

Project:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: AP2 - NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (30)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	08:48 15:46	08:12 16:43	07:09 17:46	16:51-17:13/22 19:51	05:31 20:53	19:55-20:18/23 21:50
2	08:48 15:48	08:11 16:46	07:06 17:48	16:50-17:12/22 19:53	05:28 20:55	19:55-20:19/24 21:52
3	08:48 15:49	08:09 16:48	07:04 17:50	16:50-17:12/22 19:55	05:26 20:57	19:54-20:19/25 21:53
4	08:47 15:50	08:07 16:50	07:01 17:52	16:50-17:12/22 19:57	05:24 20:59	19:54-20:19/25 21:54
5	08:47 15:52	08:05 16:52	06:58 17:54	16:50-17:11/21 19:59	05:22 21:01	19:54-20:19/25 21:55
6	08:46 15:53	08:02 16:55	06:56 17:56	16:51-17:11/20 20:01	05:19 21:03	19:54-20:19/25 21:57
7	08:46 15:55	08:00 16:57	06:53 17:59	16:52-17:09/17 20:03	05:17 21:05	19:54-20:19/25 21:58
8	08:45 15:56	07:58 16:59	06:51 18:01	16:52-17:08/16 20:05	05:15 21:07	19:54-20:19/25 21:59
9	08:44 15:58	07:56 17:01	06:48 18:03	16:54-17:05/11 20:08	05:13 21:09	19:54-20:18/24 22:00
10	08:44 15:59	07:54 17:04	06:45 18:05	06:23 20:10	19:28-19:40/12 21:11	19:54-20:18/24 22:01
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	19:27-19:43/16 21:13	19:55-20:17/22 22:02
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	19:25-19:44/19 21:15	19:55-20:16/21 22:03
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	19:24-19:45/21 21:17	19:57-20:16/19 22:03
14	08:40 16:06	07:45 17:12	06:35 18:13	06:13 20:18	19:23-19:45/22 21:19	19:57-20:15/18 22:04
15	08:39 16:08	07:43 17:15	06:32 18:16	06:10 20:20	19:23-19:46/23 21:21	19:58-20:14/16 22:05
16	08:38 16:10	07:40 17:17	06:30 18:18	06:07 20:22	19:22-19:45/23 21:23	20:00-20:12/12 22:05
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	19:23-19:45/22 21:25	20:03-20:10/7 22:06
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	19:22-19:44/22 21:27	04:55 22:06
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	19:23-19:44/21 21:29	04:53 22:07
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	19:23-19:42/19 21:31	04:52 22:07
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:32	19:24-19:41/17 21:32	04:50 22:08
22	08:30 16:22	07:26 17:30	06:14 18:30	05:52 20:35	19:26-19:40/14 21:34	04:48 22:08
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:37	19:27-19:37/10 21:36	04:47 22:08
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:38	04:24 22:08
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	20:04-20:10/6 21:41	04:42 22:08
27	08:22 16:33	07:14 17:41	06:00 18:41	05:40 20:45	20:01-20:13/12 21:43	04:41 22:08
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	19:59-20:15/16 21:44	04:39 22:08
29	08:18 16:37		06:55 19:45	05:35 20:49	19:58-20:17/19 21:46	04:38 22:07
30	08:16 16:39		06:52 19:47	05:33 20:51	19:56-20:17/21 21:47	04:37 22:07
31	08:14 16:41		06:49 19:49		04:35 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	0	75	173	343	360	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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15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: AP2 - NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (30)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:28 22:07	05:14 20:05-20:27/22 21:26	06:15 19:26-19:41/15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	04:29 22:06	05:16 20:05-20:28/23 21:24	06:17 19:27-19:39/12 20:09	07:17 18:49	07:23 16:32	08:24 15:42
3	04:30 22:06	05:18 20:04-20:28/24 21:21	06:19 19:29-19:37/8 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	04:31 22:05	05:20 20:04-20:29/25 21:19	06:21 20:04	07:21 17:34-17:41/7 18:44	07:27 16:28	08:27 15:41
5	04:32 22:04	05:22 20:04-20:29/25 21:17	06:23 20:01	07:23 17:31-17:44/13 18:41	07:29 16:25	08:28 15:40
6	04:33 22:04	05:24 20:03-20:29/26 21:15	06:25 19:59	07:25 17:28-17:45/17 18:38	07:31 16:23	08:30 15:39
7	04:34 22:03	05:26 20:03-20:29/26 21:13	06:27 19:56	07:27 17:27-17:46/19 18:36	07:33 16:21	08:31 15:39
8	04:35 22:02	05:27 20:03-20:29/26 21:11	06:29 19:53	07:29 17:26-17:46/20 18:33	07:36 16:19	08:33 15:38
9	04:36 22:01	05:29 20:04-20:29/25 21:08	06:31 19:51	07:32 17:25-17:46/21 18:30	07:38 16:17	08:34 15:38
10	04:38 22:00	05:31 20:04-20:28/24 21:06	06:33 19:48	07:34 17:24-17:46/22 18:28	07:40 16:15	08:36 15:37
11	04:39 21:59	05:33 20:03-20:27/24 21:04	06:35 19:45	07:36 17:24-17:47/23 18:25	07:42 16:13	08:37 15:37
12	04:40 21:58	05:35 20:04-20:26/22 21:02	06:37 19:43	07:38 17:24-17:46/22 18:23	07:44 16:11	08:38 15:37
13	04:42 21:57	05:37 20:05-20:25/20 20:59	06:39 19:40	07:40 17:24-17:45/21 18:20	07:46 16:09	08:39 15:36
14	04:43 21:55	05:39 20:06-20:24/18 20:57	06:41 19:37	07:42 17:24-17:44/20 18:18	07:48 16:08	08:40 15:36
15	04:45 21:54	05:41 20:07-20:22/15 20:55	06:43 19:35	07:44 17:25-17:43/18 18:15	07:51 16:06	08:41 15:36
16	04:46 21:53	05:43 20:09-20:20/11 20:52	06:45 19:32	07:46 17:26-17:41/15 18:12	07:53 16:04	08:42 15:36
17	04:48 21:51	05:45 20:14-20:16/2 20:50	06:47 19:29	07:48 17:28-17:38/10 18:10	07:55 16:02	08:43 15:36
18	04:49 21:50	05:47 20:47	06:49 19:27	07:50 17:31-17:35/4 18:07	07:57 16:01	08:44 15:36
19	04:51 21:49	05:49 19:36-19:40/4 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:37
20	04:52 21:47	05:51 19:32-19:43/11 20:42	06:53 19:21	07:55 18:02	08:01 15:57	08:45 15:37
21	04:54 21:46	05:53 19:30-19:45/15 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	04:56 21:44	05:55 19:28-19:46/18 20:37	06:57 19:16	07:59 17:58	08:05 15:54	08:47 15:38
23	04:57 21:42	05:57 19:27-19:47/20 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	04:59 21:41	05:59 19:26-19:47/21 20:32	07:01 19:10	08:03 17:53	08:09 15:52	08:48 15:39
25	05:01 21:39	06:01 19:26-19:48/22 20:30	07:03 19:08	07:05 16:50	08:11 15:50	08:48 15:40
26	05:03 20:15-20:18/3 21:37	06:03 19:24-19:47/23 20:27	07:05 19:05	07:07 16:48	08:13 15:49	08:48 15:40
27	05:05 20:12-20:22/10 21:35	06:05 19:24-19:47/23 20:25	07:07 19:02	07:10 16:46	08:15 15:48	08:48 15:41
28	05:06 20:10-20:24/14 21:33	06:07 19:24-19:46/22 20:22	07:09 19:00	07:12 16:43	08:16 15:47	08:49 15:42
29	05:08 20:08-20:25/17 21:31	06:09 19:24-19:46/22 20:20	07:11 18:57	07:14 16:41	08:18 15:45	08:49 15:43
30	05:10 20:07-20:26/19 21:30	06:11 19:24-19:45/21 20:17	07:13 18:54	07:16 16:39	08:20 15:44	08:49 15:44
31	05:12 20:07-20:27/20 21:28	06:13 19:25-19:44/19 20:14		07:18 16:36		08:48 15:45
Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	83	599	35	252	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:

Flickering_Nordex_N163_Prikuli_B

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SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: AP6.1 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (31
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running
with worst case wind direction.

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 10:27-10:49/22 15:47	08:12 17:46 16:43	07:09 17:46 17:46	06:47 19:51 20:53	05:31 21:50 22:07	04:34 21:50 22:07	04:28 21:26 21:26	05:14 20:12 18:52	06:15 20:12 18:52	07:15 16:34 15:43	07:20 16:34 15:43	08:22 10:21-10:26/5
2	08:48 10:27-10:48/21 15:48	08:11 17:46 16:46	07:06 17:48 17:48	06:44 19:53 20:55	05:28 21:52 22:06	04:33 21:24 20:09	04:29 21:24 20:09	05:16 20:19 18:49	06:17 20:19 18:49	07:17 16:32 15:42	07:23 16:32 15:42	08:24 10:19-10:29/10
3	08:48 10:29-10:49/20 15:49	08:09 17:50 16:48	07:04 17:50 17:50	06:41 19:55 20:57	05:26 21:53 22:06	04:32 21:21 20:07	04:30 21:21 20:07	05:18 20:21 18:46	06:19 20:21 18:46	07:19 16:30 15:42	07:25 16:30 15:42	08:25 10:18-10:31/13
4	08:47 10:29-10:49/20 15:50	08:07 17:52 16:50	07:01 17:52 17:52	06:39 19:57 20:59	05:24 21:54 22:05	04:31 21:20 20:05	04:31 21:20 20:05	05:20 20:04 18:44	06:21 20:04 18:44	07:21 16:28 15:41	07:27 16:28 15:41	08:27 10:18-10:32/14
5	08:47 10:30-10:49/19 15:52	08:05 17:54 16:52	06:58 17:54 17:54	06:36 19:59 21:01	05:22 21:55 22:04	04:30 21:17 20:01	04:32 21:17 20:01	05:22 20:01 18:41	06:23 20:01 18:41	07:23 16:25 15:40	07:29 16:25 15:40	08:28 10:18-10:34/16
6	08:46 10:32-10:49/17 15:53	08:03 17:56 16:55	06:56 17:56 17:56	06:34 20:01 21:03	05:19 21:57 22:04	04:29 21:15 20:04	04:33 21:15 20:04	05:24 20:15 19:59	06:25 20:15 19:59	07:25 16:23 15:39	07:31 16:23 15:39	08:30 10:17-10:34/17
7	08:46 10:32-10:49/17 15:55	08:00 17:59 16:57	06:53 17:59 17:59	06:31 20:03 21:05	05:17 21:58 22:03	04:28 21:13 20:03	04:34 21:13 20:03	05:26 20:13 19:56	06:27 20:13 19:56	07:27 16:21 15:39	07:33 16:21 15:39	08:31 10:17-10:36/19
8	08:45 10:34-10:48/14 15:56	07:58 18:01 16:59	06:51 18:01 18:01	06:28 20:05 21:07	05:15 21:59 22:02	04:28 21:11 20:02	04:35 21:11 20:02	05:27 20:11 19:53	06:29 20:11 19:53	07:30 16:19 15:38	07:36 16:19 15:38	08:33 10:17-10:37/20
9	08:44 10:35-10:48/13 15:58	07:56 18:03 17:01	06:48 18:03 18:03	06:26 20:08 21:09	05:13 22:00 22:01	04:27 21:08 20:01	04:36 21:08 20:01	05:29 20:11 19:51	06:31 20:11 19:51	07:32 16:17 15:38	07:38 16:17 15:38	08:34 10:17-10:37/20
10	08:44 10:37-10:47/10 15:59	07:54 18:05 17:04	06:45 18:05 18:05	06:23 20:10 21:11	05:11 22:01 22:01	04:26 21:06 20:01	04:38 21:06 20:01	05:31 20:18 19:48	06:33 20:18 19:48	07:34 16:15 15:37	07:40 16:15 15:37	08:36 10:18-10:39/21
11	08:43 10:38-10:44/6 16:01	07:52 18:07 17:06	06:43 18:07 18:07	06:20 20:12 21:13	05:09 22:02 21:59	04:26 21:04 20:04	04:39 21:04 20:04	05:33 20:14 19:45	06:35 20:14 19:45	07:36 16:13 15:37	07:42 16:13 15:37	08:37 10:17-10:39/22
12	08:42 16:03 08:41	07:50 17:08 07:47	06:40 18:09 06:37	06:18 20:14 06:15	05:07 21:15 05:05	04:25 22:03 04:42	04:40 21:58 05:37	05:35 21:02 06:39	06:37 21:02 06:39	07:38 16:11 07:46	07:44 16:11 07:46	08:38 10:17-10:40/23
13	08:41 16:05 08:40	07:47 17:10 07:45	06:37 18:11 06:35	06:15 20:16 06:13	05:05 21:17 05:03	04:25 22:03 04:43	04:42 21:57 05:39	05:37 20:59 06:41	06:39 20:59 06:41	07:40 16:09 07:48	07:46 16:09 07:48	08:39 10:17-10:40/23
14	08:40 16:06 08:39	07:45 17:13 07:43	06:35 18:13 06:32	06:13 20:18 06:10	05:03 21:19 05:01	04:24 22:04 04:45	04:43 21:55 05:41	05:39 20:57 06:43	06:41 20:57 06:43	07:42 16:08 07:51	07:48 16:08 07:51	08:40 10:18-10:41/23
15	08:39 16:08 08:38	07:43 17:15 07:40	06:32 18:16 06:30	06:10 20:20 06:07	05:01 21:21 04:59	04:24 22:05 04:46	04:45 21:54 05:43	05:41 20:55 06:45	06:43 20:55 06:45	07:44 16:15 07:53	07:51 16:15 07:53	08:41 10:19-10:42/23
16	08:38 16:10 08:36	07:40 17:17 07:38	06:30 18:18 06:27	06:07 20:22 06:05	04:59 21:23 04:57	04:24 22:05 04:48	04:46 21:53 05:45	05:43 20:52 06:47	06:45 20:52 06:47	07:46 16:13 07:55	07:53 16:13 07:55	08:42 10:19-10:42/23
17	08:36 16:12 08:35	07:38 17:19 07:36	06:27 18:20 06:24	06:05 20:24 06:02	04:57 21:25 04:55	04:24 22:06 04:49	04:48 21:52 05:49	05:45 20:50 06:49	06:47 20:50 06:49	07:48 16:10 07:57	07:55 16:10 07:57	08:43 10:19-10:43/24
18	08:35 16:14 08:34	07:36 17:21 07:33	06:24 18:22 06:22	06:02 20:26 06:00	04:55 21:27 04:53	04:24 22:07 04:51	04:49 21:50 05:49	05:47 20:47 06:51	06:49 20:47 06:51	07:50 16:01 07:52	07:57 16:01 07:59	08:44 10:19-10:43/24
19	08:34 16:16 08:32	07:33 17:24 07:31	06:22 18:24 06:19	06:00 20:28 05:57	04:53 21:29 04:52	04:24 22:07 04:52	04:51 21:49 05:51	05:49 20:45 06:53	06:51 20:45 06:53	07:52 16:05 07:55	07:59 16:05 08:01	08:45 10:20-10:44/24
20	08:32 16:18 08:31	07:31 17:26 07:29	06:19 18:26 06:16	05:57 20:30 05:55	04:52 21:31 04:50	04:24 22:07 04:54	04:52 21:47 05:53	05:51 20:42 06:55	06:53 20:42 06:55	07:55 16:02 07:57	08:01 16:02 08:03	08:45 10:20-10:44/24
21	08:31 16:20 08:30	07:29 17:28 07:26	06:16 18:28 06:14	05:55 20:32 05:52	04:50 21:32 04:48	04:24 22:08 04:56	04:54 21:46 05:55	05:53 20:40 06:57	06:55 20:40 06:57	07:57 16:00 07:59	08:03 16:00 08:05	08:46 10:20-10:44/24
22	08:30 16:22 08:28	07:26 17:30 07:24	06:14 18:30 06:11	05:52 20:35 05:50	04:48 21:34 04:47	04:24 22:08 04:57	04:56 21:44 05:57	05:55 20:37 06:59	06:57 20:37 06:59	07:59 16:16 08:01	08:05 16:16 08:07	08:47 10:21-10:45/24
23	08:28 16:24 08:27	07:24 17:32 07:21	06:11 18:32 06:08	05:50 20:37 05:47	04:47 21:36 04:45	04:24 22:08 04:59	04:57 21:42 05:59	05:57 20:35 07:01	06:59 20:35 07:01	08:01 17:55 08:03	08:07 17:55 08:09	08:47 10:21-10:45/24
24	08:27 16:26 08:25	07:21 17:35 07:19	06:08 18:34 06:05	05:47 20:39 05:45	04:45 21:38 04:44	04:24 22:08 04:25	04:59 21:41 05:01	05:59 20:32 06:01	07:01 20:32 07:03	08:03 17:53 08:05	08:09 17:53 08:11	08:48 10:23-10:46/23
25	08:25 16:28 08:23	07:19 17:37 07:16	06:05 18:36 06:03	05:45 20:41 05:43	04:44 21:39 04:42	04:25 22:08 04:25	05:01 21:39 05:03	06:01 20:30 06:03	07:03 20:30 07:05	08:05 16:50 07:07	08:11 16:50 08:13	08:48 10:23-10:47/24
26	08:23 16:30 08:22	07:16 17:39 07:14	06:03 18:38 06:00	05:43 20:43 05:40	04:42 21:41 04:41	04:25 22:08 04:26	05:03 21:37 05:05	06:03 20:27 06:05	07:05 20:27 07:07	07:07 16:48 07:10	08:13 16:48 08:15	08:48 10:23-10:47/24
27	08:22 16:33 08:20	07:14 17:41 07:11	06:00 18:41 05:57	05:40 20:45 05:38	04:41 21:43 04:39	04:26 22:08 04:26	05:05 21:35 05:06	06:05 20:25 06:07	07:07 20:25 07:09	07:10 16:46 07:12	08:15 16:46 08:17	08:48 10:24-10:47/23
28	08:20 16:35 08:18	07:11 17:43 07:08	05:57 18:43 06:55	05:38 20:47 05:35	04:39 21:44 04:38	04:26 22:08 04:27	05:06 21:33 05:08	06:07 20:22 06:09	07:09 20:22 07:11	07:12 16:43 07:14	08:17 16:43 08:18	08:49 10:24-10:48/24
29	08:18 16:37 08:16	07:08 17:45 07:05	06:55 18:45 06:52	05:35 20:49 05:33	04:38 21:46 04:37	04:27 22:07 04:28	05:08 21:31 05:10	06:09 20:20 06:11	07:11 20:20 07:13	07:14 16:41 07:16	08:18 16:41 08:20	08:49 10:25-10:48/23
30	08:16 16:39 08:14	07:05 17:47 07:02	06:52 18:47 06:49	05:33 20:51 05:30	04:37 21:47 04:35	04:28 22:07 04:27	05:10 21:30 05:12	06:11 20:17 06:13	07:13 20:17 07:18	07:16 16:39 07:18	08:20 16:39 08:21	08:49 10:26-10:48/22
31	08:14 16:41 Potential sun hours Sum of minutes with flicker	07:02 17:49 236 179	06:49 18:49 366 0	05:30 20:51 426 0	04:35 21:49 507 0	04:27 22:07 528 0	04:27 22:07 529 0	05:12 21:28 469 0	06:13 20:14 384 0	07:18 16:36 324 0	07:18 16:36 248 0	08:49 10:26-10:48/22 217 643

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: DD1 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (23)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January		February		March		April	May	June
1	08:48	13:34-14:13/39	08:13	13:55-14:14/19	07:09	16:10-16:49/39	06:47	05:31	04:35
	15:47		16:44		17:46		19:51	20:53	21:50
2	08:48	13:35-14:14/39	08:11	13:59-14:11/12	07:06	16:08-16:50/42	06:45	05:29	04:34
	15:48		16:46		17:48		19:53	20:55	21:52
3	08:48	13:35-14:14/39	08:09		07:04	16:08-16:51/43	06:42	05:27	04:33
	15:50		16:48		17:50		19:55	20:57	21:53
4	08:47	13:36-14:15/39	08:07		07:01	16:07-16:51/44	06:39	05:24	04:32
	15:51		16:51		17:53		19:57	20:59	21:54
5	08:47	13:36-14:15/39	08:05		06:59	16:06-16:51/45	06:37	05:22	04:31
	15:52		16:53		17:55		19:59	21:02	21:55
6	08:46	13:36-14:16/40	08:03		06:56	16:06-16:52/46	06:34	05:20	04:30
	15:54		16:55		17:57		20:02	21:04	21:57
7	08:46	13:36-14:16/40	08:01		06:54	16:05-16:51/46	06:31	05:18	04:29
	15:55		16:57		17:59		20:04	21:06	21:58
8	08:45	13:36-14:17/41	07:58		06:51	16:06-16:52/46	06:29	05:16	04:28
	15:57		17:00		18:01	17:25-17:32/7	20:06	21:08	21:59
9	08:44	13:37-14:17/40	07:56		06:48	16:05-16:51/46	06:26	05:14	04:28
	15:59		17:02		18:03	17:22-17:35/13	20:08	21:10	22:00
10	08:44	13:37-14:18/41	07:54		06:46	16:05-16:51/46	06:23	05:11	04:27
	16:00		17:04		18:05	17:20-17:37/17	20:10	21:12	22:01
11	08:43	13:37-14:18/41	07:52		06:43	16:04-16:50/46	06:21	05:09	04:27
	16:02		17:06		18:07	17:18-17:39/21	20:12	21:14	22:02
12	08:42	13:38-14:19/41	07:50		06:40	16:05-16:50/45	06:18	05:07	04:26
	16:04		17:09		18:10	17:18-17:42/24	20:14	21:16	22:03
13	08:41	13:39-14:20/41	07:48		06:38	16:05-16:49/44	06:16	05:05	04:26
	16:05		17:11		18:12	17:16-17:43/27	20:16	21:17	22:03
14	08:40	13:38-14:19/41	07:45		06:35	16:05-16:48/43	06:13	05:03	04:25
	16:07		17:13		18:14	17:15-17:44/29	20:18	21:19	22:04
15	08:39	13:39-14:20/41	07:43		06:33	16:06-16:48/42	06:11	05:01	04:25
	16:09		17:15		18:16	17:16-17:44/28	20:20	21:21	22:05
16	08:38	13:40-14:21/41	07:41		06:30	16:07-16:46/39	06:08	05:00	04:25
	16:11		17:17		18:18	17:15-17:44/29	20:22	21:23	22:05
17	08:36	13:40-14:21/41	07:38		06:27	16:07-16:45/38	06:05	04:58	04:25
	16:13		17:20		18:20	17:15-17:43/28	20:24	21:25	22:06
18	08:35	13:41-14:21/40	07:36		06:25	16:09-16:44/35	06:03	04:56	04:24
	16:15		17:22		18:22	17:15-17:43/28	20:26	21:27	22:06
19	08:34	13:41-14:21/40	07:34		06:22	16:10-16:42/32	06:00	04:54	04:24
	16:17		17:24		18:24	17:15-17:41/26	20:28	21:29	22:07
20	08:33	13:41-14:21/40	07:31		06:19	16:11-16:40/29	05:58	04:52	04:24
	16:19		17:26		18:26	17:16-17:40/24	20:31	21:31	22:07
21	08:31	13:42-14:22/40	07:29		06:17	16:14-16:38/24	05:55	04:51	04:25
	16:21		17:29		18:28	17:17-17:38/21	20:33	21:32	22:07
22	08:30	13:43-14:21/38	07:26	16:25-16:36/11	06:14	16:16-16:34/18	05:53	04:49	04:25
	16:23		17:31		18:31	17:18-17:35/17	20:35	21:34	22:08
23	08:28	13:43-14:21/38	07:24	16:21-16:40/19	06:11	16:22-16:28/6	05:50	04:47	04:25
	16:25		17:33		18:33	17:20-17:30/10	20:37	21:36	22:08
24	08:27	13:44-14:21/37	07:21	16:18-16:43/25	06:09		05:48	04:46	04:25
	16:27		17:35		18:35		20:39	21:38	22:08
25	08:25	13:45-14:20/35	07:19	16:16-16:45/29	06:06		05:46	04:44	04:26
	16:29		17:37		18:37		20:41	21:39	22:08
26	08:23	13:46-14:20/34	07:16	16:14-16:46/32	06:03		05:43	04:43	04:26
	16:31		17:40		18:39		20:43	21:41	22:08
27	08:22	13:47-14:19/32	07:14	16:12-16:47/35	06:01		05:41	04:41	04:27
	16:33		17:42		18:41		20:45	21:43	22:08
28	08:20	13:48-14:19/31	07:11	16:11-16:49/38	05:58		05:38	04:40	04:27
	16:35		17:44		18:43		20:47	21:44	22:07
29	08:18	13:49-14:18/29			06:55		05:36	04:39	04:28
	16:37				19:45		20:49	21:46	22:07
30	08:16	13:51-14:17/26			06:53		05:34	04:37	04:28
	16:40				19:47		20:51	21:47	22:07
31	08:14	13:53-14:15/22			06:50			04:36	
	16:42				19:49			21:49	
Potential sun hours	236		266		366		426	507	528
Sum of minutes with flicker	1166		220		1233		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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: DD1 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (23)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:29 22:06	05:15 21:26	06:16 20:12	07:16 16:44-17:29/45 18:52 17:56-18:22/26	07:21 16:35	08:22 13:20-14:00/40 15:44
2	04:30 22:06	05:16 21:24	06:18 20:09	07:18 16:43-17:29/46 18:49 17:57-18:19/22	07:23 16:33	08:24 13:20-14:01/41 15:43
3	04:31 22:05	05:18 21:22	06:20 20:07	07:20 16:43-17:29/46 18:47 17:57-18:16/19	07:25 16:30	08:25 13:21-14:01/40 15:42
4	04:32 22:05	05:20 21:19	06:22 20:04	07:22 16:42-17:28/46 18:44 17:58-18:13/15	07:27 16:28	08:27 13:21-14:02/41 15:41
5	04:33 22:04	05:22 21:17	06:24 20:02	07:24 16:42-17:28/46 18:41 18:00-18:10/10	07:29 16:26	08:28 13:21-14:01/40 15:41
6	04:34 22:03	05:24 21:15	06:26 19:59	07:26 16:41-17:28/47 18:39	07:31 16:24	08:30 13:22-14:02/40 15:40
7	04:35 22:03	05:26 21:13	06:28 19:56	07:28 16:41-17:27/46 18:36	07:34 16:22	08:31 13:23-14:03/40 15:39
8	04:36 22:02	05:28 21:11	06:30 19:54	07:30 16:42-17:27/45 18:34	07:36 16:20	08:33 13:23-14:02/39 15:39
9	04:37 22:01	05:30 21:09	06:32 19:51	07:32 16:42-17:26/44 18:31	07:38 13:29-13:42/13 16:18	08:34 13:24-14:03/39 15:38
10	04:39 22:00	05:32 21:06	06:34 19:48	07:34 16:42-17:26/44 18:28	07:40 13:26-13:45/19 16:16	08:36 13:24-14:03/39 15:38
11	04:40 21:59	05:34 21:04	06:36 19:46	07:36 16:42-17:25/43 18:26	07:42 13:24-13:47/23 16:14	08:37 13:25-14:04/39 15:38
12	04:41 21:58	05:36 21:02	06:38 19:43	07:38 16:43-17:23/40 18:23	07:44 13:22-13:49/27 16:12	08:38 13:26-14:04/38 15:37
13	04:43 21:57	05:38 20:59	06:40 19:40	07:40 16:43-17:22/39 18:21	07:46 13:21-13:50/29 16:10	08:39 13:26-14:04/38 15:37
14	04:44 21:55	05:40 20:57	06:42 19:38	07:42 16:44-17:20/36 18:18	07:49 13:21-13:51/30 16:08	08:40 13:26-14:04/38 15:37
15	04:45 21:54	05:42 20:55	06:44 19:35	07:44 16:45-17:20/35 18:16	07:51 13:19-13:52/33 16:06	08:41 13:27-14:04/37 15:37
16	04:47 21:53	05:44 20:52	06:46 19:32	07:46 16:47-17:18/31 18:13	07:53 13:18-13:53/35 16:05	08:42 13:27-14:05/38 15:37
17	04:48 21:51	05:46 20:50	06:48 19:30	07:48 16:48-17:16/28 18:10	07:55 13:19-13:54/35 16:03	08:43 13:28-14:05/37 15:37
18	04:50 21:50	05:48 20:48	06:50 19:27	07:51 16:50-17:13/23 18:08	07:57 13:18-13:55/37 16:01	08:44 13:29-14:06/37 15:37
19	04:52 21:49	05:50 20:45	06:52 19:24	07:53 16:53-17:10/17 18:05	07:59 13:17-13:55/38 16:00	08:45 13:29-14:06/37 15:37
20	04:53 21:47	05:52 20:43	06:54 18:08-18:16/8 19:21	07:55 16:59-17:04/5 18:03	08:01 13:18-13:56/38 15:58	08:45 13:29-14:06/37 15:38
21	04:55 21:46	05:54 20:40	06:56 17:03-17:19/16 19:19 18:04-18:19/15	07:57 18:01	08:03 13:18-13:57/39 15:57	08:46 13:30-14:07/37 15:38
22	04:57 21:44	05:56 20:38	06:58 16:59-17:22/23 19:16 18:02-18:23/21	07:59 17:58	08:05 13:17-13:57/40 15:55	08:47 13:31-14:08/37 15:39
23	04:58 21:42	05:58 20:35	07:00 16:56-17:24/28 19:13 18:01-18:24/23	08:01 17:56	08:07 13:18-13:58/40 15:54	08:47 13:31-14:08/37 15:39
24	05:00 21:41	06:00 20:33	07:02 16:54-17:25/31 19:11 17:59-18:25/26	08:03 17:53	08:09 13:18-13:58/40 15:52	08:48 13:31-14:08/37 15:40
25	05:02 21:39	06:02 20:30	07:04 16:52-17:26/34 19:08 17:58-18:25/27	07:05 16:51	08:11 13:18-13:59/41 15:51	08:48 13:32-14:09/37 15:40
26	05:03 21:37	06:04 20:28	07:06 16:50-17:27/37 19:05 17:57-18:26/29	07:08 16:48	08:13 13:18-13:59/41 15:50	08:48 13:33-14:10/37 15:41
27	05:05 21:35	06:06 20:25	07:08 16:49-17:28/39 19:03 17:57-18:25/28	07:10 16:46	08:15 13:18-13:59/41 15:48	08:48 13:33-14:11/38 15:42
28	05:07 21:33	06:08 20:22	07:10 16:47-17:28/41 19:00 17:56-18:25/29	07:12 16:44	08:17 13:18-14:00/42 15:47	08:49 13:34-14:11/37 15:43
29	05:09 21:32	06:10 20:20	07:12 16:46-17:29/43 18:57 17:56-18:25/29	07:14 16:41	08:18 13:19-14:00/41 15:46	08:49 13:33-14:11/38 15:44
30	05:11 21:30	06:12 20:17	07:14 16:45-17:29/44 18:55 17:56-18:24/28	07:16 16:39	08:20 13:19-14:00/41 15:45	08:49 13:34-14:12/38 15:45
31	05:13 21:28	06:14 20:15		07:18 16:37		08:48 13:34-14:12/38 15:46
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	0	0	599	844	763	1186

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: DD3 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (24)
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	08:48 12:51-13:34/43 15:47 11:20-11:52/32	08:13 12:52-13:54/62 16:44 15:19-15:33/14	07:09 16:06-16:56/50 17:46	06:47 19:51	05:31 20:53	04:35 21:50
2	08:48 12:51-13:35/44 15:48 11:21-11:53/32	08:11 12:52-13:54/62 16:46 15:22-15:31/9	07:06 16:06-16:55/49 17:48	06:45 19:53	05:29 20:55	04:34 21:51
3	08:48 12:51-13:35/44 15:50 11:22-11:53/31	08:09 12:53-13:54/61 16:48	07:04 16:07-16:55/48 17:50	06:42 19:55	05:27 20:57	04:33 21:53
4	08:47 12:52-13:37/45 15:51 11:23-11:53/30	08:07 12:53-13:54/61 16:51	07:01 16:08-16:54/46 17:53	06:39 19:57	05:24 20:59	04:32 21:54
5	08:47 12:51-13:37/46 15:52 11:24-11:53/29	08:05 12:53-13:53/60 16:53	06:59 16:09-16:52/43 17:55	06:37 19:59	05:22 21:01	04:31 21:55
6	08:46 12:51-13:38/47 15:54 11:24-11:53/29	08:03 12:54-13:53/59 16:55	06:56 16:12-16:52/40 17:57	06:34 20:02	05:20 21:03	04:30 21:57
7	08:46 12:51-13:39/48 15:55 11:25-11:53/28	08:01 12:55-13:53/58 16:57	06:53 16:14-16:27/13 17:59	06:31 20:04	05:18 21:06	04:29 21:58
8	08:45 12:51-13:40/49 15:57 11:26-11:53/27	07:58 12:55-13:52/57 17:00	06:51 16:34-16:46/12 18:01	06:29 20:06	05:16 21:08	04:28 21:59
9	08:44 12:51-13:40/49 15:58 11:27-11:53/26	07:56 12:56-13:52/56 17:02	06:48 18:03	06:26 20:08	05:14 21:10	04:28 22:00
10	08:44 12:51-13:41/50 15:17-15:19/2 16:00 11:28-11:52/24	07:54 12:57-13:52/55 17:04	06:46 18:05	06:23 20:10	05:11 21:12	04:27 22:01
11	08:43 12:51-13:42/51 15:15-15:21/6 16:02 11:29-11:52/23	07:52 12:57-13:50/53 17:06	06:43 16:26-16:30/4 18:07	06:21 20:12	05:09 21:13	04:26 22:02
12	08:42 12:51-13:43/52 15:15-15:23/8 16:04 11:31-11:52/21	07:50 12:59-13:50/51 17:09	06:40 16:22-16:35/13 18:10	06:18 20:14	05:07 21:15	04:26 22:03
13	08:41 12:51-13:44/53 15:14-15:26/12 16:05 11:32-11:51/19	07:47 13:00-13:49/49 17:11	06:38 16:19-16:37/18 18:12	06:16 20:16	05:05 21:17	04:26 22:03
14	08:40 12:50-13:45/55 15:13-15:27/14 16:07 11:33-11:50/17	07:45 13:01-13:47/46 17:13	06:35 16:15-16:41/26 18:14	06:13 20:18	05:03 21:19	04:25 22:04
15	08:39 12:51-13:46/55 15:13-15:29/16 16:09 11:36-11:48/12	07:43 13:03-13:47/44 17:15	06:32 16:13-16:44/31 18:16	06:11 20:20	05:01 21:21	04:25 22:05
16	08:38 12:51-13:47/56 15:12-15:31/19 16:11 11:40-11:46/6	07:41 13:04-13:44/40 17:17	06:30 16:10-16:45/34 18:18	06:08 20:22	05:00 21:23	04:25 22:05
17	08:36 12:51-13:47/56 16:13 15:12-15:32/20	07:38 13:07-13:43/36 17:20	06:27 16:10-16:47/37 18:20	06:05 20:24	04:58 21:25	04:24 22:06
18	08:35 12:50-13:48/58 16:15 15:12-15:32/20	07:36 13:09-13:40/31 17:22	06:25 16:08-16:48/40 18:22	06:03 20:26	04:56 21:27	04:24 22:06
19	08:34 12:51-13:49/58 16:17 15:12-15:34/22	07:34 13:12-13:37/25 17:24	06:22 16:08-16:50/42 18:24	06:00 20:28	04:54 21:29	04:24 22:07
20	08:32 12:50-13:49/59 16:19 15:12-15:34/22	07:31 13:17-13:32/15 17:26	06:19 16:06-16:51/45 18:26	05:58 20:31	04:52 21:31	04:24 22:07
21	08:31 12:51-13:50/59 16:21 15:12-15:34/22	07:29 16:06-16:53/47 17:29	06:17 18:28	05:55 20:33	04:51 21:32	04:25 22:07
22	08:30 12:51-13:51/60 16:23 15:13-15:35/22	07:26 16:05-16:54/49 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:25 22:08
23	08:28 12:51-13:51/60 16:25 15:12-15:36/24	07:24 16:06-16:56/50 17:33	06:11 18:33	05:50 20:37	04:47 21:36	04:25 22:08
24	08:27 12:51-13:51/60 16:27 15:13-15:36/23	07:21 16:05-16:56/51 17:35	06:09 18:35	05:48 20:39	04:46 21:38	04:25 22:08
25	08:25 12:50-13:52/62 16:29 15:13-15:36/23	07:19 16:04-16:56/52 17:37	06:06 18:37	05:46 20:41	04:44 21:39	04:26 22:08
26	08:23 12:50-13:52/62 16:31 15:13-15:36/23	07:16 16:05-16:57/52 17:40	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08
27	08:22 12:51-13:52/61 16:33 15:14-15:36/22	07:14 16:05-16:56/51 17:42	06:01 18:41	05:41 20:45	04:41 21:43	04:27 22:08
28	08:20 12:51-13:53/62 16:35 15:14-15:35/21	07:11 16:06-16:57/51 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07
29	08:18 12:51-13:53/62 16:37 15:15-15:35/20		06:55 19:45	05:36 20:49	04:39 21:46	04:28 22:07
30	08:16 12:51-13:53/62 16:40 15:16-15:35/19		06:53 19:47	05:34 20:51	04:37 21:47	04:28 22:07
31	08:14 12:51-13:53/62 16:42 15:17-15:34/17		06:50 19:49		04:36 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	2473	1697	318	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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
 Vilandes 3-6
 LV-1010 Riga
 0037167242411
 Laura Kurzemniece / laura.kurzemniece@environment.lv
 Calculated:
 15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: DD3 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (24)
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:29 22:06	05:15 21:26	06:16 20:12	07:16 18:52	07:20 12:26-13:21/55 16:35	08:22 12:33-13:25/52 14:57-15:03/6 15:44 11:11-11:34/23
2	04:30 22:06	05:16 21:24	06:18 20:09	07:18 18:49	07:23 12:25-13:22/57 16:32	08:24 12:34-13:25/51 15:00-15:02/2 15:43 11:11-11:35/24
3	04:31 22:05	05:18 21:21	06:20 20:07	07:20 18:47	07:25 12:24-13:22/58 16:30	08:25 12:35-13:25/50 15:42 11:11-11:37/26
4	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44	07:27 12:24-13:23/59 16:28	08:27 12:36-13:25/49 15:41 11:11-11:38/27
5	04:33 22:04	05:22 21:17	06:24 20:02	07:24 17:13-17:21/8 18:41	07:29 12:23-13:23/60 16:26	08:28 12:36-13:24/48 15:41 11:10-11:38/28
6	04:34 22:03	05:24 21:15	06:26 19:59	07:26 17:09-17:24/15 18:39 16:53-17:01/8	07:31 12:24-13:24/60 16:24	08:30 12:37-13:24/47 15:40 11:10-11:39/29
7	04:35 22:03	05:26 21:13	06:28 19:56	07:28 17:07-17:26/19 18:36 16:48-17:05/17	07:33 12:23-13:24/61 16:22	08:31 12:38-13:24/46 15:39 11:11-11:40/29
8	04:36 22:02	05:28 21:11	06:30 19:54	07:30 16:45-17:27/42 18:34	07:36 12:23-13:24/61 16:20	08:33 12:39-13:24/45 15:39 11:10-11:40/30
9	04:37 22:01	05:30 21:09	06:32 19:51	07:32 16:44-17:29/45 18:31	07:38 12:23-13:25/62 16:18 14:52-15:02/10	08:34 12:40-13:24/44 15:38 11:11-11:42/31
10	04:38 22:00	05:32 21:06	06:34 19:48	07:34 16:42-17:29/47 18:28	07:40 12:23-13:25/62 16:16 14:50-15:04/14	08:35 12:40-13:24/44 15:38 11:11-11:42/31
11	04:40 21:59	05:34 21:04	06:36 19:46	07:36 16:41-17:29/48 18:26	07:42 12:23-13:25/62 16:14 14:49-15:06/17	08:37 12:42-13:25/43 15:38 11:11-11:43/32
12	04:41 21:58	05:36 21:02	06:38 19:43	07:38 16:39-17:29/50 18:23	07:44 12:23-13:25/62 16:12 14:48-15:07/19	08:38 12:42-13:24/42 15:37 11:11-11:43/32
13	04:42 21:57	05:38 20:59	06:40 19:40	07:40 16:38-17:29/51 18:21	07:46 12:23-13:25/62 16:10 14:47-15:07/20	08:39 12:43-13:24/41 15:37 11:11-11:44/33
14	04:44 21:55	05:40 20:57	06:42 19:38	07:42 16:37-17:29/52 18:18	07:48 12:24-13:26/62 16:08 14:47-15:08/21	08:40 12:44-13:24/40 15:37 11:12-11:44/32
15	04:45 21:54	05:42 20:55	06:44 19:35	07:44 16:38-17:29/51 18:15	07:51 12:23-13:25/62 16:06 14:47-15:09/22	08:41 12:44-13:24/40 15:37 11:12-11:45/33
16	04:47 21:53	05:44 20:52	06:46 19:32	07:46 16:37-17:29/52 18:13	07:53 12:23-13:25/62 16:05 14:46-15:09/23	08:42 12:45-13:25/40 15:37 11:12-11:45/33
17	04:48 21:51	05:46 20:50	06:48 19:30	07:48 16:36-17:28/52 18:10	07:55 12:24-13:26/62 16:03 14:47-15:10/23	08:43 12:46-13:25/39 15:37 11:13-11:46/33
18	04:50 21:50	05:48 20:47	06:50 19:27	07:51 16:36-17:27/51 18:08	07:57 12:24-13:25/61 16:01 14:47-15:10/23	08:44 12:46-13:25/39 15:37 11:13-11:47/34
19	04:52 21:49	05:50 20:45	06:52 19:24	07:53 16:37-17:25/48 18:05	07:59 12:25-13:25/60 16:00 14:46-15:10/24	08:45 12:47-13:26/39 15:37 11:14-11:47/33
20	04:53 21:47	05:52 20:43	06:54 19:21	07:55 16:37-17:25/48 18:03	08:01 12:26-13:26/60 15:58 14:48-15:10/22	08:45 12:47-13:26/39 15:38 11:14-11:47/33
21	04:55 21:45	05:54 20:40	06:56 19:19	07:57 16:37-17:23/46 18:00	08:03 12:26-13:25/59 15:57 14:48-15:10/22	08:46 12:48-13:27/39 15:38 11:15-11:48/33
22	04:56 21:44	05:56 20:38	06:57 19:16	07:59 13:45-14:04/19 17:58 16:37-17:21/44	08:05 12:26-13:25/59 15:55 14:48-15:10/22	08:47 12:48-13:27/39 15:39 11:16-11:49/33
23	04:58 21:42	05:58 20:35	06:59 19:13	08:01 13:42-14:09/27 17:56 16:38-17:20/42	08:07 12:27-13:25/58 15:54 14:48-15:10/22	08:47 12:49-13:28/39 15:39 11:16-11:49/33
24	05:00 21:41	06:00 20:33	07:01 19:11	08:03 13:38-14:11/33 17:53 16:39-17:17/38	08:09 12:28-13:26/58 15:52 14:50-15:10/20	08:47 12:49-13:28/39 15:40 11:16-11:49/33
25	05:02 21:39	06:02 20:30	07:03 19:08	07:05 12:35-13:13/38 16:51 15:39-16:16/37	08:11 12:29-13:25/56 15:51 14:50-15:10/20	08:48 12:49-13:28/39 15:40 11:16-11:50/34
26	05:03 21:37	06:04 20:28	07:05 19:05	07:08 12:34-13:15/41 16:48 15:41-16:15/34	08:13 12:29-13:25/56 14:51-15:10/19 15:50 11:18-11:24/6	08:48 12:51-13:30/39 15:41 11:18-11:51/33
27	05:05 21:35	06:06 20:25	07:07 19:03	07:10 12:32-13:16/44 16:46 15:43-16:13/30	08:15 12:30-13:25/55 14:52-15:09/17 15:48 11:15-11:27/12	08:48 12:51-13:30/39 15:42 11:18-11:51/33
28	05:07 21:33	06:08 20:22	07:09 19:00	07:12 12:30-13:17/47 16:44 15:45-16:09/24	08:16 12:31-13:25/54 14:53-15:07/14 15:47 11:14-11:30/16	08:48 12:51-13:31/40 15:43 11:19-11:52/33
29	05:09 21:31	06:10 20:20	07:11 18:57	07:14 12:29-13:19/50 16:41 15:50-16:06/16	08:18 12:31-13:25/54 14:54-15:06/12 15:46 11:13-11:31/18	08:49 12:50-13:31/41 15:44 11:18-11:51/33
30	05:11 21:30	06:12 20:17	07:14 18:55	07:16 12:28-13:20/52 16:39 15:52-16:03/11	08:20 12:32-13:25/53 14:56-15:04/8 15:45 11:12-11:33/21	08:49 12:51-13:32/41 15:45 11:19-11:52/33
31	05:13 21:28	06:14 20:15		07:18 12:26-13:20/54 16:37		08:48 12:51-13:33/42 15:46 11:20-11:52/32
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	0	0	0	1431	2259	2292

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: JV1 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (26)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January		February	March	April	May		June
1	08:48	14:17-14:40/23	08:13	07:09	06:47	05:31	18:42-19:09/27	04:35
	15:47		16:44	17:46	19:51	20:53		21:50
2	08:48	14:18-14:41/23	08:11	07:06	06:45	05:29	18:44-19:07/23	04:34
	15:49		16:46	17:48	19:53	20:55		21:51
3	08:48	14:18-14:40/22	08:09	07:04	06:42	05:27	18:47-19:04/17	04:33
	15:50		16:49	17:50	19:55	20:57		21:53
4	08:47	14:19-14:41/22	08:07	07:01	06:39	05:25	18:50-19:01/11	04:32
	15:51		16:51	17:53	19:57	20:59		21:54
5	08:47	14:20-14:41/21	08:05	06:59	06:37	05:22		04:31
	15:53		16:53	17:55	19:59	21:01		21:55
6	08:46	14:20-14:41/21	08:03	06:56	06:34	05:20		04:30
	15:54		16:55	17:57	20:02	21:03		21:57
7	08:46	14:21-14:41/20	08:01	06:54	06:31	05:18		04:29
	15:55		16:57	17:59	20:04	21:06		21:58
8	08:45	14:21-14:42/21	07:58	06:51	06:29	05:16		04:28
	15:57		17:00	18:01	20:06	21:08		21:59
9	08:44	14:22-14:42/20	07:56	06:48	06:26	05:14		04:28
	15:59		17:02	18:03	20:08	21:10		22:00
10	08:44	14:23-14:42/19	07:54	06:46	06:24	05:12		04:27
	16:00		17:04	18:05	20:10	21:12		22:01
11	08:43	14:24-14:42/18	07:52	06:43	06:21	05:09		04:27
	16:02		17:06	18:07	20:12	21:13		22:02
12	08:42	14:25-14:42/17	07:50	06:40	06:18	05:07		04:26
	16:04		17:09	18:10	20:14	21:15		22:03
13	08:41	14:27-14:42/15	07:47	06:38	06:16	05:05		04:26
	16:05		17:11	18:12	20:16	21:17		22:03
14	08:40	14:28-14:40/12	07:45	06:35	06:13	05:03		04:25
	16:07		17:13	18:14	20:18	21:19		22:04
15	08:39	14:30-14:40/10	07:43	06:33	06:11	05:02		04:25
	16:09		17:15	18:16	20:20	21:21		22:05
16	08:38	14:33-14:38/5	07:41	06:30	06:08	05:00		04:25
	16:11		17:18	18:18	20:22	21:23		22:05
17	08:36		07:38	06:27	06:05	04:58		04:25
	16:13		17:20	18:20	20:24	21:25		22:06
18	08:35		07:36	06:25	06:03	04:56		04:25
	16:15		17:22	18:22	20:26	21:27		22:06
19	08:34		07:34	06:22	06:00	04:54		04:24
	16:17		17:24	18:24	20:28	21:29		22:07
20	08:32		07:31	06:19	05:58	04:52		04:25
	16:19		17:26	18:26	20:31	21:31		22:07
21	08:31		07:29	06:17	05:55	04:51		04:25
	16:21		17:29	18:28	20:33	21:32		22:07
22	08:30		07:26	06:14	05:53	04:49		04:25
	16:23		17:31	18:31	20:35	21:34		22:08
23	08:28		07:24	06:11	05:50	04:47		04:25
	16:25		17:33	18:33	20:37	21:36		22:08
24	08:27		07:21	06:09	05:48	04:46		04:25
	16:27		17:35	18:35	20:39	21:38		22:08
25	08:25		07:19	06:06	05:46	04:44		04:26
	16:29		17:37	18:37	20:41	21:39		22:08
26	08:23		07:16	06:03	05:43	04:43		04:26
	16:31		17:40	18:39	20:43	21:41		22:08
27	08:22		07:14	06:01	05:41	04:41		04:27
	16:33		17:42	18:41	20:45	21:43		22:08
28	08:20		07:11	05:58	05:38	04:40		04:27
	16:35		17:44	18:43	20:47	21:44		22:07
29	08:18			06:55	05:36	04:39		04:28
	16:38			19:45	20:49	21:46		22:07
30	08:16			06:53	05:34	04:37		04:29
	16:40			19:47	20:51	21:47		22:07
31	08:14			06:50		04:36		
	16:42			19:49		21:49		
Potential sun hours	236		266	366	426	507	528	0
Sum of minutes with flicker	289		0	0	1032	78	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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: JV1 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (26)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:29 22:06	05:15 21:26	06:16 20:12	18:37-19:18/41 18:52	07:16 16:35	08:22 15:44
2	04:30 22:06	05:17 21:24	06:18 20:09	18:38-19:17/39 18:49	07:23 16:33	08:23 15:43
3	04:31 22:05	05:18 21:22	06:20 20:07	18:39-19:16/37 18:47	07:20 16:30	08:25 15:42
4	04:32 22:05	05:20 21:19	06:22 20:04	18:40-19:14/34 18:44	07:22 16:28	08:27 15:41
5	04:33 22:04	05:22 21:17	06:24 20:02	18:41-19:12/31 18:41	07:24 16:26	08:28 15:41
6	04:34 22:03	05:24 21:15	06:26 19:59	18:42-19:11/29 18:39	07:26 16:24	08:30 15:40
7	04:35 22:03	05:26 21:13	06:28 19:56	18:44-19:08/24 18:36	07:28 16:22	08:31 15:39
8	04:36 22:02	05:28 21:11	06:30 19:54	18:46-19:05/19 18:34	07:30 16:20	08:33 15:39
9	04:37 22:01	05:30 21:09	06:32 19:51	18:51-19:01/10 18:31	07:32 16:18	08:34 15:38
10	04:39 22:00	05:32 21:06	06:34 19:48	18:54-19:14/20 18:28	07:40 16:16	08:35 15:38
11	04:40 21:59	05:34 21:04	06:36 19:46	18:52-19:16/24 18:26	07:42 16:14	08:37 15:38
12	04:41 21:58	05:36 21:02	06:38 19:43	18:50-19:17/27 18:23	07:44 16:12	08:38 15:37
13	04:43 21:57	05:38 20:59	06:40 19:40	18:49-19:19/30 18:21	07:46 16:10	08:39 15:37
14	04:44 21:55	05:40 20:57	06:42 19:38	18:47-19:20/33 18:18	07:48 16:08	08:40 15:37
15	04:45 21:54	05:42 20:55	06:44 19:35	18:45-19:20/35 18:16	07:51 16:07	08:41 15:37
16	04:47 21:53	05:44 20:52	06:46 19:32	18:44-19:21/37 18:13	07:53 16:05	08:42 15:37
17	04:48 21:51	05:46 20:50	06:48 19:30	18:43-19:22/39 18:10	07:55 16:03	08:43 15:37
18	04:50 21:50	05:48 20:47	06:50 19:27	18:42-19:22/40 18:08	07:57 16:01	08:44 15:37
19	04:52 21:49	05:50 20:45	06:52 19:24	18:41-19:23/42 18:05	07:59 16:00	08:45 15:37
20	04:53 21:47	05:52 20:43	06:54 19:21	18:41-19:23/42 18:03	08:01 15:58	08:45 15:38
21	04:55 21:45	05:54 20:40	06:56 19:19	18:40-19:23/43 18:01	08:03 15:57	08:46 15:38
22	04:57 21:44	05:56 20:38	06:58 19:16	18:40-19:23/43 17:58	08:05 15:55	08:47 15:39
23	04:58 21:42	05:58 20:35	07:00 19:13	18:38-19:23/45 17:56	08:07 15:54	08:47 15:39
24	05:00 21:41	06:00 20:33	07:02 19:11	18:38-19:23/45 17:53	08:09 15:52	08:47 15:40
25	05:02 21:39	06:02 20:30	07:04 19:08	18:38-19:22/44 17:51	08:11 15:51	08:48 15:40
26	05:04 21:37	06:04 20:28	07:06 19:05	18:37-19:22/45 17:49	08:13 15:50	08:48 15:41
27	05:05 21:35	06:06 20:25	07:08 19:03	18:37-19:22/45 17:46	08:15 15:48	08:48 15:42
28	05:07 21:33	06:08 20:22	07:10 19:00	18:37-19:22/45 17:44	08:16 15:47	08:48 15:43
29	05:09 21:31	06:10 20:20	07:12 18:57	18:37-19:21/44 17:42	08:18 15:46	08:49 15:44
30	05:11 21:30	06:12 20:17	07:14 18:55	18:38-19:20/42 17:40	08:20 15:45	08:49 15:45
31	05:13 21:28	06:14 20:15	07:16 18:53	18:37-19:19/42 17:38	08:22 15:43	08:48 15:46
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	0	866	264	0	59	695

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

Flickering_Nordex_N163_Prikuli_B

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Laura Kurzemniece / laura.kurzemniece@environment.lv
Calculated:
15.07.2025 17:21/4.1.254

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

Project:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: 01.b - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (25)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January		February		March	April	May	June	
1	08:48	14:37-14:58/21	08:13		07:09	06:47	05:31	04:35	20:20-20:44/24
	15:47		16:44		17:46	19:51	20:53	21:50	
2	08:48	14:38-14:59/21	08:11		07:06	06:45	05:29	04:34	20:20-20:44/24
	15:49		16:46		17:48	19:53	20:55	21:52	
3	08:48	14:38-15:00/22	08:09		07:04	06:42	05:27	04:33	20:20-20:44/24
	15:50		16:49		17:50	19:55	20:57	21:53	
4	08:47	14:39-15:01/22	08:07		07:01	06:39	05:25	04:32	20:21-20:43/22
	15:51		16:51		17:53	19:57	20:59	21:54	
5	08:47	14:39-15:01/22	08:05		06:59	06:37	05:22	04:31	20:22-20:44/22
	15:53		16:53		17:55	20:00	21:02	21:55	
6	08:46	14:39-15:02/23	08:03	16:14-16:22/8	06:56	06:34	05:20	04:30	20:22-20:43/21
	15:54		16:55		17:57	20:02	21:04	21:57	
7	08:46	14:39-15:02/23	08:01	16:12-16:24/12	06:54	06:31	05:18	04:29	20:22-20:43/21
	15:55		16:57		17:59	20:04	21:06	21:58	
8	08:45	14:39-15:02/23	07:58	16:10-16:26/16	06:51	06:29	05:16	04:28	20:23-20:43/20
	15:57		17:00		18:01	20:06	21:08	21:59	
9	08:44	14:40-15:03/23	07:56	16:09-16:28/19	06:48	06:26	05:14	04:28	20:24-20:43/19
	15:59		17:02		18:03	20:08	21:10	22:00	
10	08:44	14:40-15:03/23	07:54	16:08-16:29/21	06:46	06:24	05:12	04:27	20:25-20:43/18
	16:00		17:04		18:05	20:10	21:12	22:01	
11	08:43	14:41-15:04/23	07:52	16:07-16:29/22	06:43	06:21	05:09	04:27	20:25-20:42/17
	16:02		17:06		18:08	20:12	21:14	22:02	
12	08:42	14:41-15:04/23	07:50	16:07-16:30/23	06:40	06:18	05:07	04:26	20:26-20:42/16
	16:04		17:09		18:10	20:14	21:16	22:03	
13	08:41	14:42-15:05/23	07:48	16:07-16:31/24	06:38	06:16	05:05	04:26	20:26-20:42/16
	16:05		17:11		18:12	20:16	21:17	22:03	
14	08:40	14:42-15:05/23	07:45	16:06-16:31/25	06:35	06:13	05:03	04:25	20:27-20:42/15
	16:07		17:13		18:14	20:18	21:19	22:04	
15	08:39	14:43-15:05/22	07:43	16:07-16:31/24	06:33	06:11	05:02	04:25	20:27-20:42/15
	16:09		17:15		18:16	20:20	21:21	22:05	
16	08:38	14:44-15:06/22	07:41	16:07-16:30/23	06:30	06:08	05:00	04:25	20:27-20:42/15
	16:11		17:18		18:18	20:22	21:23	22:05	
17	08:36	14:44-15:05/21	07:38	16:07-16:30/23	06:27	06:05	04:58	04:25	20:28-20:42/14
	16:13		17:20		18:20	20:24	21:25	22:06	
18	08:35	14:45-15:06/21	07:36	16:07-16:29/22	06:25	06:03	04:56	04:24	20:28-20:42/14
	16:15		17:22		18:22	20:26	21:27	22:06	
19	08:34	14:46-15:05/19	07:34	16:09-16:29/20	06:22	06:00	04:54	04:24	20:29-20:42/13
	16:17		17:24		18:24	20:29	21:29	22:07	
20	08:33	14:47-15:04/17	07:31	16:09-16:27/18	06:19	05:58	04:52	04:24	20:29-20:42/13
	16:19		17:26		18:26	20:31	21:31	22:07	
21	08:31	14:49-15:04/15	07:29	16:11-16:26/15	06:17	05:55	04:51	04:25	20:30-20:43/13
	16:21		17:29		18:28	20:33	21:32	22:07	
22	08:30	14:50-15:03/13	07:26	16:13-16:23/10	06:14	05:53	04:49	04:25	20:30-20:43/13
	16:23		17:31		18:31	20:35	21:34	22:08	
23	08:28	14:52-15:02/10	07:24		06:11	05:50	04:47	04:25	20:30-20:43/13
	16:25		17:33		18:33	20:37	21:36	22:08	
24	08:27	14:55-14:58/3	07:21		06:09	05:48	04:46	04:25	20:31-20:44/13
	16:27		17:35		18:35	20:39	21:38	22:08	
25	08:25		07:19		06:06	05:46	04:44	04:26	20:30-20:44/14
	16:29		17:37		18:37	20:41	21:39	22:08	
26	08:23		07:17		06:03	05:43	04:43	04:26	20:30-20:44/14
	16:31		17:40		18:39	20:43	21:41	22:08	
27	08:22		07:14		06:01	05:41	04:41	04:27	20:30-20:45/15
	16:33		17:42		18:41	20:45	21:43	22:08	
28	08:20		07:11		05:58	05:38	04:40	04:27	20:29-20:44/15
	16:35		17:44		18:43	20:47	21:44	22:07	
29	08:18				06:55	05:36	04:39	04:28	20:30-20:45/15
	16:38				19:45	20:49	21:46	22:07	
30	08:16				06:53	05:34	04:37	04:29	20:30-20:46/16
	16:40				19:47	20:51	21:47	22:07	
31	08:15				06:50		04:36		
	16:42				19:49		21:49		
Potential sun hours	236		266		366	426	507	528	504
Sum of minutes with flicker	478		325		0	0	545		

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
 Vilandes 3-6
 LV-1010 Riga
 0037167242411
 Laura Kurzemniece / laura.kurzemniece@environment.lv
 Calculated:
 15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: 01.b - NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (25)
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:29 20:29-20:46/17 22:06	05:15 20:32-20:49/17 21:26	06:16 20:12 20:12	07:16 18:52 20:12	07:21 15:38-15:59/21 16:35	08:22 14:23-14:46/23 15:44
2	04:30 20:29-20:47/18 22:06	05:17 20:34-20:48/14 21:24	06:18 20:10 20:10	07:18 18:49 20:10	07:23 15:39-15:57/18 16:33	08:24 14:23-14:46/23 15:43
3	04:31 20:29-20:48/19 22:05	05:18 20:36-20:46/10 21:22	06:20 20:07 20:07	07:20 18:47 20:07	07:25 15:39-15:56/17 16:30	08:25 14:24-14:47/23 15:42
4	04:32 20:29-20:48/19 22:05	05:20 21:19 21:19	06:22 20:04 20:04	07:22 18:44 20:04	07:27 15:42-15:54/12 16:28	08:27 14:24-14:48/24 15:41
5	04:33 20:29-20:49/20 22:04	05:22 21:17 21:17	06:24 20:02 20:02	07:24 18:41 20:02	07:29 15:44-15:51/7 16:26	08:28 14:24-14:47/23 15:41
6	04:34 20:29-20:50/21 22:03	05:24 21:15 21:15	06:26 19:59 19:59	07:26 18:39 18:39	07:31 16:24 16:24	08:30 14:25-14:48/23 15:40
7	04:35 20:28-20:50/22 22:03	05:26 21:13 21:13	06:28 19:56 19:56	07:28 18:36 18:36	07:34 16:22 16:22	08:31 14:26-14:48/22 15:39
8	04:36 20:28-20:51/23 22:02	05:28 21:11 21:11	06:30 19:54 19:54	07:30 18:34 18:34	07:36 16:20 16:20	08:33 14:26-14:48/22 15:39
9	04:37 20:28-20:51/23 22:01	05:30 21:09 21:09	06:32 19:51 19:51	07:32 18:31 18:31	07:38 16:18 16:18	08:34 14:27-14:49/22 15:38
10	04:39 20:28-20:51/23 22:00	05:32 21:06 21:06	06:34 19:48 19:48	07:34 18:28 18:28	07:40 16:16 16:16	08:36 14:27-14:49/22 15:38
11	04:40 20:27-20:52/25 21:59	05:34 21:04 21:04	06:36 19:46 19:46	07:36 18:26 18:26	07:42 16:14 16:14	08:37 14:28-14:50/22 15:38
12	04:41 20:28-20:53/25 21:58	05:36 21:02 21:02	06:38 19:43 19:43	07:38 18:23 18:23	07:44 16:12 16:12	08:38 14:29-14:50/21 15:37
13	04:43 20:27-20:53/26 21:57	05:38 20:59 20:59	06:40 19:40 19:40	07:40 18:21 18:21	07:46 16:10 16:10	08:39 14:29-14:50/21 15:37
14	04:44 20:27-20:53/26 21:55	05:40 20:57 20:57	06:42 19:38 19:38	07:42 18:18 18:18	07:49 16:08 16:08	08:40 14:29-14:50/21 15:37
15	04:45 20:27-20:53/26 21:54	05:42 20:55 20:55	06:44 19:35 19:35	07:44 18:16 18:16	07:51 16:07 16:07	08:41 14:30-14:50/20 15:37
16	04:47 20:27-20:54/27 21:53	05:44 20:52 20:52	06:46 19:32 19:32	07:46 18:13 18:13	07:53 16:05 16:05	08:42 14:31-14:50/19 15:37
17	04:48 20:27-20:54/27 21:52	05:46 20:50 20:50	06:48 19:30 19:30	07:48 18:11 18:11	07:55 16:03 16:03	08:43 14:31-14:51/20 15:37
18	04:50 20:27-20:55/28 21:50	05:48 20:48 20:48	06:50 19:27 19:27	07:51 18:08 18:08	07:57 14:29-14:32/3 16:01	08:44 14:32-14:51/19 15:37
19	04:52 20:27-20:54/27 21:49	05:50 20:45 20:45	06:52 19:24 19:24	07:53 18:06 18:06	07:59 14:26-14:36/10 16:00	08:45 14:33-14:52/19 15:37
20	04:53 20:27-20:55/28 21:47	05:52 20:43 20:43	06:54 19:22 19:22	07:55 18:03 18:03	08:01 14:25-14:38/13 15:58	08:45 14:33-14:52/19 15:38
21	04:55 20:27-20:55/28 21:46	05:54 20:40 20:40	06:56 19:19 19:19	07:57 18:01 18:01	08:03 14:24-14:39/15 15:57	08:46 14:34-14:53/19 15:38
22	04:57 20:27-20:55/28 21:44	05:56 20:38 20:38	06:58 19:16 19:16	07:59 18:00 18:00	08:05 14:23-14:40/17 15:55	08:47 14:34-14:54/20 15:39
23	04:58 20:27-20:54/27 21:42	05:58 20:35 20:35	07:00 19:13 19:13	08:01 18:00 18:00	08:07 14:23-14:42/19 15:54	08:47 14:35-14:54/19 15:39
24	05:00 20:28-20:55/27 21:41	06:00 20:33 20:33	07:02 19:11 19:11	08:03 18:00 18:00	08:09 14:23-14:43/20 15:52	08:48 14:35-14:54/19 15:40
25	05:02 20:27-20:54/27 21:39	06:02 20:30 20:30	07:04 19:08 19:08	08:05 18:00 18:00	08:11 14:22-14:43/21 15:51	08:48 14:35-14:54/19 15:40
26	05:04 20:28-20:54/26 21:37	06:04 20:28 20:28	07:06 19:05 19:05	08:07 18:00 18:00	08:13 14:22-14:44/22 15:50	08:48 14:36-14:56/20 15:41
27	05:05 20:29-20:54/25 21:35	06:06 20:25 20:25	07:08 19:03 19:03	08:09 18:00 18:00	08:15 14:22-14:44/22 15:48	08:48 14:36-14:56/20 15:42
28	05:07 20:29-20:53/24 21:33	06:08 20:22 20:22	07:10 19:00 19:00	08:11 18:00 18:00	08:17 14:22-14:45/23 15:47	08:49 14:37-14:57/20 15:43
29	05:09 20:30-20:53/23 21:32	06:10 20:20 20:20	07:12 18:57 18:57	08:13 18:00 18:00	08:18 14:22-14:45/23 15:46	08:49 14:36-14:56/20 15:44
30	05:11 20:31-20:52/21 21:30	06:12 20:17 20:17	07:14 18:55 18:55	08:15 18:00 18:00	08:20 14:22-14:46/24 15:45	08:49 14:37-14:57/20 15:45
31	05:13 20:31-20:50/19 21:28	06:14 20:15 20:15	07:16 18:55 18:55	08:17 18:00 18:00	08:21 15:37-15:59/22 15:44	08:48 14:37-14:58/21 15:46
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	745	41	0	251	307	645

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
 Vilandes 3-6
 LV-1010 Riga
 0037167242411
 Laura Kurzemniece / laura.kurzemniece@environment.lv
 Calculated:
 15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: O2 - NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (19)
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	17:29-18:15/46 20:53	05:31 21:50
2	08:48 15:48	08:11 16:46	07:06 17:48	06:45 19:53	17:31-18:14/43 20:55	05:29 21:52
3	08:48 15:50	08:09 16:48	07:04 17:50	06:42 19:55	17:31-18:13/42 20:57	05:27 21:53
4	08:47 15:51	08:07 16:51	07:01 17:53	06:39 19:57	17:32-18:11/39 21:00	05:24 21:54
5	08:47 15:52	08:05 16:53	06:59 17:55	06:37 20:00	17:34-18:10/36 21:02	05:22 21:55
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:02	17:35-18:08/33 21:04	05:20 21:57
7	08:46 15:55	08:01 16:57	06:54 17:59	06:31 20:04	17:37-18:06/29 21:06	05:18 21:58
8	08:45 15:57	07:59 17:00	06:51 18:01	06:29 20:06	17:39-18:03/24 21:08	05:16 21:59
9	08:45 15:58	07:56 17:02	06:48 18:03	06:26 20:08	17:42-17:59/17 21:10	05:14 22:00
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	17:48-17:54/6 21:12	05:11 22:01
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	16:44-17:11/27 21:14	05:09 22:02
12	08:42 16:04	07:50 17:09	06:40 18:10	06:18 20:14	16:42-17:14/32 21:16	05:07 22:03
13	08:41 16:05	07:48 17:11	06:38 18:12	06:16 20:16	16:40-17:15/35 21:18	05:05 22:06
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	16:38-17:16/38 21:19	05:03 22:04
15	08:39 16:09	07:43 17:15	06:33 18:16	06:11 20:20	16:37-17:18/41 21:21	05:01 22:05
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	16:35-17:18/43 21:23	05:00 22:05
17	08:37 16:13	07:38 17:20	06:27 18:20	06:05 20:24	16:34-17:19/45 21:25	04:58 22:06
18	08:35 16:15	07:36 17:22	06:25 18:22	06:03 20:26	16:33-17:20/47 21:27	04:56 22:06
19	08:34 16:17	07:34 17:24	06:22 18:24	06:00 20:29	16:32-17:20/48 21:29	04:54 22:07
20	08:33 16:19	07:31 17:26	06:19 18:26	05:58 20:31	16:31-17:20/49 21:31	04:52 22:07
21	08:31 16:21	07:29 17:29	06:17 18:28	05:55 20:33	16:31-17:21/50 21:32	04:51 22:08
22	08:30 16:23	07:26 17:31	06:14 18:31	05:53 20:35	16:30-17:20/50 21:34	04:49 22:08
23	08:28 16:25	07:24 17:33	06:11 18:33	05:50 20:37	16:29-17:20/51 21:36	04:47 22:08
24	08:27 16:27	07:21 17:35	06:09 18:35	05:48 20:39	16:29-17:21/52 21:38	04:46 22:08
25	08:25 16:29	07:19 17:37	06:06 18:37	05:46 20:41	16:29-17:20/51 21:39	04:44 22:08
26	08:23 16:31	07:17 17:40	06:03 18:39	05:43 20:43	19:40-20:01/21 21:41	04:43 22:08
27	08:22 16:33	07:14 17:42	06:01 18:41	05:41 20:45	19:38-20:02/24 21:43	04:41 22:08
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	19:36-20:03/27 21:44	04:40 22:08
29	08:18 16:37		06:55 19:45	05:36 20:49	17:28-18:18/50 21:46	04:39 22:07
30	08:16 16:40		06:53 19:47	05:34 20:51	17:28-18:17/49 21:47	04:37 22:07
31	08:15 16:42		06:50 19:49		17:29-18:16/47 21:49	04:36 21:49
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	0	0	989	473	812	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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
 Vilandes 3-6
 LV-1010 Riga
 0037167242411
 Laura Kurzemniece / laura.kurzemniece@environment.lv
 Calculated:
 15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: O2 - NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (19)
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:29 22:07	05:15 19:41-20:17/36 21:26	06:16 20:12	07:16 17:21-17:54/33 18:52	07:21 16:35	08:22 15:44
2	04:30 22:06	05:16 19:41-20:17/36 21:24	06:18 17:46-17:52/6 20:10	07:18 17:22-17:51/29 18:49	07:23 16:33	08:24 15:43
3	04:31 22:06	05:18 19:41-20:18/37 21:22	06:20 17:40-17:57/17 20:07	07:20 17:24-17:48/24 18:47	07:25 16:30	08:25 15:42
4	04:32 22:05	05:20 19:40-20:17/37 21:20	06:22 17:36-18:00/24 20:04	07:22 17:28-17:44/16 18:44	07:27 16:28	08:27 15:41
5	04:33 22:04	05:22 19:40-20:17/37 21:17	06:24 17:33-18:02/29 20:02	07:24 18:41	07:29 16:26	08:28 15:41
6	04:34 22:04	05:24 19:40-20:17/37 21:15	06:26 17:31-18:04/33 19:59	07:26 18:39	07:31 16:24	08:30 15:40
7	04:35 22:03	05:26 19:41-20:17/36 21:13	06:28 17:29-18:05/36 19:56	07:28 18:36	07:34 16:22	08:31 15:39
8	04:36 22:02	05:28 19:41-20:17/36 21:11	06:30 17:27-18:06/39 19:54	07:30 18:34	07:36 16:20	08:33 15:39
9	04:37 22:01	05:30 19:40-20:15/35 21:09	06:32 17:26-18:07/41 19:51	07:32 18:31	07:38 16:18	08:34 15:38
10	04:38 22:00	05:32 19:41-20:15/34 21:06	06:34 17:24-18:08/44 19:48	07:34 18:28	07:40 16:16	08:36 15:38
11	04:40 21:59	05:34 19:41-20:15/34 21:04	06:36 17:22-18:07/45 19:46	07:36 18:26	07:42 16:14	08:37 15:38
12	04:41 21:58	05:36 19:42-20:14/32 21:02	06:38 17:21-18:08/47 19:43	07:38 18:23	07:44 16:12	08:38 15:37
13	04:42 21:57	05:38 19:43-20:13/30 20:59	06:40 17:20-18:08/48 19:40	07:40 18:21	07:46 16:10	08:39 15:37
14	04:44 21:56	05:40 19:44-20:12/28 20:57	06:42 17:19-18:08/49 19:38	07:42 18:18	07:49 16:08	08:40 15:37
15	04:45 21:54	05:42 19:44-20:10/26 20:55	06:44 17:18-18:08/50 19:35	07:44 18:16	07:51 16:06	08:41 15:37
16	04:47 19:56-20:02/6 21:53	05:44 19:45-20:09/24 20:52	06:46 17:17-18:08/51 19:32	07:46 18:13	07:53 16:05	08:42 15:37
17	04:48 19:53-20:05/12 21:52	05:46 19:47-20:07/20 20:50	06:48 17:17-18:08/51 19:30	07:48 18:10	07:55 16:03	08:43 15:37
18	04:50 19:52-20:07/15 21:50	05:48 19:49-20:04/15 20:48	06:50 17:16-18:08/52 19:27	07:51 18:08	07:57 16:01	08:44 15:37
19	04:52 19:50-20:08/18 21:49	05:50 19:53-20:00/7 20:45	06:52 17:16-18:07/51 19:24	07:53 18:05	07:59 16:00	08:45 15:37
20	04:53 19:49-20:10/21 21:47	05:52 20:43	06:54 17:16-18:07/51 19:22	07:55 18:03	08:01 15:58	08:45 15:38
21	04:55 19:48-20:11/23 21:46	05:54 20:40	06:56 17:15-18:06/51 19:19	07:57 18:01	08:03 15:57	08:46 15:38
22	04:56 19:47-20:12/25 21:44	05:56 20:38	06:58 17:15-18:06/51 19:16	07:59 17:58	08:05 15:55	08:47 15:39
23	04:58 19:46-20:12/26 21:42	05:58 20:35	07:00 17:15-18:05/50 19:13	08:01 17:56	08:07 15:54	08:47 15:39
24	05:00 19:45-20:14/29 21:41	06:00 20:33	07:02 17:16-18:04/48 19:11	08:03 17:53	08:09 15:52	08:48 15:40
25	05:02 19:44-20:14/30 21:39	06:02 20:30	07:04 17:16-18:03/47 19:08	07:05 16:51	08:11 15:51	08:48 15:40
26	05:03 19:44-20:15/31 21:37	06:04 20:28	07:06 17:16-18:02/46 19:05	07:08 16:48	08:13 15:50	08:48 15:41
27	05:05 19:44-20:16/32 21:35	06:06 20:25	07:08 17:17-18:01/44 19:03	07:10 16:46	08:15 15:48	08:48 15:42
28	05:07 19:42-20:15/33 21:33	06:08 20:22	07:10 17:17-17:59/42 19:00	07:12 16:44	08:17 15:47	08:49 15:43
29	05:09 19:42-20:16/34 21:32	06:10 20:20	07:12 17:18-17:57/39 18:57	07:14 16:42	08:18 15:46	08:49 15:44
30	05:11 19:42-20:17/35 21:30	06:12 20:17	07:14 17:19-17:56/37 18:55	07:16 16:39	08:20 15:45	08:49 15:45
31	05:13 19:41-20:16/35 21:28	06:14 20:15		07:18 16:37		08:49 15:46
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	405	577	1219	102	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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: O3 - NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (20)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	08:48 15:47	08:13 15:10-15:37/27 16:44	07:09 15:09-15:40/31 17:46	06:47 18:34-19:18/44 19:51	05:31 20:53	04:35 21:50
2	08:48 15:48	08:11 15:09-15:39/30 16:46	07:06 15:11-15:37/26 17:48	06:45 18:33-19:17/44 19:53	05:29 20:55	04:34 21:52
3	08:48 15:50	08:09 15:08-15:41/33 16:48	07:04 15:14-15:35/21 17:50	06:42 18:31-19:17/46 19:55	05:27 20:57	04:33 21:53
4	08:47 15:51	08:07 15:07-15:43/36 16:51	07:01 15:19-15:30/11 17:53	06:39 18:29-19:16/47 19:57	05:24 20:59	04:32 21:54
5	08:47 15:52	08:05 15:05-15:43/38 16:53	06:59 17:55	06:37 18:29-19:16/47 20:00	05:22 21:02	04:31 21:55
6	08:46 15:54	08:03 15:05-15:44/39 16:55	06:56 17:57	06:34 18:28-19:15/47 20:02	05:20 21:04	04:30 21:57
7	08:46 15:55	08:01 15:04-15:46/42 16:57	06:54 17:59	06:31 18:26-19:13/47 20:04	05:18 21:06	04:29 21:58
8	08:45 15:57	07:58 15:04-15:47/43 17:00	06:51 18:01	06:29 18:26-19:12/46 20:06	05:16 21:08	04:28 21:59
9	08:44 15:58	07:56 15:03-15:47/44 17:02	06:48 18:03	06:26 18:25-19:09/44 20:08	05:14 21:10	04:28 22:00
10	08:44 16:00	07:54 15:02-15:48/46 17:04	06:46 18:05	06:23 18:25-19:08/43 20:10	05:11 21:12	04:27 22:01
11	08:43 16:02	07:52 15:01-15:48/47 17:06	06:43 18:07	06:21 18:25-19:08/43 20:12	05:09 21:14	04:26 22:02
12	08:42 16:04	07:50 15:01-15:49/48 17:09	06:40 18:10	06:18 18:25-19:08/43 20:14	05:07 21:16	04:26 22:03
13	08:41 16:05	07:48 15:01-15:49/48 17:11	06:38 18:12	06:16 18:24-19:07/43 20:16	05:05 21:17	04:26 22:03
14	08:40 16:07	07:45 15:01-15:49/48 17:13	06:35 18:14	06:13 18:25-19:07/42 20:18	05:03 21:19	04:25 22:04
15	08:39 16:09	07:43 15:01-15:50/49 17:15	06:33 18:16	06:11 18:25-19:06/41 20:20	05:01 21:21	04:25 22:05
16	08:38 16:11	07:41 15:00-15:49/49 17:17	06:30 18:18	06:08 18:25-19:06/41 20:22	05:00 21:23	04:25 22:05
17	08:37 16:13	07:38 15:01-15:50/49 17:20	06:27 18:20	06:05 18:25-19:04/39 20:24	04:58 21:25	04:24 22:06
18	08:35 16:15	07:36 15:00-15:49/49 17:22	06:25 18:22	06:03 18:26-19:04/38 20:26	04:56 21:27	04:24 22:06
19	08:34 16:17	07:34 15:01-15:49/48 17:24	06:22 18:24	06:00 18:26-19:02/36 20:29	04:54 21:29	04:24 22:07
20	08:33 16:19	07:31 15:01-15:49/48 17:26	06:19 18:26	05:58 18:27-19:02/35 20:31	04:52 21:31	04:24 22:07
21	08:31 16:21	07:29 15:02-15:49/47 17:29	06:17 18:28	05:55 18:29-19:01/32 20:33	04:51 21:32	04:25 22:07
22	08:30 16:23	07:26 15:02-15:48/46 17:31	06:14 18:31	05:53 18:29-18:59/30 20:35	04:49 21:34	04:25 22:08
23	08:28 16:25	07:24 15:03-15:48/45 17:33	06:11 18:33	05:50 18:31-18:57/26 20:37	04:47 21:36	04:25 22:08
24	08:27 16:27	07:21 15:03-15:46/43 17:35	06:09 18:35	05:48 18:33-18:55/22 20:39	04:46 21:38	04:25 22:08
25	08:25 16:29	07:19 15:04-15:46/42 17:37	06:06 18:37	05:46 18:35-18:52/17 20:41	04:44 21:39	04:26 22:08
26	08:23 16:31	07:16 15:05-15:45/40 17:40	06:03 18:01-18:11/10 18:39	05:43 18:40-18:48/8 20:43	04:43 21:41	04:26 22:08
27	08:22 16:33	07:14 15:06-15:43/37 17:42	06:01 17:58-18:12/14 18:41	05:41 20:45	04:41 21:43	04:27 22:08
28	08:20 16:35	07:11 15:08-15:42/34 17:44	05:58 17:57-18:15/18 18:43	05:38 20:47	04:40 21:44	04:27 22:08
29	08:18 15:18-15:28/10 16:37		06:55 18:43-19:17/34 19:45	05:36 20:49	04:39 21:46	04:28 22:07
30	08:16 15:15-15:32/17 16:40		06:53 18:39-19:17/38 19:47	05:34 20:51	04:37 21:47	04:28 22:07
31	08:15 15:12-15:35/23 16:42		06:50 18:37-19:18/41 19:49		04:36 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	50	1195	244	991	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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: O3 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (20)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:29 22:07	05:15 21:26	06:16 20:12	18:24-19:07/43 18:52	07:21 16:35	14:32-15:17/45 15:44
2	04:30 22:06	05:16 21:24	06:18 20:10	18:23-19:06/43 18:49	07:23 16:33	14:32-15:16/44 15:43
3	04:31 22:06	05:18 21:22	06:20 20:07	18:23-19:07/44 18:47	07:25 16:30	14:34-15:16/42 15:42
4	04:32 22:05	05:20 21:19	06:22 20:04	18:23-19:09/46 18:44	07:27 16:28	14:34-15:15/41 15:41
5	04:33 22:04	05:22 21:17	06:24 20:02	18:23-19:10/47 18:41	07:29 16:26	14:34-15:14/40 15:41
6	04:34 22:04	05:24 21:15	06:26 19:59	18:24-19:11/47 18:39	07:31 16:24	14:36-15:14/38 15:40
7	04:35 22:03	05:26 21:13	06:28 19:56	18:24-19:11/47 18:36	07:34 16:22	14:37-15:12/35 15:39
8	04:36 22:02	05:28 21:11	06:30 19:54	18:25-19:12/47 18:34	07:36 16:20	14:38-15:11/33 15:39
9	04:37 22:01	05:30 21:09	06:32 19:51	18:25-19:12/47 18:31	07:38 16:18	14:40-15:10/30 15:38
10	04:39 22:00	05:32 21:06	06:34 19:48	18:26-19:10/44 18:28	07:40 16:16	14:41-15:08/27 15:38
11	04:40 21:59	05:34 21:04	06:36 19:46	18:26-19:10/44 18:26	07:42 16:14	14:44-15:06/22 15:38
12	04:41 21:58	05:36 21:02	06:38 19:43	18:28-19:09/41 18:23	07:44 16:12	14:47-15:04/17 15:37
13	04:42 21:57	05:38 20:59	06:40 19:40	18:30-19:08/38 18:21	07:46 16:10	14:50-14:59/9 15:37
14	04:44 21:55	05:40 20:57	06:42 19:38	18:32-19:07/35 18:18	07:49 16:08	15:39-16:15/36 15:37
15	04:45 21:54	05:42 20:55	06:44 19:35	18:38-18:42/4 18:16	07:51 16:06	15:38-16:16/38 15:37
16	04:47 21:53	05:44 20:52	06:46 19:32	18:47-19:05/18 18:13	07:53 16:05	15:37-16:17/40 15:37
17	04:48 21:52	05:46 20:50	06:48 19:30	18:48-19:02/14 18:10	07:55 16:03	15:35-16:18/43 15:37
18	04:50 21:50	05:48 20:48	06:50 19:27	18:49-19:00/11 18:08	07:57 16:01	15:35-16:18/44 15:37
19	04:52 21:49	05:50 20:45	06:52 19:24	18:52-18:57/5 18:05	07:59 16:00	15:34-16:19/45 15:37
20	04:53 21:47	05:52 20:43	06:54 19:21	15:33-16:19/46 18:03	08:01 15:58	15:33-16:19/46 15:38
21	04:55 21:46	05:54 20:40	06:56 19:19	15:32-16:19/47 18:01	08:03 15:57	15:32-16:19/47 15:38
22	04:56 21:44	05:56 20:38	06:58 19:16	15:31-16:19/48 17:58	08:05 15:55	15:31-16:19/48 15:39
23	04:58 21:42	05:58 20:35	07:00 19:13	15:31-16:20/49 17:56	08:07 15:54	15:31-16:20/49 15:39
24	05:00 21:41	06:00 20:33	07:02 19:11	15:31-16:20/49 17:53	08:09 15:52	15:31-16:20/49 15:40
25	05:02 21:39	06:02 20:30	07:04 19:08	14:30-15:19/49 16:51	08:11 15:51	14:30-15:19/49 15:40
26	05:03 21:37	06:04 20:28	07:06 19:05	14:31-15:20/49 16:48	08:13 15:50	14:31-15:20/49 15:41
27	05:05 21:35	06:06 20:25	07:08 19:03	14:30-15:19/49 16:46	08:15 15:48	14:30-15:19/49 15:42
28	05:07 21:33	06:08 20:22	07:10 19:00	14:30-15:19/49 16:44	08:17 15:47	14:30-15:19/49 15:43
29	05:09 21:32	06:10 20:20	07:12 18:57	14:31-15:19/48 16:42	08:18 15:46	14:31-15:19/48 15:44
30	05:11 21:30	06:12 20:17	07:14 18:55	14:31-15:18/47 16:39	08:20 15:45	14:31-15:18/47 15:45
31	05:13 21:28	06:14 20:15	18:24-19:07/43	14:31-15:17/46 16:37	08:49 15:46	14:31-15:17/46 15:46
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	0	499	665	922	423	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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: 04 - NORDEX N163/6.X 7000 163.0 !OI! hub: 169,0 m (TOT: 250,5 m) (22)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	08:48 15:47	08:13 15:15-15:44/29 16:44	07:09 16:55-17:13/18 17:46	06:47 19:51	05:31 20:53	04:35 21:50
2	08:48 15:49	08:11 15:15-15:44/29 16:46	07:06 16:53-17:14/21 17:48	06:45 19:53	05:29 20:55	04:34 21:52
3	08:48 15:50	08:09 15:16-15:44/28 16:49	07:04 16:53-17:16/23 17:50	06:42 19:55	05:27 20:57	04:33 21:53
4	08:47 15:51	08:07 15:17-15:44/27 16:51	07:01 16:51-17:16/25 17:53	06:39 19:57	05:25 20:59	04:32 21:54
5	08:47 15:52	08:05 15:17-15:43/26 16:53	06:59 16:50-17:16/26 17:55	06:37 20:00	05:22 21:02	04:31 21:55
6	08:46 15:54	08:03 15:18-15:42/24 16:55	06:56 16:50-17:17/27 17:57	06:34 20:02	05:20 21:04	04:30 21:57
7	08:46 15:55	08:01 15:19-15:42/23 16:57	06:54 16:49-17:17/28 17:59	06:31 20:04	05:18 21:06	04:29 21:58
8	08:45 15:57	07:59 15:20-15:41/21 17:00	06:51 16:50-17:17/27 18:01	06:29 20:06	05:16 21:08	04:28 21:59
9	08:44 15:59	07:56 15:21-15:39/18 17:02	06:48 16:49-17:17/28 18:03	06:26 20:08	05:14 21:10	04:28 22:00
10	08:44 16:00	07:54 15:24-15:37/13 17:04	06:46 16:49-17:16/27 18:05	06:24 20:10	05:12 21:12	04:27 22:01
11	08:43 16:02	07:52 15:27-15:33/6 17:06	06:43 16:49-17:15/26 18:08	06:21 20:12	05:09 21:14	04:27 22:02
12	08:42 16:04	07:50 17:09	06:40 16:50-17:15/25 18:10	06:18 20:14	05:07 21:16	04:26 22:03
13	08:41 16:05	07:48 17:11	06:38 16:50-17:13/23 18:12	06:16 20:16	05:05 21:17	04:26 22:03
14	08:40 16:07	07:45 17:13	06:35 16:51-17:11/20 18:14	06:13 20:18	05:03 21:19	04:25 22:04
15	08:39 16:09	07:43 17:15	06:33 16:53-17:10/17 18:16	06:11 20:20	05:02 21:21	04:25 22:05
16	08:38 16:11	07:41 17:18	06:30 16:56-17:07/11 18:18	06:08 20:22	05:00 21:23	04:25 22:05
17	08:37 15:23-15:28/5 16:13	07:38 17:20	06:27 18:20	06:05 20:24	04:58 21:25	04:25 22:06
18	08:35 15:21-15:32/11 16:15	07:36 17:22	06:25 18:22	06:03 20:26	04:56 21:27	04:24 22:06
19	08:34 15:19-15:33/14 16:17	07:34 17:24	06:22 18:24	06:00 20:29	04:54 21:29	04:24 22:07
20	08:33 15:18-15:35/17 16:19	07:31 17:26	06:19 18:26	05:58 20:31	04:52 21:31	04:24 22:07
21	08:31 15:17-15:37/20 16:21	07:29 17:29	06:17 18:28	05:55 20:33	04:51 21:32	04:25 22:07
22	08:30 15:17-15:38/21 16:23	07:26 17:31	06:14 18:31	05:53 20:35	04:49 21:34	04:25 22:08
23	08:28 15:16-15:39/23 16:25	07:24 17:33	06:11 18:33	05:50 20:37	04:47 21:36	04:25 22:08
24	08:27 15:15-15:40/25 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 21:38	04:25 22:08
25	08:25 15:15-15:40/25 16:29	07:19 17:37	06:06 18:37	05:46 20:41	04:44 21:39	04:26 22:08
26	08:23 15:14-15:41/27 16:31	07:17 17:40	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08
27	08:22 15:14-15:42/28 16:33	07:14 17:02-17:07/5 17:42	06:01 18:41	05:41 20:45	04:41 21:43	04:27 22:08
28	08:20 15:14-15:42/28 16:35	07:11 16:58-17:12/14 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:08
29	08:18 15:14-15:43/29 16:38		06:55 19:45	05:36 20:49	04:39 21:46	04:28 22:07
30	08:16 15:14-15:43/29 16:40		06:53 19:47	05:34 20:51	04:37 21:47	04:28 22:07
31	08:15 15:15-15:43/28 16:42		06:50 19:49		04:36 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	330	263	372	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

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: 04 - NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (22)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:29 22:07	05:15 21:26	06:16 20:12	07:16 17:29-17:53/24 18:52	07:21 14:53-15:07/14 16:35	08:22 15:44
2	04:30 22:06	05:17 21:24	06:18 20:10	07:18 17:28-17:54/26 18:49	07:23 14:51-15:09/18 16:33	08:24 15:43
3	04:31 22:06	05:18 21:22	06:20 20:07	07:20 17:27-17:54/27 18:47	07:25 14:50-15:11/21 16:30	08:25 15:42
4	04:32 22:05	05:20 21:19	06:22 20:04	07:22 17:26-17:54/28 18:44	07:27 14:48-15:12/24 16:28	08:27 15:41
5	04:33 22:04	05:22 21:17	06:24 20:02	07:24 17:26-17:54/28 18:41	07:29 14:47-15:12/25 16:26	08:28 15:41
6	04:34 22:04	05:24 21:15	06:26 19:59	07:26 17:25-17:53/28 18:39	07:31 14:47-15:13/26 16:24	08:30 15:40
7	04:35 22:03	05:26 21:13	06:28 19:56	07:28 17:25-17:53/28 18:36	07:34 14:46-15:14/28 16:22	08:31 15:39
8	04:36 22:02	05:28 21:11	06:30 19:54	07:30 17:26-17:53/27 18:34	07:36 14:46-15:14/28 16:20	08:33 15:39
9	04:37 22:01	05:30 21:09	06:32 19:51	07:32 17:26-17:52/26 18:31	07:38 14:46-15:15/29 16:18	08:34 15:38
10	04:39 22:00	05:32 21:06	06:34 19:48	07:34 17:26-17:51/25 18:28	07:40 14:46-15:14/28 16:16	08:36 15:38
11	04:40 21:59	05:34 21:04	06:36 19:46	07:36 17:27-17:49/22 18:26	07:42 14:46-15:15/29 16:14	08:37 15:38
12	04:41 21:58	05:36 21:02	06:38 19:43	07:38 17:28-17:48/20 18:23	07:44 14:46-15:15/29 16:12	08:38 15:37
13	04:43 21:57	05:38 20:59	06:40 19:40	07:40 17:29-17:45/16 18:21	07:46 14:46-15:15/29 16:10	08:39 15:37
14	04:44 21:55	05:40 20:57	06:42 19:38	07:42 17:31-17:42/11 18:18	07:49 14:47-15:15/28 16:08	08:40 15:37
15	04:45 21:54	05:42 20:55	06:44 19:35	07:44 18:16	07:51 14:47-15:15/28 16:06	08:41 15:37
16	04:47 21:53	05:44 20:52	06:46 19:32	07:46 18:13	07:53 14:47-15:14/27 16:05	08:42 15:37
17	04:48 21:52	05:46 20:50	06:48 19:30	07:48 18:10	07:55 14:49-15:14/25 16:03	08:43 15:37
18	04:50 21:50	05:48 20:48	06:50 19:27	07:51 18:08	07:57 14:49-15:14/25 16:01	08:44 15:37
19	04:52 21:49	05:50 20:45	06:52 19:24	07:53 18:05	07:59 14:50-15:13/23 16:00	08:45 15:37
20	04:53 21:47	05:52 20:43	06:54 19:22	07:55 18:03	08:01 14:52-15:13/21 15:58	08:45 15:38
21	04:55 21:46	05:54 20:40	06:56 19:19	07:57 18:01	08:03 14:53-15:12/19 15:57	08:46 15:38
22	04:57 21:44	05:56 20:38	06:58 19:16	07:59 17:58	08:05 14:54-15:11/17 15:55	08:47 15:39
23	04:58 21:42	05:58 20:35	07:00 19:13	08:01 17:56	08:07 14:56-15:11/15 15:54	08:47 15:39
24	05:00 21:41	06:00 20:33	07:02 19:11	08:03 17:53	08:09 14:58-15:09/11 15:52	08:48 15:40
25	05:02 21:39	06:02 20:30	07:04 19:08	07:05 16:51	08:11 15:01-15:06/5 15:51	08:48 15:40
26	05:04 21:37	06:04 20:28	07:06 19:05	07:08 16:49	08:13 15:50	08:48 15:41
27	05:05 21:35	06:06 20:25	07:08 17:39-17:47/8 19:03	07:10 16:46	08:15 15:48	08:48 15:42
28	05:07 21:33	06:08 20:22	07:10 17:35-17:50/15 19:00	07:12 16:44	08:17 15:47	08:49 15:43
29	05:09 21:32	06:10 20:20	07:12 17:33-17:52/19 18:57	07:14 16:42	08:18 15:46	08:49 15:44
30	05:11 21:30	06:12 20:17	07:14 17:31-17:53/22 18:55	07:16 16:39	08:20 15:45	08:49 15:45
31	05:13 21:28	06:14 20:15		07:18 14:56-15:04/8 16:37		08:49 15:46
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	0	0	64	344	572	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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Laura Kurzemniece / laura.kurzemniece@environment.lv
Calculated:
15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: 05 - NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (21)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:47	08:13 14:42-15:14/32 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:15 21:26	06:16 20:12	07:16 18:52	07:21 15:54-16:01/7 16:35	08:22 14:22-14:46/24 15:44
2	08:48 15:48	08:11 14:43-15:14/31 16:46	07:06 17:48	06:45 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:17 21:24	06:18 20:09	07:18 18:49	07:23 14:27-14:32/5 16:33	08:24 14:23-14:46/23 15:43
3	08:48 14:45-14:52/7 15:50	08:09 14:44-15:14/30 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:18 21:22	06:20 20:07	07:20 18:47	07:25 14:22-14:36/14 16:30	08:25 14:25-14:46/21 15:42
4	08:47 14:44-14:55/11 15:51	08:07 14:46-15:13/27 16:51	07:01 17:53	06:39 19:57	05:24 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44	07:27 14:20-14:39/19 16:28	08:27 14:26-14:45/19 15:41
5	08:47 14:43-14:56/13 15:52	08:05 14:46-15:11/25 16:53	06:59 17:55	06:37 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:02	07:24 18:41	07:29 14:17-14:40/23 16:26	08:28 14:27-14:44/17 15:41
6	08:46 14:42-14:58/16 15:54	08:03 14:48-15:10/22 16:55	06:56 17:57	06:34 20:02	05:20 21:04	04:30 21:57	04:34 22:03	05:24 21:15	06:26 21:59	07:26 18:39	07:31 14:17-14:42/25 16:24	08:30 14:28-14:44/16 15:40
7	08:46 14:42-14:59/17 15:55	08:01 14:50-15:09/19 16:57	06:54 17:59	06:31 20:04	05:18 21:06	04:29 21:58	04:35 22:03	05:26 21:13	06:28 21:56	07:28 18:36	07:34 14:15-14:43/28 16:22	08:31 14:30-14:44/14 15:39
8	08:45 14:41-15:00/19 15:57	07:58 14:52-15:06/14 17:00	06:51 18:01	06:29 20:06	05:16 21:08	04:28 21:59	04:36 22:02	05:28 21:11	06:30 21:54	07:30 18:34	07:36 14:14-14:43/29 16:20	08:33 14:31-14:42/11 15:39
9	08:44 14:41-15:02/21 15:59	07:56 17:02	06:48 18:03	06:26 20:08	05:14 21:10	04:28 22:00	04:37 22:01	05:30 21:09	06:32 21:51	07:32 18:31	07:38 14:14-14:45/31 16:18	08:34 14:34-14:41/7 15:38
10	08:44 14:40-15:03/23 16:00	07:54 16:24-16:32/8 17:04	06:46 18:05	06:23 20:10	05:12 21:12	04:27 22:01	04:39 22:00	05:32 21:06	06:34 21:48	07:34 18:28	07:40 14:13-14:45/32 16:16	08:35 14:37-14:38/1 15:38
11	08:43 14:40-15:04/24 16:02	07:52 16:22-16:34/12 17:06	06:43 18:07	06:21 20:12	05:09 21:14	04:27 22:02	04:40 21:59	05:34 21:04	06:36 21:46	07:36 18:26	07:42 14:13-14:46/33 16:14	08:37 15:38
12	08:42 14:40-15:05/25 16:04	07:50 16:21-16:37/16 17:09	06:40 18:10	06:18 20:14	05:07 21:15	04:26 22:03	04:41 21:58	05:36 21:02	06:38 21:43	07:38 18:23	07:44 14:13-14:46/33 16:12	08:38 15:37
13	08:41 14:40-15:07/27 16:05	07:47 16:20-16:39/19 17:11	06:38 18:12	06:16 20:16	05:05 21:17	04:26 22:03	04:43 21:57	05:38 20:59	06:40 21:40	07:40 18:21	07:46 14:12-14:46/34 16:10	08:39 15:37
14	08:40 14:39-15:07/28 16:07	07:45 16:19-16:40/21 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 21:38	07:42 18:18	07:49 14:13-14:47/34 16:08	08:40 13:03-13:08/5 15:37
15	08:39 14:39-15:08/29 16:09	07:43 16:18-16:41/23 17:15	06:33 18:16	06:11 20:20	05:02 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:44 21:35	07:44 18:16	07:51 14:12-14:47/35 16:06	08:41 13:02-13:10/8 15:37
16	08:38 14:40-15:10/30 16:11	07:41 16:18-16:41/23 17:18	06:30 18:18	06:08 20:22	05:00 21:23	04:25 22:05	04:47 21:53	05:44 20:52	06:46 21:32	07:46 18:13	07:53 14:12-14:47/35 16:05	08:42 13:02-13:11/9 15:37
17	08:36 14:39-15:10/31 16:13	07:38 16:18-16:42/24 17:20	06:27 18:20	06:05 20:24	04:58 21:25	04:25 22:06	04:48 21:51	05:46 20:50	06:48 21:30	07:48 16:56-17:05/9 18:10	07:55 14:13-14:48/35 16:03	08:43 13:02-13:12/10 15:37
18	08:35 14:38-15:10/32 16:15	07:36 16:17-16:41/24 17:22	06:25 18:22	06:03 20:26	04:56 21:27	04:24 22:06	04:50 21:50	05:48 20:47	06:50 21:27	07:51 16:53-17:07/14 18:08	07:57 14:13-14:48/35 16:01	08:44 13:02-13:13/11 15:37
19	08:34 14:39-15:12/33 16:17	07:34 16:18-16:41/23 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:52 21:49	05:50 20:45	06:52 21:24	07:53 16:52-17:10/18 18:05	07:59 14:13-14:48/35 16:00	08:45 13:03-13:14/11 15:37
20	08:33 14:39-15:12/33 16:19	07:31 16:18-16:41/23 17:26	06:19 18:26	05:58 20:31	04:52 21:31	04:24 22:07	04:53 21:47	05:52 20:43	06:54 21:21	07:55 16:50-17:10/20 18:03	08:01 14:14-14:48/34 15:58	08:45 13:02-13:14/12 15:38
21	08:31 14:39-15:13/34 16:21	07:29 16:19-16:40/21 17:29	06:17 18:28	05:55 20:33	04:51 21:32	04:25 22:07	04:55 21:46	05:54 20:40	06:56 21:19	07:57 16:49-17:11/22 18:01	08:03 14:14-14:48/34 15:57	08:46 13:03-13:15/12 15:38
22	08:30 14:39-15:13/34 16:23	07:26 16:19-16:39/20 17:31	06:14 18:31	05:53 20:35	04:49 21:34	04:25 22:08	04:57 21:44	05:56 20:38	06:58 21:16	07:59 16:48-17:11/23 17:58	08:05 14:15-14:48/33 15:55	08:47 13:04-13:16/12 15:39
23	08:28 14:39-15:14/35 16:25	07:24 16:21-16:38/17 17:33	06:11 18:33	05:50 20:37	04:47 21:36	04:25 22:08	04:58 21:42	05:58 20:35	07:00 21:13	08:01 16:48-17:12/24 17:56	08:07 14:15-14:48/33 15:54	08:47 13:04-13:16/12 15:39
24	08:27 14:39-15:14/35 16:27	07:21 16:23-16:35/12 17:35	06:09 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:41	06:00 20:33	07:02 21:11	08:03 16:48-17:12/24 17:53	08:09 14:16-14:48/32 15:52	08:48 13:05-13:16/11 15:40
25	08:25 14:39-15:14/35 16:29	07:19 16:27-16:29/2 17:37	06:06 18:37	05:46 20:41	04:44 21:39	04:26 22:08	05:02 21:39	06:02 20:30	07:04 21:08	07:05 15:47-16:11/24 16:51	08:11 14:17-14:48/31 15:51	08:48 13:05-13:16/11 15:40
26	08:23 14:39-15:14/35 16:31	07:16 17:40	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:04 21:37	06:04 20:28	07:06 21:05	07:08 15:48-16:11/23 16:48	08:13 14:18-14:48/30 15:50	08:48 13:07-13:17/10 15:41
27	08:22 14:39-15:14/35 16:33	07:14 17:42	06:01 18:41	05:41 20:45	04:41 21:43	04:27 22:08	05:05 21:35	06:06 20:25	07:08 21:03	07:10 15:48-16:11/23 16:46	08:15 14:18-14:47/29 15:48	08:48 13:08-13:17/9 15:42
28	08:20 14:40-15:14/34 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:10 21:00	07:12 15:48-16:10/22 16:44	08:16 14:19-14:47/28 15:47	08:48 13:09-13:17/8 15:43
29	08:18 14:40-15:15/35 16:38		06:55 19:45	05:36 20:49	04:39 21:46	04:28 22:07	05:09 21:31	06:10 20:20	07:12 21:57	07:14 15:50-16:08/18 16:42	08:18 14:20-14:47/27 15:46	08:49 13:09-13:16/7 15:44
30	08:16 14:41-15:14/33 16:40		06:53 19:47	05:34 20:51	04:37 21:47	04:28 22:07	05:11 21:30	06:12 20:17	07:14 21:55	07:16 15:50-16:06/16 16:39	08:20 14:21-14:47/26 15:45	08:49 13:12-13:15/3 15:45
31	08:14 14:42-15:14/32 16:42		06:50 19:49		04:36 21:49		05:13 21:28	06:14 20:15	07:18 21:37	15:51-16:03/12 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
Sum of minutes with flicker	796	488	0	0	0	0	0	0	0	292	859	314

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: 06 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (28)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	08:49 14:49-15:04/15 15:47 14:16-14:43/27	08:13 15:06-15:41/35 16:44	07:09 16:14-16:48/34 17:46 15:23-16:02/39	06:47 19:51	05:31 20:53	04:34 21:50
2	08:48 14:48-15:05/17 15:48 14:16-14:43/27	08:11 15:06-15:42/36 16:46	07:06 16:14-16:47/33 17:48 15:24-16:00/36	06:44 19:53	05:28 20:55	04:33 21:52
3	08:48 14:49-15:06/17 15:49 14:17-14:44/27	08:09 15:06-15:43/37 16:48	07:04 16:15-16:47/32 17:50 15:26-15:59/33	06:42 19:55	05:26 20:57	04:32 21:53
4	08:48 14:49-15:07/18 15:50 14:16-14:45/29	08:07 15:06-15:48/42 16:50	07:01 16:15-16:46/31 17:52 15:27-15:57/30	06:39 19:57	05:24 21:00	04:31 21:54
5	08:47 14:48-15:07/19 15:52 14:16-14:45/29	08:05 15:05-15:51/46 16:52	06:59 16:15-16:45/30 17:54 15:29-15:54/25	06:36 19:59	05:22 21:02	04:30 21:56
6	08:47 14:49-15:09/20 15:53 14:17-14:47/30	08:03 15:05-15:54/49 16:55	06:56 16:17-16:44/27 17:57 15:32-15:52/20	06:34 20:01	05:19 21:04	04:29 21:57
7	08:46 14:49-15:09/20 15:55 14:18-14:47/29	08:01 15:05-15:57/52 16:57	06:53 16:17-16:42/25 17:59 15:36-15:47/11	06:31 20:04	05:17 21:06	04:28 21:58
8	08:45 14:49-15:10/21 15:56 14:18-14:47/29	07:58 15:05-15:59/54 16:59	06:51 17:27-17:32/5 18:01 16:19-16:40/21	06:28 20:06	05:15 21:08	04:28 21:59
9	08:45 14:49-15:11/22 15:58 14:18-14:48/30	07:56 15:04-16:00/56 17:01	06:48 17:24-17:35/11 18:03 16:21-16:39/18	06:26 20:08	05:13 21:10	04:27 22:00
10	08:44 14:50-15:12/22 15:59 14:18-14:49/31	07:54 15:05-16:01/56 17:04	06:46 17:22-17:37/15 18:05 16:24-16:35/11	06:23 20:10	05:11 21:12	04:26 22:01
11	08:43 14:50-15:12/22 16:01 14:19-14:49/30	07:52 15:05-16:03/58 17:06	06:43 17:20-17:39/19 18:07	06:20 20:12	05:09 21:14	04:26 22:02
12	08:42 14:18-15:12/54 16:03	07:50 15:05-16:03/58 17:08	06:40 17:19-17:40/21 18:09	06:18 20:14	05:07 21:16	04:25 22:03
13	08:41 14:19-15:13/54 16:05	07:47 15:06-16:04/58 17:10	06:38 17:16-17:40/24 18:11	06:15 20:16	05:05 21:18	04:25 22:04
14	08:40 14:51-15:14/23 16:06 14:20-14:50/30	07:45 15:05-16:04/59 17:13	06:35 17:14-17:40/26 18:14	06:13 20:18	05:03 21:20	04:24 22:04
15	08:39 14:20-15:14/54 16:08	07:43 15:06-16:05/59 17:15	06:32 17:14-17:39/25 18:16	06:10 20:20	05:01 21:21	04:24 22:05
16	08:38 14:20-15:14/54 16:10	07:41 15:06-16:05/59 17:17	06:30 17:12-17:39/27 18:18	06:08 20:22	04:59 21:23	04:24 22:06
17	08:37 14:20-15:14/54 16:12	07:38 15:08-16:06/58 17:19	06:27 17:11-17:40/29 18:20	06:05 20:24	04:57 21:25	04:24 22:06
18	08:35 14:52-15:15/23 16:14 14:21-14:51/30	07:36 15:08-16:06/58 17:22	06:24 17:10-17:39/29 18:22	06:02 20:26	04:55 21:27	04:24 22:07
19	08:34 14:52-15:15/23 16:16 14:22-14:51/29	07:34 15:10-16:07/57 17:24	06:22 17:10-17:40/30 18:24	06:00 20:28	04:53 21:29	04:24 22:07
20	08:33 14:23-15:14/51 16:18	07:31 15:11-16:06/55 17:26	06:19 17:09-17:40/31 18:26	05:57 20:31	04:52 21:31	04:24 22:07
21	08:31 14:54-15:15/21 16:20 14:23-14:51/28	07:29 15:13-16:07/54 17:28	06:16 17:09-17:39/30 18:28	05:55 20:33	04:50 21:33	04:24 22:08
22	08:30 14:54-15:15/21 16:22 14:24-14:51/27	07:26 15:15-16:06/51 17:30	06:14 17:09-17:39/30 18:30	05:52 20:35	04:48 21:34	04:24 22:08
23	08:28 14:55-15:14/19 16:24 14:25-14:50/25	07:24 15:19-16:06/47 17:33	06:11 17:09-17:38/29 18:32	05:50 20:37	04:47 21:36	04:24 22:08
24	08:27 14:56-15:13/17 15:17-15:26/9 16:26 14:25-14:50/25	07:21 16:16-16:47/31 17:35	06:08 17:09-17:37/28 18:34	05:48 20:39	04:45 21:38	04:24 22:08
25	08:25 14:57-15:13/16 15:14-15:30/16 16:28 14:27-14:50/23	07:19 16:15-16:47/32 17:37	06:06 17:10-17:37/27 18:37	05:45 20:41	04:44 21:40	04:25 22:08
26	08:23 15:00-15:12/12 15:13-15:33/20 16:30 14:29-14:49/20	07:16 16:15-16:48/33 17:39	06:03 17:11-17:35/24 18:39	05:43 20:43	04:42 21:41	04:25 22:08
27	08:22 15:02-15:10/8 15:12-15:35/23 16:33 14:30-14:48/18	07:14 16:14-16:48/34 17:41	06:00 17:11-17:33/22 18:41	05:40 20:45	04:41 21:43	04:26 22:08
28	08:20 14:32-14:47/15 16:35 15:10-15:37/27	07:11 16:15-16:48/33 17:44	05:58 17:14-17:32/18 18:43	05:38 20:47	04:39 21:44	04:26 22:08
29	08:18 14:36-14:44/8 16:37 15:09-15:38/29		06:55 18:16-18:29/13 19:45	05:35 20:49	04:38 21:46	04:27 22:08
30	08:16 15:08-15:38/30 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07
31	08:15 15:07-15:40/33 16:41		06:50 19:49		04:35 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	1500	1728	969	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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
 Vilandes 3-6
 LV-1010 Riga
 0037167242411
 Laura Kurzemniece / laura.kurzemniece@environment.lv
 Calculated:
 15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: 06 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (28)
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:28 22:07	05:14 21:26	06:15 20:12	07:15 17:57-18:19/22 18:52	07:21 14:34-15:31/57 16:34	08:22 14:31-14:53/22 15:43 14:00-14:30/30
2	04:29 22:06	05:16 21:24	06:17 20:09	07:17 17:59-18:18/19 18:49	07:23 14:34-15:29/55 16:32	08:24 14:32-14:54/22 15:42 14:01-14:31/30
3	04:30 22:06	05:18 21:22	06:19 20:07	07:19 17:59-18:16/17 18:46	07:25 14:35-15:28/53 16:30	08:25 14:33-14:54/21 15:42 14:01-14:31/30
4	04:31 22:05	05:20 21:20	06:21 20:04	07:21 18:00-18:13/13 18:44	07:27 14:34-15:26/52 16:28	08:27 14:33-14:54/21 15:41 14:02-14:32/30
5	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:02-18:10/8 18:41	07:29 14:34-15:24/50 16:26	08:29 14:34-14:55/21 15:40 14:03-14:32/29
6	04:33 22:04	05:24 21:15	06:25 19:59	07:26 16:54-17:18/24 18:38	07:31 14:35-15:22/47 16:23	08:30 14:35-14:55/20 15:39 14:04-14:33/29
7	04:34 22:03	05:26 21:13	06:27 19:56	07:28 16:53-17:19/26 18:36	07:34 14:35-15:17/42 16:21	08:32 14:35-14:54/19 15:39 14:04-14:32/28
8	04:35 22:02	05:28 21:11	06:29 19:54	07:30 16:51-17:19/28 18:33	07:36 14:37-15:14/37 16:19	08:33 14:37-14:55/18 15:38 14:05-14:33/28
9	04:37 22:01	05:30 21:09	06:31 19:51	07:32 16:51-17:21/30 18:31	07:38 14:37-15:13/36 16:17	08:34 14:37-14:54/17 15:38 14:05-14:33/28
10	04:38 22:00	05:32 21:06	06:33 19:48	07:34 16:50-17:21/31 18:28	07:40 14:37-15:12/35 16:15	08:36 14:38-14:55/17 15:37 14:06-14:33/27
11	04:39 21:59	05:33 21:04	06:35 19:45	07:36 16:49-17:21/32 18:25	07:42 14:39-15:11/32 16:13	08:37 14:39-14:54/15 15:37 14:06-14:33/27
12	04:40 21:58	05:35 21:02	06:37 19:43	07:38 16:48-17:21/33 18:23	07:44 14:40-15:10/30 16:11	08:38 14:39-14:53/14 15:37 14:06-14:33/27
13	04:42 21:57	05:37 20:59	06:39 19:40	07:40 16:47-17:21/34 18:20	07:46 14:07-14:16/9 16:10	08:39 14:41-14:54/13 15:36 14:08-14:34/26
14	04:43 21:56	05:39 20:57	06:41 18:06-18:18/12 19:37	07:42 16:47-17:20/33 18:18	07:49 14:04-14:19/15 16:08	08:40 14:42-14:53/11 15:36 14:08-14:34/26
15	04:45 21:54	05:41 20:55	06:43 18:03-18:21/18 19:35	07:44 16:47-17:21/34 18:15	07:51 14:34-14:42/8 14:44-15:07/23 16:06	08:41 14:42-14:53/11 15:36 14:09-14:35/26
16	04:46 21:53	05:43 20:52	06:45 18:01-18:22/21 19:32	07:46 16:47-17:20/33 18:13	07:53 14:33-14:45/12 14:46-15:06/20 16:04	08:42 14:43-14:53/10 15:36 14:09-14:35/26
17	04:48 21:52	05:45 20:50	06:47 17:59-18:23/24 19:29	07:48 16:47-17:19/32 18:10	07:55 14:31-14:47/16 14:48-15:04/16 16:02	08:43 14:44-14:53/9 15:36 14:10-14:35/25
18	04:49 21:50	05:47 20:48	06:49 17:58-18:24/26 19:27	07:50 15:51-16:37/46 18:08	07:57 14:30-14:47/17 14:51-15:00/9 16:01	08:44 14:44-14:52/8 15:36 14:10-14:35/25
19	04:51 21:49	05:49 20:45	06:51 17:57-18:24/27 19:24	07:53 15:49-16:37/48 18:05	07:59 14:30-14:49/19 15:59	08:45 14:45-14:53/8 15:37 14:11-14:36/25
20	04:52 21:47	05:51 20:43	06:53 17:56-18:25/29 19:21	07:55 15:45-16:37/52 18:03	08:01 14:29-14:50/21 15:58	08:46 14:46-14:53/7 15:37 14:11-14:36/25
21	04:54 21:46	05:53 20:40	06:55 17:55-18:25/30 19:19	07:57 15:43-16:37/54 18:00	08:03 14:29-14:50/21 15:56	08:46 14:46-14:53/7 15:37 14:11-14:36/25
22	04:56 21:44	05:55 20:38	06:57 17:54-18:25/31 19:16	07:59 15:41-16:36/55 17:58	08:05 14:29-14:51/22 15:54	08:47 14:47-14:54/7 15:38 14:12-14:37/25
23	04:58 21:42	05:57 20:35	06:59 17:54-18:24/30 19:13	08:01 15:40-16:37/57 17:55	08:07 14:29-14:52/23 15:53	08:47 14:47-14:54/7 15:38 14:12-14:37/25
24	04:59 21:41	05:59 20:33	07:01 17:54-18:24/30 19:10	08:03 15:38-16:36/58 17:53	08:09 14:29-14:52/23 15:52	08:48 14:48-14:56/8 15:39 14:13-14:38/25
25	05:01 21:39	06:01 20:30	07:03 17:53-18:23/30 19:08	07:05 14:37-15:35/58 16:50	08:11 13:58-14:52/54 15:50	08:48 14:48-14:56/8 15:40 14:14-14:39/25
26	05:03 21:37	06:03 20:28	07:05 17:53-18:23/30 19:05	07:08 14:37-15:36/59 16:48	08:13 13:59-14:52/53 15:49	08:48 14:48-14:57/9 15:40 14:14-14:39/25
27	05:05 21:35	06:05 20:25	07:07 17:54-18:22/28 19:02	07:10 14:36-15:35/59 16:46	08:15 13:59-14:53/54 15:48	08:49 14:48-14:58/10 15:41 14:14-14:40/26
28	05:06 21:34	06:07 20:22	07:09 17:54-18:21/27 19:00	07:12 14:35-15:34/59 16:43	08:17 14:00-14:53/53 15:47	08:49 14:48-14:59/11 15:42 14:15-14:40/25
29	05:08 21:32	06:09 20:20	07:11 17:55-18:21/26 18:57	07:14 14:35-15:34/59 16:41	08:18 14:00-14:54/54 15:45	08:49 14:48-15:00/12 15:43 14:15-14:41/26
30	05:10 21:30	06:11 20:17	07:13 17:56-18:20/24 18:54	07:16 14:34-15:32/58 16:39	08:20 14:32-14:54/22 15:44	08:49 14:49-15:01/12 15:44 14:16-14:42/26
31	05:12 21:28	06:13 20:15		07:18 14:34-15:31/57 16:36		08:49 14:48-15:02/14 15:45 14:15-14:42/27
Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	0	0	443	1830	1428	1236

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: P19.2b - NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (35)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 05:38-05:54/16	04:29 22:06	05:15 05:48-06:03/15	06:16 20:12	07:16 18:52	07:20 16:35	08:22 15:44
2	08:48 15:49	08:11 16:46	07:06 17:48	06:45 19:53	05:29 20:55	04:34 05:38-05:54/16	04:30 22:06	05:17 05:50-06:02/12	06:18 20:09	07:18 18:49	07:23 16:33	08:23 15:43
3	08:48 15:50	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 05:39-05:53/14	04:31 22:05	05:18 05:52-06:00/8	06:20 20:07	07:20 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:53	06:39 19:57	05:24 20:59	04:32 05:41-05:53/12	04:32 22:05	05:20 21:21	06:22 20:04	07:22 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:55	06:37 19:59	05:22 21:01	04:31 05:42-05:52/10	04:33 22:05	05:51-05:55/4	05:22 21:17	07:24 18:41	07:29 16:26	08:28 15:41
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:02	05:20 21:03	04:30 05:42-05:51/9	04:34 22:03	05:49-05:57/8	05:24 21:15	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:55	08:01 16:57	06:53 17:59	06:31 20:04	05:18 21:05	04:29 05:45-05:51/6	04:35 22:03	05:48-05:58/10	05:26 21:13	07:28 18:36	07:35 16:22	08:31 15:39
8	08:45 15:57	07:58 17:00	06:51 18:01	06:29 20:06	05:16 21:07	04:28 05:44-05:46/2	04:28 22:02	05:48-05:59/11	05:28 21:11	07:30 18:34	07:36 16:20	08:33 15:39
9	08:44 15:59	07:56 17:02	06:48 18:03	06:26 20:08	05:14 05:44-05:46/2	04:28 05:41-05:50/9	04:28 22:01	05:47-06:00/13	05:30 21:09	07:32 18:31	07:38 16:18	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:12 05:41-05:50/9	04:27 05:39-05:52/13	04:27 22:01	05:46-06:01/15	05:32 21:06	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 05:39-05:52/13	04:27 05:37-05:53/16	04:27 22:02	05:47-06:03/16	05:34 21:04	07:42 18:26	07:40 16:14	08:37 15:38
12	08:42 16:04	07:50 17:09	06:40 18:10	06:18 20:14	05:07 05:37-05:53/16	04:26 05:35-05:54/19	04:26 22:02	05:46-06:03/17	05:36 21:02	07:44 18:23	07:46 16:12	08:38 15:37
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:05 05:35-05:54/19	04:26 05:35-05:55/20	04:26 22:03	05:45-06:04/19	05:38 20:59	07:46 18:21	07:48 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 05:35-05:55/20	04:25 05:35-05:56/21	04:25 22:04	05:45-06:04/19	05:40 20:57	07:48 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:33 18:16	06:11 20:20	05:02 05:35-05:56/21	04:25 05:34-05:56/22	04:25 22:05	05:45-06:05/20	05:42 20:55	07:51 18:15	08:41 16:06	08:41 15:37
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	05:00 05:34-05:56/22	04:25 05:34-05:57/23	04:25 22:05	05:44-06:05/21	05:44 20:52	07:53 18:13	08:42 16:05	08:42 15:37
17	08:36 16:13	07:38 17:20	06:27 18:20	06:05 20:24	04:58 05:34-05:57/23	04:25 05:34-05:57/23	04:25 22:06	05:44-06:05/21	05:46 20:50	07:55 18:10	08:43 16:03	08:43 15:37
18	08:35 16:15	07:36 17:22	06:25 18:22	06:03 20:26	04:56 05:34-05:57/23	04:24 05:33-05:56/23	04:24 22:06	05:44-06:06/22	05:48 20:50	07:57 18:08	08:44 16:01	08:44 15:37
19	08:34 16:17	07:34 17:24	06:22 18:24	06:00 20:28	04:54 05:33-05:56/23	04:24 05:33-05:57/24	04:24 22:07	05:44-06:06/22	05:50 20:45	07:58 18:05	08:45 16:00	08:45 15:37
20	08:32 16:19	07:31 17:26	06:19 18:26	05:58 20:31	04:52 05:33-05:57/24	04:24 05:33-05:57/24	04:24 22:07	05:44-06:07/23	05:52 20:43	08:01 18:03	08:46 15:58	08:46 15:38
21	08:31 16:21	07:29 17:29	06:17 18:28	05:55 20:33	04:51 05:33-05:57/24	04:25 05:33-05:57/24	04:25 22:07	05:43-06:07/24	05:54 20:40	08:03 18:01	08:47 15:57	08:47 15:38
22	08:30 16:23	07:26 17:31	06:14 18:30	05:53 20:35	04:49 05:34-05:57/23	04:25 05:34-05:57/23	04:25 22:08	05:44-06:07/23	05:56 20:38	08:05 17:58	08:48 15:55	08:47 15:39
23	08:28 16:25	07:24 17:33	06:11 18:33	05:50 20:37	04:47 05:34-05:57/23	04:25 05:34-05:57/23	04:25 22:08	05:43-06:07/24	05:58 20:35	08:07 17:56	08:47 15:54	08:47 15:39
24	08:27 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 05:34-05:57/23	04:25 05:34-05:57/23	04:25 22:08	05:44-06:07/23	06:00 20:33	08:08 17:53	08:47 15:52	08:47 15:40
25	08:25 16:29	07:19 17:37	06:06 18:37	05:46 20:41	04:44 05:34-05:57/23	04:26 05:34-05:57/23	04:26 22:08	05:44-06:08/24	06:02 20:30	08:09 17:51	08:48 15:51	08:48 15:40
26	08:23 16:31	07:16 17:40	06:03 18:39	05:43 20:43	04:43 05:35-05:57/22	04:26 05:35-05:57/22	04:26 22:08	05:44-06:07/23	06:04 20:28	08:10 17:50	08:48 15:50	08:48 15:41
27	08:22 16:33	07:14 17:42	06:01 18:41	05:41 20:45	04:41 05:35-05:56/21	04:27 05:35-05:56/21	04:27 22:08	05:45-06:07/22	06:06 20:25	08:11 17:48	08:49 15:48	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 05:35-05:56/21	04:27 05:35-05:56/21	04:27 22:07	05:44-06:06/22	06:08 20:22	08:12 17:47	08:49 15:47	08:48 15:43
29	08:18 16:38	07:14 17:45	06:55 18:45	05:36 20:49	04:39 05:36-05:55/19	04:28 05:36-05:55/19	04:28 22:07	05:45-06:06/21	06:10 20:20	08:13 17:46	08:49 15:46	08:48 15:44
30	08:16 16:40	07:14 17:47	06:53 18:47	05:34 20:51	04:37 05:37-05:55/18	04:29 05:37-05:55/18	04:29 22:07	05:46-06:05/19	06:12 20:17	08:14 17:46	08:49 15:45	08:48 15:45
31	08:14 16:42	07:14 17:49	06:50 18:49	05:34 21:49	04:36 05:37-05:55/18	04:29 05:37-05:55/18	04:29 22:07	05:47-06:05/18	06:14 20:15	08:15 17:47	08:49 15:46	08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
Sum of minutes with flicker	0	0	0	0	450	83	504	35	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
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Project:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: Pr11 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (29)
Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January		February		March		April	May	June
1	08:48	12:07-12:56/49	08:13	14:01-14:30/29	07:09	16:15-16:23/8	06:47	05:31	04:34
	15:47	13:48-14:23/35	16:43	15:27-15:44/17	17:46	15:26-15:47/21	19:51	20:53	21:50
2	08:48	12:07-12:56/49	08:11	14:03-14:29/26	07:06	15:30-15:43/13	06:44	05:28	04:33
	15:48	13:47-14:23/36	16:46	15:25-15:47/22	17:48		19:53	20:55	21:52
3	08:48	12:08-12:57/49	08:09	14:05-14:27/22	07:04		06:42	05:26	04:32
	15:49	13:48-14:24/36	16:48	15:23-15:49/26	17:50		19:55	20:57	21:53
4	08:48	12:08-12:57/49	08:07	14:07-14:26/19	07:01		06:39	05:24	04:31
	15:50	13:48-14:24/36	16:50	15:22-15:51/29	17:52		19:57	20:59	21:54
5	08:47	12:08-12:57/49	08:05	14:10-14:22/12	06:59		06:36	05:22	04:30
	15:52	13:48-14:25/37	16:52	15:20-15:52/32	17:54		19:59	21:02	21:56
6	08:47	12:09-12:58/49	08:03	15:20-15:53/33	06:56		06:34	05:19	04:29
	15:53	13:49-14:26/37	16:55		17:56		20:01	21:04	21:57
7	08:46	12:09-12:58/49	08:01	15:19-15:55/36	06:53		06:31	05:17	04:28
	15:55	13:49-14:27/38	16:57		17:59		20:03	21:06	21:58
8	08:45	12:10-12:58/48	07:58	15:18-15:56/38	06:51		06:28	05:15	04:28
	15:56	13:49-14:27/38	16:59		18:01		20:06	21:08	21:59
9	08:45	12:10-12:58/48	07:56	15:17-15:56/39	06:48		06:26	05:13	04:27
	15:58	13:49-14:28/39	17:01		18:03		20:08	21:10	22:00
10	08:44	12:11-12:58/47	07:54	16:14-16:26/12	06:45		06:23	05:11	04:26
	15:59	13:50-14:29/39	17:04	15:17-15:57/40	18:05		20:10	21:12	22:01
11	08:43	12:11-12:58/47	07:52	16:11-16:28/17	06:43		06:20	05:09	04:26
	16:01	13:49-14:28/39	17:06	15:16-15:57/41	18:07		20:12	21:14	22:02
12	08:42	12:11-12:58/47	07:50	16:10-16:30/20	06:40		06:18	05:07	04:25
	16:03	13:49-14:29/40	17:08	15:16-15:58/42	18:09		20:14	21:16	22:03
13	08:41	12:12-12:58/46	07:47	16:09-16:32/23	06:38		06:15	05:05	04:25
	16:05	13:50-14:30/40	17:10	15:16-15:59/43	18:11		20:16	21:18	22:04
14	08:40	12:13-12:58/45	07:45	16:08-16:32/24	06:35		06:13	05:03	04:24
	16:06	13:50-14:31/41	17:13	15:15-15:59/44	18:13		20:18	21:19	22:04
15	08:39	12:13-12:58/45	07:43	16:07-16:33/26	06:32		06:10	05:01	04:24
	16:08	13:50-14:31/41	17:15	15:15-15:59/44	18:16		20:20	21:21	22:05
16	08:38	12:14-12:58/44	07:41	16:06-16:34/28	06:30		06:08	04:59	04:24
	16:10	13:51-14:32/41	17:17	15:15-15:59/44	18:18		20:22	21:23	22:06
17	08:37	12:14-12:58/44	07:38	16:06-16:34/28	06:27		06:05	04:57	04:24
	16:12	13:51-14:32/41	17:19	15:15-15:59/44	18:20		20:24	21:25	22:06
18	08:35	12:15-12:58/43	07:36	16:05-16:34/29	06:24		06:02	04:55	04:24
	16:14	13:51-14:33/42	17:21	15:15-15:58/43	18:22		20:26	21:27	22:07
19	08:34	12:16-12:58/42	07:33	16:06-16:35/29	06:22		06:00	04:53	04:24
	16:16	13:51-14:32/41	17:24	15:16-15:59/43	18:24		20:28	21:29	22:07
20	08:33	12:16-12:57/41	07:31	16:05-16:34/29	06:19		05:57	04:52	04:24
	16:18	13:51-14:32/41	17:26	15:16-15:58/42	18:26		20:30	21:31	22:07
21	08:31	12:18-12:58/40	07:29	16:06-16:35/29	06:16		05:55	04:50	04:24
	16:20	13:53-14:33/40	17:28	15:16-15:58/42	18:28		20:33	21:33	22:08
22	08:30	12:18-12:57/39	07:26	16:05-16:34/29	06:14		05:52	04:48	04:24
	16:22	13:53-14:33/40	17:30	15:17-15:57/40	18:30		20:35	21:34	22:08
23	08:28	13:53-14:33/40	07:24	16:06-16:34/28	06:11		05:50	04:47	04:24
	16:24	12:19-12:56/37	17:33	15:18-15:57/39	18:32		20:37	21:36	22:08
24	08:27	13:53-14:33/40	07:21	16:06-16:33/27	06:08		05:47	04:45	04:24
	16:26	12:20-12:56/36	17:35	15:18-15:55/37	18:34		20:39	21:38	22:08
25	08:25	13:54-14:33/39	07:19	16:07-16:31/24	06:06		05:45	04:44	04:25
	16:28	12:21-12:55/34	17:37	15:19-15:54/35	18:36		20:41	21:39	22:08
26	08:23	13:55-14:34/39	07:16	16:08-16:31/23	06:03		05:43	04:42	04:25
	16:30	12:24-12:55/31	17:39	15:21-15:53/32	18:39		20:43	21:41	22:08
27	08:22	13:56-14:33/37	07:14	16:09-16:29/20	06:00		05:40	04:41	04:26
	16:33	12:25-12:54/29	17:41	15:22-15:51/29	18:41		20:45	21:43	22:08
28	08:20	13:57-14:33/36	07:11	16:12-16:27/15	05:58		05:38	04:39	04:26
	16:35	12:27-12:52/25	17:43	15:24-15:50/26	18:43		20:47	21:44	22:08
29	08:18	13:58-14:33/35			06:55		05:35	04:38	04:27
	16:37	12:29-12:50/21			19:45		20:49	21:46	22:07
30	08:16	13:58-14:31/33			06:52		05:33	04:37	04:28
	16:39	12:32-12:47/15			19:47		20:51	21:47	22:07
31	08:14	13:59-14:30/31			06:50			04:35	
	16:41	15:30-15:41/11			19:49			21:49	
Potential sun hours	236		266		366		426	507	528
Sum of minutes with flicker	2436		1590		42		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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: Pr11 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (29)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:28 22:07	05:14 21:26	06:15 20:12	07:15 18:52	07:20 15:45-15:55/10 16:34 14:47-15:27/40	08:22 11:53-12:40/47 15:43 13:31-14:11/40
2	04:29 22:06	05:16 21:24	06:17 20:09	07:17 18:49	07:23 14:47-15:26/39 16:32	08:24 11:53-12:40/47 15:42 13:32-14:11/39
3	04:30 22:06	05:18 21:22	06:19 20:07	07:19 18:46	07:25 14:48-15:26/38 16:30	08:25 11:53-12:41/48 15:42 13:32-14:11/39
4	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 14:49-15:24/35 16:28	08:27 11:54-12:42/48 15:41 13:33-14:11/38
5	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 14:49-15:23/34 16:25	08:29 11:55-12:43/48 15:40 13:34-14:12/38
6	04:33 22:04	05:24 21:15	06:25 19:59	07:25 18:38	07:31 13:40-13:53/13 16:23 14:51-15:22/31	08:30 11:54-12:43/49 15:39 13:34-14:11/37
7	04:34 22:03	05:26 21:13	06:27 19:56	07:28 18:36	07:34 13:37-13:56/19 16:21 14:52-15:21/29	08:32 11:55-12:44/49 15:39 13:35-14:12/37
8	04:35 22:02	05:28 21:11	06:29 19:53	07:30 18:33	07:36 13:35-13:58/23 16:19 14:54-15:20/26	08:33 11:56-12:45/49 15:38 13:36-14:12/36
9	04:37 22:01	05:30 21:09	06:31 19:51	07:32 18:31	07:38 13:33-14:00/27 16:17 14:56-15:18/22	08:34 11:56-12:45/49 15:38 13:36-14:12/36
10	04:38 22:00	05:31 21:06	06:33 19:48	07:34 18:28	07:40 13:31-14:01/30 16:15 14:58-15:15/17	08:36 11:57-12:46/49 15:37 13:38-14:13/35
11	04:39 21:59	05:33 21:04	06:35 19:45	07:36 16:08-16:13/5 18:25	07:42 13:31-14:02/31 15:02-15:12/10 16:13 12:10-12:13/3	08:37 11:57-12:46/49 15:37 13:38-14:13/35
12	04:40 21:58	05:35 21:02	06:37 19:43	07:38 16:02-16:18/16 18:23	07:44 13:30-14:03/33 16:11 12:03-12:19/16	08:38 11:57-12:46/49 15:37 13:38-14:13/35
13	04:42 21:57	05:37 20:59	06:39 19:40	07:40 16:46-16:58/12 18:20 15:58-16:21/23	07:46 13:30-14:04/34 16:10 12:01-12:22/21	08:39 11:58-12:48/50 15:36 13:39-14:13/34
14	04:43 21:56	05:39 20:57	06:41 19:37	07:42 16:43-17:00/17 18:18 15:55-16:22/27	07:49 13:29-14:05/36 16:08 11:59-12:24/25	08:40 11:59-12:48/49 15:36 13:40-14:14/34
15	04:45 21:54	05:41 20:55	06:43 19:35	07:44 16:42-17:02/20 18:15 15:54-16:25/31	07:51 13:28-14:05/37 16:06 11:57-12:26/29	08:41 11:59-12:49/50 15:36 13:41-14:14/33
16	04:46 21:53	05:43 20:52	06:45 19:32	07:46 16:40-17:03/23 18:13 15:52-16:26/34	07:53 13:28-14:07/39 16:04 11:57-12:28/31	08:42 11:59-12:49/50 15:36 13:41-14:14/33
17	04:48 21:52	05:45 20:50	06:47 19:29	07:48 16:39-17:04/25 18:10 15:50-16:26/36	07:55 13:28-14:07/39 16:02 11:55-12:29/34	08:43 12:00-12:50/50 15:36 13:42-14:15/33
18	04:49 21:50	05:47 20:47	06:49 19:27	07:50 16:37-17:04/27 18:08 15:49-16:27/38	07:57 13:27-14:07/40 16:01 11:54-12:30/36	08:44 12:00-12:49/49 15:36 13:42-14:14/32
19	04:51 21:49	05:49 20:45	06:51 19:24	07:53 16:36-17:04/28 18:05 15:48-16:27/39	07:59 13:28-14:08/40 15:59 11:54-12:31/37	08:45 12:00-12:50/50 15:37 13:43-14:15/32
20	04:52 21:47	05:51 20:43	06:53 19:21	07:55 16:36-17:05/29 18:03 15:48-16:28/40	08:01 11:53-12:32/39 15:57 13:28-14:08/40	08:46 12:01-12:51/50 15:37 13:43-14:16/33
21	04:54 21:46	05:53 20:40	06:55 19:19	07:57 16:36-17:05/29 18:00 15:47-16:28/41	08:03 11:53-12:33/40 15:56 13:28-14:08/40	08:46 12:01-12:51/50 15:37 13:43-14:15/32
22	04:56 21:44	05:55 20:38	06:57 19:16	07:59 16:35-17:05/30 17:58 15:46-16:28/42	08:05 11:53-12:34/41 15:54 13:28-14:08/40	08:47 12:02-12:52/50 15:38 13:44-14:16/32
23	04:58 21:42	05:57 20:35	06:59 19:13	08:01 16:36-17:05/29 17:55 15:46-16:29/43	08:07 11:53-12:35/42 15:53 13:28-14:09/41	08:47 12:02-12:52/50 15:38 13:44-14:16/32
24	04:59 21:41	05:59 20:33	07:01 19:10	08:03 16:36-17:05/29 17:53 15:45-16:29/44	08:09 11:52-12:35/43 15:52 13:29-14:10/41	08:48 12:03-12:53/50 15:39 13:45-14:18/33
25	05:01 21:39	06:01 20:30	07:03 19:08	07:05 15:36-16:04/28 16:50 14:45-15:29/44	08:11 11:52-12:36/44 15:50 13:29-14:10/41	08:48 12:04-12:53/49 15:40 13:46-14:18/32
26	05:03 21:37	06:03 20:27	07:05 19:05	07:07 15:37-16:04/27 16:48 14:45-15:29/44	08:13 11:52-12:36/44 15:49 13:29-14:10/41	08:48 12:04-12:54/50 15:40 13:46-14:18/32
27	05:05 21:35	06:05 20:25	07:07 19:02	07:10 15:37-16:03/26 16:46 14:45-15:29/44	08:15 11:52-12:37/45 15:48 13:29-14:10/41	08:49 12:04-12:54/50 15:41 13:46-14:19/33
28	05:06 21:33	06:07 20:22	07:09 19:00	07:12 15:37-16:01/24 16:43 14:45-15:28/43	08:17 11:52-12:37/45 15:47 13:30-14:10/40	08:49 12:05-12:54/49 15:42 13:47-14:20/33
29	05:08 21:32	06:09 20:20	07:11 18:57	07:14 15:39-16:01/22 16:41 14:45-15:28/43	08:18 11:53-12:39/46 15:45 13:30-14:10/40	08:49 12:05-12:55/50 15:43 13:47-14:20/33
30	05:10 21:30	06:11 20:17	07:13 18:54	07:16 15:40-15:59/19 16:39 14:45-15:28/43	08:20 11:53-12:40/47 15:44 13:31-14:10/39	08:49 12:06-12:56/50 15:44 13:47-14:21/34
31	05:12 21:28	06:13 20:15		07:18 15:41-15:57/16 16:36 14:45-15:27/42		08:49 12:06-12:55/49 15:45 13:47-14:21/34
Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	0	0	0	1222	1924	2595

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
 Vilandes 3-6
 LV-1010 Riga
 0037167242411
 Laura Kurzemniece / laura.kurzemniece@environment.lv
 Calculated:
 15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: Pr25 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (33)
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	08:48 15:46	08:12 16:43	07:09 16:53-17:14/21 08:05-08:25/20 17:46 08:45-09:21/36 07:44-08:03/19	06:47 18:44-19:07/23 19:51 20:53	05:31 19:39-20:06/27 20:53 21:50	04:34 20:17-20:31/14 21:50 22:00
2	08:48 15:48	08:11 16:46	07:06 16:52-17:14/22 08:06-08:23/17 17:48 08:46-09:19/33 07:42-08:04/22	06:44 18:44-19:06/22 19:53 20:55	05:28 19:39-20:05/26 20:55 21:52	04:33 20:19-20:30/11 21:52 22:00
3	08:48 15:49	08:09 16:48	07:04 16:52-17:15/23 08:09-08:21/12 17:50 08:48-09:18/30 07:41-08:06/25	06:41 18:44-19:04/20 19:55 20:57	05:26 19:39-20:05/26 20:57 21:53	04:32 20:20-20:29/9 21:53 22:00
4	08:47 15:50	08:07 16:50	07:01 16:51-17:15/24 07:40-08:07/27 17:52 08:49-09:15/26	06:39 18:45-19:04/19 19:57 20:59	05:24 19:40-20:05/25 20:59 21:54	04:31 20:23-20:28/5 21:54 22:00
5	08:47 15:52	08:05 16:52	06:58 16:51-17:14/23 07:38-08:07/29 17:54 08:51-09:12/21	06:36 18:46-19:01/15 19:59 20:59	05:22 19:40-20:04/24 21:01 20:22-20:25/3	04:30 20:22-20:25/3 21:55 22:00
6	08:46 15:53	08:03 08:57-09:11/14 16:55	06:56 16:52-17:14/22 07:38-08:08/30 17:56 08:54-09:09/15	06:33 18:49-18:59/10 20:01 20:59	05:19 19:41-20:03/22 21:03 20:18-20:29/11	04:29 20:18-20:29/11 21:57 22:00
7	08:46 15:55	08:00 08:55-09:14/19 16:57	06:53 16:52-17:13/21 17:58 07:37-08:08/31	06:31 20:03 20:03 20:03	05:17 19:42-20:02/20 21:05 20:16-20:31/15	04:28 20:16-20:31/15 21:58 22:00
8	08:45 15:56	07:58 08:53-09:17/24 16:59	06:51 16:52-17:12/20 18:01 07:36-08:07/31	06:28 20:05 20:05 20:05	05:15 19:43-20:01/18 21:07 20:14-20:33/19	04:27 20:14-20:33/19 21:59 22:00
9	08:44 15:58	07:56 08:50-09:18/28 17:01	06:48 16:52-17:10/18 18:03 07:37-08:08/31	06:26 20:08 20:08 20:08	05:13 19:44-20:00/16 21:10 20:13-20:34/21	04:27 20:13-20:34/21 22:00 22:00
10	08:44 15:59	07:54 08:49-09:20/31 17:03	06:45 16:54-17:09/15 18:05 07:36-08:07/31	06:23 20:10 20:10 20:10	05:11 19:46-19:58/12 21:11 20:12-20:34/22	04:26 20:12-20:34/22 22:01 22:01
11	08:43 16:01	07:52 08:48-09:21/33 17:06	06:43 16:56-17:06/10 18:07 07:36-08:06/30	06:20 20:12 20:12 20:12	05:09 19:48-19:55/7 21:13 20:11-20:35/24	04:26 20:11-20:35/24 22:02 22:02
12	08:42 16:03	07:50 08:47-09:22/35 17:08	06:40 07:37-08:06/29 18:09 07:37-08:05/28	06:18 20:14 20:14 20:14	05:07 20:11-20:35/24 21:15 20:11-20:36/25	04:25 20:11-20:36/25 22:03 22:03
13	08:41 16:04	07:47 08:46-09:24/38 17:10	06:37 07:37-08:05/28 18:11 07:37-08:03/26	06:15 20:16 20:16 20:16	05:05 20:11-20:36/25 21:17 20:10-20:36/26	04:25 20:11-20:36/25 22:04 22:04
14	08:40 16:06	07:45 08:45-09:24/39 17:12	06:35 07:37-08:03/26 18:13 07:39-08:03/24	06:13 20:18 20:18 20:18	05:03 20:10-20:36/26 21:19 20:10-20:36/26	04:24 20:10-20:36/26 22:04 22:04
15	08:39 16:08	07:43 08:45-09:25/40 17:15	06:32 07:39-08:03/24 18:15 07:40-08:01/21	06:10 20:20 20:20 20:20	05:01 20:10-20:36/26 21:21 20:09-20:36/27	04:24 20:10-20:36/26 22:05 22:05
16	08:38 16:10	07:40 08:44-09:25/41 17:17	06:30 07:40-08:01/21 18:18 07:41-07:58/17	06:07 20:22 20:22 20:22	04:59 20:09-20:36/27 21:23 20:10-20:37/27	04:24 20:09-20:36/27 22:06 22:06
17	08:36 16:12	07:38 08:44-09:26/42 17:19	06:27 07:41-07:58/17 18:20 07:44-07:54/10	06:05 20:24 20:24 20:24	04:57 20:10-20:37/27 21:25 20:10-20:36/26	04:24 20:10-20:36/26 22:06 22:06
18	08:35 16:14	07:36 08:43-09:25/42 17:21	06:24 07:44-07:54/10 18:22 08:07-08:25/18	06:02 20:26 20:26 20:26	04:55 20:10-20:36/26 21:27 20:10-20:37/27	04:23 20:10-20:36/26 22:07 22:07
19	08:34 16:16	07:33 08:43-09:26/43 17:24	06:22 18:24 18:24 08:06-08:27/21	06:00 20:28 20:28 20:28	04:53 20:10-20:37/27 21:29 20:10-20:36/26	04:23 20:10-20:37/27 22:07 22:07
20	08:33 16:18	07:31 08:42-09:26/44 17:26	06:19 18:26 18:26 08:05-08:27/22	05:57 20:30 20:30 20:30	04:52 20:10-20:36/26 21:31 20:10-20:36/26	04:23 20:10-20:36/26 22:07 22:07
21	08:31 16:20	07:29 08:43-09:26/43 17:28	06:16 18:28 18:28 08:05-08:28/23	05:55 19:48-20:00/12 20:32 20:32	04:50 20:10-20:36/26 21:32 20:10-20:36/26	04:24 20:10-20:36/26 22:08 22:08
22	08:30 16:22	07:26 08:42-09:26/44 17:30	06:13 18:30 18:30 08:04-08:28/24	05:52 19:46-20:02/16 20:35 20:35	04:48 20:11-20:36/25 21:34 20:11-20:36/25	04:24 20:11-20:36/25 22:08 22:08
23	08:28 16:24	07:24 08:43-09:26/43 17:32	06:11 17:52-18:04/12 18:32 08:04-08:29/25	05:50 19:44-20:03/19 20:37 20:37	04:47 20:11-20:36/25 21:36 20:11-20:35/24	04:24 20:11-20:36/25 22:08 22:08
24	08:27 16:26	07:21 08:43-09:25/42 17:35	06:08 17:49-18:06/17 18:34 08:03-08:28/25	05:47 19:43-20:04/21 20:39 20:39	04:45 20:11-20:35/24 21:38 20:12-20:35/23	04:24 20:11-20:35/24 22:08 22:08
25	08:25 16:28	07:19 17:01-17:07/6 08:03-08:28/25 17:37	06:05 17:47-18:07/20 18:36 17:47-18:08/21	05:45 19:42-20:05/23 20:41 20:41	04:43 20:12-20:35/23 21:39 20:13-20:35/22	04:25 20:12-20:35/23 22:08 22:08
26	08:23 16:30	07:16 16:58-17:10/12 08:04-08:28/24 17:39	06:03 17:47-18:08/21 18:38 17:45-18:08/23	05:42 19:41-20:05/24 20:43 20:43	04:42 20:13-20:35/22 21:41 20:14-20:35/21	04:25 20:13-20:35/22 22:08 22:08
27	08:22 16:32	07:14 16:55-17:12/17 08:04-08:27/23 17:41	06:00 17:45-18:08/23 18:41 17:44-18:08/24	05:40 19:40-20:06/26 20:45 20:45	04:41 20:14-20:35/21 21:43 20:14-20:34/20	04:26 20:14-20:35/21 22:08 22:08
28	08:20 16:35	07:11 16:54-17:13/19 08:05-08:26/21 17:43	05:57 17:44-18:08/24 18:43 18:44-19:09/25	05:38 19:40-20:06/26 20:47 20:47	04:39 20:14-20:34/20 21:44 20:15-20:33/18	04:26 20:14-20:34/20 22:08 22:08
29	08:18 16:37		06:55 18:44-19:09/25 19:45 18:44-19:08/24	05:35 19:40-20:06/26 20:49 20:49	04:38 20:15-20:33/18 21:46 20:15-20:33/18	04:27 20:15-20:33/18 22:07 22:07
30	08:16 16:39		06:52 18:44-19:08/24 19:47 18:43-19:07/24	05:33 19:39-20:06/27 20:51 20:51	04:37 20:15-20:33/18 21:47 20:16-20:32/16	04:28 20:15-20:33/18 22:07 22:07
31	08:14 16:41		06:49 18:43-19:07/24 19:49 19:49		04:35 20:16-20:32/16 21:49 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	0	1193	1080	329	810	39

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: Pr25 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (33)
Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:28 22:07	05:14 20:21-20:45/24 21:26	06:15 20:12	07:15 08:16-08:45/29 18:52	07:20 08:19-08:49/30 16:34	08:22 15:43
2	04:29 22:06	05:16 19:57-20:07/10 21:24 20:22-20:45/23	06:17 20:09	07:17 17:37-17:44/7 18:49 08:15-08:45/30	07:23 08:20-08:47/27 16:32	08:24 15:42
3	04:30 22:06	05:18 19:55-20:09/14 21:21 20:23-20:44/21	06:19 20:07	07:19 17:33-17:47/14 18:46 08:15-08:45/30	07:25 08:22-08:45/23 16:30	08:25 15:41
4	04:31 22:05	05:20 19:54-20:11/17 21:19 20:24-20:43/19	06:21 20:04	07:21 17:31-17:48/17 18:44 08:14-08:45/31	07:27 08:25-08:44/19 16:28	08:27 15:41
5	04:32 22:04	05:22 19:53-20:12/19 21:17 20:25-20:42/17	06:23 20:01	07:23 17:29-17:49/20 18:41 08:14-08:45/31	07:29 08:28-08:40/12 16:25	08:28 15:40
6	04:33 22:04	05:23 19:51-20:12/21 21:15 20:26-20:40/14	06:25 18:44-18:54/10 19:59	07:25 17:28-17:49/21 18:38 08:13-08:44/31	07:31 16:23	08:30 15:39
7	04:34 22:03	05:25 19:50-20:13/23 21:13 20:28-20:38/10	06:27 18:42-18:56/14 19:56	07:27 17:27-17:49/22 08:13-08:43/30 18:36 09:32-09:42/10	07:33 16:21	08:31 15:39
8	04:35 20:30-20:34/4 22:02	05:27 19:49-20:14/25 21:11	06:29 18:40-18:58/18 19:53	07:29 17:26-17:49/23 08:13-08:42/29 18:33 09:27-09:46/19	07:36 16:19	08:33 15:38
9	04:36 20:28-20:36/8 22:01	05:29 19:49-20:14/25 21:08	06:31 18:38-18:58/20 19:51	07:32 17:26-17:49/23 08:14-08:42/28 18:30 09:24-09:48/24	07:38 16:17	08:34 15:37
10	04:38 20:27-20:37/10 22:00	05:31 19:49-20:15/26 21:06	06:33 18:37-18:59/22 19:48	07:34 17:25-17:48/23 08:45-08:53/8 18:28 09:23-09:51/28 08:15-08:41/26	07:40 16:15	08:36 15:37
11	04:39 20:26-20:39/13 21:59	05:33 19:47-20:14/27 21:04	06:35 18:36-18:59/23 19:45	07:36 17:26-17:49/23 08:42-08:56/14 18:25 09:21-09:52/31 08:16-08:40/24	07:42 16:13	08:37 15:37
12	04:40 20:25-20:40/15 21:58	05:35 19:47-20:14/27 21:02	06:37 18:35-18:59/24 19:43	07:38 17:26-17:48/22 08:40-08:57/17 18:23 09:19-09:53/34 08:17-08:38/21	07:44 16:11	08:38 15:36
13	04:42 20:24-20:41/17 21:57	05:37 19:47-20:14/27 20:59	06:39 18:35-18:59/24 19:40	07:40 17:27-17:47/20 08:38-08:58/20 18:20 09:18-09:54/36 08:18-08:35/17	07:46 16:09	08:39 15:36
14	04:43 20:23-20:42/19 21:56	05:39 19:47-20:14/27 20:57	06:41 18:35-18:59/24 19:37	07:42 17:27-17:45/18 08:37-08:59/22 18:18 09:16-09:55/39 08:21-08:32/11	07:48 16:08	08:40 15:36
15	04:45 20:24-20:43/19 21:54	05:41 19:47-20:14/27 20:55	06:43 18:35-18:58/23 19:35	07:44 17:28-17:43/15 08:36-09:00/24 18:15 09:16-09:56/40	07:51 16:06	08:41 15:36
16	04:46 20:23-20:43/20 21:53	05:43 19:48-20:13/25 20:52	06:45 18:35-18:58/23 19:32	07:46 17:31-17:41/10 08:36-09:00/24 18:12 09:15-09:56/41	07:53 16:04	08:42 15:36
17	04:48 20:22-20:44/22 21:52	05:45 19:48-20:13/25 20:50	06:47 18:35-18:57/22 19:29	07:48 09:14-09:56/42 18:10 08:35-09:00/25	07:55 16:02	08:43 15:36
18	04:49 20:22-20:45/23 21:50	05:47 19:48-20:11/23 20:47	06:49 18:36-18:55/19 19:27	07:50 09:14-09:56/42 18:07 08:34-08:59/25	07:57 16:01	08:44 15:36
19	04:51 20:21-20:45/24 21:49	05:49 19:49-20:10/21 20:45	06:51 18:36-18:53/17 19:24	07:52 09:13-09:56/43 18:05 08:35-09:00/25	07:59 15:59	08:45 15:37
20	04:52 20:21-20:46/25 21:47	05:51 19:50-20:08/18 20:42	06:53 18:37-18:50/13 19:21	07:55 09:14-09:57/43 18:02 08:35-08:59/24	08:01 15:57	08:46 15:37
21	04:54 20:21-20:46/25 21:46	05:53 19:51-20:07/16 20:40	06:55 18:40-18:46/6 19:18	07:57 09:13-09:56/43 18:00 08:35-08:58/23	08:03 15:56	08:46 15:37
22	04:56 20:21-20:46/25 21:44	05:55 19:54-20:04/10 20:37	06:57 19:16	07:59 09:13-09:56/43 17:58 08:35-08:57/22	08:05 15:54	08:47 15:38
23	04:57 20:20-20:46/26 21:42	05:57 20:35	06:59 19:13	08:01 09:13-09:56/43 17:55 08:37-08:57/20	08:07 15:53	08:47 15:38
24	04:59 20:20-20:47/27 21:41	05:59 20:32	07:01 19:10	08:03 09:13-09:56/43 17:53 08:38-08:55/17	08:09 15:51	08:48 15:39
25	05:01 20:21-20:47/26 21:39	06:01 20:30	07:03 08:29-08:36/7 19:08	07:05 08:13-08:55/42 16:50 07:39-07:53/14	08:11 15:50	08:48 15:39
26	05:03 20:20-20:47/27 21:37	06:03 20:27	07:05 08:25-08:40/15 19:05	07:07 08:14-08:55/41 16:48 07:42-07:51/9	08:13 15:49	08:48 15:40
27	05:05 20:20-20:47/27 21:35	06:05 20:25	07:07 08:22-08:42/20 19:02	07:10 08:14-08:54/40 16:46	08:15 15:48	08:48 15:41
28	05:06 20:21-20:47/26 21:33	06:07 20:22	07:09 08:20-08:43/23 19:00	07:12 08:15-08:53/38 16:43	08:17 15:46	08:49 15:42
29	05:08 20:20-20:46/26 21:31	06:09 20:20	07:11 08:19-08:44/25 18:57	07:14 08:16-08:53/37 16:41	08:18 15:45	08:49 15:43
30	05:10 20:21-20:47/26 21:30	06:11 20:17	07:13 08:17-08:45/28 18:54	07:16 08:17-08:51/34 16:39	08:20 15:44	08:49 15:44
31	05:12 20:21-20:46/25 21:28	06:13 20:14	 	07:18 08:17-08:50/33 16:36	 	08:49 15:45
Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	505	581	420	1888	111	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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
 Vilandes 3-6
 LV-1010 Riga
 0037167242411
 Laura Kurzemniece / laura.kurzemniece@environment.lv
 Calculated:
 15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: Pr3b - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (36)
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

No operational time reduction. It is assumed the WTGs are always running
 with worst case wind direction.

	January	February	March	April	May	June
1	08:48 15:46	08:12 15:25-15:51/26 16:43 08:59-09:24/25	07:09 16:23-16:53/30 17:46	06:47 18:22-18:59/37 19:51	05:31 18:58-19:38/40 20:53	04:34 20:56-21:12/16 21:50
2	08:48 15:48	08:11 15:25-15:51/26 16:46 08:59-09:25/26	07:06 16:23-16:53/30 17:48	06:44 18:21-18:59/38 19:53	05:28 18:59-19:37/38 20:55	04:33 20:56-21:13/17 21:52
3	08:48 15:49	08:09 16:10-16:13/3 08:59-09:25/26 16:48 15:26-15:51/25	07:04 16:23-16:52/29 17:50	06:41 18:20-18:59/39 19:55	05:26 18:59-19:37/38 20:57	04:32 20:55-21:14/19 21:53
4	08:47 15:50	08:07 16:06-16:16/10 09:00-09:25/25 16:50 15:26-15:50/24	07:01 17:17-17:23/6 17:52 16:24-16:52/28	06:39 18:20-18:59/39 19:57 19:13-19:26/13	05:24 19:00-19:36/36 20:59	04:31 20:56-21:15/19 21:54
5	08:47 15:52	08:05 16:04-16:18/14 08:59-09:24/25 16:52 15:26-15:50/24	06:58 17:13-17:25/12 17:54 16:25-16:50/25	06:36 18:20-18:58/38 19:59 19:10-19:27/17	05:22 19:01-19:36/35 21:01	04:30 20:55-21:16/21 21:55
6	08:46 15:53	08:02 16:03-16:21/18 09:00-09:24/24 16:54 15:27-15:50/23	06:56 17:11-17:27/16 17:56 16:26-16:50/24	06:33 18:20-18:58/38 20:01 19:09-19:29/20	05:19 19:01-19:35/34 21:03	04:29 20:55-21:16/21 21:57
7	08:46 15:55	08:00 16:02-16:22/20 09:01-09:24/23 16:57 15:29-15:49/20	06:53 17:10-17:30/20 17:58 16:27-16:48/21	06:31 18:20-18:57/37 20:03 19:07-19:30/23	05:17 19:02-19:34/32 21:05	04:28 20:55-21:17/22 21:58
8	08:45 15:56	07:58 16:01-16:22/21 09:02-09:24/22 16:59 15:29-15:48/19	06:51 17:09-17:32/23 18:01 16:29-16:45/16	06:28 18:20-18:56/36 20:05 19:05-19:30/25	05:15 19:03-19:33/30 21:07	04:28 20:55-21:17/22 21:59
9	08:44 15:58	07:56 16:01-16:23/22 09:02-09:22/20 17:01 15:31-15:46/15	06:48 17:07-17:33/26 18:03 16:31-16:42/11	06:26 18:20-18:56/36 20:07 19:05-19:31/26	05:13 19:05-19:31/26 21:09	04:27 20:54-21:17/23 22:00
10	08:44 15:59	07:54 16:01-16:24/23 09:04-09:21/17 17:03 15:34-15:45/11	06:45 17:08-17:34/26 18:05	06:23 18:20-18:54/34 20:10 19:04-19:31/27	05:11 19:06-19:30/24 21:11	04:26 20:55-21:18/23 22:01
11	08:43 16:01	07:52 16:00-16:24/24 17:06 09:05-09:19/14	06:43 17:07-17:37/30 18:07	06:20 18:22-18:54/32 20:12 19:04-19:31/27	05:09 19:07-19:28/21 21:13	04:26 20:55-21:18/23 22:02
12	08:42 16:03	07:50 16:00-16:24/24 17:08 09:09-09:17/8	06:40 17:06-17:40/34 18:09	06:18 18:22-18:52/30 20:14 19:03-19:31/28	05:07 19:09-19:26/17 21:15	04:25 20:55-21:18/23 22:03
13	08:41 16:04	07:47 16:00-16:24/24 17:10	06:37 17:07-17:43/36 18:11	06:15 18:24-18:51/27 20:16 19:03-19:31/28	05:05 19:13-19:24/11 21:17	04:25 20:55-21:19/24 22:03
14	08:40 16:06	07:45 16:01-16:24/23 17:12	06:35 17:07-17:45/38 18:13	06:13 18:25-18:49/24 20:18 19:03-19:32/29	05:03 19:05-19:31/26 21:19	04:24 20:55-21:19/24 22:04
15	08:39 16:08	07:43 16:01-16:24/23 17:15	06:32 17:07-17:47/40 18:15	06:10 18:27-18:47/20 20:20 19:03-19:35/32	05:01 19:06-19:30/24 21:21	04:24 20:56-21:20/24 22:05
16	08:38 16:10	07:40 16:01-16:23/22 17:17 16:44-16:45/1	06:29 17:09-17:50/41 18:18	06:07 18:29-18:43/14 20:22 19:03-19:35/32	04:59 19:04-19:37/33 21:23	04:24 20:55-21:19/24 22:05
17	08:36 16:12	07:38 16:03-16:22/19 17:19 16:39-16:48/9	06:27 17:10-17:52/42 18:20	06:05 19:04-19:37/33 20:24	04:57 19:03-19:37/34 21:25	04:24 20:55-21:19/24 22:06
18	08:35 16:14	07:36 16:04-16:21/17 17:21 16:36-16:50/14	06:24 17:11-17:53/42 18:22	06:02 19:03-19:37/34 20:26	04:55 19:03-19:37/34 21:27	04:23 20:55-21:20/25 22:06
19	08:34 16:16	07:33 16:06-16:19/13 17:24 16:33-16:53/20	06:21 17:13-17:56/43 18:24	06:00 19:03-19:38/35 20:28	04:53 19:03-19:38/35 21:29	04:23 20:55-21:20/25 22:07
20	08:32 15:32-15:37/5 16:18	07:31 16:08-16:16/8 17:26 16:30-16:54/24	06:19 17:15-17:58/43 18:26	05:57 19:01-19:38/37 20:30	04:52 19:01-19:38/37 21:31	04:23 20:56-21:21/25 22:07
21	08:31 15:30-15:41/11 16:20	07:28 16:29-16:55/26 17:28	06:16 17:15-17:58/43 18:28	05:55 19:01-19:39/38 20:32	04:50 19:01-19:39/38 21:32	04:24 20:57-21:21/24 22:08
22	08:30 15:29-15:43/14 16:22 09:08-09:11/3	07:26 16:27-16:55/28 17:30	06:13 17:16-17:58/42 18:30	05:52 19:00-19:40/40 20:34	04:48 19:00-19:40/40 21:34	04:24 20:57-21:21/24 22:08
23	08:28 15:27-15:44/17 16:24 09:04-09:15/11	07:24 16:26-16:55/29 17:32	06:11 17:17-17:59/42 18:32	05:50 18:59-19:39/40 20:37	04:47 18:59-19:39/40 21:36	04:24 20:56-21:21/25 22:08
24	08:26 15:27-15:45/18 16:26 09:03-09:17/14	07:21 16:25-16:56/31 17:35	06:08 17:18-17:59/41 18:34	05:47 18:59-19:40/41 20:39	04:45 18:59-19:40/41 21:38	04:24 20:57-21:22/25 22:08
25	08:25 15:26-15:46/20 16:28 09:01-09:18/17	07:19 16:24-16:55/31 17:37	06:05 17:19-17:58/39 18:36	05:45 18:59-19:40/41 20:41	04:43 18:59-19:40/41 21:39	04:25 20:57-21:21/24 22:08
26	08:23 15:25-15:47/22 16:30 09:01-09:20/19	07:16 16:24-16:55/31 17:39	06:03 17:22-17:58/36 18:38	05:42 18:58-19:39/41 20:43	04:42 18:58-19:39/41 21:41	04:25 20:58-21:22/24 22:08
27	08:22 15:25-15:48/23 16:32 09:01-09:22/21	07:14 16:24-16:54/30 17:41	06:00 17:27-17:57/30 18:40	05:40 18:58-19:39/41 20:45	04:41 18:58-19:39/41 21:43	04:26 20:58-21:22/24 22:08
28	08:20 15:25-15:49/24 16:35 09:00-09:23/23	07:11 16:23-16:53/30 17:43	05:57 17:25-17:57/32 18:43	05:38 18:58-19:39/41 20:47	04:39 21:00-21:06/6 21:44	04:26 20:58-21:22/24 22:08
29	08:18 15:25-15:49/24 16:37 08:59-09:22/23		06:55 18:24-18:59/35 19:45	05:35 18:59-19:39/40 20:49	04:38 20:59-21:08/9 21:46	04:27 20:58-21:22/24 22:07
30	08:16 15:25-15:50/25 16:39 08:59-09:23/24		06:52 18:23-18:59/36 19:47	05:33 18:58-19:38/40 20:51	04:37 20:57-21:09/12 21:47	04:28 20:59-21:22/23 22:07
31	08:14 15:25-15:50/25 16:41 08:59-09:24/25		06:49 18:22-18:59/37 19:49		04:35 20:57-21:10/13 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	408	1100	1145	1388	422	685

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Laura Kurzemniece / laura.kurzemniece@environment.lv
Calculated:
15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: Pr3b - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (36)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:28 20:59-21:23/24 22:07	05:14 19:19-19:37/18 21:26	06:15 18:21-18:53/32 20:12 19:03-19:30/27	07:15 17:46-18:21/35 18:52	07:20 15:30-15:54/24 08:33-08:51/18 16:34 15:03-15:15/12	08:22 15:43
2	04:29 20:59-21:22/23 22:06	05:16 19:17-19:39/22 21:24	06:17 18:19-18:53/34 20:09 19:03-19:30/27	07:17 17:46-18:17/31 18:49	07:23 15:30-15:53/23 08:32-08:52/20 16:32 15:01-15:16/15	08:24 15:42
3	04:30 20:59-21:22/23 22:06	05:18 19:16-19:41/25 21:21	06:19 18:18-18:54/36 20:07 19:03-19:29/26	07:19 17:46-18:14/28 18:46	07:25 15:31-15:52/21 08:31-08:53/22 16:30 14:59-15:17/18	08:25 15:41
4	04:31 21:00-21:22/22 22:05	05:20 19:14-19:42/28 21:19	06:21 18:18-18:54/36 20:04 19:03-19:28/25	07:21 17:45-18:12/27 18:44 17:12-17:17/5	07:27 15:32-15:52/20 08:31-08:54/23 16:28 14:58-15:19/21	08:27 15:41
5	04:32 21:00-21:22/22 22:04	05:22 19:13-19:43/30 21:17	06:23 18:16-18:53/37 20:01 19:03-19:26/23	07:23 17:45-18:10/25 18:41 17:07-17:21/14	07:29 15:33-15:50/17 08:30-08:54/24 16:25 14:57-15:19/22	08:28 15:40
6	04:33 21:01-21:22/21 22:04	05:23 19:11-19:43/32 21:15	06:25 18:15-18:53/38 19:59 19:04-19:24/20	07:25 17:46-18:07/21 18:38 17:04-17:23/19	07:31 15:35-15:49/14 08:30-08:55/25 16:23 14:57-15:21/24	08:30 15:39
7	04:34 21:01-21:22/21 22:03	05:25 19:11-19:44/33 21:13	06:27 18:15-18:53/38 19:56 19:05-19:23/18	07:27 17:46-18:05/19 18:36 17:02-17:24/22	07:33 15:37-15:46/9 08:29-08:55/26 16:21 14:56-15:21/25	08:31 15:39
8	04:35 21:02-21:22/20 22:02	05:27 19:10-19:45/35 21:11	06:29 18:14-18:53/39 19:53 19:07-19:20/13	07:29 17:48-18:02/14 18:33 17:00-17:25/25	07:36 14:56-15:21/25 16:19 08:29-08:55/26	08:33 15:38
9	04:36 21:02-21:21/19 22:01	05:29 19:09-19:46/37 21:08	06:31 18:14-18:53/39 19:51 19:12-19:14/2	07:32 17:49-17:59/10 18:30 16:59-17:25/26	07:38 14:56-15:22/26 16:17 08:30-08:56/26	08:34 15:37
10	04:38 21:03-21:21/18 22:00	05:31 19:09-19:46/37 21:06	06:33 18:14-18:52/38 19:48	07:34 16:58-17:26/28 18:28	07:40 14:56-15:21/25 16:15 08:30-08:55/25	08:36 15:37
11	04:39 21:04-21:21/17 21:59	05:33 19:07-19:46/39 21:04	06:35 18:14-18:52/38 19:45	07:36 16:58-17:27/29 18:25	07:42 14:57-15:22/25 16:13 08:31-08:56/25	08:37 15:37
12	04:40 21:05-21:19/14 21:58	05:35 19:07-19:46/39 21:02	06:37 18:14-18:51/37 19:43	07:38 16:57-17:27/30 18:23	07:44 14:56-15:22/26 16:11 08:31-08:55/24	08:38 15:36
13	04:42 21:06-21:18/12 21:57	05:37 19:06-19:47/41 20:59	06:39 18:14-18:50/36 19:40	07:40 16:56-17:27/31 18:20	07:46 14:56-15:21/25 16:09 08:31-08:54/23	08:39 15:36
14	04:43 21:06-21:17/11 21:55	05:39 19:06-19:47/41 20:57	06:41 18:15-18:49/34 19:37	07:42 16:56-17:26/30 18:18	07:48 14:58-15:22/24 16:08 08:32-08:54/22	08:40 15:36
15	04:45 21:09-21:16/7 21:54	05:41 19:06-19:47/41 20:55	06:43 18:15-18:48/33 19:35	07:44 16:56-17:26/30 18:15	07:51 14:58-15:21/23 16:06 08:33-08:54/21	08:41 15:36
16	04:46 21:11-21:15/4 21:53	05:43 19:06-19:47/41 20:52	06:45 18:16-18:46/30 19:32	07:46 16:56-17:27/31 18:12	07:53 14:58-15:20/22 16:04 08:34-08:53/19	08:42 15:36
17	04:48 21:51	05:45 19:06-19:47/41 20:50	06:47 18:12-18:47/35 19:29	07:48 16:56-17:27/31 18:10	07:55 15:00-15:20/20 16:02 08:35-08:52/17	08:43 15:36
18	04:49 21:50	05:47 19:05-19:46/41 20:47	06:49 18:07-18:46/39 19:26	07:50 16:57-17:27/30 18:07	07:57 15:01-15:19/18 16:01 08:37-08:51/14	08:44 15:36
19	04:51 21:49	05:49 19:05-19:45/40 20:45	06:51 18:05-18:45/40 19:24	07:52 16:57-17:26/29 18:05	07:59 15:01-15:18/17 15:59 08:39-08:50/11	08:45 15:37
20	04:52 21:47	05:51 19:05-19:45/40 20:42	06:53 18:03-18:45/42 19:21	07:54 16:59-17:26/27 18:02	08:01 15:04-15:18/14 15:57 08:43-08:46/3	08:45 15:37
21	04:54 21:46	05:53 19:05-19:44/39 20:40	06:55 18:01-18:44/43 19:18	07:57 17:00-17:25/25 18:00	08:03 15:05-15:16/11 15:56	08:46 15:37
22	04:56 21:44	05:55 19:05-19:44/39 20:37	06:57 18:00-18:43/43 19:16	07:59 16:37-16:47/10 17:58 17:01-17:24/23	08:05 15:08-15:13/5 15:54	08:47 15:38
23	04:57 21:42	05:57 19:06-19:43/37 20:35	06:59 17:59-18:42/43 19:13	08:01 16:34-16:49/15 17:55 17:03-17:22/19	08:07 15:53	08:47 15:38
24	04:59 21:41	05:59 19:07-19:42/35 20:32	07:01 17:57-18:40/43 19:10	08:03 16:33-16:51/18 17:53 17:07-17:20/13	08:09 15:51	08:48 15:39
25	05:01 21:39	06:01 19:07-19:41/34 20:30	07:03 17:55-18:37/42 19:08	07:05 15:32-15:52/20 16:50 16:09-16:17/8	08:11 15:50	08:48 15:39
26	05:03 21:37	06:03 19:06-19:39/33 20:27	07:05 17:52-18:34/42 19:05	07:07 15:31-15:52/21 16:48	08:13 15:49	08:48 15:40
27	05:05 21:35	06:05 18:31-18:45/14 20:25	07:07 17:50-18:31/41 19:02	07:09 15:31-15:53/22 16:46	08:15 15:48	08:48 15:41
28	05:06 21:33	06:07 18:28-18:48/20 20:22	07:09 17:48-18:29/41 19:00	07:12 15:30-15:53/23 16:43	08:16 15:46	08:49 15:42
29	05:08 21:31	06:09 18:26-18:50/24 20:20	07:11 17:47-18:26/39 18:57	07:14 15:29-15:53/24 16:41	08:18 15:45	08:49 15:43
30	05:10 19:26-19:31/5 21:30	06:11 18:24-18:51/27 20:17	07:13 17:46-18:23/37 18:54	07:16 15:30-15:54/24 16:39 08:37-08:47/10	08:20 15:44	08:49 15:44
31	05:12 19:22-19:36/14 21:28	06:13 18:22-18:52/30 20:14	07:15 17:45-18:22/37 18:54	07:18 15:30-15:53/23 08:34-08:49/15 16:36 15:07-15:09/2	08:22 15:44	08:48 15:45
Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	297	1181	1326	962	985	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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: PrRR3 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (34)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	08:48 10:02-10:36/34 15:46	08:12 16:43	07:09 17:07-17:10/10 15:57-16:14/17 17:46 16:31-17:01/30 07:53-08:19/26	06:47 18:06-19:19/73 19:51	05:31 20:53	04:34 19:46-20:35/49 21:50
2	08:48 10:03-10:36/33 15:48	08:11 16:46	07:06 17:05-17:18/13 16:00-16:09/9 17:48 16:30-17:01/31 07:53-08:19/26	06:44 18:06-19:20/74 19:53	05:28 20:55	04:33 19:46-20:35/49 21:52
3	08:48 10:04-10:36/32 15:49	08:09 16:48	07:04 17:03-17:20/17 07:54-08:19/25 17:50 16:29-17:00/31	06:41 18:06-19:23/77 19:55	05:26 20:57	04:32 19:46-20:34/48 21:53
4	08:47 10:04-10:24/20 15:50 10:25-10:36/11	08:07 16:50	07:01 17:03-17:23/20 07:54-08:17/23 17:52 16:30-17:01/31	06:39 18:46-19:28/42 19:57 18:07-18:44/37	05:24 20:59	04:31 19:47-20:35/48 21:54
5	08:47 10:04-10:24/20 15:52 10:26-10:35/9	08:05 16:52	06:58 17:02-17:24/22 07:54-08:16/22 17:54 16:30-17:00/30	06:36 18:47-19:30/43 19:59 18:07-18:43/36	05:22 21:01	04:30 19:47-20:35/48 21:55
6	08:46 10:06-10:25/19 15:53 10:29-10:34/5	08:02 16:54	06:56 17:01-17:23/22 07:56-08:15/19 17:56 16:30-17:00/30	06:33 18:47-19:32/45 20:01 18:08-18:42/34	05:19 20:19-20:23/4 21:03	04:29 19:47-20:35/48 21:57
7	08:46 10:07-10:25/18 15:55	08:00 16:01-16:11/10 16:57	06:53 17:01-17:24/23 07:57-08:13/16 17:58 16:30-16:59/29	06:31 18:47-19:33/46 20:03 18:09-18:40/31	05:17 20:15-20:27/12 21:05	04:28 19:48-20:36/48 21:58
8	08:45 10:08-10:25/17 15:56	07:58 15:57-16:14/17 16:59	06:51 17:01-17:27/26 07:59-08:09/10 18:01 16:31-16:57/26	06:28 18:47-19:33/46 20:05 18:09-18:38/29	05:15 20:13-20:29/16 21:07	04:27 19:47-20:35/48 21:59
9	08:44 10:08-10:25/17 15:58	07:56 15:56-16:16/20 17:01	06:48 17:01-17:30/29 18:03 16:31-16:56/25	06:26 18:48-19:34/46 20:07 18:11-18:37/26	05:13 20:11-20:31/20 21:09	04:27 19:47-20:35/48 22:00
10	08:44 10:10-10:25/15 15:59	07:54 15:54-16:18/24 17:03	06:45 17:02-17:37/35 18:05 16:33-16:55/22	06:23 18:48-19:36/48 20:10 18:13-18:34/21	05:11 20:06-20:32/26 21:11	04:26 19:48-20:36/48 22:01
11	08:43 10:10-10:23/13 16:01	07:52 16:32-16:33/1 17:06 15:53-16:19/26	06:43 17:03-17:39/36 18:07 16:35-16:52/17	06:20 18:50-19:41/51 20:12 18:16-18:32/16	05:09 20:01-20:33/32 21:13	04:26 19:48-20:36/48 22:02
12	08:42 10:12-10:23/11 16:03	07:50 16:28-16:36/8 17:08 15:52-16:20/28	06:40 17:04-17:40/36 18:09 16:37-16:49/12	06:18 18:51-19:43/52 20:14 18:20-18:26/6	05:07 19:58-20:33/35 21:15	04:25 19:48-20:36/48 22:03
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26	08:23 16:30	07:16 16:30-17:00/30 07:54-08:20/26 17:39 15:52-16:20/28	06:03 17:09-18:09/60 18:38	05:42 19:08-19:40/32 20:43	04:42 19:47-20:36/49 21:41	04:25 19:51-20:39/48 22:08
27	08:22 16:32	07:14 16:32-17:00/28 07:53-08:19/26 17:41 15:53-16:18/25	06:00 17:08-18:09/61 18:40	05:40 19:23-19:39/16 20:45 19:11-19:22/11	04:40 19:47-20:35/48 21:43	04:26 19:51-20:39/48 22:08
28	08:20 16:35	07:11 17:09-17:14/5 15:54-16:16/22 17:43 16:31-17:00/29 07:54-08:20/26	05:57 17:07-18:11/64 18:43	05:38 19:26-19:37/11 20:47	04:39 19:46-20:36/50 21:44	04:26 19:52-20:40/48 22:08
29	08:18 16:37		06:55 18:07-19:14/67 19:45	05:35 20:49	04:38 19:46-20:35/49 21:46	04:27 19:52-20:40/48 22:07
30	08:16 16:39		06:52 18:06-19:15/69 19:47	05:33 20:51	04:36 19:46-20:35/49 21:47	04:27 19:52-20:40/48 22:07
31	08:14 16:41		06:49 18:06-19:17/71 19:49		04:35 19:46-20:35/49 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	282	1225	1709	1523	1028	1443

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:

Flickering_Nordex_N163_Prikuli_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment
Vilandes 3-6
LV-1010 Riga
0037167242411
Laura Kurzemniece / laura.kurzemniece@environment.lv
Calculated:
15.07.2025 17:21/4.1.254

SHADOW - Calendar per WTG

Calculation: Flickering_Nordex_N163_Prikuli_B WTG: PrRR3 - NORDEX N163/6.X 7000 163.0 !O! hub: 169,0 m (TOT: 250,5 m) (34)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:28 19:52-20:41/49 22:07	05:14 20:09-20:43/34 21:26	06:15 18:48-19:40/52 20:12 18:15-18:31/16	07:15 17:45-18:20/35 18:52 17:19-17:27/8	07:20 15:24-15:48/24 16:34	08:22 09:52-10:05/13 15:43
2	04:29 19:52-20:40/48 22:06	05:16 20:13-20:43/30 21:24	06:17 18:47-19:35/48 20:09 18:12-18:33/21	07:17 17:43-18:19/36 18:49 17:15-17:30/15	07:23 15:26-15:45/19 16:32	08:24 09:52-10:07/15 15:42
3	04:30 19:52-20:40/48 22:06	05:18 20:20-20:42/22 21:21	06:19 18:46-19:32/46 20:07 18:09-18:35/26	07:19 17:41-18:16/35 18:46 17:12-17:32/20	07:25 15:27-15:43/16 16:30	08:25 09:52-10:08/16 15:41
4	04:31 19:53-20:41/48 22:05	05:20 20:22-20:40/18 21:19	06:21 18:45-19:31/46 20:04 18:07-18:36/29	07:21 17:39-18:09/30 18:44 17:10-17:33/23	07:27 15:31-15:40/9 16:27	08:27 09:52-10:09/17 15:41
5	04:32 19:53-20:41/48 22:04	05:21 20:23-20:38/15 21:17	06:23 18:43-19:29/46 20:01 18:05-18:36/31	07:23 17:38-18:06/28 08:39-08:44/5 18:41 17:08-17:34/26	07:29 15:31-15:40/9 16:25	08:28 09:52-10:10/18 15:40
6	04:33 19:53-20:41/48 22:04	05:23 20:25-20:36/11 21:15	06:25 18:42-19:27/45 19:59 18:03-18:37/34	07:25 17:38-18:00/22 08:34-08:48/14 18:38 17:07-17:34/27	07:31 15:31-15:40/9 16:23	08:30 09:51-10:10/19 15:39
7	04:34 19:53-20:41/48 22:03	05:25 20:25-20:36/11 21:13	06:27 18:42-19:25/43 19:56 18:02-18:38/36	07:27 17:37-18:00/23 08:32-08:49/17 18:36 17:06-17:35/29	07:33 15:31-15:40/9 16:21	08:31 09:52-10:11/19 15:38
8	04:35 19:53-20:41/48 22:02	05:27 20:25-20:36/11 21:11	06:29 18:40-19:23/43 19:53 18:01-18:38/37	07:29 17:37-17:59/22 08:30-08:50/20 18:33 17:05-17:35/30	07:36 15:31-15:40/9 16:19	08:33 09:52-10:24/32 15:38
9	04:36 19:54-20:42/48 22:01	05:29 20:25-20:36/11 21:08	06:31 18:39-19:18/39 19:51 18:00-18:38/38	07:31 17:37-17:58/21 08:29-08:51/22 18:30 17:04-17:35/31	07:38 15:31-15:40/9 16:17	08:34 09:52-10:24/32 15:37
10	04:38 19:54-20:42/48 22:00	05:31 20:25-20:36/11 21:06	06:33 17:59-19:13/74 19:48	07:34 17:37-17:56/19 08:28-08:53/25 18:28 17:04-17:34/30	07:40 15:31-15:40/9 16:15	08:36 09:53-10:26/33 15:37
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13	04:42 19:55-20:44/49 21:57	05:37 20:25-20:36/11 20:59	06:39 17:58-19:07/69 19:40	07:40 17:41-17:48/7 16:29-16:48/19 18:20 17:04-17:34/30 08:26-08:52/26	07:46 15:31-15:40/9 16:09	08:39 09:53-10:28/35 15:36
14	04:43 19:55-20:44/49 21:55	05:39 19:36-19:42/6 20:57	06:41 17:57-19:04/67 19:37	07:42 17:45-17:46/1 16:26-16:49/23 18:17 17:04-17:33/29 08:26-08:52/26	07:48 15:31-15:40/9 16:08	08:40 09:54-10:29/35 15:36
15	04:44 19:56-20:45/49 21:54	05:41 19:33-19:45/12 20:55 19:23-19:25/2	06:43 17:57-19:02/65 19:35	07:44 17:04-17:32/28 08:26-08:52/26 18:15 16:24-16:50/26	07:51 15:31-15:40/9 16:06	08:41 09:54-10:30/36 15:36
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Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	1451	848	1753	1981	87	979

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