:02 06:37-07:43/66 20:30 06:28-06:35/7	04:55 05:51-06:05/14 21:31 06:32-06:54/22	04:25 22:09	
20	08:35 10:46-11:28/42 16:19	07:33 08:01-08:39/38 17:28	06:21 18:28	05:59 06:25-07:42/77 20:32	04:53 05:52-06:05/13 21:33 06:34-06:53/19	04:25 22:10	
21	08:33 10:47-11:27/40 16:22	07:31 08:01-08:40/39 17:30	06:18 18:30	05:57 06:23-07:42/79 20:35	04:51 05:54-06:03/9 21:35 06:35-06:51/16	04:25 22:10	
22	08:32 10:47-11:27/40 16:24	07:28 08:00-08:39/39 17:32	06:15 18:32	05:54 06:21-07:42/81 20:37	04:50 05:57-06:00/3 21:36 06:38-06:49/11	04:25 22:10	
23	08:30 10:48-11:26/38 16:26	07:26 08:00-08:40/40 17:34	06:13 18:34	05:52 06:19-07:40/81 20:39	04:48 06:42-06:44/2 21:38	04:26 22:10	
24	08:29 10:50-11:27/37 16:28	07:23 08:00-08:39/39 17:36	06:10 18:36	05:49 06:18-07:40/82 20:41	04:47 21:40	04:26 22:10	
25	08:27 10:51-11:26/35 16:30	07:21 08:01-08:38/37 17:39	06:07 18:38	05:47 06:18-07:39/81 20:43	04:45 21:42	04:26 22:10	
26	08:25 10:52-11:25/33 16:32	07:18 08:01-08:38/37 17:41	06:05 18:40	05:44 06:17-07:37/80 20:45	04:44 21:43	04:27 22:10	
27	08:24 10:53-11:24/31 16:34	07:16 08:01-08:37/36 17:43 07:42-07:51/9	06:02 18:42	05:42 06:17-07:36/79 20:47	04:42 21:45	04:27 22:10	
28	08:22 10:54-11:23/29 16:36	07:13 08:03-08:36/33 17:45 07:40-07:54/14	05:59 18:45	05:39 06:17-07:35/78 20:49	04:41 21:47	04:28 22:10	
29	08:20 10:56-11:22/26 16:38		06:57 19:47	05:37 06:18-07:34/76 20:51	04:39 21:48	04:28 22:10	
30	08:18 10:58-11:20/22 16:41		06:54 19:49	05:35 06:17-07:31/74 20:53	04:38 21:50	04:29 22:09	
31	08:17 11:01-11:18/17 16:43		06:51 19:51		04:37 21:51		
Potential sun hours	235	266	366	426	508	529	
Sum of minutes with flicker	1928	839	346	1523	1285	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 05:58-06:19/21 21:28 06:36-07:22/46	06:17 07:04-07:43/39 20:14	07:17 08:15-08:30/15 18:53	07:22 08:01-08:24/23 16:36	08:24 12:27-12:55/28 10:23-11:08/45 15:45 10:09-10:19/10
2	04:31 22:08	05:17 05:58-06:20/22 21:26 06:36-07:24/48	06:19 07:05-07:41/36 20:11	07:19 08:13-08:32/19 18:51	07:25 08:01-08:23/22 16:34	08:26 12:26-12:56/30 10:24-11:09/45 15:44 10:08-10:21/13
3	04:31 22:08	05:19 05:58-06:20/22 21:24 06:35-07:25/50	06:21 07:06-07:40/34 20:09	07:21 08:11-08:32/21 18:48	07:27 08:02-08:24/22 16:31	08:27 12:25-12:56/31 10:24-11:09/45 15:43 10:08-10:23/15
4	04:32 22:07	05:21 05:58-06:20/22 21:22 06:35-07:26/51	06:23 07:07-07:39/32 20:06	07:23 08:10-08:33/23 18:45	07:29 08:02-08:23/21 16:29	08:29 12:26-12:57/31 10:24-11:09/45 15:42 10:07-10:23/16
5	04:33 22:07	05:23 05:58-06:19/21 21:19 06:34-07:26/52	06:25 07:07-07:36/29 20:03	07:25 08:09-08:33/24 18:43	07:31 08:05-08:22/17 16:27	08:31 12:26-12:58/32 10:25-11:09/44 15:41 10:07-10:24/17
6	04:34 22:06	05:25 05:58-06:18/20 21:17 06:34-07:27/53	06:27 07:09-07:34/25 20:01	07:27 08:08-08:33/25 18:40	07:33 08:07-08:21/14 16:25	08:32 12:26-12:59/33 15:41 10:07-11:10/63
7	04:36 22:05	05:27 06:00-06:18/18 21:15 06:34-07:27/53	06:29 07:12-07:31/19 19:58	07:29 08:08-08:33/25 18:38	07:36 08:09-08:19/10 16:23	08:34 12:26-12:59/33 15:40 10:06-11:10/64
8	04:37 22:04	05:29 06:02-06:17/15 21:13 06:32-07:28/56	06:31 07:17-07:26/9 19:55	07:31 08:08-08:32/24 18:35	07:38 08:12-08:18/6 16:21	08:35 12:26-13:00/34 15:40 10:06-11:11/65
9	04:38 22:03	05:31 06:04-06:16/12 21:11 06:30-07:29/59	06:33 19:53	07:34 08:08-08:33/25 18:32	07:40 16:19	08:37 12:26-13:00/34 15:39 10:07-11:11/64
10	04:39 22:02	05:33 06:06-06:14/8 21:08 06:29-07:28/59	06:35 19:50	07:36 08:08-08:32/24 18:30 08:55-09:01/6	07:42 10:35-10:44/9 16:17	08:38 12:27-13:01/34 15:39 10:07-11:11/64
11	04:40 22:01	05:35 06:07-06:11/4 21:06 06:27-07:35/68	06:37 19:47	07:38 08:09-08:31/22 18:27 08:51-09:05/14	07:44 10:32-10:49/17 16:15	08:39 12:27-13:02/35 15:38 10:07-11:11/64
12	04:42 22:00	05:37 06:26-07:38/72 21:04	06:39 19:45	07:40 08:39-09:07/28 18:25 08:09-08:29/20	07:46 10:29-10:51/22 16:13	08:40 12:27-13:03/36 15:38 10:08-11:12/64
13	04:43 21:59	05:39 06:26-07:40/74 21:01	06:41 19:42	07:42 08:36-09:08/32 18:22 08:11-08:28/17	07:48 10:28-10:54/26 16:11	08:41 12:28-13:03/35 15:38 10:08-11:13/65
14	04:45 21:58	05:41 06:25-07:41/76 20:59	06:43 19:39	07:44 08:34-09:09/35 18:19 08:13-08:25/12	07:51 10:26-10:55/29 16:09	08:43 12:28-13:04/36 15:38 10:08-11:13/65
15	04:46 21:57	05:43 06:25-07:43/78 20:57	06:45 19:37	07:46 08:34-09:10/36 18:17 08:16-08:23/7	07:53 10:25-10:56/31 16:07	08:44 12:28-13:04/36 15:38 10:08-11:13/65
16	04:48 21:55	05:45 06:25-07:44/79 20:54	06:47 19:34	07:48 08:33-09:10/37 18:14	07:55 10:25-10:58/33 16:06	08:45 12:28-13:05/37 15:38 10:08-11:14/66
17	04:49 21:54	05:47 06:25-07:44/79 20:52	06:49 19:31	07:50 08:32-09:10/38 18:12	07:57 10:24-10:59/35 16:04	08:45 12:29-13:05/36 15:38 10:09-11:14/65
18	04:51 21:52	05:49 06:24-07:45/81 20:49	06:51 19:28	07:52 08:31-09:10/39 18:09	07:59 10:24-11:01/37 16:02	08:46 12:30-13:06/36 15:38 10:09-11:15/66
19	04:52 21:51	05:51 06:24-07:46/82 20:47	06:53 19:26	07:54 08:32-09:11/39 18:07	08:01 10:23-11:01/38 16:01	08:47 12:30-13:07/37 15:38 10:10-11:15/65
20	04:54 21:49	05:53 06:25-07:46/81 20:45	06:55 19:23	07:57 08:31-09:10/39 18:04	08:03 10:22-11:02/40 15:59	08:48 12:30-13:07/37 15:38 10:10-11:15/65
21	04:56 06:49-06:57/8 21:48	05:55 06:26-07:47/81 20:42	06:57 19:20	07:59 08:31-09:10/39 18:02	08:05 10:22-11:02/40 15:57	08:48 12:31-13:08/37 15:39 10:11-11:16/65
22	04:57 06:06-06:12/6 21:46 06:47-07:00/13	05:57 06:28-07:47/79 20:40	06:59 19:18	08:01 08:31-09:09/38 17:59	08:07 10:22-11:04/42 15:56	08:49 12:31-13:07/36 15:39 10:11-11:16/65
23	04:59 06:03-06:14/11 21:45 06:44-07:02/18	05:59 06:30-07:47/77 20:37	07:01 19:15	08:03 08:34-09:18/44 17:57	08:09 10:22-11:04/42 15:55	08:49 12:32-13:09/37 15:40 10:12-11:17/65
24	05:01 06:02-06:16/14 21:43 06:43-07:04/21	06:01 06:41-07:47/66 20:35 06:32-06:39/7	07:03 19:12	08:05 08:36-09:20/44 17:54	08:11 12:33-12:43/10 15:53 10:22-11:04/42	08:50 12:32-13:09/37 15:40 10:12-11:17/65
25	05:03 06:02-06:17/15 21:41 06:41-07:05/24	06:03 06:42-07:47/65 20:32	07:05 19:10	07:07 07:38-08:21/43 16:52	08:13 12:31-12:46/15 15:52 10:22-11:05/43	08:50 12:32-13:09/37 15:41 10:12-11:18/66
26	05:04 06:00-06:17/17 21:39 06:41-07:06/25	06:05 06:44-07:46/62 20:29	07:07 19:07	07:09 07:41-08:23/42 16:50	08:15 12:29-12:48/19 15:50 10:23-11:06/43	08:51 12:33-13:09/36 15:42 10:13-11:18/65
27	05:06 06:00-06:18/18 21:37 06:40-07:10/30	06:07 06:52-07:46/54 20:27	07:09 19:04	07:12 07:45-08:23/38 16:47	08:17 12:29-12:50/21 15:49 10:23-11:07/44	08:51 12:33-13:10/37 15:43 10:13-11:18/65
28	05:08 05:59-06:18/19 21:36 06:38-07:15/37	06:09 06:55-07:45/50 20:24	07:11 19:02	07:14 07:46-08:23/37 16:45	08:19 12:28-12:52/24 15:48 10:23-11:07/44	08:51 12:34-13:10/36 15:43 10:14-11:19/65
29	05:10 05:58-06:19/21 21:34 06:38-07:17/39	06:11 06:58-07:45/47 20:22	07:13 18:59	07:16 07:50-08:24/34 16:43	08:21 12:27-12:53/26 15:47 10:23-11:07/44	08:51 12:34-13:11/37 15:44 10:14-11:20/66
30	05:12 05:58-06:20/22 21:32 06:38-07:20/42	06:13 07:03-07:44/41 20:19	07:15 08:18-08:28/10 18:56	07:18 08:01-08:24/23 16:40	08:22 12:27-12:54/27 10:23-11:08/45 15:46 10:11-10:16/5	08:51 12:35-13:11/36 15:45 10:15-11:20/65
31	05:14 05:58-06:20/22 21:30 06:37-07:22/45	06:15 07:04-07:43/39 20:16		07:20 08:01-08:25/24 16:38		08:51 12:36-13:12/36 15:46 10:16-11:21/65
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	467	2150	233	1052	1028	3065

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
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0037167242411

Anna / anna@environment.lv

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5	08:49 15:53	08:07 16:54	07:00 07:43-08:30/47 17:56	06:38 20:01	05:23 21:03	04:32 05:41-06:16/35 21:58
6	08:49 15:55	08:04 16:56	06:58 07:42-08:31/49 17:58	06:35 20:03	05:21 21:05	04:31 05:41-06:16/35 21:59
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8	08:47 15:58	08:00 08:30-08:41/11 17:01	06:52 07:38-08:31/53 18:02	06:30 20:07	05:17 21:09	04:29 05:42-06:16/34 22:01
9	08:47 15:59	07:58 08:27-08:42/15 17:03	06:50 07:38-08:31/53 18:05	06:27 20:09	05:15 21:11	04:28 05:42-06:16/34 22:02
10	08:46 16:01	07:56 08:26-08:44/18 17:05	06:47 07:37-08:31/54 18:07	06:25 20:11	05:12 05:51-06:03/12 21:13	04:28 05:43-06:17/34 22:03
11	08:45 16:03	07:54 08:24-08:45/21 17:07	06:45 07:35-08:31/56 18:09	06:22 20:14	05:10 05:49-06:05/16 21:15	04:27 05:42-06:16/34 22:04
12	08:44 16:04	07:52 08:24-08:46/22 17:10	06:42 07:34-08:30/56 18:11	06:19 20:16	05:08 05:47-06:07/20 21:17	04:27 05:43-06:17/34 22:05
13	08:43 16:06	07:49 08:24-08:47/23 17:12	06:39 07:35-08:30/55 18:13	06:17 20:18	05:06 05:45-06:08/23 21:19	04:26 05:44-06:17/33 22:06
14	08:42 16:08	07:47 08:23-08:47/24 17:14	06:37 07:34-08:29/55 18:15	06:14 20:20	05:04 05:45-06:10/25 21:21	04:26 05:43-06:16/33 22:06
15	08:41 16:10	07:45 08:23-08:47/24 17:16	06:34 07:33-08:28/55 18:17	06:12 20:22	05:02 05:43-06:10/27 21:23	04:26 05:44-06:17/33 22:07
16	08:40 16:12	07:42 08:23-08:47/24 17:19	06:31 07:33-08:28/55 18:19	06:09 20:24	05:00 05:42-06:11/29 21:25	04:25 05:44-06:17/33 22:08
17	08:38 16:14	07:40 08:23-08:47/24 17:21	06:29 07:33-08:27/54 18:22	06:07 20:26	04:59 05:42-06:12/30 21:27	04:25 05:44-06:17/33 22:08
18	08:37 16:15	07:38 08:23-08:46/23 17:23	06:26 07:33-08:25/52 18:24	06:04 20:28	04:57 05:41-06:12/31 21:29	04:25 05:45-06:17/32 22:09
19	08:36 16:17	07:35 08:24-08:46/22 17:25	06:23 07:33-08:24/51 18:26	06:02 20:30	04:55 05:40-06:13/33 21:31	04:25 05:45-06:17/32 22:09
20	08:35 16:19	07:33 08:24-08:45/21 17:28	06:21 07:33-08:22/49 18:28	05:59 20:32	04:53 05:41-06:14/33 21:33	04:25 05:45-06:17/32 22:09
21	08:33 16:21	07:30 08:26-08:45/19 17:30	06:18 07:33-08:20/47 18:30	05:56 20:34	04:51 05:40-06:13/33 21:34	04:25 05:46-06:18/32 22:10
22	08:32 16:24	07:28 08:26-08:43/17 17:32	06:15 07:34-08:18/44 18:32	05:54 20:36	04:50 05:40-06:14/34 21:36	04:25 05:46-06:18/32 22:10
23	08:30 16:26	07:26 08:29-08:41/12 17:34	06:13 07:35-08:15/40 18:34	05:52 20:39	04:48 05:39-06:14/35 21:38	04:26 05:46-06:18/32 22:10
24	08:29 16:28	07:23 08:32-08:37/5 17:36	06:10 07:36-08:11/35 18:36	05:49 20:41	04:47 05:39-06:14/35 21:40	04:26 05:46-06:18/32 22:10
25	08:27 16:30	07:21 17:39	06:07 07:36-08:05/29 18:38	05:47 20:43	04:45 05:40-06:15/35 21:41	04:26 05:46-06:19/33 22:10
26	08:25 16:32	07:18 08:04-08:20/16 17:41	06:05 07:39-08:03/24 18:40	05:44 20:45	04:44 05:40-06:15/35 21:43	04:27 05:46-06:19/33 22:10
27	08:24 16:34	07:16 08:00-08:22/22 17:43	06:02 07:40-08:00/20 18:42	05:42 20:47	04:42 05:39-06:15/36 21:45	04:27 05:47-06:20/33 22:10
28	08:22 16:36	07:13 07:57-08:24/27 17:45	05:59 07:43-07:56/13 18:44	05:39 20:49	04:41 05:39-06:15/36 21:46	04:28 05:46-06:19/33 22:10
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 05:39-06:15/36 21:48	04:28 05:47-06:20/33 22:09
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 05:40-06:16/36 21:49	04:29 05:47-06:21/34 22:09
31	08:16 16:43		06:51 19:51		04:37 05:40-06:16/36 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	0	392	1243	0	666	1007

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C10 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (84)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30 05:47-06:20/33 22:09	05:15 05:58-06:16/18 21:28	06:17 20:14	07:17 08:14-09:10/56 18:53	07:22 07:56-08:14/18 16:36	08:24 15:45
2	04:31 05:47-06:21/34 22:08	05:17 06:00-06:15/15 21:26	06:19 20:11	07:19 08:14-09:10/56 18:51	07:24 07:57-08:12/15 16:34	08:26 15:44
3	04:32 05:47-06:21/34 22:08	05:19 06:03-06:12/9 21:23	06:21 20:08	07:21 08:14-09:09/55 18:48	07:27 08:00-08:10/10 16:31	08:27 15:43
4	04:32 05:47-06:22/35 22:07	05:21 21:21	06:23 20:06	07:23 08:15-09:09/54 18:45	07:29 16:29	08:29 15:42
5	04:33 05:48-06:22/34 22:06	05:23 21:19	06:25 20:03	07:25 08:15-09:08/53 18:43	07:31 16:27	08:30 15:41
6	04:35 05:48-06:22/34 22:06	05:25 21:17	06:27 20:01	07:27 08:16-09:07/51 18:40	07:33 16:25	08:32 15:41
7	04:36 05:48-06:23/35 22:05	05:27 21:15	06:29 19:58	07:29 08:17-09:06/49 18:37	07:35 16:23	08:34 15:40
8	04:37 05:48-06:23/35 22:04	05:29 21:13	06:31 19:55	07:31 08:18-09:05/47 18:35	07:38 16:21	08:35 15:40
9	04:38 05:48-06:23/35 22:03	05:31 21:10	06:33 19:53	07:33 08:19-09:04/45 18:32	07:40 16:19	08:36 15:39
10	04:39 05:48-06:23/35 22:02	05:33 21:08	06:35 19:50	07:35 08:22-09:04/42 18:30	07:42 16:17	08:38 15:39
11	04:40 05:47-06:23/36 22:01	05:35 21:06	06:37 19:47	07:38 08:25-09:02/37 18:27	07:44 16:15	08:39 15:38
12	04:42 05:48-06:24/36 22:00	05:37 21:04	06:39 19:45	07:40 08:29-09:01/32 18:24	07:46 16:13	08:40 15:38
13	04:43 05:48-06:24/36 21:59	05:39 21:01	06:41 19:42	07:42 08:30-08:59/29 18:22	07:48 16:11	08:41 15:38
14	04:45 05:48-06:24/36 21:58	05:41 20:59	06:43 19:39	07:44 08:31-08:56/25 18:19	07:50 16:09	08:42 15:38
15	04:46 05:48-06:24/36 21:56	05:43 20:57	06:45 08:35-08:45/10 19:36	07:46 08:33-08:53/20 18:17	07:53 16:07	08:43 15:38
16	04:48 05:49-06:24/35 21:55	05:45 20:54	06:47 08:30-08:49/19 19:34	07:48 08:38-08:50/12 18:14	07:55 16:06	08:44 15:38
17	04:49 05:48-06:24/36 21:54	05:47 20:52	06:49 08:28-08:51/23 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	04:51 05:49-06:25/36 21:52	05:49 20:49	06:51 08:24-08:52/28 19:28	07:52 09:01-09:10/9 18:09	07:59 16:02	08:46 15:38
19	04:52 05:49-06:24/35 21:51	05:51 20:47	06:53 08:22-08:56/34 19:26	07:54 08:58-09:12/14 18:07	08:01 16:01	08:47 15:38
20	04:54 05:50-06:25/35 21:49	05:53 20:44	06:55 08:21-09:00/39 19:23	07:56 08:57-09:14/17 18:04	08:03 15:59	08:48 15:38
21	04:56 05:50-06:24/34 21:48	05:55 20:42	06:57 08:20-09:03/43 19:20	07:59 08:55-09:15/20 18:02	08:05 15:57	08:48 15:39
22	04:57 05:50-06:24/34 21:46	05:57 20:39	06:59 08:18-09:04/46 19:18	08:01 08:54-09:16/22 17:59	08:07 15:56	08:49 15:39
23	04:59 05:50-06:24/34 21:44	05:59 20:37	07:01 08:17-09:06/49 19:15	08:03 08:54-09:17/23 17:57	08:09 15:55	08:49 15:40
24	05:01 05:51-06:24/33 21:43	06:01 20:34	07:03 08:16-09:07/51 19:12	08:05 08:53-09:17/24 17:54	08:11 15:53	08:50 15:40
25	05:03 05:51-06:23/32 21:41	06:03 20:32	07:05 08:16-09:08/52 19:09	07:07 07:52-08:17/25 16:52	08:13 15:52	08:50 15:41
26	05:04 05:52-06:23/31 21:39	06:05 20:29	07:07 08:15-09:08/53 19:07	07:09 07:53-08:17/24 16:50	08:15 15:50	08:50 15:42
27	05:06 05:53-06:22/29 21:37	06:07 20:27	07:09 08:14-09:09/55 19:04	07:11 07:53-08:17/24 16:47	08:17 15:49	08:51 15:43
28	05:08 05:53-06:21/28 21:35	06:09 20:24	07:11 08:14-09:09/55 19:01	07:14 07:52-08:16/24 16:45	08:19 15:48	08:51 15:43
29	05:10 05:54-06:20/26 21:33	06:11 20:22	07:13 08:14-09:09/55 18:59	07:16 07:53-08:16/23 16:43	08:20 15:47	08:51 15:44
30	05:12 05:55-06:20/25 21:32	06:13 20:19	07:15 08:14-09:10/56 18:56	07:18 07:54-08:15/21 16:40	08:22 15:46	08:51 15:45
31	05:14 05:57-06:19/22 21:30	06:15 20:16		07:20 07:54-08:14/20 16:38		08:51 15:47
Potential sun hours		529	469	385	324	247
Sum of minutes with flicker		1029	42	668	953	43
						0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C11 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (85)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 09:00-09:40/40 16:45	07:11 17:47	06:49 07:27-07:59/32 19:53	05:32 20:55	04:36 21:52
2	08:50 15:49	08:13 08:59-09:41/42 16:47	07:08 17:49	06:46 07:25-07:59/34 19:55	05:30 20:57	04:35 21:54
3	08:50 15:51	08:11 08:59-09:41/42 16:49	07:05 17:52	06:43 07:24-07:59/35 19:57	05:28 20:59	04:34 21:55
4	08:49 15:52	08:09 08:59-09:42/43 16:52	07:03 17:54	06:41 07:24-07:59/35 19:59	05:25 21:01	04:33 21:56
5	08:49 15:53	08:07 08:58-09:41/43 16:54	07:00 17:56	06:38 07:23-07:59/36 20:01	05:23 21:03	04:32 21:58
6	08:48 15:55	08:04 08:59-09:41/42 16:56	06:58 17:58	06:35 07:23-07:59/36 20:03	05:21 21:05	04:31 21:59
7	08:48 15:56	08:02 08:59-09:41/42 16:58	06:55 18:00	06:33 07:22-07:59/37 20:05	05:19 21:07	04:30 22:00
8	08:47 15:58	08:00 09:00-09:41/41 17:01	06:52 18:02	06:30 07:22-07:58/36 20:07	05:17 21:09	04:29 22:01
9	08:46 15:59	07:58 08:59-09:40/41 17:03	06:50 18:05	06:27 07:22-07:58/36 20:09	05:15 21:11	04:28 22:02
10	08:46 16:01	07:56 09:00-09:39/39 17:05	06:47 18:07	06:25 07:22-07:57/35 20:11	05:12 21:13	04:28 22:03
11	08:45 16:03	07:54 09:00-09:37/37 17:07	06:45 18:09	06:22 07:23-07:56/33 20:14	05:10 21:15	04:27 22:04
12	08:44 16:04	07:51 09:01-09:37/36 17:10	06:42 18:11	06:19 07:23-07:55/32 20:16	05:08 21:17	04:27 22:05
13	08:43 16:06	07:49 09:02-09:35/33 17:12	06:39 18:13	06:17 07:24-07:54/30 20:18	05:06 21:19	04:26 22:06
14	08:42 16:08	07:47 09:02-09:32/30 17:14	06:37 18:15	06:14 07:24-07:52/28 20:20	05:04 21:21	04:26 22:06
15	08:41 16:10	07:45 09:04-09:27/23 17:16	06:34 18:17	06:12 07:26-07:51/25 20:22	05:02 21:23	04:26 22:07
16	08:40 16:12	07:42 09:05-09:25/20 17:19	06:31 18:19	06:09 07:27-07:48/21 20:24	05:00 21:25	04:25 22:08
17	08:38 16:14	07:40 09:07-09:23/16 17:21	06:29 18:22	06:07 07:29-07:46/17 20:26	04:59 21:27	04:25 22:08
18	08:37 16:16	07:38 09:10-09:19/9 17:23	06:26 18:24	06:04 07:32-07:41/9 20:28	04:57 21:29	04:25 22:09
19	08:36 16:17	07:35 17:25	06:23 18:26	06:02 20:30	04:55 21:31	04:25 22:09
20	08:34 09:16-09:27/11 16:19	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:09
21	08:33 09:15-09:30/15 16:22	07:30 17:30	06:18 18:30	05:57 20:34	04:51 21:34	04:25 22:10
22	08:32 09:14-09:32/18 16:24	07:28 17:32	06:15 18:32	05:54 20:36	04:50 21:36	04:25 22:10
23	08:30 09:12-09:33/21 16:26	07:26 17:34	06:13 18:34	05:52 20:39	04:48 21:38	04:26 22:10
24	08:29 09:11-09:34/23 16:28	07:23 17:36	06:10 18:36	05:49 20:41	04:47 21:40	04:26 22:10
25	08:27 09:07-09:35/28 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	04:26 22:10
26	08:25 09:06-09:37/31 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:44 21:43	04:27 22:10
27	08:24 09:04-09:38/34 16:34	07:16 17:43	06:02 06:37-06:52/15 18:42	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 09:03-09:39/36 16:36	07:13 17:45	05:59 06:34-06:54/20 18:44	05:39 20:49	04:41 21:46	04:28 22:10
29	08:20 09:02-09:40/38 16:38		06:57 07:32-07:56/24 19:47	05:37 20:51	04:39 21:48	04:28 22:09
30	08:18 09:01-09:39/38 16:41		06:54 07:29-07:57/28 19:49	05:35 20:53	04:38 21:49	04:29 22:09
31	08:16 09:00-09:40/40 16:43		06:51 07:27-07:57/30 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	333	619	117	547	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

SHADOW - Calendar per WTG

WTG: C11 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (85)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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 20:14	07:22-07:55/33 18:53	07:17 16:36	07:22 08:29-09:09/40 15:45
2	04:31 22:08	05:17 21:26	06:19 20:11	07:21-07:56/35 18:51	07:19 16:34	07:24 08:29-09:09/40 15:44
3	04:32 22:08	05:19 21:23	06:21 20:08	07:20-07:56/36 18:48	07:21 16:31	07:27 08:28-09:10/42 15:43
4	04:32 22:07	05:21 21:21	06:23 20:06	07:19-07:55/36 18:45	07:23 16:29	07:29 08:29-09:11/42 15:42
5	04:33 22:06	05:23 21:19	06:25 20:03	07:18-07:55/37 18:43	07:25 16:27	07:31 08:28-09:11/43 15:41
6	04:35 22:06	05:25 21:17	06:27 20:01	07:18-07:54/36 18:40	07:27 16:25	07:33 08:29-09:12/43 15:41
7	04:36 22:05	05:27 21:15	06:29 19:58	07:18-07:54/36 18:37	07:29 16:23	07:35 08:29-09:11/42 15:40
8	04:37 22:04	05:29 21:13	06:31 19:55	07:18-07:54/36 18:35	07:31 16:21	07:38 08:29-09:11/42 15:40
9	04:38 22:03	05:31 21:10	06:33 19:53	07:18-07:53/35 18:32	07:33 16:19	07:40 08:30-09:12/42 15:39
10	04:39 22:02	05:33 21:08	06:35 19:50	07:19-07:52/33 18:30	07:35 16:17	07:42 08:31-09:11/40 15:39
11	04:41 22:01	05:35 21:06	06:37 19:47	07:19-07:51/32 18:27	07:38 16:15	07:44 08:32-09:12/40 15:38
12	04:42 22:00	05:37 21:04	06:39 19:45	07:20-07:50/30 18:24	07:40 16:13	07:46 08:32-09:11/39 15:38
13	04:43 21:59	05:39 21:01	06:41 19:42	07:21-07:48/27 18:22	07:42 16:11	07:48 08:34-09:12/38 15:38
14	04:45 21:58	05:41 20:59	06:43 19:39	07:22-07:47/25 18:19	07:44 16:09	07:50 08:35-09:11/36 15:38
15	04:46 21:56	05:43 20:57	06:45 19:36	07:23-07:45/22 18:17	07:53 16:07	08:36-09:10/34 15:38
16	04:48 21:55	05:45 20:54	06:47 19:34	07:26-07:42/16 18:14	07:55 16:06	08:39-09:10/31 15:38
17	04:49 21:54	05:47 20:52	06:49 19:31	07:31-07:37/6 18:12	07:57 16:04	08:41-09:09/28 15:38
18	04:51 21:52	05:49 20:49	06:51 19:28	07:52 18:09	07:59 16:02	08:45-09:08/23 15:38
19	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:07	08:01 16:01	08:47-09:08/21 15:38
20	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	08:03 15:59	08:49-09:07/18 15:38
21	04:56 21:48	05:55 20:42	06:57 19:20	07:59 18:02	08:05 15:57	08:50-09:05/15 15:39
22	04:57 21:46	05:57 20:39	06:59 19:18	08:01 17:59	08:07 15:56	08:52-09:03/11 15:39
23	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	08:09 15:55	08:49 15:40
24	05:01 21:43	06:01 20:34	07:03 19:12	08:05 09:40-09:50/10 17:54	08:11 15:53	08:50 15:40
25	05:03 21:41	06:03 07:34-07:45/11 20:32	07:05 19:09	07:07 08:36-08:53/17 16:52	08:13 15:52	08:50 15:41
26	05:04 21:39	06:05 07:30-07:48/18 20:29	07:07 19:07	07:09 08:35-08:55/20 16:50	08:15 15:50	08:50 15:42
27	05:06 21:37	06:07 07:28-07:50/22 20:27	07:09 19:04	07:11 08:33-08:59/26 16:47	08:17 15:49	08:50 15:43
28	05:08 21:35	06:09 07:26-07:52/26 20:24	07:11 19:01	07:14 08:31-09:02/31 16:45	08:19 15:48	08:51 15:44
29	05:10 21:33	06:11 07:25-07:53/28 20:22	07:13 18:59	07:16 08:31-09:05/34 16:43	08:20 15:47	08:51 15:44
30	05:12 21:32	06:13 07:24-07:54/30 20:19	07:15 18:56	07:18 08:30-09:06/36 16:40	08:22 15:46	08:51 15:45
31	05:14 21:30	06:15 07:23-07:55/32 20:16		07:20 08:29-09:07/38 16:38		08:51 15:47
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	0	167	511	212	750	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C12 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (86)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January		February		March		April		May		June	
1	08:50	09:30-09:54/24	08:14		07:10	07:47-08:16/29	06:49		05:32		04:36	05:46-06:05/19
	15:48		16:45		17:47		19:53		20:55		21:52	
2	08:50	09:29-09:54/25	08:12		07:08	07:46-08:16/30	06:46		05:30		04:35	05:46-06:04/18
	15:49		16:47		17:49		19:55		20:57		21:54	
3	08:50	09:29-09:55/26	08:11		07:05	07:46-08:17/31	06:43		05:28		04:34	05:47-06:03/16
	15:51		16:50		17:52		19:57		20:59		21:55	
4	08:49	09:28-09:56/28	08:09		07:03	07:46-08:16/30	06:41		05:25		04:33	05:48-06:03/15
	15:52		16:52		17:54		19:59		21:01		21:56	
5	08:49	09:28-09:56/28	08:06		07:00	07:45-08:15/30	06:38		05:23		04:32	05:49-06:03/14
	15:53		16:54		17:56		20:01		21:03		21:57	
6	08:48	09:29-09:57/28	08:04		06:58	07:46-08:15/29	06:35		05:21		04:31	05:50-06:02/12
	15:55		16:56		17:58		20:03		21:05		21:59	
7	08:48	09:28-09:58/30	08:02		06:55	07:46-08:14/28	06:33		05:19	05:49-06:00/11	04:30	05:51-06:01/10
	15:56		16:58		18:00		20:05		21:07		22:00	
8	08:47	09:28-09:58/30	08:00		06:52	07:46-08:13/27	06:30		05:17	05:47-06:02/15	04:29	05:05-05:07/2
	15:58		17:01		18:02		20:07		21:09		22:01	05:53-06:00/7
9	08:46	09:29-09:59/30	07:58		06:50	07:47-08:12/25	06:27		05:15	05:45-06:03/18	04:28	05:04-05:08/4
	15:59		17:03		18:05		20:09		21:11		22:02	05:54-05:58/4
10	08:46	09:29-10:00/31	07:56		06:47	07:48-08:10/22	06:25		05:12	05:44-06:04/20	04:28	05:04-05:10/6
	16:01		17:05		18:07		20:11		21:13		22:03	
11	08:45	09:29-10:00/31	07:54		06:45	07:49-08:08/19	06:22		05:10	05:43-06:05/22	04:27	05:03-05:10/7
	16:03		17:07		18:09		20:14		21:15		22:04	
12	08:44	09:28-10:00/32	07:51		06:42	07:50-08:05/15	06:19		05:08	05:42-06:05/23	04:27	05:03-05:11/8
	16:04		17:10		18:11		20:16		21:17		22:05	
13	08:43	09:29-10:01/32	07:49		06:39	07:55-08:00/5	06:17		05:06	05:41-06:06/25	04:26	05:03-05:12/9
	16:06		17:12		18:13		20:18		21:19		22:06	
14	08:42	09:29-10:01/32	07:47		06:37		06:14		05:04	05:42-06:07/25	04:26	05:03-05:13/10
	16:08		17:14		18:15		20:20		21:21		22:06	
15	08:41	09:29-10:01/32	07:45		06:34		06:12		05:02	05:41-06:07/26	04:26	05:02-05:13/11
	16:10		17:16		18:17		20:22		21:23		22:07	
16	08:40	09:30-10:02/32	07:42		06:31		06:09		05:00	05:40-06:07/27	04:25	05:02-05:13/11
	16:12		17:19		18:19		20:24		21:25		22:08	
17	08:38	09:30-10:01/31	07:40		06:29		06:07		04:59	05:41-06:08/27	04:25	05:02-05:14/12
	16:14		17:21		18:21		20:26		21:27		22:08	
18	08:37	09:31-10:02/31	07:38		06:26		06:04		04:57	05:40-06:08/28	04:25	05:02-05:14/12
	16:16		17:23		18:24		20:28		21:29		22:09	
19	08:36	09:31-10:01/30	07:35		06:23		06:02		04:55	05:40-06:07/27	04:25	05:02-05:14/12
	16:18		17:25		18:26		20:30		21:31		22:09	
20	08:34	09:31-10:01/30	07:33		06:21		05:59		04:53	05:41-06:08/27	04:25	05:02-05:15/13
	16:20		17:28		18:28		20:32		21:33		22:09	
21	08:33	09:32-10:01/29	07:30		06:18		05:57		04:52	05:40-06:07/27	04:25	05:03-05:16/13
	16:22		17:30		18:30		20:34		21:34		22:10	
22	08:32	09:33-10:00/27	07:28		06:15		05:54		04:50	05:41-06:08/27	04:25	05:03-05:16/13
	16:24		17:32		18:32		20:36		21:36		22:10	
23	08:30	09:33-09:59/26	07:26	07:56-08:08/12	06:13		05:52		04:48	05:41-06:08/27	04:26	05:03-05:15/12
	16:26		17:34		18:34		20:39		21:38		22:10	
24	08:28	09:34-09:58/24	07:23	07:54-08:11/17	06:10		05:49		04:47	05:41-06:07/26	04:26	05:04-05:16/12
	16:28		17:36		18:36		20:41		21:40		22:10	
25	08:27	09:35-09:56/21	07:21	07:51-08:13/22	06:07		05:47		04:45	05:42-06:07/25	04:26	05:04-05:16/12
	16:30		17:39		18:38		20:43		21:41		22:10	
26	08:25	09:37-09:53/16	07:18	07:50-08:14/24	06:05		05:44		04:44	05:42-06:07/25	04:27	05:04-05:15/11
	16:32		17:41		18:40		20:45		21:43		22:10	
27	08:24	09:39-09:52/13	07:16	07:49-08:15/26	06:02		05:42		04:42	05:42-06:06/24	04:27	05:05-05:16/11
	16:34		17:43		18:42		20:47		21:45		22:10	
28	08:22	09:41-09:50/9	07:13	07:47-08:15/28	05:59		05:39		04:41	05:43-06:06/23	04:28	05:05-05:15/10
	16:36		17:45		18:44		20:49		21:46		22:10	
29	08:20				06:57		05:37		04:39	05:44-06:06/22	04:28	05:06-05:16/10
	16:38				19:47		20:51		21:48		22:09	
30	08:18				06:54		05:35		04:38	05:44-06:06/22	04:29	05:07-05:16/9
	16:41				19:49		20:53		21:49		22:09	
31	08:16				06:51				04:37	05:45-06:05/20		
	16:43				19:51				21:51			
Potential sun hours	235		266		366		426		508		528	
Sum of minutes with flicker	758		129		320		0		589		345	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C12 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (86)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30 05:07-05:15/8 22:09	05:16 05:53-06:16/23 21:28	06:17 07:17 08:32-08:43/11 20:14	07:17 08:32-08:43/11 18:53	07:22 16:36	08:24 09:10-09:41/31 15:45
2	04:31 05:08-05:15/7 22:08	05:17 05:54-06:15/21 21:25	06:19 07:19 08:29-08:46/17 20:11	07:19 08:29-08:46/17 18:51	07:24 16:34	08:26 09:11-09:42/31 15:44
3	04:32 05:09-05:14/5 22:08	05:19 05:55-06:14/19 21:23	06:21 07:21 08:26-08:48/22 20:08	07:21 08:26-08:48/22 18:48	07:27 16:31	08:27 09:12-09:42/30 15:43
4	04:33 05:10-05:13/3 22:07	05:21 05:56-06:13/17 21:21	06:23 07:23 08:25-08:49/24 20:06	07:23 08:25-08:49/24 18:45	07:29 16:29	08:29 09:13-09:43/30 15:42
5	04:34 05:59-06:05/6 22:06	05:23 05:57-06:11/14 21:19	06:25 07:25 08:23-08:50/27 20:03	07:25 08:23-08:50/27 18:43	07:31 16:27	08:30 09:14-09:43/29 15:41
6	04:35 05:57-06:08/11 22:06	05:25 06:00-06:08/8 21:17	06:27 07:27 08:22-08:50/28 20:01	07:27 08:22-08:50/28 18:40	07:33 16:25	08:32 09:15-09:44/29 15:41
7	04:36 05:56-06:09/13 22:05	05:27 05:58-06:09/13 21:15	06:29 07:29 08:21-08:50/29 19:58	07:29 08:21-08:50/29 18:37	07:35 16:23	08:33 09:15-09:43/28 15:40
8	04:37 05:55-06:10/15 22:04	05:29 05:59-06:10/15 21:13	06:31 07:31 08:21-08:50/29 19:55	07:31 08:21-08:50/29 18:35	07:37 16:21	08:35 09:16-09:44/28 15:40
9	04:38 05:55-06:11/16 22:03	05:31 05:59-06:11/16 21:10	06:33 07:33 08:20-08:50/30 19:53	07:33 08:20-08:50/30 18:32	07:40 16:19	08:36 09:17-09:43/26 15:39
10	04:39 05:54-06:11/17 22:02	05:33 05:58-06:11/17 21:08	06:35 07:35 08:21-08:51/30 19:50	07:35 08:21-08:51/30 18:30	07:42 16:17	08:38 09:19-09:44/25 15:39
11	04:41 05:53-06:12/19 22:01	05:35 05:59-06:12/19 21:06	06:37 07:37 08:20-08:50/30 19:47	07:37 08:20-08:50/30 18:27	07:44 16:15	08:39 09:20-09:44/24 15:38
12	04:42 05:54-06:13/19 22:00	05:37 05:59-06:13/19 21:04	06:39 07:39 08:20-08:50/30 19:44	07:39 08:20-08:50/30 18:24	07:46 16:13	08:40 09:21-09:44/23 15:38
13	04:43 05:53-06:14/21 21:59	05:39 05:59-06:14/21 21:01	06:41 07:41 08:20-08:49/29 19:42	07:41 08:20-08:49/29 18:22	07:48 16:11	08:41 09:23-09:45/22 15:38
14	04:45 05:52-06:14/22 21:57	05:41 05:59-06:14/22 20:59	06:43 07:43 08:21-08:48/27 19:39	07:43 08:21-08:48/27 18:19	07:50 09:13-09:22/9 16:09	08:42 09:24-09:45/21 15:38
15	04:46 05:52-06:15/23 21:56	05:43 05:59-06:15/23 20:56	06:45 07:45 08:21-08:47/26 19:36	07:45 08:21-08:47/26 18:17	07:52 09:10-09:24/14 16:07	08:43 09:25-09:45/20 15:38
16	04:48 05:52-06:16/24 21:55	05:45 05:59-06:16/24 20:54	06:47 07:47 08:23-08:46/23 19:34	07:47 08:23-08:46/23 18:14	07:55 09:10-09:26/16 16:06	08:44 09:26-09:46/20 15:38
17	04:49 05:51-06:16/25 21:54	05:47 05:59-06:16/25 20:52	06:49 07:49 08:24-08:44/20 19:31	07:49 08:24-08:44/20 18:12	07:57 09:09-09:30/21 16:04	08:45 09:27-09:46/19 15:38
18	04:51 05:52-06:17/25 21:52	05:49 05:59-06:17/25 20:49	06:51 07:51 08:26-08:42/16 19:28	07:51 08:26-08:42/16 18:09	07:59 09:08-09:32/24 16:02	08:46 09:28-09:46/18 15:38
19	04:52 05:51-06:17/26 21:51	05:51 05:59-06:17/26 20:47	06:53 07:53 08:29-08:38/9 19:26	07:53 08:29-08:38/9 18:07	08:01 09:08-09:34/26 16:01	08:47 09:28-09:46/18 15:38
20	04:54 05:51-06:18/27 21:49	05:53 05:59-06:18/27 20:44	06:55 07:55 08:29-08:35/27 19:23	07:55 08:29-08:35/27 18:04	08:03 09:08-09:35/27 15:59	08:47 09:29-09:47/18 15:38
21	04:56 05:51-06:17/26 21:48	05:55 05:59-06:17/26 20:42	06:57 07:57 08:29-08:36/29 19:20	07:57 08:29-08:36/29 18:02	08:05 09:07-09:36/29 15:57	08:48 09:29-09:47/18 15:39
22	04:57 05:51-06:18/27 21:46	05:57 05:59-06:18/27 20:39	06:59 07:59 08:29-08:37/30 19:18	08:01 08:29-08:37/30 17:59	08:07 09:07-09:37/30 15:56	08:49 09:30-09:48/18 15:39
23	04:59 05:50-06:18/28 21:44	05:59 05:59-06:18/28 20:37	07:01 07:59 08:29-08:38/9 19:15	08:03 08:29-08:38/9 17:57	08:09 09:08-09:38/30 15:55	08:49 09:30-09:48/18 15:40
24	05:01 05:51-06:18/27 21:43	06:01 05:59-06:18/27 20:34	07:03 07:59 08:29-08:38/9 19:12	08:05 08:29-08:38/9 17:54	08:11 09:08-09:39/31 15:53	08:50 09:31-09:49/18 15:40
25	05:03 05:50-06:18/28 21:41	06:03 05:59-06:18/28 20:32	07:05 07:59 08:29-08:38/9 19:09	07:07 08:29-08:38/9 16:52	08:13 09:08-09:39/31 15:52	08:50 09:31-09:49/18 15:41
26	05:04 05:51-06:18/27 21:39	06:05 05:59-06:18/27 20:29	07:07 07:59 08:29-08:38/9 19:07	07:09 08:29-08:38/9 16:50	08:15 09:08-09:40/32 15:51	08:50 09:31-09:50/19 15:42
27	05:06 05:51-06:18/27 21:37	06:07 05:59-06:18/27 20:27	07:09 07:59 08:29-08:38/9 19:04	07:11 08:29-08:38/9 16:47	08:17 09:08-09:40/32 15:49	08:50 09:31-09:50/19 15:43
28	05:08 05:51-06:17/26 21:35	06:09 05:59-06:17/26 20:24	07:11 07:59 08:29-08:38/9 19:01	07:14 08:29-08:38/9 16:45	08:18 09:08-09:40/32 15:48	08:51 09:31-09:51/20 15:44
29	05:10 05:51-06:17/26 21:33	06:11 05:59-06:17/26 20:22	07:13 07:59 08:29-08:38/9 18:59	07:16 08:29-08:38/9 16:43	08:20 09:10-09:42/32 15:47	08:51 09:31-09:52/21 15:44
30	05:12 05:52-06:17/25 21:31	06:13 05:59-06:17/25 20:19	07:15 07:59 08:29-08:38/9 18:56	07:18 08:29-08:38/9 16:40	08:22 09:10-09:42/32 15:46	08:51 09:31-09:53/22 15:45
31	05:14 05:53-06:17/24 21:30	06:15 05:59-06:17/24 20:16	07:17 07:59 08:29-08:38/9 16:38	07:20 08:29-08:38/9 15:46	08:22 09:10-09:42/32 15:46	08:51 09:30-09:53/23 15:47
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	631	102	0	457	448	704

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C13 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (87)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June
1	08:51 09:44-11:30/106 13:17-13:38/21 15:48 14:00-14:40/40 12:55-13:09/14	08:15 10:07-11:16/69 09:05-09:54/49 16:45 14:06-15:12/66	07:11 16:10-16:59/49 17:48	06:49 07:54-08:25/31 19:53	05:33 06:51-07:12/21 20:55 06:00-06:35/35	04:36 05:10-05:29/19 21:52 20:28-20:59/31
2	08:50 09:44-11:31/107 13:18-13:38/20 15:49 14:00-14:42/42 12:57-13:09/12	08:13 10:08-11:15/67 09:04-09:55/51 16:47 14:07-15:12/65	07:08 16:10-16:58/48 17:50	06:46 08:10-08:21/11 19:55 07:56-08:06/10	05:30 06:53-07:10/17 20:57 05:58-06:34/36	04:35 05:09-05:30/21 21:54 20:28-21:00/32
3	08:50 09:44-11:31/107 13:19-13:38/19 15:51 14:00-14:42/42 12:58-13:08/10	08:11 10:09-11:13/64 09:03-09:56/53 16:50 14:08-15:12/64	07:06 16:10-16:59/49 17:52	06:43 07:18-07:31/13 19:57	05:28 06:56-07:07/11 20:59 05:57-06:33/36	04:34 05:08-05:30/22 21:55 20:28-21:00/32
4	08:50 09:44-11:31/107 13:19-13:36/17 15:52 14:00-14:43/43 13:00-13:07/7	08:09 10:10-11:10/60 09:02-09:57/55 16:52 14:09-15:12/63 08:39-08:42/3	07:03 16:10-16:58/48 17:54	06:41 07:14-07:34/20 19:59	05:26 05:56-06:32/36 21:02	04:33 05:08-05:31/23 21:57 20:27-21:00/33
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6	08:49 09:45-11:32/107 13:22-13:35/13 15:55 14:00-14:49/49	08:05 14:12-15:10/58 08:34-08:47/13 16:56 10:11-10:58/47 09:00-09:57/57	06:58 16:11-16:58/47 17:58	06:35 07:09-07:38/29 20:03	05:21 05:56-06:20/24 21:06	04:31 05:06-05:31/25 21:59 20:27-21:02/35
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9	08:47 09:45-11:32/107 15:59 14:00-14:54/54	07:58 10:15-10:53/38 08:29-08:50/21 17:03 14:19-15:08/49 08:59-09:58/59	06:50 07:23-07:30/7 18:05 16:13-16:55/42	06:28 06:53-07:41/48 20:10	05:15 05:57-06:19/22 21:12	04:29 05:04-05:32/28 22:02 20:27-21:03/36
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11	08:45 09:46-11:32/106 16:03 14:00-14:57/57	07:54 10:21-10:47/26 08:29-08:52/23 17:08 14:31-15:06/35 08:59-09:59/60	06:45 07:15-07:35/20 18:09 16:15-16:51/36	06:22 06:48-07:42/54 20:14	05:11 05:58-06:17/19 21:16	04:27 05:04-05:33/29 22:04 20:27-21:03/36
12	08:44 09:46-11:32/106 09:24-09:25/1 16:05 14:00-14:58/58	07:52 10:25-10:43/18 08:28-08:51/23 17:10 14:33-15:04/31 08:58-09:58/60	06:42 07:14-07:37/23 18:11 16:18-16:50/32	06:20 06:45-07:41/56 20:16	05:08 05:58-06:16/18 21:18	04:27 05:03-05:33/30 22:05 20:28-21:04/36
13	08:43 09:46-11:31/105 09:20-09:28/8 16:06 14:00-14:59/59	07:49 10:30-10:38/8 08:28-08:52/24 17:12 14:35-15:01/26 08:59-09:58/59	06:39 07:12-07:38/26 16:21-16:33/12 18:13 16:34-16:46/12	06:17 06:43-07:42/59 20:18	05:06 06:00-06:16/16 21:20	04:26 05:03-05:33/30 22:06 20:28-21:04/36
14	08:42 09:47-11:31/105 09:19-09:31/12 16:08 14:00-15:01/61	07:47 14:38-14:56/18 08:58-09:57/59 17:14 08:27-08:52/25	06:37 07:11-07:38/27 18:15	06:14 06:40-07:41/61 20:20	05:04 06:01-06:14/13 21:22	04:26 05:03-05:34/31 22:07 20:28-21:05/37
15	08:41 09:47-11:30/103 09:18-09:33/15 16:10 14:00-15:02/62	07:45 08:27-08:52/25 17:17 08:59-09:57/58	06:34 07:03-07:40/37 18:17	06:12 06:38-07:42/64 20:22	05:03 06:03-06:12/9 21:23	04:26 05:03-05:34/31 22:07 20:28-21:04/36
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18	08:37 09:47-11:26/99 09:16-09:36/20 16:16 14:01-15:05/64	07:38 16:23-16:37/14 16:43-16:51/8 17:23 08:28-08:51/23 08:59-09:54/55	06:26 06:54-07:39/45 18:24	06:04 06:30-07:40/70 20:28	04:57 21:29 04:55	04:25 05:02-05:34/32 22:09 20:28-21:05/37
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20	08:35 09:49-11:22/93 09:09-09:38/29 16:20 14:01-15:07/66	07:33 16:18-16:57/39 09:00-09:52/52 17:28 08:29-08:49/20	06:21 06:52-07:39/47 18:28	05:59 06:26-07:38/72 20:32	04:53 21:33 04:52	04:25 05:03-05:35/32 22:10 20:29-21:06/37
21	08:33 09:49-11:22/93 09:07-09:39/32 16:22 14:01-15:08/67	07:31 16:17-16:59/42 09:01-09:51/50 17:30 08:31-08:48/17	06:18 06:51-07:38/47 18:30	05:57 06:23-07:38/75 20:35	04:52 21:35 04:50	04:25 05:03-05:35/32 22:10 20:30-21:07/37
22	08:32 09:49-11:22/93 09:06-09:39/33 16:24 14:01-15:08/67	07:28 16:15-16:59/44 09:01-09:48/47 17:32 08:32-08:46/14	06:15 06:51-07:38/47 18:32	05:54 06:21-07:37/76 20:37	04:50 20:38-20:47/9 21:36	04:25 05:03-05:35/32 22:10 20:30-21:07/37
23	08:30 09:50-11:22/92 09:05-09:40/35 16:26 14:01-15:09/68	07:26 16:14-17:00/46 09:03-09:46/43 17:34 08:36-08:43/7	06:13 06:50-07:37/47 18:34	05:52 06:18-07:36/78 20:39	04:48 20:36-20:50/14 21:38	04:26 05:03-05:35/32 22:10 20:29-21:06/37
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26	08:25 09:53-11:22/89 09:05-09:47/42 16:32 14:03-15:11/68	07:18 16:12-17:01/49 17:41 09:08-09:27/19	06:05 06:49-07:35/46 18:40	05:44 06:47-07:31/44 20:45	04:44 20:32-20:55/23 21:43	04:27 05:05-05:36/31 22:10 20:30-21:07/37
27	08:24 09:54-11:21/87 09:05-09:49/44 16:34 14:03-15:11/68	07:16 16:11-17:00/49 17:43 09:11-09:23/12	06:02 06:49-07:34/45 18:43	05:42 06:47-07:29/42 20:47	04:42 20:30-20:55/25 21:45	04:27 05:05-05:36/31 22:10 20:31-21:07/36
28	08:22 09:55-11:21/86 09:05-09:51/46 16:36 14:04-15:12/68	07:13 16:11-17:00/49 17:45	05:59 06:50-07:33/43 18:45	05:40 06:48-07:27/39 20:49	04:41 20:30-20:56/26 21:46	04:28 05:06-05:37/31 22:10 20:30-21:07/37
29	08:20 09:57-11:20/83 09:05-09:52/47 16:39 14:04-15:12/68		06:57 07:50-08:31/41 19:47	05:37 06:49-07:24/35 20:51	04:40 20:29-20:57/28 21:48	04:29 05:06-05:36/30 22:10 20:31-21:08/37
30	08:18 09:59-11:20/81 09:05-09:53/48 16:41 14:05-15:12/67		06:54 07:51-08:29/38 19:49	05:35 06:50-07:14/24 20:53	04:38 20:29-20:58/29 21:50	04:29 05:07-05:37/30 22:09 20:32-21:08/36
31	08:17 10:02-11:19/77 09:05-09:54/49 16:43 14:05-15:11/66		06:51 07:52-08:28/36 19:51		04:37 20:29-20:59/30 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	5651	3455	1412	1691	726	1937

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C13 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (87)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30 05:08-05:37/29 22:09 20:31-21:07/36	05:16 06:08-06:27/19 21:28	06:17 06:47-07:41/54 20:14	07:17 07:53-08:17/24 18:54 16:58-17:28/30	07:23 09:47-10:21/34 07:58-08:20/22 16:36 13:54-14:37/43 08:29-09:28/59	08:24 09:28-11:14/106 15:45 13:42-14:40/58
2	04:31 05:08-05:37/29 22:08 20:32-21:08/36	05:18 06:08-06:28/20 21:26	06:19 06:49-07:40/51 20:11	07:19 07:54-08:15/21 18:51 16:55-17:30/35	07:25 09:45-10:23/38 07:59-08:19/20 16:34 13:48-14:38/50 08:29-09:28/59	08:26 09:28-11:15/107 15:44 13:43-14:39/56
3	04:32 05:09-05:37/28 22:08 20:32-21:08/36	05:19 06:07-06:28/21 21:24	06:21 06:51-07:39/48 20:09	07:21 07:55-08:13/18 18:48 16:53-17:31/38	07:27 13:46-14:39/53 08:00-08:19/19 16:32 09:44-10:25/41 08:30-09:28/58	08:27 09:29-11:15/106 15:43 13:43-14:37/54
4	04:33 05:10-05:37/27 22:07 20:33-21:08/35	05:21 06:07-06:29/22 21:22	06:23 07:03-07:38/35 20:06	07:23 07:58-08:09/11 18:46 16:51-17:32/41	07:29 13:43-14:40/57 08:02-08:18/16 16:29 09:42-10:27/45 08:30-09:28/58	08:29 09:29-11:16/107 13:11-13:16/5 15:42 13:44-14:37/53
5	04:34 05:11-05:37/26 22:07 20:33-21:08/35	05:23 06:07-06:30/23 21:19	06:25 07:04-07:36/32 20:03	07:25 16:49-17:32/43 18:43	07:31 13:41-14:40/59 08:05-08:17/12 16:27 09:41-10:27/46 08:30-09:27/57	08:31 09:30-11:17/107 13:09-13:19/10 15:42 13:45-14:36/51
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7	04:36 05:13-05:38/25 22:05 20:34-21:08/34	05:27 06:31-06:37/6 21:15	06:29 07:06-07:31/25 19:58	07:29 16:46-17:33/47 18:38	07:36 09:39-10:40/61 08:32-09:27/55 16:23 13:39-14:41/62 08:09-08:11/2	08:34 09:31-11:18/107 13:07-13:22/15 15:40 13:46-14:32/46
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9	04:38 05:15-05:38/23 22:03 20:35-21:08/33	05:31 07:09-07:13/4 21:11	06:33 07:11-07:25/14 19:53	07:34 16:44-17:33/49 18:32	07:40 09:39-10:46/67 08:35-09:26/51 16:19 13:38-14:43/64	08:37 09:33-11:19/106 13:07-13:26/19 15:39 13:48-14:31/43 12:46-12:56/10
10	04:39 05:16-05:37/21 22:02 20:35-21:07/32	05:33 07:04-07:18/14 21:08	06:35 08:04-08:14/10 19:50	07:36 16:45-17:33/48 18:30	07:42 09:39-10:48/69 08:36-09:26/50 16:17 13:37-14:42/65	08:38 09:33-11:20/107 13:07-13:27/20 15:39 13:49-14:31/42 12:46-12:58/12
11	04:41 05:18-05:38/20 22:01 20:36-21:07/31	05:35 07:01-07:19/18 21:06	06:37 07:46-08:17/31 19:47	07:38 16:44-17:33/49 18:27	07:44 09:33-10:50/77 08:36-09:25/49 16:15 13:37-14:43/66	08:39 09:34-11:20/106 13:07-13:28/21 15:38 13:50-14:31/41 12:45-12:59/14
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13	04:43 05:20-05:37/17 21:59 05:20-05:37/17	05:39 06:58-07:23/25 21:01	06:41 07:42-08:20/38 19:42	07:42 16:43-17:33/50 18:22	07:49 09:29-10:52/83 08:37-09:24/47 16:11 13:36-14:44/68	08:41 09:36-11:22/106 13:07-13:31/24 15:38 13:52-14:31/39 12:46-13:02/16
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17	04:49 05:26-05:34/8 21:54 05:25-05:35/10	05:47 06:54-07:39/45 20:52	06:49 07:38-08:23/45 19:31	07:50 16:44-17:32/48 09:37-10:02/25 18:12	07:57 09:25-10:55/90 08:38-09:19/41 16:04 13:36-14:43/67	08:46 09:38-11:24/106 13:08-13:34/26 15:38 13:55-14:31/36 12:46-13:05/19
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19	04:52 05:28-05:33/5 21:51 05:28-05:33/5	05:51 06:22-07:41/79 20:47	06:53 07:37-08:23/46 19:26	07:55 16:45-17:30/45 09:34-10:18/44 18:07	08:01 09:25-10:57/92 08:40-09:15/35 16:01 13:36-14:44/68	08:47 09:40-11:25/105 13:08-13:34/26 15:38 13:55-14:31/36 12:46-13:05/19
20	04:54 05:29-05:31/1 21:49 05:30-05:31/1	05:53 06:24-07:41/77 20:45	06:55 07:36-08:23/47 19:23	07:57 16:46-17:30/44 09:32-10:20/48 18:04	08:03 09:24-10:57/93 08:41-09:14/33 15:59 13:36-14:43/67	08:48 09:40-11:25/105 13:09-13:35/26 15:39 13:56-14:32/36 12:47-13:06/19
21	04:56 05:30-05:29/13 21:48	05:55 06:26-07:42/76 20:42	06:57 07:36-08:23/47 19:20	07:59 16:47-17:28/41 09:31-10:22/51 18:02	08:05 09:24-10:57/93 08:43-09:15/32 15:58 13:36-14:43/67	08:48 09:41-11:26/105 13:10-13:36/26 15:39 13:57-14:33/36 12:47-13:07/20
22	04:57 05:31-05:28/6 21:46	05:57 06:28-07:43/75 20:40	06:59 07:36-08:23/47 19:18	08:01 16:49-17:26/37 09:30-10:23/53 17:59	08:07 09:25-10:58/93 08:45-09:14/29 15:56 13:37-14:43/66	08:49 09:41-11:26/105 13:10-13:36/26 15:39 13:57-14:33/36 12:47-13:07/20
23	04:59 05:32-05:27/1 21:45	05:59 06:30-07:43/73 20:37	07:01 07:37-08:23/46 19:15	08:03 16:51-17:10/19 17:12-17:24/12 17:57	08:09 09:24-11:00/96 08:47-09:14/27 15:55 13:38-14:43/65	08:49 09:42-11:27/105 13:11-13:37/26 15:40 13:58-14:34/36 12:48-13:08/20
24	05:01 05:33-05:24/1 21:43	06:01 06:32-07:44/72 20:35	07:03 07:37-08:23/46 19:12	08:05 16:54-17:06/12 17:15-17:20/5 17:55	08:11 09:24-11:03/99 08:53-09:13/20 15:53 13:38-14:42/64	08:50 09:42-11:27/105 13:11-13:37/26 15:41 13:58-14:34/36 12:49-13:08/19
25	05:03 05:34-05:25/1 21:41	06:03 06:34-07:44/70 20:32	07:05 07:38-08:23/45 19:10	07:07 07:57-08:21/24 16:52	08:13 09:25-11:05/100 08:54-09:13/19 15:52 13:38-14:42/64	08:50 09:42-11:27/105 13:11-13:37/26 15:41 13:58-14:35/37 12:49-13:08/19
26	05:04 05:35-05:26/1 21:39	06:05 06:36-07:44/68 20:29	07:07 07:39-08:22/43 19:07	07:09 07:57-08:22/25 16:50	08:15 09:26-11:08/102 08:56-09:13/17 15:51 13:38-14:41/63	08:51 09:42-11:28/106 13:12-13:37/25 15:42 13:58-14:35/37 12:50-13:09/19
27	05:06 05:36-05:27/1 21:37	06:07 06:38-07:43/65 20:27	07:09 07:40-08:22/42 19:04	07:12 14:14-14:17/3 08:28-09:27/59 16:47	08:17 09:26-11:09/103 08:57-09:12/15 15:49 13:40-14:42/62	08:51 09:42-11:28/106 13:12-13:38/26 15:43 13:59-14:36/37 12:50-13:09/19
28	05:08 05:37-05:28/1 21:36	06:09 06:39-07:43/64 20:24	07:11 07:42-08:21/39 19:02	07:14 14:07-14:27/20 08:27-09:27/60 16:45	08:19 09:26-11:11/105 08:59-09:11/12 15:48 13:40-14:41/61	08:51 09:43-11:28/105 13:13-13:38/25 15:44 13:59-14:37/38 12:51-13:09/18
29	05:10 05:38-05:29/1 21:34	06:11 06:41-07:42/61 20:22	07:13 07:51-08:20/29 18:59	07:16 09:58-10:09/11 07:57-08:22/25 16:43	08:21 09:27-11:12/105 09:01-09:10/9 15:47 13:41-14:41/60	08:51 09:43-11:29/106 13:14-13:38/24 15:45 13:59-14:38/39 12:52-13:09/17
30	05:12 05:39-05:30/1 21:32	06:13 06:43-07:42/59 20:19	07:15 07:52-08:18/26 17:03-17:11/8 18:56	07:18 09:53-10:13/20 07:57-08:21/24 16:40	08:22 09:27-11:13/106 09:04-09:07/3 15:46 14:00-14:39/39 12:53-13:10/17	08:51 09:43-11:29/106 13:15-13:39/24 15:46 14:00-14:39/39 12:53-13:10/17
31	05:14 05:40-05:31/1 21:30	06:15 06:45-07:41/56 20:17	07:17 07:53-08:21/31 18:54	07:20 09:49-10:17/28 07:58-08:21/23 16:38	08:23 09:28-11:14/106 09:04-09:07/3 15:46 14:00-14:39/39 12:53-13:10/17	08:51 09:43-11:29/106 13:16-13:39/23 15:47 14:00-14:40/40 12:54-13:10/16
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1042	1722	1174	2384	5522	5597

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C14 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (88)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June
1	08:51 09:32-10:29/57 15:48	08:15 09:20-10:28/68 16:45	07:11 07:37-08:24/47 17:48	06:49 07:14-07:26/12 19:53	05:33 06:18-07:14/56 20:55	04:36 05:16-05:39/23 21:52 05:52-06:27/35
2	08:50 09:33-10:30/57 15:49	08:13 09:20-10:28/68 16:48	07:08 07:34-08:23/49 17:50	06:46 07:11-07:27/16 19:55	05:30 06:19-07:13/54 20:57	04:35 05:16-05:39/23 21:54 05:53-06:27/34
3	08:50 09:32-10:30/58 15:51	08:11 09:20-10:28/68 16:50	07:06 07:32-08:22/50 17:52	06:43 07:09-07:28/19 19:57	05:28 06:19-07:13/54 20:59	04:34 05:17-05:40/23 21:55 05:53-06:27/34
4	08:50 09:32-10:30/58 15:52	08:09 09:21-10:28/67 16:52	07:03 07:29-08:21/52 17:54	06:41 07:06-07:29/23 19:59	05:26 06:19-07:12/53 21:02 06:05-06:14/9	04:33 05:17-05:40/23 21:56 05:54-06:28/34
5	08:49 09:32-10:31/59 15:53	08:07 09:21-10:27/66 16:54	07:00 07:26-08:19/53 17:56	06:38 07:03-07:28/25 20:01	05:23 06:19-07:11/52 21:04 06:02-06:17/15	04:32 05:17-05:40/23 21:58 05:54-06:27/33
6	08:49 09:32-10:32/60 15:55	08:05 09:20-10:26/66 16:56	06:58 07:24-08:18/54 17:58	06:35 07:01-07:29/28 20:03	05:21 06:20-07:09/49 21:06 05:59-06:19/20	04:31 05:17-05:40/23 21:59 05:54-06:27/33
7	08:48 09:31-10:32/61 15:56	08:03 09:21-10:25/64 16:59	06:55 07:21-08:15/54 18:01	06:33 06:58-07:28/30 20:05	05:19 05:58-07:08/70 21:08	04:30 05:18-05:40/22 22:00 05:56-06:27/31
8	08:47 09:31-10:33/62 15:58	08:00 09:22-10:24/62 17:01	06:53 07:18-08:10/52 18:03	06:30 06:56-07:29/33 20:08	05:17 05:56-07:06/70 21:10	04:29 05:18-05:40/22 22:01 05:56-06:27/31
9	08:47 09:31-10:33/62 16:00	07:58 09:21-10:22/61 17:03	06:50 07:16-08:03/47 18:05	06:28 06:53-07:28/35 20:10	05:15 05:55-07:04/69 21:12	04:29 05:18-05:41/23 22:02 05:56-06:26/30
10	08:46 09:31-10:34/63 16:01	07:56 09:22-10:20/58 17:05	06:47 07:13-08:00/47 18:07	06:25 06:50-07:27/37 20:12	05:13 05:54-07:03/69 21:14	04:28 05:18-05:40/22 22:03 05:56-06:27/31
11	08:45 09:31-10:34/63 16:03	07:54 09:23-10:18/55 17:08	06:45 07:10-07:58/48 18:09	06:22 06:48-07:26/38 20:14	05:11 05:53-07:02/69 21:16	04:27 05:19-05:41/22 22:04 05:57-06:27/30
12	08:44 09:32-10:35/63 16:05	07:52 09:23-10:13/50 17:10	06:42 07:08-07:58/50 18:11	06:20 06:46-07:24/38 20:16	05:09 05:52-07:01/69 21:18	04:27 05:18-05:40/22 22:05 05:57-06:26/29
13	08:43 09:31-10:34/63 16:06	07:49 09:24-10:03/39 17:12	06:40 07:05-07:57/52 18:13	06:17 06:45-07:23/38 20:18	05:07 06:27-07:01/34 21:20 05:52-06:26/34	04:26 05:19-05:41/22 22:06 05:58-06:26/28
14	08:42 09:31-10:35/64 16:08	07:47 09:25-10:00/35 17:14	06:37 07:02-07:55/53 18:15	06:15 06:43-07:21/38 20:20	05:05 05:52-07:00/68 21:22	04:26 05:20-05:41/21 22:07 05:58-06:27/29
15	08:41 09:32-10:35/63 16:10	07:45 09:26-09:58/32 17:17	06:34 07:00-07:55/55 18:18	06:12 06:43-07:18/35 20:22	05:03 05:51-06:27/36 21:23 06:28-06:59/31	04:26 05:20-05:41/21 22:07 05:59-06:27/28
16	08:40 09:31-10:35/64 16:12	07:43 09:27-09:56/29 17:19	06:32 06:59-07:53/54 18:20	06:09 06:41-07:14/33 20:24	05:01 05:50-06:27/37 21:25 06:28-06:58/30	04:26 05:20-05:41/21 22:08 05:58-06:26/28
17	08:39 09:30-10:36/66 16:14	07:40 09:29-09:54/25 17:21	06:29 06:57-07:52/55 18:22	06:07 06:41-07:15/34 20:26	04:59 05:51-06:28/37 21:27 06:30-06:58/28	04:25 05:20-05:41/21 22:08 05:59-06:26/27
18	08:37 09:29-10:36/67 16:16	07:38 09:31-09:52/21 17:23	06:26 06:56-07:50/54 18:24	06:04 06:41-07:15/34 20:28	04:57 05:50-06:28/38 21:29 06:31-06:56/25	04:25 05:20-05:41/21 22:09 05:59-06:26/27
19	08:36 09:27-10:35/68 16:18	07:35 08:03-08:20/17 17:26	06:24 06:55-07:48/53 18:26	06:02 06:34-07:16/42 20:30	04:55 05:27-05:30/3 06:32-06:56/24 21:31 05:51-06:28/37	04:25 05:21-05:42/21 22:09 05:59-06:26/27
20	08:35 09:26-10:36/70 16:20	07:33 08:00-08:21/21 17:28	06:21 06:54-07:45/51 18:28	05:59 06:30-07:17/47 20:33	04:53 05:25-05:32/7 06:33-06:54/21 21:33 05:50-06:28/38	04:25 05:21-05:42/21 22:10 06:01-06:27/26
21	08:33 09:25-10:35/70 16:22	07:31 07:58-08:23/25 17:30	06:18 06:54-07:35/41 18:30	05:57 06:27-07:17/50 20:35	04:52 05:24-05:34/10 06:36-06:53/17 21:35 05:50-06:29/39	04:25 05:21-05:42/21 22:10 06:01-06:27/26
22	08:32 09:24-10:35/71 16:24	07:28 07:55-08:23/28 17:32	06:16 06:54-07:35/41 18:32	05:54 06:25-07:17/52 20:37	04:50 05:22-05:34/12 06:37-06:50/13 21:36 05:50-06:28/38	04:26 05:21-05:42/21 22:10 06:01-06:27/26
23	08:30 09:23-10:34/71 16:26	07:26 07:53-08:24/31 17:34	06:13 06:54-07:34/40 18:34	05:52 06:23-07:17/54 20:39	04:48 05:21-05:36/15 06:41-06:47/6 21:38 05:50-06:28/38	04:26 05:21-05:42/21 22:10 06:00-06:27/27
24	08:29 09:24-10:34/70 16:28	07:23 07:50-08:24/34 17:37	06:10 06:53-07:33/40 18:36	05:49 06:22-07:17/55 20:41	04:47 05:19-05:36/17 21:40 05:50-06:28/38	04:26 05:22-05:43/21 22:10 06:01-06:28/27
25	08:27 09:23-10:33/70 16:30	07:21 07:48-08:25/37 17:39	06:07 06:54-07:33/39 18:38	05:47 06:22-07:17/55 20:43	04:45 05:18-05:37/19 21:42 05:50-06:28/38	04:26 05:22-05:43/21 22:10 06:01-06:28/27
26	08:25 09:22-10:32/70 16:32	07:18 07:45-08:25/40 17:41	06:05 06:54-07:31/37 18:41	05:44 06:20-07:16/56 20:45	04:44 05:17-05:37/20 21:43 05:51-06:28/37	04:27 05:23-05:44/21 22:10 06:02-06:29/27
27	08:24 09:22-10:31/69 16:34	07:16 07:42-08:24/42 17:43	06:02 06:55-07:29/34 18:43	05:42 06:20-07:16/56 20:47	04:42 05:17-05:38/21 21:45 05:51-06:29/38	04:27 05:22-05:43/21 22:10 06:01-06:29/28
28	08:22 09:22-10:29/67 16:37	07:13 07:40-08:25/45 17:45	05:59 06:56-07:28/32 18:45	05:40 06:20-07:16/56 20:49	04:41 05:16-05:38/22 21:46 05:51-06:28/37	04:28 05:23-05:44/21 22:10 06:02-06:30/28
29	08:20 09:21-10:29/68 16:39		06:57 07:57-08:25/28 19:47	05:37 06:20-07:16/56 20:51	04:40 05:16-05:38/22 21:48 05:51-06:28/37	04:29 05:22-05:44/22 22:10 06:01-06:30/29
30	08:18 09:21-10:29/68 16:41		06:54 07:59-08:22/23 19:49	05:35 06:19-07:15/56 20:53	04:38 05:16-05:38/22 21:50 05:52-06:28/36	04:29 05:23-05:44/21 22:09 06:01-06:30/29
31	08:17 09:21-10:29/68 16:43		06:51 07:17-07:24/7 19:51	05:31 07:17-07:24/7 19:51	04:37 05:16-05:39/23 21:51 05:52-06:28/36	
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	2010	1287	1762	1181	1957	1530

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C14 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (88)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30 05:23-05:45/22 22:09 06:02-06:31/29 04:31 05:22-05:44/22 22:08 06:01-06:31/30	05:16 06:04-07:12/68 21:28 05:18 06:03-07:13/70 21:26	06:17 06:47-07:25/38 20:14 06:19 06:49-07:26/37 20:11	07:17 07:46-08:37/51 18:54 18:00-18:20/20 07:19 07:48-08:37/49 18:51 18:01-18:18/17	07:23 08:52-09:50/58 16:36 07:25 08:51-09:52/61 16:34	08:24 09:13-10:16/63 15:45 08:26 09:14-10:17/63 15:44
2	04:32 05:23-05:45/22 22:08 06:01-06:31/30 04:33 05:23-05:45/22 22:07 06:01-06:32/31	05:20 06:04-07:13/69 21:24 05:21 06:06-07:15/69 21:22	06:21 06:51-07:26/35 20:09 06:23 06:53-07:26/33 20:06	07:21 07:50-08:38/48 18:48 18:03-18:16/13 07:23 07:52-08:39/47 18:46	07:27 08:51-09:54/63 16:32 07:29 08:51-09:55/64 16:29	08:27 09:14-10:16/62 15:43 08:29 09:15-10:17/62 15:42
3	04:34 05:23-05:46/23 22:07 06:01-06:33/32 04:35 05:23-05:46/23 22:06 06:01-06:33/32	05:23 06:07-07:17/70 21:19 05:25 06:07-07:18/71 21:17	06:25 06:55-07:26/31 20:03 06:27 06:57-07:25/28 20:01	07:25 07:54-08:40/46 18:43 07:27 07:56-08:50/54 18:40	07:31 08:50-09:55/65 16:27 07:33 08:51-09:57/66 16:25	08:31 09:17-10:17/60 15:42 08:32 09:18-10:18/60 15:41
4	04:36 05:23-05:46/23 22:05 06:01-06:33/32 04:37 05:23-05:46/23 22:04 06:01-06:34/33	05:27 06:29-07:19/50 21:15 06:09-06:28/19 05:29 06:29-07:20/51 21:13 06:12-06:26/14	06:29 06:58-07:24/26 19:58 06:31 07:00-07:23/23 19:55	07:29 07:58-08:52/54 18:38 07:32 08:00-08:54/54 18:35	07:36 08:50-09:57/67 16:23 07:38 08:51-09:59/68 16:21	08:34 09:18-10:18/60 15:40 08:35 09:20-10:18/58 15:40
5	04:38 05:23-05:46/23 22:03 06:00-06:34/34 04:39 05:24-05:46/22 22:02 06:00-06:34/34	05:31 06:28-07:21/53 21:11 06:17-06:21/4 05:33 06:28-07:22/54 21:08	06:33 07:02-07:22/20 19:53 06:35 07:04-07:20/16 19:50	07:34 08:03-08:56/53 18:32 07:36 08:05-08:56/51 18:30	07:40 08:51-09:59/68 16:19 07:42 08:51-09:59/68 16:17	08:36 09:20-10:18/58 15:39 08:38 09:22-10:19/57 15:39
6	04:41 05:25-05:47/22 22:01 06:01-06:36/35 04:42 05:24-05:47/23 22:00 06:01-06:36/35	05:35 06:28-07:23/55 21:06 05:37 06:27-07:23/56 21:04	06:37 07:06-07:18/12 19:47 06:39 07:08-07:16/8 19:45	07:38 08:07-08:57/50 18:27 07:40 08:09-08:57/48 18:25	07:44 08:52-10:00/68 16:15 07:46 08:52-10:00/68 16:13	08:39 09:22-10:19/57 15:39 08:40 09:24-10:20/56 15:38
7	04:43 05:24-05:47/23 21:59 06:00-06:36/36 04:45 05:24-05:47/23 21:58 06:00-06:36/36	05:39 06:27-07:23/56 21:01 05:41 06:27-07:23/56 20:59	06:41 07:50-08:12/22 19:42 06:43 07:48-08:15/27 19:39	07:42 08:11-08:57/46 18:22 07:44 08:13-08:57/44 18:20	07:48 08:53-10:01/68 16:11 07:51 08:53-10:01/68 16:09	08:41 09:39-10:20/41 15:38 08:43 09:39-10:20/41 15:38
8	04:46 05:25-05:47/22 21:56 06:01-06:37/36 04:48 05:25-05:47/22 21:55 06:00-06:37/37	05:43 06:27-07:24/57 20:57 05:45 06:28-07:24/56 20:54	06:45 07:46-08:17/31 19:37 06:47 07:44-08:18/34 19:34	07:46 08:16-08:57/41 18:17 07:48 08:18-08:57/39 18:14	07:53 08:54-10:03/69 16:08 07:55 08:55-10:05/70 16:06	08:44 09:39-10:20/41 15:38 08:45 09:40-10:21/41 15:38
9	04:50 05:26-05:47/21 21:54 06:00-06:37/37 04:51 05:27-05:46/19 21:52 06:00-06:38/38	05:47 06:28-07:24/56 20:52 05:49 06:29-07:24/55 20:49	06:49 07:43-08:19/36 19:31 06:51 07:42-08:20/38 19:29	07:50 08:20-08:56/36 18:12 07:52 08:22-08:55/33 18:09	07:57 08:56-10:06/70 16:04 07:59 08:58-10:08/70 16:02	08:45 09:41-10:21/40 15:38 08:46 09:41-10:22/41 15:38
10	04:53 05:28-05:46/18 21:51 06:00-06:38/38 04:54 05:30-05:46/16 21:49 06:00-06:38/38	05:51 06:28-07:23/55 20:47 05:53 06:29-07:22/53 20:45	06:53 07:41-08:20/39 19:26 06:55 07:40-08:21/41 19:23	07:55 08:25-08:55/30 18:07 07:57 08:27-08:54/27 18:04	08:01 08:58-10:09/71 16:01 08:03 08:59-10:10/71 15:59	08:47 09:41-10:22/41 15:38 08:48 09:42-10:22/40 15:39
11	04:56 05:31-05:44/13 06:48-06:58/10 21:48 06:00-06:38/38 04:58 05:33-05:44/11 06:46-07:01/15 21:46 06:00-06:38/38	05:55 06:30-07:22/52 20:42 05:57 06:32-07:22/50 20:40	06:57 07:40-08:21/41 19:20 06:59 07:39-08:21/42 19:18	08:09 08:29-08:52/23 18:02 08:01 08:31-08:51/20 17:59	08:05 09:00-10:10/70 15:58 08:07 09:02-10:12/70 15:56	08:48 09:43-10:23/40 15:39 08:49 09:43-10:23/40 15:40
12	04:59 05:35-05:43/8 06:44-07:03/19 21:45 06:00-06:38/38 05:01 05:36-05:41/5 06:43-07:05/22 21:43 06:00-06:38/38	05:59 06:34-07:21/47 20:37 06:01 06:39-06:43/4 20:35	07:01 07:39-08:28/49 19:15 07:03 07:39-08:31/52 19:12	08:03 08:34-08:50/16 17:57 08:05 10:00-10:23/23 17:55	08:09 09:04-10:12/68 15:55 08:11 09:06-10:13/67 15:53	08:49 09:44-10:24/40 15:40 08:50 09:44-10:24/40 15:41
13	05:03 06:01-06:39/38 21:41 06:42-07:06/24 05:05 06:00-06:38/38 21:39 06:40-07:07/27	06:03 06:44-07:19/35 20:32 06:05 06:44-07:18/34 20:29	07:05 07:39-08:33/54 19:10 07:07 07:39-08:34/55 19:07	08:07 08:58-09:24/26 16:52 07:09 07:40-08:35/55 16:50	08:13 09:08-10:13/65 15:52 08:15 09:10-10:13/63 15:51	08:50 09:44-10:25/41 15:41 08:50 09:45-10:25/40 15:42
14	05:06 06:01-06:38/37 21:37 06:40-07:08/28 05:08 06:02-06:38/36 21:36 06:39-07:10/31	06:07 06:44-07:17/33 20:27 06:09 06:44-07:19/35 20:24	07:11 07:41-08:36/55 19:04 07:13 07:42-08:36/54 18:59	08:17 08:55-09:28/33 16:47 07:14 08:54-09:30/36 16:45	08:19 09:11-10:15/64 15:49 08:19 09:11-10:15/64 15:48	08:51 09:45-10:26/41 15:43 08:51 09:45-10:26/41 15:44
15	05:10 06:01-06:37/36 21:34 06:38-07:10/32 05:12 06:02-07:11/69 21:32	06:11 06:44-07:22/38 20:22 06:13 06:45-07:23/38 20:19	07:13 07:42-08:36/54 18:56 07:15 07:44-08:36/52 18:56	08:19 08:54-09:34/40 16:43 07:18 08:52-09:44/52 16:41	08:21 09:12-10:15/63 15:47 08:22 09:13-10:16/63 15:46	08:51 09:46-10:27/41 15:45 08:51 09:46-10:28/42 15:46
16	05:14 06:03-07:12/69 21:30 Potential sun hours 529 Sum of minutes with flicker 1837	06:15 06:45-07:24/39 20:17 469	07:15 07:44-08:36/52 18:56 385	08:21 08:51-09:47/56 16:38 324	08:23 09:13-10:16/63 15:46 247	08:51 09:47-10:29/42 15:47 216

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C15 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (89)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June
1	08:51 14:05-14:24/19 15:48 13:50-14:03/13	08:15 08:45-09:13/28 16:45	07:11 15:37-16:13/36 17:48	06:49 07:22-07:49/27 19:53	05:33 20:55	04:36 20:27-20:44/17 21:52
2	08:50 14:05-14:24/19 15:49 13:51-14:02/11	08:13 08:43-09:14/31 16:47	07:08 15:38-16:12/34 17:50	06:46 07:21-07:47/26 19:55	05:30 20:57	04:35 05:25-05:27/2 21:54 20:28-20:44/16
3	08:50 14:07-14:25/18 15:51 13:53-14:02/9	08:11 08:41-09:14/33 16:50	07:06 15:40-16:11/31 17:52	06:43 07:09-07:15/6 19:57 07:22-07:46/24	05:28 20:59	04:34 05:21-05:31/10 21:55 20:29-20:43/14
4	08:50 14:07-14:24/17 15:52 13:54-14:01/7	08:09 08:39-09:15/36 16:52	07:03 15:41-16:09/28 17:54	06:41 07:06-07:17/11 19:59 07:22-07:44/22	05:26 21:01	04:33 05:20-05:34/14 21:56 20:30-20:42/12
5	08:49 14:09-14:25/16 15:53 13:58-13:59/1	08:07 08:37-09:15/38 16:54	07:00 17:22-17:26/4 17:56 15:43-16:06/23	06:38 07:03-07:18/15 20:01 07:22-07:42/20	05:23 21:04	04:32 05:19-05:35/16 21:58 20:31-20:42/11
6	08:49 14:10-14:25/15 15:55	08:05 08:35-09:14/39 16:56 15:50-16:01/11	06:58 17:19-17:30/11 17:58 15:46-16:04/18	06:35 07:01-07:20/19 20:03 07:23-07:41/18	05:21 21:06	04:31 05:18-05:36/18 21:59 20:32-20:41/9
7	08:48 14:11-14:24/13 15:56	08:03 08:35-09:15/40 16:59 15:47-16:05/18	06:55 17:16-17:32/16 18:00 15:51-15:58/7	06:33 06:59-07:20/21 20:05 07:24-07:38/14	05:19 21:08	04:30 05:18-05:37/19 22:00 20:34-20:39/5
8	08:47 14:12-14:24/12 15:58	08:00 08:35-09:15/40 17:01 15:45-16:08/23	06:53 17:14-17:33/19 18:03	06:30 06:58-07:21/23 20:07 07:27-07:36/9	05:17 21:10	04:29 05:17-05:38/21 22:01
9	08:47 14:13-14:23/10 16:00	07:58 08:34-09:13/39 17:03 15:42-16:09/27	06:50 17:14-17:35/21 18:05	06:28 06:57-07:20/23 20:10	05:15 20:30-20:38/8 21:12	04:29 05:16-05:38/22 22:02
10	08:46 14:16-14:22/6 16:01	07:56 08:35-09:13/38 17:05 15:41-16:11/30	06:47 17:12-17:35/23 18:07	06:25 06:56-07:20/24 20:12	05:13 20:28-20:40/12 21:14	04:28 05:16-05:39/23 22:03
11	08:45 16:03	07:54 08:35-09:12/37 17:08 15:39-16:12/33	06:45 17:11-17:35/24 18:09	06:22 06:57-07:20/23 20:14	05:11 20:26-20:41/15 21:16	04:27 05:16-05:41/25 22:04
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14	08:42 16:08	07:47 08:36-09:02/26 17:14 15:37-16:15/38	06:37 17:11-17:34/23 18:15	06:14 06:57-07:17/20 20:20	05:05 20:24-20:46/22 21:21	04:26 05:15-05:42/27 22:06
15	08:41 16:10	07:45 08:37-09:00/23 17:17 15:36-16:16/40	06:34 17:10-17:33/23 18:17	06:12 06:58-07:16/18 20:22	05:03 20:23-20:46/23 21:23	04:26 05:16-05:43/27 22:07
16	08:40 16:12	07:43 08:37-08:56/19 17:19 15:35-16:16/41	06:32 17:12-17:33/21 18:20	06:09 06:59-07:14/15 20:24	05:01 20:23-20:46/23 21:25	04:26 05:15-05:42/27 22:08
17	08:39 16:14	07:40 08:39-08:55/16 17:21 15:35-16:17/42	06:29 17:12-17:31/19 18:22	06:07 07:01-07:12/11 20:26	04:59 20:23-20:47/24 21:27	04:25 05:15-05:43/28 22:08
18	08:37 16:16	07:38 08:41-08:52/11 17:23 15:34-16:17/43	06:26 17:13-17:29/16 18:24	06:04 07:04-07:08/4 20:28	04:57 20:22-20:47/25 21:29	04:25 05:15-05:43/28 22:09
19	08:36 16:18	07:35 15:35-16:18/43 17:26	06:24 17:15-17:28/13 18:26	06:02 20:30	04:55 20:22-20:46/24 21:31	04:25 05:15-05:43/28 22:09
20	08:35 16:20	07:33 15:34-16:17/43 17:28	06:21 17:19-17:23/4 18:28	05:59 20:32	04:53 20:23-20:47/24 21:33	04:25 05:16-05:44/28 22:10
21	08:33 16:22	07:31 15:34-16:18/44 17:30	06:18 18:30	05:57 20:35	04:52 20:22-20:47/25 21:35	04:25 05:16-05:44/28 22:10
22	08:32 16:24	07:28 15:34-16:17/43 17:32	06:15 06:41-06:47/6 18:32	05:54 20:37	04:50 20:23-20:47/24 21:36	04:26 05:16-05:44/28 22:10
23	08:30 16:26	07:26 15:35-16:18/43 17:34	06:13 06:38-06:49/11 18:34	05:52 20:39	04:48 20:23-20:47/24 21:38	04:26 05:16-05:44/28 22:10
24	08:29 16:28	07:23 15:34-16:17/43 17:37	06:10 06:35-06:50/15 18:36	05:49 20:41	04:47 20:23-20:47/24 21:40	04:26 05:17-05:45/28 22:10
25	08:27 09:00-09:02/2 16:30	07:21 15:34-16:16/42 17:39	06:07 06:33-06:51/18 18:38	05:47 20:43	04:45 20:24-20:47/23 21:42	04:26 05:17-05:45/28 22:10
26	08:25 08:58-09:06/8 16:32	07:18 15:35-16:16/41 17:41	06:05 06:30-06:52/22 18:40	05:44 20:45	04:44 20:24-20:47/23 21:43	04:27 05:17-05:44/27 22:10
27	08:24 08:56-09:08/12 16:34	07:16 15:35-16:15/40 17:43	06:02 06:27-06:51/24 18:43	05:42 20:47	04:42 20:24-20:46/22 21:45	04:27 05:18-05:45/27 22:10
28	08:22 08:54-09:10/16 16:36	07:13 15:37-16:15/38 17:45	05:59 06:25-06:52/27 18:45	05:40 20:49	04:41 20:25-20:46/21 21:46	04:28 05:18-05:45/27 22:10
29	08:20 08:52-09:11/19 16:39		06:57 07:24-07:51/27 19:47	05:37 20:51	04:40 20:25-20:45/20 21:48	04:29 05:18-05:45/27 22:10
30	08:18 08:50-09:12/22 16:41		06:54 07:22-07:51/29 19:49	05:35 20:53	04:38 20:26-20:45/19 21:49	04:29 05:19-05:45/26 22:09
31	08:17 08:48-09:13/25 16:43		06:51 07:22-07:50/28 19:51		04:37 20:27-20:45/18 21:51	
Potential sun hours	235	266	366	426	508	528
Sum of minutes with flicker	290	1398	668	438	481	773

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C15 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (89)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30 05:20-05:45/25 22:09	05:16 20:36-20:53/17 21:28	06:17 06:56-07:19/23 20:14	07:17 17:51-18:14/23 18:54	07:22 08:04-08:43/39 16:36 15:11-15:40/29	08:24 15:45
2	04:31 05:20-05:44/24 22:08	05:18 20:37-20:51/14 21:26	06:19 06:55-07:19/24 20:11	07:19 17:50-18:14/24 18:51	07:25 08:04-08:43/39 16:34 15:12-15:38/26	08:26 13:58-14:04/6 15:44
3	04:32 05:21-05:44/23 22:08	05:20 20:39-20:49/10 21:24	06:21 06:55-07:18/23 20:09	07:21 17:50-18:13/23 18:48	07:27 08:05-08:44/39 16:32 15:15-15:37/22	08:27 13:57-14:06/9 15:43
4	04:33 05:22-05:44/22 22:07	05:21 20:41-20:48/7 21:22	06:23 06:55-07:18/23 20:06 07:25-07:33/8	07:23 17:50-18:12/22 18:46	07:29 08:05-08:44/39 16:29 15:17-15:34/17	08:29 13:56-14:08/12 15:42
5	04:34 05:23-05:43/20 22:07 20:41-20:45/4	05:23 21:19	06:25 06:56-07:17/21 20:03 07:22-07:35/13	07:25 17:51-18:11/20 18:43	07:31 08:05-08:44/39 16:27 15:20-15:30/10	08:31 13:56-14:09/13 15:42
6	04:35 05:24-05:43/19 22:06 20:39-20:47/8	05:25 21:17	06:27 06:57-07:16/19 20:01 07:20-07:37/17	07:27 17:52-18:09/17 18:40	07:33 08:07-08:45/38 16:25	08:32 13:56-14:11/15 15:41
7	04:36 05:25-05:42/17 22:05 20:38-20:48/10	05:27 21:15	06:29 06:58-07:13/15 19:58 07:17-07:37/20	07:29 17:53-18:06/13 18:38 16:24-16:37/13	07:36 08:09-08:44/35 16:23	08:34 13:55-14:11/16 15:40
8	04:37 05:26-05:41/15 22:04 20:37-20:49/12	05:29 21:13	06:31 07:00-07:11/11 19:55 07:16-07:38/22	07:32 17:55-18:04/9 18:35 16:19-16:40/21	07:38 08:12-08:45/33 16:21	08:35 13:55-14:12/17 15:40 13:42-13:49/7
9	04:38 05:28-05:39/11 22:03 20:37-20:50/13	05:31 21:11	06:33 07:02-07:08/6 19:53 07:15-07:39/24	07:34 16:16-16:42/26 18:32	07:40 08:14-08:44/30 16:19	08:36 13:55-14:13/18 15:39 13:41-13:50/9
10	04:39 05:30-05:37/7 22:02 20:36-20:51/15	05:33 21:08	06:35 07:14-07:41/27 19:50	07:36 16:15-16:44/29 18:30	07:42 08:16-08:44/28 16:17	08:38 13:55-14:14/19 15:39 13:41-13:52/11
11	04:41 20:35-20:52/17 22:01	05:35 21:06	06:37 07:14-07:41/27 19:47	07:38 16:13-16:45/32 18:27	07:44 08:19-08:44/25 16:15	08:39 13:55-14:14/19 15:39 13:40-13:53/13
12	04:42 20:35-20:53/18 22:00	05:37 21:04	06:39 07:14-07:42/28 19:45	07:40 16:11-16:46/35 18:25	07:46 08:21-08:43/22 16:13	08:40 13:55-14:15/20 15:38 13:40-13:53/13
13	04:43 20:35-20:53/18 21:59	05:39 21:01	06:41 07:14-07:42/28 19:42	07:42 16:10-16:47/37 18:22	07:48 08:24-08:43/19 16:11	08:41 13:56-14:16/20 15:38 13:41-13:55/14
14	04:45 20:34-20:54/20 21:58	05:41 20:59	06:43 07:14-07:42/28 19:39	07:44 16:08-16:47/39 18:19	07:51 08:26-08:42/16 16:09	08:42 13:41-14:17/36 15:38
15	04:46 20:33-20:54/21 21:56	05:43 20:57	06:45 07:14-07:41/27 19:37	07:46 16:08-16:48/40 18:17	07:53 08:28-08:40/12 16:08	08:44 13:57-14:17/20 15:38 13:41-13:56/15
16	04:48 20:34-20:55/21 21:55	05:45 20:54	06:47 07:16-07:41/25 19:34	07:48 16:07-16:48/41 18:14	07:55 08:31-08:39/8 16:06	08:44 13:41-14:18/37 15:38
17	04:49 20:33-20:55/22 21:54	05:47 20:52	06:49 07:18-07:40/22 19:31	07:50 16:06-16:48/42 18:12	07:57 08:33-08:35/2 16:04	08:45 13:41-14:18/37 15:38
18	04:51 20:33-20:56/23 21:52	05:49 20:49	06:51 07:20-07:39/19 19:29	07:52 16:05-16:48/43 18:09	07:59 16:02	08:46 13:42-14:19/37 15:38
19	04:53 20:33-20:56/23 21:51	05:51 20:47	06:53 07:22-07:38/16 19:26	07:54 16:05-16:48/43 18:07	08:01 16:01	08:47 13:41-14:19/38 15:38
20	04:54 20:33-20:57/24 21:49	05:53 20:45	06:55 07:24-07:36/12 19:23	07:57 16:05-16:49/44 18:04	08:03 15:59	08:48 13:42-14:20/38 15:39
21	04:56 20:33-20:57/24 21:48	05:55 20:42	06:57 07:26-07:33/7 19:20	07:59 16:05-16:48/43 18:02	08:05 15:58	08:48 13:43-14:20/37 15:39
22	04:58 20:33-20:57/24 21:46	05:57 20:40	06:59 19:18	08:01 16:04-16:48/44 17:59	08:07 15:56	08:49 13:43-14:20/37 15:39
23	04:59 20:32-20:57/25 21:44	05:59 20:37	07:01 19:15	08:03 09:14-09:20/6 17:57 16:05-16:48/43	08:09 15:55	08:49 13:43-14:21/38 15:40
24	05:01 20:33-20:57/24 21:43	06:01 20:35	07:03 17:59-18:10/11 19:12	08:05 09:10-09:23/13 17:55 16:05-16:47/42	08:11 15:53	08:50 13:44-14:22/38 15:41
25	05:03 20:32-20:57/25 21:41	06:03 07:07-07:12/5 20:32	07:05 17:56-18:12/16 19:10	07:07 08:08-08:25/17 16:52 15:05-15:46/41	08:13 15:52	08:50 13:45-14:22/37 15:41
26	05:05 20:33-20:57/24 21:39	06:05 07:03-07:15/12 20:29	07:07 17:54-18:13/19 19:07	07:09 08:07-08:26/19 16:50 15:06-15:46/40	08:15 15:51	08:50 13:45-14:22/37 15:42
27	05:06 20:33-20:57/24 21:37	06:07 07:01-07:17/16 20:27	07:09 17:53-18:13/20 19:04	07:12 08:06-08:30/24 16:47 15:06-15:45/39	08:17 15:49	08:51 13:46-14:22/36 15:43
28	05:08 20:33-20:56/23 21:36	06:09 06:59-07:17/18 20:24	07:11 17:52-18:14/22 19:02	07:14 08:05-08:34/29 16:45 15:06-15:44/38	08:19 15:48	08:51 13:46-14:23/37 15:44
29	05:10 20:34-20:56/22 21:34	06:11 06:58-07:18/20 20:22	07:13 17:51-18:14/23 18:59	07:16 08:05-08:38/33 16:43 15:08-15:44/36	08:20 15:47	08:51 13:47-14:23/36 15:45
30	05:12 20:35-20:56/21 21:32	06:13 06:57-07:18/21 20:19	07:15 17:51-18:15/24 18:56	07:18 08:04-08:40/36 16:41 15:08-15:43/35	08:22 15:46	08:51 14:04-14:24/20 15:46 13:48-14:03/15
31	05:14 20:36-20:55/19 21:30	06:15 06:56-07:19/23 20:17		07:20 08:04-08:41/37 16:38 15:09-15:41/32		08:51 14:04-14:23/19 15:47 13:48-14:02/14
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	707	163	670	1283	567	910

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C16 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (90)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January		February		March	April		May		June		
1	08:51	12:55-13:40/45	08:15	13:19-13:36/17	07:11	06:49		05:33	06:35-06:56/21	04:36	20:02-20:38/36	
	15:48		16:45		17:47	19:53		20:55		21:52		
2	08:50	12:54-13:40/46	08:13	13:24-13:32/8	07:08	06:46		05:30	06:37-06:54/17	04:35	20:02-20:38/36	
	15:49		16:47		17:50	19:55		20:57		21:54		
3	08:50	12:55-13:41/46	08:11		07:06	06:43		05:28	06:39-06:52/13	04:34	20:02-20:38/36	
	15:51		16:50		17:52	19:57		20:59		21:55		
4	08:50	12:55-13:41/46	08:09		07:03	06:41		05:26	06:42-06:49/7	04:33	20:02-20:38/36	
	15:52		16:52		17:54	19:59		21:01		21:56		
5	08:49	12:56-13:41/45	08:07		07:00	06:38		05:23		04:32	20:03-20:39/36	
	15:53		16:54		17:56	20:01		21:03		21:58		
6	08:49	12:57-13:43/46	08:05		06:58	06:35		05:21		04:31	20:03-20:38/35	
	15:55		16:56		17:58	20:03		21:06		21:59		
7	08:48	12:57-13:43/46	08:02		06:55	06:33		05:19	20:16-20:22/6	04:30	20:03-20:38/35	
	15:56		16:59		18:00	20:05		21:08		22:00		
8	08:47	12:57-13:43/46	08:00	16:13-16:21/8	06:53	06:30		05:17	20:12-20:26/14	04:29	20:04-20:38/34	
	15:58		17:01		18:03	20:07		21:10		22:01		
9	08:47	12:58-13:44/46	07:58	16:10-16:25/15	06:50	06:27		05:15	20:09-20:28/19	04:29	20:04-20:38/34	
	15:59		17:03		18:05	20:10		21:12		22:02		
10	08:46	12:58-13:44/46	07:56	16:08-16:28/20	06:47	06:25		05:13	20:08-20:30/22	04:28	20:05-20:39/34	
	16:01		17:05		18:07	20:12		21:14		22:03		
11	08:45	12:59-13:45/46	07:54	16:06-16:29/23	06:45	06:22		05:11	20:06-20:31/25	04:27	20:05-20:38/33	
	16:03		17:08		18:09	20:14		21:16		22:04		
12	08:44	12:58-13:44/46	07:52	16:06-16:30/24	06:42	06:20		05:08	20:05-20:32/27	04:27	20:06-20:38/32	
	16:05		17:10		18:11	20:16		21:18		22:05		
13	08:43	12:59-13:45/46	07:49	16:05-16:32/27	06:39	06:17	06:46-06:55/9	05:06	20:04-20:33/29	04:26	20:06-20:39/33	
	16:06		17:12		18:13	20:18		21:20		22:06		
14	08:42	13:00-13:46/46	07:47	16:04-16:32/28	06:37	06:14		06:42-06:57/15	05:05	20:04-20:34/30	04:26	20:07-20:39/32
	16:08		17:14		18:15	20:20		21:21		22:06		
15	08:41	13:00-13:45/45	07:45	16:04-16:33/29	06:34	06:12	06:40-06:59/19	05:03	20:03-20:35/32	04:26	20:06-20:38/32	
	16:10		17:17		18:17	20:22		21:23		22:07		
16	08:40	13:01-13:46/45	07:42	16:03-16:33/30	06:31	06:09	06:38-07:00/22	05:01	20:02-20:35/33	04:26	20:07-20:39/32	
	16:12		17:19		18:20	20:24		21:25		22:08		
17	08:39	13:01-13:46/45	07:40	16:03-16:34/31	06:29	06:07	06:37-07:01/24	04:59	20:02-20:36/34	04:25	20:07-20:39/32	
	16:14		17:21		18:22	20:26		21:27		22:08		
18	08:37	13:02-13:46/44	07:38	16:02-16:33/31	06:26	06:04	06:35-07:01/26	04:57	20:01-20:36/35	04:25	20:07-20:39/32	
	16:16		17:23		18:24	20:28		21:29		22:09		
19	08:36	13:02-13:46/44	07:35	16:03-16:34/31	06:23	06:02	06:35-07:02/27	04:55	20:01-20:36/35	04:25	20:08-20:39/31	
	16:18		17:25		18:26	20:30		21:31		22:09		
20	08:35	13:02-13:46/44	07:33	16:03-16:33/30	06:21	05:59	06:34-07:03/29	04:53	20:01-20:37/36	04:25	20:08-20:39/31	
	16:20		17:28		18:28	20:32		21:33		22:09		
21	08:33	13:04-13:46/42	07:31	16:03-16:33/30	06:18	05:57	06:33-07:02/29	04:52	20:00-20:37/37	04:25	20:09-20:40/31	
	16:22		17:30		18:30	20:34		21:35		22:10		
22	08:32	13:04-13:46/42	07:28	16:03-16:32/29	06:15	05:54	06:33-07:03/30	04:50	20:01-20:37/36	04:26	20:09-20:40/31	
	16:24		17:32		18:32	20:37		21:36		22:10		
23	08:30	13:05-13:46/41	07:26	16:03-16:31/28	06:13	05:52	06:32-07:02/30	04:48	20:01-20:38/37	04:26	20:09-20:40/31	
	16:26		17:34		18:34	20:39		21:38		22:10		
24	08:29	13:06-13:45/39	07:23	16:05-16:30/25	06:10	05:49	06:32-07:02/30	04:47	20:00-20:37/37	04:26	20:08-20:40/32	
	16:28		17:37		18:36	20:41		21:40		22:10		
25	08:27	13:07-13:45/38	07:21	16:05-16:29/24	06:07	05:47	06:33-07:02/29	04:45	20:01-20:38/37	04:26	20:09-20:41/32	
	16:30		17:39		18:38	20:43		21:41		22:10		
26	08:25	13:09-13:45/36	07:18	16:08-16:28/20	06:05	05:44	06:32-07:01/29	04:44	20:01-20:38/37	04:27	20:09-20:41/32	
	16:32		17:41		18:40	20:45		21:43		22:10		
27	08:24	13:10-13:44/34	07:16	16:09-16:25/16	06:02	05:42	06:33-07:00/27	04:42	20:00-20:38/38	04:27	20:10-20:41/31	
	16:34		17:43		18:43	20:47		21:45		22:10		
28	08:22	13:11-13:43/32	07:13	16:12-16:21/9	05:59	05:40	06:33-07:00/27	04:41	20:01-20:38/37	04:28	20:09-20:41/32	
	16:36		17:45		18:45	20:49		21:46		22:10		
29	08:20	13:13-13:42/29			06:57	05:37	06:34-06:59/25	04:40	20:01-20:38/37	04:29	20:09-20:42/33	
	16:39				19:47	20:51		21:48		22:10		
30	08:18	13:14-13:40/26			06:54	05:35	06:35-06:58/23	04:38	20:01-20:38/37	04:29	20:10-20:43/33	
	16:41				19:49	20:53		21:49		22:09		
31	08:16	13:16-13:38/22			06:51			04:37	20:02-20:38/36			
	16:43				19:51			21:51				
Potential sun hours	235		266		366	426		508		528		
Sum of minutes with flicker		1290		533	0	450		841		990		

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C16 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (90)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July		August		September		October		November		December	
1	04:30	20:09-20:42/33	05:16	20:16-20:42/26	06:17	07:17			07:22	15:38-15:57/19	08:24	12:41-13:27/46
	22:09		21:28		20:14	18:54			16:36		15:45	
2	04:31	20:09-20:43/34	05:18	20:17-20:41/24	06:19	07:19			07:25	15:40-15:54/14	08:26	12:40-13:26/46
	22:08		21:26		20:11	18:51			16:34		15:44	
3	04:32	20:10-20:43/33	05:20	20:19-20:40/21	06:21	07:21			07:27	15:43-15:50/7	08:27	12:41-13:27/46
	22:08		21:24		20:09	18:48			16:32		15:43	
4	04:33	20:10-20:44/34	05:21	20:20-20:38/18	06:23	07:23			07:29		08:29	12:41-13:28/47
	22:07		21:21		20:06	18:46			16:29		15:42	
5	04:34	20:10-20:44/34	05:23	20:22-20:34/12	06:25	07:25			07:31		08:31	12:42-13:28/46
	22:06		21:19		20:03	18:43			16:27		15:42	
6	04:35	20:10-20:45/35	05:25		06:27	07:27			07:33		08:32	12:43-13:29/46
	22:06		21:17		20:01	18:40			16:25		15:41	
7	04:36	20:10-20:45/35	05:27		06:29	07:29			07:35		08:34	12:43-13:28/45
	22:05		21:15		19:58	18:38			16:23		15:40	
8	04:37	20:10-20:45/35	05:29		06:31	07:31			07:38		08:35	12:44-13:29/45
	22:04		21:13		19:55	18:35			16:21		15:40	
9	04:38	20:10-20:45/35	05:31	06:50-07:00/10	06:33	07:34			07:40	12:54-13:03/9	08:36	12:44-13:29/45
	22:03		21:11		19:53	18:32			16:19		15:39	
10	04:39	20:10-20:45/35	05:33	06:48-07:02/14	06:35	07:36			07:42	12:49-13:07/18	08:38	12:45-13:30/45
	22:02		21:08		19:50	18:30			16:17		15:39	
11	04:41	20:09-20:46/37	05:35	06:45-07:03/18	06:37	07:38			07:44	12:48-13:10/22	08:39	12:45-13:30/45
	22:01		21:06		19:47	18:27			16:15		15:39	
12	04:42	20:10-20:47/37	05:37	06:44-07:05/21	06:39	07:40			07:46	12:45-13:12/27	08:40	12:45-13:30/45
	22:00		21:04		19:45	18:25			16:13		15:38	
13	04:43	20:10-20:47/37	05:39	06:42-07:06/24	06:41	07:42			07:48	12:45-13:14/29	08:41	12:46-13:31/45
	21:59		21:01		19:42	18:22			16:11		15:38	
14	04:45	20:10-20:47/37	05:41	06:42-07:07/25	06:43	07:44	16:43-16:56/13		07:51	12:43-13:15/32	08:42	12:47-13:31/44
	21:58		20:59		19:39	18:19			16:09		15:38	
15	04:46	20:09-20:46/37	05:43	06:41-07:07/26	06:45	07:46	16:40-16:58/18		07:53	12:42-13:16/34	08:43	12:47-13:32/45
	21:56		20:57		19:37	18:17			16:08		15:38	
16	04:48	20:10-20:47/37	05:45	06:40-07:08/28	06:47	07:48	16:39-17:00/21		07:55	12:42-13:18/36	08:44	12:47-13:32/45
	21:55		20:54		19:34	18:14			16:06		15:38	
17	04:49	20:10-20:47/37	05:47	06:40-07:08/28	06:49	07:50	16:37-17:01/24		07:57	12:41-13:18/37	08:45	12:48-13:33/45
	21:54		20:52		19:31	18:12			16:04		15:38	
18	04:51	20:10-20:48/38	05:49	06:38-07:07/29	06:51	07:52	16:36-17:02/26		07:59	12:40-13:19/39	08:46	12:49-13:33/44
	21:52		20:49		19:28	18:09			16:02		15:38	
19	04:53	20:10-20:47/37	05:51	06:38-07:08/30	06:53	07:54	16:34-17:02/28		08:01	12:40-13:21/41	08:47	12:49-13:33/44
	21:51		20:47		19:26	18:07			16:01		15:38	
20	04:54	20:11-20:48/37	05:53	06:38-07:08/30	06:55	07:57	16:34-17:03/29		08:03	12:39-13:21/42	08:48	12:49-13:34/45
	21:49		20:44		19:23	18:04			15:59		15:39	
21	04:56	20:10-20:47/37	05:55	06:38-07:07/29	06:57	07:59	16:33-17:03/30		08:05	12:39-13:21/42	08:48	12:49-13:34/45
	21:48		20:42		19:20	18:02			15:58		15:39	
22	04:58	20:11-20:48/37	05:57	06:38-07:07/29	06:59	08:01	16:33-17:03/30		08:07	12:40-13:23/43	08:49	12:50-13:35/45
	21:46		20:40		19:18	17:59			15:56		15:39	
23	04:59	20:11-20:47/36	05:59	06:38-07:07/29	07:01	08:03	16:33-17:04/31		08:09	12:39-13:23/44	08:49	12:50-13:35/45
	21:44		20:37		19:15	17:57			15:55		15:40	
24	05:01	20:11-20:47/36	06:01	06:38-07:06/28	07:03	08:05	16:33-17:03/30		08:11	12:39-13:23/44	08:50	12:51-13:36/45
	21:43		20:34		19:12	17:55			15:53		15:41	
25	05:03	20:11-20:46/35	06:03	06:39-07:05/26	07:05	07:07	15:32-16:03/31		08:13	12:39-13:24/45	08:50	12:52-13:36/44
	21:41		20:32		19:10	16:52			15:52		15:41	
26	05:05	20:12-20:46/34	06:05	06:40-07:04/24	07:07	07:09	15:32-16:02/30		08:15	12:39-13:24/45	08:50	12:52-13:37/45
	21:39		20:29		19:07	16:50			15:51		15:42	
27	05:06	20:13-20:46/33	06:07	06:40-07:02/22	07:09	07:12	15:33-16:02/29		08:17	12:39-13:24/45	08:51	12:52-13:37/45
	21:37		20:27		19:04	16:47			15:49		15:43	
28	05:08	20:12-20:45/33	06:09	06:41-07:00/19	07:11	07:14	15:34-16:01/27		08:19	12:40-13:26/46	08:51	12:53-13:38/45
	21:35		20:24		19:02	16:45			15:48		15:44	
29	05:10	20:13-20:45/32	06:11	06:43-06:58/15	07:13	07:16	15:35-16:01/26		08:20	12:40-13:26/46	08:51	12:53-13:38/45
	21:34		20:22		18:59	16:43			15:47		15:45	
30	05:12	20:14-20:44/30	06:13	06:46-06:54/8	07:15	07:18	15:35-16:00/25		08:22	12:41-13:27/46	08:51	12:54-13:39/45
	21:32		20:19		18:56	16:40			15:46		15:46	
31	05:14	20:15-20:44/29	06:15			07:20	15:36-15:58/22				08:51	12:54-13:39/45
	21:30		20:16			16:38					15:47	
Potential sun hours	529		469		384	324			248		216	
Sum of minutes with flicker	1086		613		0		470		852		1398	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C17 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (91)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January		February		March	April		May		June	
1	08:51	10:50-11:33/43	08:15	07:11		06:49		05:32	07:25-08:48/83	04:36	07:34-08:33/59
	15:48		16:45	17:47		19:53		20:55	06:31-07:14/43	21:53	
2	08:50	10:51-11:34/43	08:13	07:08		06:46		05:30	07:25-08:48/83	04:34	07:35-08:32/57
	15:49		16:47	17:50		19:55		20:57	06:31-07:14/43	21:54	
3	08:50	10:51-11:34/43	08:11	07:06	07:35-07:45/10	06:43		05:28	07:25-08:47/82	04:33	07:35-08:31/56
	15:50		16:49	17:52		19:57		20:59	06:31-07:14/43	21:55	
4	08:50	10:51-11:34/43	08:09	07:03	07:31-07:48/17	06:41	08:04-08:23/19	05:25	07:25-08:47/82	04:32	07:36-08:31/55
	15:52		16:52	17:54		19:59		21:02	06:31-07:13/42	21:57	
5	08:49	10:52-11:35/43	08:07	07:00	07:29-07:49/20	06:38	07:59-08:27/28	05:23	07:25-08:47/82	04:31	07:37-08:31/54
	15:53		16:54	17:56		20:01		21:04	06:31-07:13/42	21:58	
6	08:49	10:53-11:36/43	08:05	06:58	07:28-07:51/23	06:35	07:55-08:31/36	05:21	07:25-08:47/82	04:31	07:37-08:30/53
	15:55		16:56	17:58		20:03		21:06	06:32-07:13/41	21:59	
7	08:48	10:53-11:36/43	08:03	06:55	07:26-07:51/25	06:33	07:52-08:34/42	05:19	07:25-08:46/81	04:30	07:38-08:29/51
	15:56		16:58	18:00		20:05		21:08	06:32-07:12/40	22:00	
8	08:47	10:53-11:36/43	08:00	06:53	07:25-07:52/27	06:30	07:48-08:35/47	05:17	07:25-08:46/81	04:29	07:39-08:30/51
	15:58		17:01	18:02		20:07		21:10	06:32-07:12/40	22:01	
9	08:47	10:54-11:37/43	07:58	06:50	07:25-07:53/28	06:27	07:47-08:38/51	05:14	07:25-08:45/80	04:28	07:39-08:29/50
	15:59		17:03	18:05		20:10		21:12	06:33-07:11/38	22:02	
10	08:46	10:54-11:37/43	07:56	06:47	07:24-07:52/28	06:25	07:44-08:39/55	05:12	07:25-08:45/80	04:28	07:40-08:29/49
	16:01		17:05	18:07		20:12		21:14	06:33-07:10/37	22:03	
11	08:45	10:55-11:37/42	07:54	06:45	07:23-07:52/29	06:22	07:43-08:41/58	05:10	07:25-08:44/79	04:27	07:40-08:28/48
	16:02		17:07	18:09		20:14		21:16	06:34-07:09/35	22:04	
12	08:44	10:56-11:38/42	07:52	06:42	07:24-07:52/28	06:19	07:40-08:42/62	05:08	07:25-08:44/79	04:26	07:41-08:28/47
	16:04		17:10	18:11		20:16	06:45-06:47/2	21:18	06:34-07:08/34	22:05	
13	08:43	10:55-11:37/42	07:49	06:39	07:23-07:52/29	06:17	07:39-08:43/64	05:06	07:25-08:43/78	04:26	07:42-08:28/46
	16:06		17:12	18:13		20:18	06:43-06:50/7	21:20	06:35-07:07/32	22:06	
14	08:42	10:56-11:38/42	07:47	06:37	07:23-07:51/28	06:14	07:37-08:44/67	05:04	07:25-08:42/77	04:26	07:41-08:27/46
	16:08		17:14	18:15		20:20	06:40-06:51/11	21:22	06:37-07:07/30	22:07	
15	08:41	10:57-11:39/42	07:45	06:34	07:23-07:49/26	06:12	07:36-08:45/69	05:02	07:26-08:42/76	04:25	07:42-08:27/45
	16:10		17:16	18:17		20:22	06:38-06:53/15	21:24	06:37-07:05/28	22:07	
16	08:40	10:57-11:38/41	07:42	06:31	07:24-07:49/25	06:09	07:35-08:45/70	05:00	07:26-08:41/75	04:25	07:42-08:27/45
	16:12		17:19	18:19		20:24	06:35-07:03/28	21:25	06:38-07:04/26	22:08	
17	08:39	10:59-11:39/40	07:40	06:29	07:25-07:47/22	06:07	07:34-08:46/72	04:58	07:26-08:41/75	04:25	07:43-08:28/45
	16:13		17:21	18:22		20:26	06:33-07:06/33	21:27	06:39-07:02/23	22:08	
18	08:37	10:59-11:38/39	07:38	06:26	07:26-07:45/19	06:04	07:32-08:46/74	04:57	07:27-08:41/74	04:25	07:43-08:28/45
	16:15		17:23	18:24		20:28	06:32-07:08/36	21:29	06:41-07:01/20	22:09	
19	08:36	10:59-11:38/39	07:35	06:23	07:28-07:44/16	06:02	07:32-08:47/75	04:55	07:27-08:40/73	04:25	07:44-08:28/44
	16:17		17:25	18:26		20:30	06:32-07:10/38	21:31	06:43-06:59/16	22:09	
20	08:35	11:01-11:38/37	07:33	06:21	07:30-07:40/10	05:59	07:30-08:47/77	04:53	07:28-08:40/72	04:25	07:44-08:28/44
	16:19		17:28	18:28		20:32	06:31-07:10/39	21:33	06:46-06:56/10	22:10	
21	08:33	11:01-11:38/37	07:31	06:18		05:56	07:30-08:48/78	04:51	07:28-08:39/71	04:25	07:44-08:28/44
	16:21		17:30	18:30		20:35	06:32-07:11/39	21:35		22:10	
22	08:32	11:02-11:37/35	07:28	06:15		05:54	07:28-08:47/79	04:50	07:29-08:38/69	04:25	07:45-08:29/44
	16:23		17:32	18:32		20:37	06:32-07:13/41	21:36		22:10	
23	08:30	11:03-11:36/33	07:26	06:13		05:51	07:28-08:48/80	04:48	07:28-08:37/69	04:25	07:45-08:29/44
	16:26		17:34	18:34		20:39	06:32-07:13/41	21:38		22:10	
24	08:29	11:05-11:36/31	07:23	06:10		05:49	07:28-08:48/80	04:46	07:29-08:37/68	04:26	07:44-08:29/45
	16:28		17:36	18:36		20:41	06:33-07:13/40	21:40		22:10	
25	08:27	11:06-11:36/30	07:21	06:07		05:47	07:27-08:48/81	04:45	07:30-08:37/67	04:26	07:45-08:30/45
	16:30		17:39	18:38		20:43	06:34-07:14/40	21:42		22:10	
26	08:25	11:07-11:34/27	07:18	06:05		05:44	07:26-08:48/82	04:43	07:30-08:35/65	04:27	07:45-08:29/44
	16:32		17:41	18:40		20:45	06:33-07:14/41	21:43		22:10	
27	08:24	11:09-11:33/24	07:16	06:02		05:42	07:26-08:48/82	04:42	07:31-08:35/64	04:27	07:45-08:30/45
	16:34		17:43	18:42		20:47	06:32-07:14/42	21:45		22:10	
28	08:22	11:11-11:31/20	07:13	05:59		05:39	07:26-08:48/82	04:41	07:32-08:35/63	04:28	07:45-08:30/45
	16:36		17:45	18:45		20:49	06:32-07:14/42	21:47		22:10	
29	08:20	11:14-11:29/15		06:57		05:37	07:25-08:48/83	04:39	07:32-08:34/62	04:28	07:45-08:31/46
	16:38			19:47		20:51	06:31-07:14/43	21:48		22:10	
30	08:18	11:19-11:24/5		06:54		05:35	07:25-08:48/83	04:38	07:33-08:34/61	04:29	07:44-08:31/47
	16:41			19:49		20:53	06:31-07:14/43	21:50		22:09	
31	08:17			06:51				04:37	07:34-08:33/59		
	16:43			19:51				21:51			
Potential sun hours	235		266			426		508		529	
Sum of minutes with flicker	1093		0	410		2397		2955		1439	

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C17 - VESTAS V172-7.2 7200 172.0 !OI hub: 175.0 m (TOT: 261.0 m) (91)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30 07:44-08:32/48 22:09	05:15 07:35-08:54/79 21:28 06:44-07:19/35	06:17 07:42-08:40/58 20:14	07:17 08:03-08:31/28 18:53	07:22 16:36	08:24 10:37-11:20/43 15:45
2	04:31 07:44-08:33/49 22:08	05:17 07:35-08:55/80 21:26 06:44-07:20/36	06:19 07:43-08:38/55 20:11	07:19 08:02-08:31/29 18:51	07:25 16:34	08:26 10:37-11:20/43 15:44
3	04:31 07:44-08:34/50 22:08	05:19 07:35-08:55/80 21:24 06:43-07:21/38	06:21 07:45-08:36/51 20:09	07:21 08:02-08:30/28 18:48	07:27 16:31	08:28 10:38-11:21/43 15:43
4	04:32 07:44-08:35/51 22:07	05:21 07:34-08:55/81 21:22 06:43-07:21/38	06:23 07:45-08:32/47 20:06	07:23 08:02-08:30/28 18:45	07:29 16:29	08:29 10:37-11:20/43 15:42
5	04:33 07:44-08:35/51 22:07	05:23 07:34-08:55/81 21:19 06:42-07:21/39	06:25 07:48-08:30/42 20:03	07:25 08:02-08:29/27 18:43	07:31 16:27	08:31 10:38-11:21/43 15:41
6	04:34 07:44-08:36/52 22:06	05:25 07:34-08:56/82 21:17 06:41-07:22/41	06:27 07:50-08:27/37 20:01	07:27 08:02-08:28/26 18:40	07:33 16:25	08:32 10:39-11:22/43 15:41
7	04:35 07:44-08:37/53 22:05	05:27 07:34-08:56/82 21:15 06:41-07:22/41	06:29 07:53-08:23/30 19:58	07:29 08:03-08:27/24 18:38	07:36 16:23	08:34 10:38-11:21/43 15:40
8	04:37 07:43-08:38/55 22:04	05:29 07:34-08:56/82 21:13 06:41-07:23/42	06:31 07:58-08:17/19 19:55	07:31 08:04-08:25/21 18:35	07:38 16:21	08:35 10:39-11:22/43 15:39
9	04:38 07:43-08:38/55 22:03	05:31 07:34-08:57/83 21:11 06:41-07:23/42	06:33 19:53	07:33 08:06-08:24/18 18:32	07:40 16:19	08:37 10:40-11:23/43 15:39
10	04:39 07:42-08:39/57 22:02	05:33 07:33-08:56/83 21:08 06:39-07:22/43	06:35 19:50	07:36 08:08-08:21/13 18:30	07:42 16:17	08:38 10:40-11:23/43 15:39
11	04:40 07:42-08:40/58 22:01	05:35 07:33-08:56/83 21:06 06:39-07:22/43	06:37 19:47	07:38 08:11-08:17/6 18:27	07:44 16:15	08:39 10:40-11:23/43 15:38
12	04:42 07:41-08:40/59 22:00	05:37 07:33-08:56/83 21:04 06:39-07:22/43	06:39 19:45	07:40 18:24	07:46 10:49-10:56/7 16:13	08:40 10:41-11:24/43 15:38
13	04:43 07:42-08:42/60 21:59	05:39 07:33-08:56/83 21:01 06:39-07:22/43	06:41 19:42	07:42 18:22	07:48 10:46-11:01/15 16:11	08:42 10:42-11:24/42 15:38
14	04:45 07:41-08:42/61 21:58	05:41 07:33-08:56/83 20:59 06:40-07:22/42	06:43 19:39	07:44 18:19	07:51 10:43-11:03/20 16:09	08:43 10:42-11:25/43 15:38
15	04:46 07:40-08:43/63 21:57	05:43 07:34-08:56/82 20:57 06:40-07:22/42	06:45 19:37	07:46 18:17	07:53 10:41-11:05/24 16:07	08:44 10:42-11:25/43 15:38
16	04:47 07:41-08:44/63 21:55	05:45 07:33-08:55/82 20:54 06:40-07:22/42	06:47 19:34	07:48 18:14	07:55 10:40-11:07/27 16:06	08:45 10:43-11:25/42 15:38
17	04:49 07:40-08:45/65 21:54	05:47 07:33-08:54/81 20:52 06:39-07:20/41	06:49 19:31	07:50 18:12	07:57 10:39-11:09/30 16:04	08:46 10:44-11:26/42 15:38
18	04:51 07:39-08:45/66 21:52	05:49 07:33-08:54/81 20:49 06:39-07:20/41	06:51 19:28	07:52 18:09	07:59 10:39-11:10/31 16:02	08:46 10:44-11:26/42 15:38
19	04:52 07:39-08:46/67 21:51	05:51 07:34-08:54/80 20:47 06:38-07:19/41	06:53 19:26	07:54 18:07	08:01 10:38-11:11/33 16:01	08:47 10:45-11:27/42 15:38
20	04:54 07:38-08:47/69 21:49	05:53 07:34-08:53/79 20:45 06:37-07:18/41	06:55 19:23	07:57 18:04	08:03 10:37-11:12/35 15:59	08:48 10:45-11:27/42 15:38
21	04:55 07:39-08:48/69 21:48	05:55 07:34-08:53/79 20:42 06:37-07:17/40	06:57 19:20	07:59 18:02	08:05 10:36-11:13/37 15:57	08:48 10:46-11:28/42 15:39
22	04:57 07:39-08:49/70 21:46	05:57 07:35-08:52/77 20:40 06:36-07:16/40	06:59 19:18	08:01 17:59	08:07 10:37-11:14/37 15:56	08:49 10:46-11:28/42 15:39
23	04:59 07:38-08:49/71 21:45	05:59 07:35-08:51/76 20:37 06:36-07:15/39	07:01 08:16-08:22/6 19:15	08:03 17:57	08:09 10:36-11:15/39 15:54	08:50 10:47-11:29/42 15:40
24	05:01 07:38-08:50/72 21:43	06:01 07:36-08:51/75 20:35 06:36-07:13/37	07:03 08:11-08:26/15 19:12	08:05 17:54	08:11 10:36-11:15/39 15:53	08:50 10:47-11:29/42 15:40
25	05:02 07:37-08:50/73 21:41	06:03 07:35-08:49/74 20:32 06:36-07:10/34	07:05 08:09-08:28/19 19:10	07:07 16:52	08:13 10:36-11:16/40 15:52	08:50 10:47-11:29/42 15:41
26	05:04 07:37-08:51/74 21:39	06:05 07:36-08:48/72 20:29 06:35-07:08/33	07:07 08:07-08:29/22 19:07	07:09 16:50	08:15 10:36-11:17/41 15:50	08:51 10:47-11:30/43 15:42
27	05:06 07:37-08:52/75 21:37	06:07 07:37-08:47/70 20:27 06:37-07:04/27	07:09 08:07-08:31/24 19:04	07:12 16:47	08:17 10:36-11:18/42 15:49	08:51 10:48-11:30/42 15:42
28	05:08 07:36-08:52/76 21:36	06:09 07:37-08:46/69 20:24 06:39-06:54/15	07:11 08:05-08:31/26 19:01	07:14 16:45	08:19 10:36-11:18/42 15:48	08:51 10:48-11:31/43 15:43
29	05:10 07:36-08:53/77 21:34	06:11 07:38-08:44/66 20:22 06:41-06:52/11	07:13 08:04-08:31/27 18:59	07:16 16:43	08:21 10:37-11:19/42 15:47	08:51 10:49-11:31/42 15:44
30	05:12 07:36-08:54/78 21:32	06:13 07:39-08:43/64 20:19 06:43-06:50/7	07:15 08:03-08:31/28 18:56	07:18 16:40	08:22 10:37-11:19/42 15:46	08:51 10:49-11:32/43 15:45
31	05:13 07:35-08:53/78 21:30	06:15 07:40-08:41/61 20:16 06:45-06:47/2		07:20 16:38		08:51 10:50-11:33/43 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	2165	3512	506	248	623	1320

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C2 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (76)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:51 15:48	08:15 09:00-09:29/29 16:45	07:11 07:55-08:19/24 17:47	06:49 19:53	05:32 20:55	04:36 21:52	04:30 22:09	05:15 21:28	06:17 20:14	07:17 18:53	07:22 08:31-09:00/29 16:36	08:24 15:45
2	08:50 15:49	08:13 09:00-09:30/30 16:47	07:08 07:55-08:18/23 17:49	06:46 19:55	05:30 20:57	04:34 21:54	04:31 22:08	05:17 21:26	06:19 20:11	07:19 18:51	07:25 08:30-09:00/30 16:34	08:26 15:44
3	08:50 15:50	08:11 09:00-09:31/31 16:49	07:05 07:57-08:18/21 17:52	06:43 19:57	05:28 20:59	04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09	07:21 18:48	07:27 08:30-09:01/31 16:31	08:27 15:43
4	08:50 15:52	08:09 09:00-09:31/31 16:52	07:03 07:58-08:16/18 17:54	06:41 19:59	05:25 21:01	04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	07:29 08:30-09:01/31 16:29	08:29 15:42
5	08:49 15:53	08:07 09:00-09:32/32 16:54	07:00 07:59-08:13/14 17:56	06:38 20:01	05:23 21:04	04:31 21:58	04:33 22:07	05:23 21:19	06:25 20:03	07:25 18:43	07:31 08:29-09:01/32 16:27	08:31 15:41
6	08:49 15:55	08:05 09:00-09:31/31 16:56	06:58 08:03-08:10/7 17:58	06:35 20:03	05:21 21:06	04:31 21:59	04:34 22:06	05:25 21:17	06:27 20:01	07:27 18:40	07:33 08:30-09:01/31 16:25	08:32 15:41
7	08:48 15:56	08:02 09:00-09:31/31 16:58	06:55 18:00	06:33 20:05	05:19 21:08	04:30 22:00	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	07:35 08:30-09:01/31 16:23	08:34 15:40
8	08:47 15:58	08:00 09:01-09:32/31 17:01	06:53 18:02	06:30 20:07	05:17 21:10	04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55	07:31 08:35-08:47/12 18:35	07:38 08:31-09:01/30 16:21	08:35 15:39
9	08:47 15:59	07:58 09:00-09:31/31 17:03	06:50 18:05	06:27 20:09	05:14 21:12	04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53	07:33 08:33-08:49/16 18:32	07:40 08:31-09:01/30 16:19	08:36 15:39
10	08:46 16:01	07:56 09:01-09:31/30 17:05	06:47 18:07	06:25 20:12	05:12 21:14	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50	07:36 08:32-08:51/19 18:30	07:42 08:31-09:00/29 16:17	08:38 15:39
11	08:45 16:03	07:54 09:02-09:31/29 17:07	06:45 18:09	06:22 20:14	05:10 21:16	04:27 22:04	04:40 22:01	05:35 21:06	06:37 19:47	07:38 08:30-08:52/22 18:27	07:44 08:32-09:00/28 16:15	08:39 15:38
12	08:44 16:04	07:52 09:02-09:29/27 17:10	06:42 18:11	06:19 20:16	05:08 21:18	04:27 22:05	04:42 22:00	05:37 21:04	06:39 19:45	07:40 08:29-08:52/23 18:24	07:46 08:32-08:59/27 16:13	08:40 15:38
13	08:43 16:06	07:49 09:04-09:29/25 17:12	06:39 18:13	06:17 20:18	05:06 21:20	04:26 22:06	04:43 21:59	05:39 21:01	06:41 19:42	07:42 08:28-08:52/24 18:22	07:48 08:34-08:59/25 16:11	08:41 15:38
14	08:42 16:08	07:47 09:04-09:27/23 17:14	06:37 18:15	06:14 20:20	05:04 21:22	04:26 22:07	04:45 21:58	05:41 20:59	06:43 19:39	07:44 08:27-08:52/25 18:19	07:51 08:35-08:58/23 16:09	08:43 15:38
15	08:41 16:10	07:45 09:06-09:26/20 17:16	06:34 18:17	06:12 20:22	05:02 21:23	04:25 22:07	04:46 21:56	05:43 20:57	06:45 19:36	07:46 08:28-08:53/25 18:17	07:53 08:36-08:57/21 16:07	08:44 15:38
16	08:40 16:12	07:42 09:08-09:23/15 17:19	06:31 18:19	06:09 20:24	05:00 21:25	04:25 22:08	04:47 21:55	05:45 20:54	06:47 19:34	07:48 08:27-08:53/26 18:14	07:55 08:38-08:56/18 16:06	08:45 15:38
17	08:39 16:13	07:40 09:12-09:20/8 17:21	06:29 18:22	06:07 20:26	04:58 21:27	04:25 22:08	04:49 21:54	05:47 20:52	06:49 19:31	07:50 08:27-08:52/25 18:12	07:57 08:39-08:54/15 16:04	08:45 15:38
18	08:37 16:15	07:38 08:05-08:13/8 17:23	06:26 18:24	06:04 20:28	04:57 21:29	04:25 22:09	04:51 21:52	05:49 20:49	06:51 19:28	07:52 08:27-08:51/24 18:09	07:59 08:43-08:53/10 16:02	08:46 15:38
19	08:36 16:17	07:35 08:03-08:16/13 17:25	06:23 18:26	06:01 20:30	04:55 21:31	04:25 22:09	04:52 21:51	05:51 20:47	06:53 19:26	07:54 08:28-08:51/23 18:07	08:01 16:01	08:47 15:38
20	08:35 16:19	07:33 08:00-08:17/17 17:28	06:21 18:28	05:59 20:32	04:53 21:33	04:25 22:10	04:54 21:49	05:53 20:44	06:55 19:23	07:57 08:28-08:50/22 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:31 07:58-08:19/21 17:30	06:18 18:30	05:56 20:34	04:51 21:35	04:25 22:10	04:56 21:48	05:55 20:42	06:57 19:20	07:59 08:29-08:49/20 18:02	08:05 15:57	08:48 15:39
22	08:32 16:23	07:28 07:57-08:19/22 17:32	06:15 18:32	05:54 20:37	04:50 21:36	04:25 22:10	04:57 21:46	05:57 20:39	06:59 19:18	08:01 08:31-08:47/16 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 07:56-08:20/24 17:34	06:13 18:34	05:51 20:39	04:48 21:38	04:25 22:10	04:59 21:44	05:59 20:37	07:01 19:15	08:03 08:34-08:46/12 17:57	08:09 15:54	08:49 15:40
24	08:29 09:09-09:19/10 16:28	07:23 07:55-08:20/25 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10	05:01 21:43	06:01 20:34	07:03 19:12	08:05 08:36-08:42/6 17:54	08:11 15:53	08:50 15:40
25	08:27 09:06-09:21/15 16:30	07:21 07:55-08:20/25 17:39	06:07 18:38	05:47 20:43	04:45 21:42	04:26 22:10	05:02 21:41	06:03 20:32	07:05 19:10	07:07 08:40-08:50/10 16:52	08:13 15:52	08:50 15:41
26	08:25 09:05-09:23/18 16:32	07:18 07:55-08:21/26 17:41	06:05 18:40	05:44 20:45	04:43 21:43	04:27 22:10	05:04 21:39	06:05 20:29	07:07 19:07	07:09 08:38-08:54/16 16:50	08:15 15:50	08:50 15:42
27	08:24 09:04-09:25/21 16:34	07:16 07:55-08:20/25 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10	05:06 21:37	06:07 20:27	07:09 19:04	07:12 08:35-08:56/21 16:47	08:17 15:49	08:51 15:42
28	08:22 09:03-09:26/23 16:36	07:13 07:55-08:20/25 17:45	05:59 18:44	05:39 20:49	04:41 21:46	04:28 22:10	05:08 21:36	06:09 20:24	07:11 19:01	07:14 08:34-08:57/23 16:45	08:19 15:48	08:51 15:43
29	08:20 09:02-09:27/25 16:38		05:57 19:47	05:37 20:51	04:39 21:48	04:28 22:10	05:10 21:34	06:11 20:22	07:13 18:59	07:16 08:33-08:58/25 16:43	08:21 15:47	08:51 15:44
30	08:18 09:02-09:28/26 16:41		05:54 19:49	05:35 20:53	04:38 21:50	04:29 22:09	05:12 21:32	06:13 20:19	07:15 18:56	07:18 08:32-08:59/27 16:40	08:22 15:46	08:51 15:45
31	08:16 09:01-09:29/28 16:43		05:51 19:51		04:37 21:51		05:13 21:30	06:15 20:16		07:20 08:31-08:59/28 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	166	685	107	0	0	0	0	0	0	490	471	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C3 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (77)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 15:34-15:56/22 16:45	07:10 16:21-16:53/32 17:47	06:48 19:53	05:32 20:55	04:35 21:52
2	08:50 15:49	08:12 15:35-15:56/21 16:47	07:08 16:21-16:52/31 17:49	06:46 19:55	05:30 20:57	04:34 21:54
3	08:50 15:50	08:11 15:35-15:56/21 16:49	07:05 16:21-16:51/30 17:51	06:43 19:57	05:27 20:59	04:33 21:55
4	08:50 15:51	08:09 15:36-15:56/20 16:51	07:03 16:22-16:51/29 17:54	06:40 19:59	05:25 21:01	04:32 21:56
5	08:49 15:53	08:06 15:37-15:54/17 16:54	07:00 16:22-16:50/28 17:56	06:38 20:01	05:23 21:03	04:31 21:58
6	08:49 15:54	08:04 15:38-15:53/15 16:56	06:58 16:22-16:48/26 17:58	06:35 20:03	05:21 21:05	04:30 21:59
7	08:48 15:56	08:02 15:40-15:52/12 16:58	06:55 16:24-16:47/23 18:00	06:32 20:05	05:19 21:07	04:29 22:00
8	08:47 15:57	08:00 15:43-15:48/5 17:00	06:52 16:26-16:45/19 18:02	06:30 20:07	05:16 21:09	04:29 22:01
9	08:47 15:59	07:58 17:03	06:50 16:27-16:42/15 18:04	06:27 20:09	05:14 21:11	04:28 22:02
10	08:46 16:01	07:56 17:05	06:47 16:33-16:38/5 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 17:09-17:39/30 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 17:08-17:40/32 18:11	06:19 20:16	05:08 21:17	04:26 22:05
13	08:43 16:06	07:49 17:12	06:39 17:07-17:40/33 18:13	06:17 20:18	05:06 21:19	04:26 22:06
14	08:42 16:08	07:47 17:14	06:37 17:08-17:41/33 18:15	06:14 20:20	05:04 21:21	04:25 22:06
15	08:41 16:09	07:45 17:16	06:34 17:08-17:41/33 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 17:08-17:40/32 18:19	06:09 20:24	05:00 21:25	04:25 22:08
17	08:38 16:13	07:40 16:37-16:39/2 17:21	06:29 17:09-17:41/32 18:21	06:06 20:26	04:58 21:27	04:25 22:08
18	08:37 16:15	07:38 16:31-16:44/13 17:23	06:26 17:09-17:40/31 18:23	06:04 20:28	04:56 21:29	04:25 22:09
19	08:36 16:17	07:35 16:29-16:47/18 17:25	06:23 17:10-17:39/29 18:26	06:01 20:30	04:55 21:31	04:25 22:09
20	08:35 15:39-15:40/1 16:19	07:33 16:27-16:49/22 17:27	06:21 17:13-17:38/25 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 16:25-16:50/25 17:30	06:18 17:17-17:37/20 18:30	05:56 20:34	04:51 21:34	04:25 22:10
22	08:32 15:36-15:46/10 16:23	07:28 16:24-16:51/27 17:32	06:15 17:18-17:35/17 18:32	05:54 20:36	04:49 21:36	04:25 22:10
23	08:30 15:35-15:48/13 16:25	07:25 16:23-16:51/28 17:34	06:12 17:20-17:32/12 18:34	05:51 20:38	04:48 21:38	04:25 22:10
24	08:29 15:34-15:50/16 16:27	07:23 16:22-16:53/31 17:36	06:10 18:36	05:49 20:41	04:46 21:40	04:26 22:10
25	08:27 15:34-15:52/18 16:30	07:20 16:21-16:53/32 17:38	06:07 18:38	05:46 20:43	04:45 21:41	04:26 22:10
26	08:25 15:33-15:53/20 16:32	07:18 16:22-16:53/31 17:41	06:04 18:40	05:44 20:45	04:43 21:43	04:26 22:10
27	08:24 15:33-15:54/21 16:34	07:15 16:21-16:53/32 17:43	06:02 18:42	05:42 20:47	04:42 21:45	04:27 22:10
28	08:22 15:33-15:55/22 16:36	07:13 16:20-16:53/33 17:45	05:59 18:44	05:39 20:49	04:40 21:46	04:27 22:10
29	08:20 15:33-15:55/22 16:38		06:56 19:46	05:37 20:51	04:39 21:48	04:28 22:09
30	08:18 15:33-15:55/22 16:40		06:54 19:48	05:34 20:53	04:38 21:49	04:29 22:09
31	08:16 15:34-15:56/22 16:43		06:51 19:51		04:37 21:51	
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	192	427	705	0	0	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C3 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (77)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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	17:47-18:19/32 16:36	07:22 15:45
2	04:30 22:08	05:17 21:26	06:19 20:11	07:19 18:51	17:47-18:18/31 16:33	07:24 15:44
3	04:31 22:08	05:19 21:23	06:21 20:08	07:21 18:48	17:47-18:16/29 16:31	07:27 15:43
4	04:32 22:07	05:21 21:21	06:23 20:06	07:23 18:45	17:07-17:19/12 17:48-18:15/27	07:29 16:29
5	04:33 22:06	05:23 21:19	06:25 20:03	07:25 18:43	17:04-17:21/17 17:48-18:11/23	07:31 16:27
6	04:34 22:06	05:25 21:17	06:27 20:00	07:27 18:40	17:01-17:23/22 17:49-18:08/19	07:33 16:25
7	04:35 22:05	05:27 21:15	06:29 19:58	07:29 18:37	16:59-17:24/25 17:50-18:06/16	07:35 16:23
8	04:36 22:04	05:29 21:13	06:31 19:55	07:31 18:35	16:58-17:25/27 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	16:56-17:25/29 16:55-17:25/30	07:40 16:19
10	04:39 22:02	05:33 21:08	06:35 19:50	07:35 18:29	16:55-17:25/30 16:54-17:25/31	07:42 16:17
11	04:40 22:01	05:35 21:06	06:37 19:47	07:37 18:27	16:54-17:25/31 16:53-17:24/31	07:44 16:15
12	04:42 22:00	05:37 21:04	06:39 19:44	07:40 18:24	16:54-17:26/32 16:53-17:24/31	07:46 16:13
13	04:43 21:59	05:39 21:01	06:41 19:42	07:42 18:22	16:54-17:26/32 16:53-17:26/33	07:48 16:11
14	04:44 21:58	05:41 20:59	06:43 19:39	07:44 18:19	16:53-17:26/33 16:52-17:25/32	07:50 16:09
15	04:46 21:56	05:43 20:56	06:45 19:36	07:46 18:17	16:53-17:25/32 16:52-17:24/31	07:53 16:07
16	04:47 21:55	05:45 20:54	06:47 19:34	07:48 18:14	16:53-17:24/31 16:52-17:25/31	07:55 16:05
17	04:49 21:54	05:47 20:52	06:49 19:31	07:50 18:11	16:54-17:25/31 16:53-17:24/30	07:57 16:04
18	04:50 21:52	05:49 20:49	06:51 19:28	07:52 18:09	16:54-17:24/30 16:53-17:22/28	07:59 16:02
19	04:52 21:51	05:51 20:47	06:53 19:26	07:54 18:06	16:54-17:22/28 16:53-17:21/26	08:01 16:00
20	04:54 21:49	05:53 20:44	06:55 19:23	07:56 18:04	16:55-17:21/26 16:54-17:20/24	08:03 15:59
21	04:55 21:48	05:55 20:42	06:57 19:20	07:58 18:01	16:56-17:20/24 16:55-17:18/21	08:05 15:57
22	04:57 21:46	05:57 20:39	06:59 19:17	08:01 17:59	16:57-17:18/21 17:02-17:14/12	08:07 15:56
23	04:59 21:44	05:59 20:37	07:01 19:15	08:03 17:57	16:59-17:16/17 17:02-17:14/12	08:09 15:54
24	05:00 21:43	06:01 20:34	07:03 19:12	08:05 17:54	17:02-17:14/12 17:01-17:13/11	08:11 15:53
25	05:02 21:41	06:03 20:32	07:05 19:09	08:07 17:52	17:01-17:13/11 17:00-17:12/10	08:13 15:51
26	05:04 21:39	06:05 20:29	07:07 19:07	08:09 17:50	17:00-17:12/10 17:00-17:12/10	08:15 15:50
27	05:06 21:37	06:07 20:27	07:09 19:04	08:11 17:48	17:00-17:12/10 17:00-17:12/10	08:17 15:49
28	05:08 21:35	06:09 20:24	07:11 19:01	08:13 17:46	17:00-17:12/10 17:00-17:12/10	08:19 15:48
29	05:10 21:33	06:11 20:21	07:13 18:59	08:15 17:44	17:00-17:12/10 17:00-17:12/10	08:20 15:47
30	05:11 21:32	06:13 20:19	07:15 18:56	08:17 17:42	17:00-17:12/10 17:00-17:12/10	08:22 15:46
31	05:13 21:30	06:15 20:16		08:19 17:40	17:00-17:12/10 17:00-17:12/10	08:24 15:45
Potential sun hours		529	469	385	324	216
Sum of minutes with flicker		0	0	288	729	331

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C4 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (78)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January			February			March			April			May			June		
1	08:51	10:26-10:43/17	15:48	08:15	16:45	17:47	07:11	17:47	19:53	06:49	19:53	20:55	05:32	20:55	21:52	04:36	05:29-06:05/36	
2	08:50	10:27-10:43/16	15:49	08:13	16:47	17:50	07:08	17:50	19:55	06:46	19:55	20:57	05:30	20:57	21:54	04:35	05:29-06:05/36	
3	08:50	10:28-10:43/15	15:50	08:11	16:49	17:52	07:05	17:52	19:57	06:43	19:57	20:59	05:28	20:59	21:55	04:33	05:29-06:04/35	
4	08:50	10:28-10:42/14	15:52	08:09	16:52	17:54	07:03	17:54	19:59	06:41	19:59	21:01	05:25	21:01	21:56	04:32	05:29-06:04/35	
5	08:49	10:30-10:42/12	15:53	08:07	16:54	17:56	07:00	17:56	20:01	06:38	20:01	21:03	05:23	21:03	21:58	04:31	05:30-06:04/34	
6	08:48	10:32-10:42/10	15:55	08:05	16:56	17:58	06:58	17:58	20:03	06:35	20:03	21:06	05:21	21:06	21:59	04:31	05:29-06:05/36	
7	08:48	10:33-10:40/7	15:56	08:02	16:58	18:00	06:55	18:00	20:05	06:33	20:05	21:08	05:19	21:08	22:00	04:30	05:28-06:05/37	
8	08:47	09:25-09:37/12	15:58	08:00	17:01	18:02	06:53	07:18-07:24/6	20:07	06:30	20:07	21:10	05:17	05:51-05:53/2	22:01	04:29	05:29-06:06/37	
9	08:47	09:24-09:38/14	15:59	07:58	17:03	18:05	06:50	07:16-07:27/11	20:09	06:27	06:53-07:01/8	21:12	05:15	05:46-05:58/12	22:02	04:28	05:28-06:06/38	
10	08:46	09:23-09:39/16	16:01	07:56	17:05	18:07	06:47	07:13-07:28/15	20:12	06:25	06:50-07:03/13	21:14	05:12	05:44-05:59/15	22:03	04:28	05:28-06:07/39	
11	08:45	09:22-09:40/18	16:03	07:54	17:07	18:09	06:45	07:10-07:28/18	20:14	06:22	06:48-07:05/17	21:16	05:10	05:43-06:01/18	22:04	04:27	05:28-06:07/39	
12	08:44	09:21-09:41/20	16:04	07:52	17:10	18:11	06:42	07:08-07:30/22	20:16	06:20	06:45-07:05/20	21:18	05:08	05:41-06:02/21	22:05	04:27	05:28-06:08/40	
13	08:43	09:20-09:41/21	16:06	07:49	17:12	18:13	06:39	07:05-07:29/24	20:18	06:17	06:43-07:06/23	21:20	05:06	05:40-06:02/22	22:06	04:26	05:28-06:08/40	
14	08:42	09:20-09:42/22	16:08	07:47	17:14	18:15	06:37	07:02-07:29/27	20:20	06:14	06:40-07:06/26	21:21	05:04	05:40-06:04/24	22:06	04:26	05:27-06:08/41	
15	08:41	09:21-09:43/22	16:10	07:45	17:16	18:17	06:34	06:59-07:28/29	20:22	06:12	06:38-07:06/28	21:23	05:02	05:39-06:04/25	22:07	04:25	05:27-06:09/42	
16	08:40	09:20-09:43/23	16:12	07:42	17:19	18:19	06:31	06:57-07:28/31	20:24	06:09	06:35-07:06/31	21:25	05:00	05:36-06:04/28	22:08	04:25	05:28-06:09/41	
17	08:39	09:21-09:44/23	16:14	07:40	17:21	18:22	06:29	06:54-07:27/33	20:26	06:07	06:33-07:06/33	21:27	04:59	05:35-06:05/30	22:08	04:25	05:28-06:09/41	
18	08:37	09:21-09:44/23	16:15	07:38	17:23	18:24	06:26	06:51-07:26/35	20:28	06:04	06:32-07:05/33	21:29	04:57	05:34-06:05/31	22:09	04:25	05:28-06:10/42	
19	08:36	09:21-09:44/23	16:17	07:35	17:25	18:26	06:23	06:49-07:25/36	20:30	06:02	06:31-07:05/34	21:31	04:55	05:32-06:05/33	22:09	04:25	05:28-06:10/42	
20	08:35	09:22-09:45/23	16:19	07:33	17:28	18:28	06:21	06:47-07:22/35	20:32	05:59	06:30-07:03/33	21:33	04:53	05:32-06:06/34	22:10	04:25	05:28-06:10/42	
21	08:33	09:22-09:45/23	16:21	07:31	17:30	18:30	06:18	06:46-07:17/31	20:34	05:56	06:30-07:02/32	21:35	04:51	05:31-06:05/34	22:10	04:25	05:28-06:10/42	
22	08:32	09:22-09:45/23	16:24	07:28	17:32	18:32	06:15	06:47-07:16/29	20:37	05:54	06:31-07:01/30	21:36	04:50	05:31-06:06/35	22:10	04:25	05:29-06:11/42	
23	08:30	09:22-09:45/23	16:26	07:26	17:34	18:34	06:13	06:46-07:14/28	20:39	05:52	06:30-06:59/29	21:38	04:48	05:30-06:05/35	22:10	04:25	05:29-06:11/42	
24	08:29	09:24-09:46/22	16:28	07:23	17:36	18:36	06:10	06:46-07:12/26	20:41	05:49	06:31-06:56/25	21:40	04:47	05:30-06:06/36	22:10	04:26	05:29-06:11/42	
25	08:27	09:25-09:45/20	16:30	07:21	17:39	18:38	06:07	06:46-07:08/22	20:43	05:47	06:31-06:54/23	21:42	04:45	05:30-06:06/36	22:10	04:26	05:30-06:11/41	
26	08:25	09:25-09:45/20	16:32	07:18	17:41	18:40	06:05	06:47-07:04/17	20:45	05:44	06:31-06:52/21	21:43	04:44	05:30-06:06/36	22:10	04:27	05:30-06:11/41	
27	08:24	09:26-09:44/18	16:34	07:16	17:43	18:42	06:02	06:48-07:02/14	20:47	05:42	06:33-06:51/18	21:45	04:42	05:29-06:05/36	22:10	04:27	05:31-06:12/41	
28	08:22	09:28-09:43/15	16:36	07:13	17:45	18:45	05:59	06:49-06:59/10	20:49	05:39	06:34-06:49/15	21:46	04:41	05:29-06:05/36	22:10	04:28	05:30-06:11/41	
29	08:20	09:30-09:42/12	16:38			19:47	06:57		20:51	05:37	06:37-06:46/9	21:48	04:39	05:29-06:05/36	22:10	04:28	05:31-06:12/41	
30	08:18	09:32-09:39/7	16:41			19:49	06:54		20:53	05:35		21:48	04:38	05:29-06:05/36	22:09	04:29	05:32-06:12/40	
31	08:16		16:43			19:51	06:51					21:51	04:37	05:29-06:05/36				
Potential sun hours	235			266			366			426			508			529		
Sum of minutes with flicker	564			0			499			501			687			1186		

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C4 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (78)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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Operational time

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442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30 05:32-06:11/39 22:09	05:15 05:52-06:12/20 21:28	06:17 06:47-07:04/17 20:14	07:17 07:46-08:09/23 18:53	07:22 16:36	08:24 09:04-09:22/18 15:45
2	04:31 05:32-06:11/39 22:08	05:17 05:53-06:11/18 21:26	06:19 06:49-07:02/13 20:11	07:19 07:48-08:08/20 18:51	07:25 16:34	08:26 09:06-09:22/16 15:44
3	04:31 05:33-06:12/39 22:08	05:19 05:55-06:09/14 21:24	06:21 06:51-06:59/8 20:09	07:21 07:50-08:07/17 18:48	07:27 16:31	08:27 09:08-09:22/14 15:43
4	04:32 05:34-06:12/38 22:07	05:21 05:58-06:07/9 21:21	06:23 20:06	07:23 07:52-08:05/13 18:45	07:29 16:29	08:29 09:09-09:21/12 15:42
5	04:33 05:35-06:11/36 22:07	05:23 21:19	06:25 20:03	07:25 07:54-08:03/9 18:43	07:31 16:27	08:31 10:19-10:25/6 15:41
6	04:34 05:35-06:11/36 22:06	05:25 21:17	06:27 20:01	07:27 07:56-07:58/2 18:40	07:33 16:25	08:32 10:18-10:28/10 15:41
7	04:36 05:36-06:11/35 22:05	05:27 21:15	06:29 19:58	07:29 18:38	07:35 16:23	08:34 10:17-10:28/11 15:40
8	04:37 05:37-06:11/34 22:04	05:29 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 10:17-10:30/13 15:40
9	04:38 05:37-06:11/34 22:03	05:31 21:11	06:33 19:53	07:33 18:32	07:40 16:19	08:36 10:16-10:31/15 15:39
10	04:39 05:37-06:12/35 22:02	05:33 21:08	06:35 19:50	07:36 18:30	07:42 16:17	08:38 10:16-10:32/16 15:39
11	04:40 05:37-06:12/35 22:01	05:35 21:06	06:37 19:47	07:38 18:27	07:44 16:15	08:39 10:16-10:33/17 15:38
12	04:42 05:38-06:13/35 22:00	05:37 21:04	06:39 19:45	07:40 18:24	07:46 09:03-09:10/7 16:13	08:40 10:17-10:34/17 15:38
13	04:43 05:38-06:14/36 21:59	05:39 21:01	06:41 19:42	07:42 18:22	07:48 09:01-09:14/13 16:11	08:41 10:17-10:35/18 15:38
14	04:45 05:38-06:14/36 21:58	05:41 06:43-06:55/12 20:59	06:43 19:39	07:44 18:19	07:51 09:00-09:15/15 16:09	08:43 10:17-10:35/18 15:38
15	04:46 05:38-06:14/36 21:56	05:43 06:41-06:57/16 20:57	06:45 07:40-07:49/9 19:36	07:46 18:17	07:53 08:58-09:16/18 16:07	08:44 10:17-10:36/19 15:38
16	04:48 05:39-06:15/36 21:55	05:45 06:40-06:58/18 20:54	06:47 07:37-07:51/14 19:34	07:48 18:14	07:55 08:58-09:18/20 16:06	08:44 10:17-10:37/20 15:38
17	04:49 05:38-06:15/37 21:54	05:47 06:38-06:58/20 20:52	06:49 07:36-07:53/17 19:31	07:50 18:12	07:57 08:58-09:18/20 16:04	08:45 10:18-10:37/19 15:38
18	04:51 05:39-06:16/37 21:52	05:49 06:37-06:59/22 20:49	06:51 07:34-07:55/21 19:28	07:52 18:09	07:59 08:58-09:20/22 16:02	08:46 10:18-10:38/20 15:38
19	04:52 05:39-06:15/36 21:51	05:51 06:36-07:03/27 20:47	06:53 07:33-07:59/26 19:26	07:54 18:07	08:01 08:57-09:20/23 16:01	08:47 10:19-10:39/20 15:38
20	04:54 05:40-06:16/36 21:49	05:53 06:36-07:05/29 20:44	06:55 07:33-08:01/28 19:23	07:57 18:04	08:03 08:57-09:20/23 15:59	08:48 10:18-10:39/21 15:38
21	04:56 05:40-06:16/36 21:48	05:55 06:35-07:06/31 20:42	06:57 07:32-08:01/29 19:20	07:59 18:02	08:05 08:57-09:20/23 15:57	08:48 10:19-10:40/21 15:39
22	04:57 05:41-06:16/35 21:46	05:57 06:35-07:07/32 20:39	06:59 07:31-08:01/30 19:18	08:01 17:59	08:07 08:58-09:21/23 15:56	08:49 10:19-10:40/21 15:39
23	04:59 05:41-06:16/35 21:44	05:59 06:35-07:08/33 20:37	07:01 07:31-08:04/33 19:15	08:03 17:57	08:09 08:58-09:21/23 15:54	08:49 10:20-10:41/21 15:40
24	05:01 05:43-06:16/33 21:43	06:01 06:35-07:08/33 20:34	07:03 07:31-08:07/36 19:12	08:05 17:54	08:11 08:58-09:21/23 15:53	08:50 10:21-10:41/20 15:40
25	05:02 05:43-06:15/32 21:41	06:03 06:35-07:09/34 20:32	07:05 07:33-08:08/35 19:10	07:07 16:52	08:13 08:58-09:21/23 15:52	08:50 10:21-10:41/20 15:41
26	05:04 05:44-06:15/31 21:39	06:05 06:35-07:08/33 20:29	07:07 07:36-08:10/34 19:07	07:09 16:50	08:15 08:59-09:22/23 15:50	08:50 10:21-10:41/20 15:42
27	05:06 05:46-06:15/29 21:37	06:07 06:37-07:08/31 20:27	07:09 07:38-08:10/32 19:04	07:12 16:47	08:17 09:00-09:22/22 15:49	08:51 10:22-10:41/19 15:43
28	05:08 05:47-06:14/27 21:36	06:09 06:39-07:07/28 20:24	07:11 07:40-08:10/30 19:01	07:14 16:45	08:19 09:00-09:22/22 15:48	08:51 10:23-10:42/19 15:43
29	05:10 05:50-06:14/24 21:34	06:11 06:41-07:07/26 20:22	07:13 07:42-08:10/28 18:59	07:16 16:43	08:20 09:01-09:22/21 15:47	08:51 10:23-10:42/19 15:44
30	05:12 05:51-06:14/23 21:32	06:13 06:43-07:06/23 20:19	07:15 07:44-08:09/25 18:56	07:18 16:40	08:22 09:02-09:22/20 15:46	08:51 10:24-10:43/19 15:45
31	05:14 05:52-06:13/21 21:30	06:15 06:45-07:05/20 20:16		07:20 16:38		08:51 10:25-10:43/18 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1051	529	465	84	384	567

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

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Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

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

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

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

Project:
Mezares_AB211223

Licensed user:
SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Anna / anna@environment.lv
Calculated:
09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C6 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (80)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
442 466 539 464 488 781 784 938 1,215 1,079 833 556 8,584
Idle start wind speed: Cut in wind speed from power curve

		January	February	March	April	May	June	July	August	September	October	November	December	
1	08:51 15:48	08:15 16:45	07:11 17:47	06:49 19:53	05:32 20:55	06:47-06:59/12	04:36 21:52	04:30 22:09	05:15 21:28	06:17 20:14	06:52-07:05/13	07:17 18:53	07:22 16:36	08:24 15:45
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	05:30 20:57	06:52-06:54/2	04:34 21:54	04:31 22:08	05:17 21:26	06:19 20:11	06:56-07:00/4	07:19 18:51	07:25 16:34	08:26 15:44
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59		04:33 21:55	04:31 22:08	05:19 21:24	06:21 20:09		07:21 18:48	07:27 16:31	08:27 15:43
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:01		04:32 21:56	04:32 22:07	05:21 21:21	06:23 20:06		07:23 18:45	07:29 16:29	08:29 15:42
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03		04:31 21:58	04:33 22:06	05:23 21:19	06:25 20:03		07:25 18:43	07:31 16:27	08:31 15:41
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05		04:31 21:59	04:34 22:06	05:25 21:17	06:27 20:01		07:27 18:40	07:33 16:25	08:32 15:41
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:08		04:30 22:00	04:36 22:05	05:27 21:15	06:29 19:58		07:29 18:37	07:35 16:23	08:34 15:40
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:10		04:29 22:01	04:37 22:04	05:29 21:13	06:31 19:55		07:31 18:35	07:38 16:21	08:35 15:39
9	08:47 15:59	07:58 17:03	06:50 18:05	06:27 20:09	05:14 21:12		04:28 22:02	04:38 22:03	05:31 21:11	06:33 19:53		07:33 18:32	07:40 16:19	08:36 15:39
10	08:46 16:01	07:56 17:05	06:47 18:07	06:25 20:12	05:12 21:14	06:57-07:01/4	04:28 22:03	04:39 22:02	05:33 21:08	06:35 19:50		07:35 18:30	07:42 16:17	08:38 15:39
11	08:45 16:03	07:54 17:07	06:45 18:09	06:22 20:14	05:10 21:16	06:53-07:06/13	04:27 22:01	04:40 22:02	05:35 21:06	06:58-07:05/7	06:37 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	08:44 16:04	07:52 17:10	06:42 18:11	06:19 20:16	05:08 21:18	06:50-07:07/17	04:27 22:05	04:42 22:00	05:37 21:04	06:43-06:46/3	06:39 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	08:43 16:06	07:49 17:12	06:39 18:13	06:17 20:18	05:06 21:19	06:48-07:09/21	04:26 22:06	04:43 21:59	05:39 21:01	06:39-06:50/11	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	06:46-07:10/24	04:26 22:06	04:45 21:58	05:41 21:06	06:37-07:12/35	06:43 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	08:41 16:10	07:45 17:16	06:34 18:17	06:12 20:22	05:02 21:23	06:38-06:44/6	04:25 22:07	04:46 21:56	05:43 21:07	06:36-07:13/37	06:45 19:36	07:46 18:17	07:53 16:07	08:43 15:38
16	08:40 16:12	07:42 17:19	06:31 18:19	06:09 20:24	05:00 21:25	06:45-07:11/26	04:25 22:08	04:48 21:55	05:45 21:08	06:35-07:14/39	06:47 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	08:39 16:13	07:40 17:21	06:29 18:22	06:07 20:26	04:59 21:27	06:33-07:12/39	04:25 22:08	04:49 21:54	05:47 21:09	06:33-07:14/41	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	06:30-07:11/41	04:25 22:09	04:51 21:52	05:49 21:09	06:33-07:15/42	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	06:29-07:12/43	04:25 22:09	04:52 21:51	05:51 21:07	06:32-07:15/43	06:53 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	08:35 16:19	07:33 17:28	06:21 18:28	05:59 20:32	04:53 21:33	06:27-07:11/44	04:25 22:10	04:54 21:49	05:53 21:08	06:32-07:15/43	06:55 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	08:33 16:21	07:30 17:30	06:18 18:30	05:56 20:34	04:51 21:35	06:27-07:11/44	04:25 22:10	04:56 21:48	05:55 21:10	06:32-07:16/44	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 20:37	04:50 21:36	06:27-07:11/44	04:25 22:10	04:57 21:46	05:57 21:11	06:32-07:16/44	06:59 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	08:30 16:26	07:26 17:34	06:13 18:34	05:51 20:39	04:48 21:38	06:26-07:10/44	04:25 22:10	04:59 21:44	05:59 21:12	06:32-07:16/44	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	04:47 21:40	06:27-07:09/42	04:26 22:10	05:01 21:43	06:01 21:13	06:33-07:15/42	07:03 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	08:27 16:30	07:21 17:39	06:07 18:38	05:47 20:43	04:45 21:41	06:27-07:09/42	04:26 22:10	05:02 21:41	06:03 21:14	06:34-07:14/40	07:05 19:09	08:07 16:52	08:13 15:52	08:50 15:41
26	08:25 16:32	07:18 17:41	06:05 18:40	05:44 20:45	04:43 21:43	06:27-07:07/40	04:27 22:10	05:04 21:39	06:05 21:16	06:35-07:13/38	07:07 19:07	08:09 16:50	08:15 15:50	08:50 15:42
27	08:24 16:34	07:16 17:43	06:02 18:42	05:42 20:47	04:42 21:45	06:28-07:06/38	04:27 22:10	05:06 21:37	06:07 21:18	06:37-07:13/36	07:09 19:04	08:11 16:47	08:17 15:49	08:51 15:43
28	08:22 16:36	07:13 17:45	05:59 18:44	05:39 20:49	04:41 21:46	06:29-07:05/36	04:28 22:10	05:08 21:35	06:09 21:20	06:39-06:44/5	07:11 19:01	08:14 16:45	08:19 15:48	08:51 15:43
29	08:20 16:38		06:57 19:47	05:37 20:51	04:39 21:48	06:30-07:03/33	04:28 22:10	05:10 21:34	06:11 21:22	06:47-07:11/24	07:13 18:59	08:16 16:43	08:20 15:47	08:51 15:44
30	08:18 16:41		06:54 19:49	05:35 20:53	04:38 21:49	06:31-06:41/10	04:29 22:09	05:12 21:32	06:13 21:19	06:48-07:09/21	07:15 18:56	08:18 16:40	08:22 15:46	08:51 15:45
31	08:16 16:43		06:51 19:51		04:37 21:51	06:45-07:01/16		05:14 21:30	06:15 21:16	06:49-07:07/18		08:20 16:38		08:51 15:46
Potential sun hours	235	266	366	426	508		529	529	469	385	17	324	247	216
Sum of minutes with flicker	0	0	0	703	14		0	0	713	17	0	0	0	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C7 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (81)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C8 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (82)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	January	February	March	April	May	June
1	08:50 15:48	08:14 16:45	07:11 17:47	06:49 19:53	07:37-07:51/14 20:55	05:32 21:52
2	08:50 15:49	08:13 16:47	07:08 17:49	06:46 19:55	07:39-07:48/9 20:57	05:30 21:54
3	08:50 15:50	08:11 16:49	07:05 17:52	06:43 19:57	05:28 20:59	06:17-07:05/48 21:55
4	08:50 15:52	08:09 16:52	07:03 17:54	06:41 19:59	05:25 21:01	06:16-07:06/50 21:56
5	08:49 15:53	08:07 16:54	07:00 17:56	06:38 20:01	05:23 21:03	06:15-07:06/51 21:58
6	08:49 15:55	08:05 16:56	06:58 17:58	06:35 20:03	05:21 21:05	06:15-07:07/52 21:59
7	08:48 15:56	08:02 16:58	06:55 18:00	06:33 20:05	05:19 21:07	06:14-07:07/53 22:00
8	08:47 15:58	08:00 17:01	06:52 18:02	06:30 20:07	05:17 21:10	06:13-07:07/54 22:01
9	08:47 15:59	07:58 17:03	06:50 18:05	07:20-07:32/12 20:09	05:14 21:12	06:13-07:07/54 22:02
10	08:46 16:01	07:56 17:05	06:47 18:07	07:17-07:34/17 20:11	05:12 21:14	06:12-07:07/55 22:03
11	08:45 16:03	07:54 17:07	06:45 18:09	07:14-07:35/21 20:14	05:10 21:16	06:12-07:07/55 22:04
12	08:44 16:04	07:52 17:10	06:42 18:11	07:13-07:36/23 20:16	05:08 21:17	06:12-07:07/55 22:05
13	08:43 16:06	07:49 17:12	06:39 18:13	07:12-07:37/25 20:18	05:06 21:19	06:11-07:07/56 22:06
14	08:42 16:08	07:47 17:14	06:37 18:15	07:11-07:37/26 20:20	05:04 21:21	06:12-07:08/56 22:06
15	08:41 16:10	07:45 17:16	06:34 18:17	07:10-07:37/27 20:22	05:02 21:23	06:12-07:07/55 22:07
16	08:40 16:12	07:42 17:19	06:31 18:19	07:10-07:38/28 20:24	05:00 21:25	06:11-07:07/56 22:08
17	08:39 16:14	07:40 17:21	06:29 18:22	07:09-07:37/28 20:26	04:59 21:27	06:11-07:07/56 22:08
18	08:37 16:15	07:38 17:23	06:26 18:24	07:08-07:36/28 20:28	04:57 21:29	06:12-07:07/55 22:09
19	08:36 16:17	07:35 17:25	06:23 18:26	07:09-07:36/27 20:30	04:55 21:31	06:11-07:06/55 22:09
20	08:35 16:19	07:33 17:28	06:21 18:28	06:46-06:50/4 20:32	04:53 21:33	06:12-07:07/55 22:09
21	08:33 16:21	07:30 17:30	06:18 18:30	06:43-06:53/10 20:34	04:51 21:34	06:12-07:06/54 22:10
22	08:32 16:24	07:28 17:32	06:15 18:32	06:41-06:55/14 20:36	04:50 21:36	06:12-07:06/54 22:10
23	08:30 16:26	07:26 17:34	06:13 18:34	06:38-06:56/18 20:39	04:48 21:38	06:12-07:05/53 22:10
24	08:29 16:28	07:23 17:36	06:10 18:36	06:36-06:56/20 20:41	04:47 21:40	06:13-07:05/52 22:10
25	08:27 16:30	07:21 17:39	06:07 18:38	06:35-06:56/21 20:43	04:45 21:41	06:13-07:05/52 22:10
26	08:25 16:32	07:18 17:41	06:05 18:40	06:35-06:57/22 20:45	04:44 21:43	06:13-07:04/51 22:10
27	08:24 16:34	07:16 17:43	06:02 18:42	06:34-06:56/22 20:47	04:42 21:45	06:14-07:04/50 22:10
28	08:22 16:36	07:13 17:45	05:59 18:44	06:34-06:55/21 20:49	04:41 21:46	06:14-07:04/50 22:10
29	08:20 16:38		06:57 19:47	07:35-07:55/20 20:51	04:39 21:48	06:15-07:04/49 22:09
30	08:18 16:41		06:54 19:49	07:35-07:54/19 20:53	04:38 21:49	06:15-07:04/49 22:09
31	08:16 16:43		06:51 19:51	07:35-07:52/17 366	04:37 21:51	06:16-07:03/47 508
Potential sun hours	235	266	366	426	508	529
Sum of minutes with flicker	0	0	593	229	1623	1114

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C8 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (82)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

	July	August	September	October	November	December
1	04:30 06:26-07:03/37 22:09	05:15 06:22-07:18/56 21:28	06:17 20:14	07:17 07:52-08:16/24 18:53	07:22 16:36	08:24 15:45
2	04:31 06:26-07:04/38 22:08	05:17 06:22-07:18/56 21:26	06:19 20:11	07:19 07:53-08:15/22 18:51	07:25 16:34	08:26 15:44
3	04:31 06:26-07:05/39 22:08	05:19 06:23-07:18/55 21:24	06:21 20:09	07:21 07:54-08:13/19 18:48	07:27 16:31	08:27 15:43
4	04:32 06:26-07:06/40 22:07	05:21 06:23-07:18/55 21:21	06:23 20:06	07:23 07:56-08:10/14 18:45	07:29 16:29	08:29 15:42
5	04:33 06:26-07:06/40 22:06	05:23 06:23-07:16/53 21:19	06:25 20:03	07:25 07:58-08:07/9 18:43	07:31 16:27	08:31 15:41
6	04:34 06:26-07:07/41 22:06	05:25 06:24-07:16/52 21:17	06:27 20:01	07:27 18:40	07:33 16:25	08:32 15:41
7	04:36 06:26-07:08/42 22:05	05:27 06:24-07:16/52 21:15	06:29 19:58	07:29 18:37	07:35 16:23	08:34 15:40
8	04:37 06:25-07:08/43 22:04	05:29 06:25-07:16/51 21:13	06:31 19:55	07:31 18:35	07:38 16:21	08:35 15:40
9	04:38 06:25-07:09/44 22:03	05:31 06:26-07:15/49 21:10	06:33 19:53	07:33 18:32	07:40 16:19	08:36 15:39
10	04:39 06:25-07:10/45 22:02	05:33 06:26-07:13/47 21:08	06:35 07:32-07:41/9 19:50	07:35 18:30	07:42 16:17	08:38 15:39
11	04:40 06:24-07:10/46 22:01	05:35 06:27-07:13/46 21:06	06:37 07:29-07:43/14 19:47	07:38 18:27	07:44 16:15	08:39 15:38
12	04:42 06:24-07:10/46 22:00	05:37 06:28-07:12/44 21:04	06:39 07:28-07:44/16 19:45	07:40 18:24	07:46 16:13	08:40 15:38
13	04:43 06:24-07:12/48 21:59	05:39 06:30-07:11/41 21:01	06:41 07:26-07:45/19 19:42	07:42 18:22	07:48 16:11	08:41 15:38
14	04:45 06:24-07:12/48 21:58	05:41 06:31-07:10/39 20:59	06:43 07:25-07:46/21 19:39	07:44 18:19	07:50 16:09	08:42 15:38
15	04:46 06:23-07:12/49 21:56	05:43 06:34-07:08/34 20:57	06:45 07:24-07:46/22 19:36	07:46 18:17	07:53 16:07	08:43 15:38
16	04:48 06:24-07:14/50 21:55	05:45 06:37-07:06/29 20:54	06:47 07:24-07:46/22 19:34	07:48 18:14	07:55 16:06	08:44 15:38
17	04:49 06:23-07:14/51 21:54	05:47 06:39-07:03/24 20:52	06:49 07:24-07:45/21 19:31	07:50 18:12	07:57 16:04	08:45 15:38
18	04:51 06:23-07:15/52 21:52	05:49 06:41-07:00/19 20:49	06:51 07:23-07:45/22 19:28	07:52 08:03-08:14/11 18:09	07:59 16:02	08:46 15:38
19	04:52 06:23-07:15/52 21:51	05:51 06:45-06:56/11 20:47	06:53 07:24-07:44/20 19:26	07:54 18:07	08:01 16:01	08:47 15:38
20	04:54 06:23-07:16/53 21:49	05:53 20:44	06:55 07:23-07:42/19 19:23	07:56 18:04	08:03 15:59	08:48 15:38
21	04:56 06:22-07:16/54 21:48	05:55 20:42	06:57 07:25-07:40/15 19:20	07:59 18:02	08:05 15:57	08:48 15:39
22	04:57 06:23-07:17/54 21:46	05:57 20:39	06:59 07:27-07:38/11 19:18	08:01 17:59	08:07 15:56	08:49 15:39
23	04:59 06:22-07:16/54 21:44	05:59 20:37	07:01 07:29-07:35/6 19:15	08:03 17:57	08:09 15:54	08:49 15:40
24	05:01 06:22-07:17/55 21:43	06:01 20:34	07:03 07:52-08:19/27 19:12	08:05 17:54	08:11 15:53	08:50 15:40
25	05:02 06:22-07:17/55 21:41	06:03 20:32	07:05 07:51-08:19/28 19:09	07:07 16:52	08:13 15:52	08:50 15:41
26	05:04 06:22-07:17/55 21:39	06:05 20:29	07:07 07:51-08:19/28 19:07	07:09 16:50	08:15 15:50	08:50 15:42
27	05:06 06:22-07:18/56 21:37	06:07 20:27	07:09 07:50-08:18/28 19:04	07:11 16:47	08:17 15:49	08:51 15:43
28	05:08 06:21-07:17/56 21:35	06:09 20:24	07:11 07:50-08:18/28 19:01	07:14 16:45	08:19 15:48	08:51 15:43
29	05:10 06:22-07:18/56 21:34	06:11 20:22	07:13 07:51-08:18/27 18:59	07:16 16:43	08:20 15:47	08:51 15:44
30	05:12 06:22-07:18/56 21:32	06:13 20:19	07:15 07:52-08:17/25 18:56	07:18 16:40	08:22 15:46	08:51 15:45
31	05:14 06:22-07:17/55 21:30	06:15 20:16		07:20 16:38		08:51 15:46
Potential sun hours	529	469	385	324	247	216
Sum of minutes with flicker	1510	813	548	88	0	0

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

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

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

09/04/2024 19:14/4.0.531

SHADOW - Calendar per WTG

WTG: C9 - VESTAS V172-7.2 7200 172.0 !O! hub: 175.0 m (TOT: 261.0 m) (83)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

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

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
442	466	539	464	488	781	784	938	1,215	1,079	833	556	8,584

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

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

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

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