

SHADOW - Main Result

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Maximum distance for influence
Calculate only when more than 20 % of sun is covered by the blade
Please look in WTG table

Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) []
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational hours are calculated from WTGs in calculation and
wind distribution:
CERRA N 56,483277 E 26,150006

Operational time
N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238

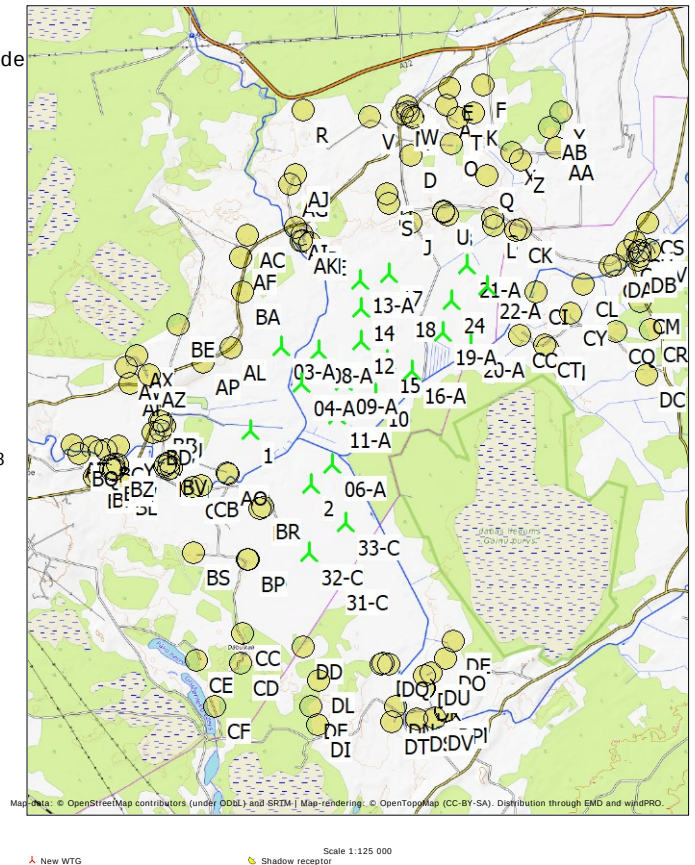
Monthly aggregation of real case reduction
Idle start wind speed 3,0 m/s
Flicker curtailment by stopping specific turbines

A ZVI (Zones of Visual Influence) calculation is performed before
flicker calculation so non visible WTG do not contribute to
calculated flicker values. A WTG will be visible if it is visible from
any part of the receiver window. The ZVI calculation is based on
the following assumptions:
DHM: DTM model
Receptor grid resolution: 1,0 m
Topographic shadow included in calculation

All coordinates are in
Geo [deg]-WGS84

WTGs

	Longitude	Latitude	Z	Row data/Description	WTG type		Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
					Valid	Manufact.				Calculation distance [m]	RPM
			[m]								[RPM]
1	26,154944° E	56,472000° N	86,4	1	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
2	26,171545° E	56,464065° N	87,4	2	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
3	26,188797° E	56,477423° N	87,3	10	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
4	26,191766° E	56,482416° N	88,1	15	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
5	26,184830° E	56,485277° N	88,1	12	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
6	26,195723° E	56,490817° N	88,2	18	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
7	26,184789° E	56,490106° N	88,3	14	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
8	26,192600° E	56,495313° N	88,9	17	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
9	26,209173° E	56,491273° N	88,1	24	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
10	26,213491° E	56,496603° N	89,1	21-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
11	26,218949° E	56,493438° N	89,5	22-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
12	26,214396° E	56,484740° N	88,5	20-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
13	26,206995° E	56,486499° N	87,9	19-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
14	26,198775° E	56,480846° N	87,4	16-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
15	26,184611° E	56,494373° N	88,5	13-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
16	26,178446° E	56,474208° N	87,2	11-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
17	26,179996° E	56,479330° N	88,4	09-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
18	26,173625° E	56,483937° N	86,9	08-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
19	26,163370° E	56,484575° N	88,4	03-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
20	26,168908° E	56,479068° N	86,9	04-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
21	26,176971° E	56,466954° N	86,4	06-A	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
22	26,177736° E	56,450016° N	88,6	31-C	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
23	26,170673° E	56,453686° N	88,8	32-C	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8
24	26,180636° E	56,458079° N	88,4	33-C	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	162,0	1 894 10,8



SHADOW - Main Result

Calculation: Alternative - Real Case Curtailment

Shadow receptor-Input

No.	Name	Longitude	Latitude	Z	Width	Height	Elevation	Slope of	Direction mode	Eye height
				[m]	[m]	[m]	a.g.l.	window		(ZVI) a.g.l.
							[m]	[°]		[m]
A	Aizkalnes	26,207858° E	56,520369° N	94,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	Zvirgzdini	26,208124° E	56,504040° N	92,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	Uplejas	26,220364° E	56,503587° N	90,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	Druku Vecumi	26,198160° E	56,512887° N	93,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	Kaijas	26,208687° E	56,522987° N	96,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	Cvetkovi	26,217847° E	56,523273° N	96,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	Balo ž i	26,198613° E	56,518862° N	93,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	Berzi	26,191627° E	56,507246° N	92,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	Kropini	26,207134° E	56,504585° N	92,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	Ergli	26,198423° E	56,502938° N	91,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	Nazari	26,214929° E	56,519219° N	93,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	Akoti	26,220549° E	56,502569° N	90,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	Linares	26,197407° E	56,520072° N	93,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
N	Lamani 1	26,195936° E	56,518989° N	92,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
O	Ro ž lejas	26,209238° E	56,514630° N	93,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
P	Aizupes	26,199053° E	56,518437° N	92,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Q	Kumelites	26,218886° E	56,509968° N	93,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
R	Dzila Vada	26,169332° E	56,519514° N	91,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
S	Vecumi	26,192519° E	56,505706° N	92,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
T	Rutini	26,211042° E	56,518444° N	93,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
U	Viksnes	26,207029° E	56,504358° N	92,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
V	Dimanti	26,187384° E	56,518664° N	93,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
W	Rudzi š i	26,197546° E	56,519321° N	93,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
X	Podnieki	26,225499° E	56,513205° N	93,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Y	Stimbinaja	26,238938° E	56,519389° N	93,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Z	Marsnica	26,227741° E	56,512101° N	91,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AA	Vilkmui ž a	26,237475° E	56,514054° N	93,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AB	Vecergli	26,235536° E	56,517157° N	93,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AC	Kvie š i	26,154412° E	56,500927° N	90,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AD	Me ž a Rasas	26,169055° E	56,501189° N	90,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AE	Dravnieki	26,171153° E	56,499901° N	90,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AF	Ogu Purvs	26,152495° E	56,497838° N	90,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AG	Jaunmedni	26,165627° E	56,508563° N	92,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AH	Graudini	26,169543° E	56,500262° N	90,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AI	Birznieki	26,167532° E	56,502200° N	89,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AJ	Irbites	26,167241° E	56,510128° N	91,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AK	Ruki	26,168833° E	56,500283° N	90,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AL	Vipmali	26,149905° E	56,484230° N	91,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AM	Galvani 1	26,122805° E	56,478966° N	95,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AN	Pludmales 1	26,148820° E	56,465677° N	87,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AO	Pludmales	26,149040° E	56,465610° N	87,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AP	Kalna Galvani	26,142436° E	56,482221° N	98,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AQ	Ziedini	26,114434° E	56,468966° N	89,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AR	Strautini	26,112449° E	56,469534° N	89,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AS	Druvas	26,131471° E	56,473578° N	87,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AT	Saulkrasti	26,107300° E	56,469842° N	90,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AU	Jaundruvas 1	26,131987° E	56,472637° N	88,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AV	Zilites	26,131108° E	56,471880° N	88,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AW	Avotini	26,121551° E	56,481424° N	95,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AX	Biksti	26,124410° E	56,483251° N	96,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AY	Tudalinas	26,119697° E	56,469646° N	90,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AZ	Kalnares	26,127965° E	56,480344° N	97,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BA	Su š i	26,153089° E	56,492562° N	90,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BB	Jaundruvas	26,130673° E	56,473442° N	87,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BC	Straumenini	26,116258° E	56,469089° N	90,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BD	Krasta Ozoli	26,128750° E	56,471771° N	88,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BE	Galvani	26,135926° E	56,487675° N	95,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BF	Mui ž nieki	26,113280° E	56,465079° N	91,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BG	Me ž mui ž a	26,132979° E	56,466265° N	88,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BH	Krastini	26,133875° E	56,466527° N	88,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BI	Strauti	26,118340° E	56,466957° N	86,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BJ	Purenes	26,117319° E	56,466719° N	87,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BK	Uplejas	26,118170° E	56,466952° N	86,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BL	Bazes stacija	26,120683° E	56,464128° N	90,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

SHADOW - Main Result

Calculation: Alternative - Real Case Curtailment

...continued from previous page

No.	Name	Longitude	Latitude	Z	Width	Height	Elevation	Slope of	Direction mode	Eye height
				[m]	[m]	[m]	a.g.l.	window		(ZVI) a.g.l.
							[m]	[°]		[m]
BM	Spridi š i	26,114672° E	56,465253° N	91,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BN	Klavas	26,157722° E	56,460261° N	90,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BO	Kaupres	26,154481° E	56,452570° N	90,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BP	Kaupres 1	26,154736° E	56,452617° N	90,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BQ	Lici š i	26,109041° E	56,468627° N	91,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BR	Liepšala	26,158460° E	56,460663° N	91,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BS	Me ž vidi	26,140069° E	56,453828° N	91,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BT	Me ž a Mui ž a	26,131989° E	56,466718° N	89,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BU	Vilni š i	26,132310° E	56,466977° N	90,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BV	Raceni	26,133513° E	56,467240° N	89,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BW	Vipes skola	26,118133° E	56,466127° N	90,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BX	Vipes skola	26,118460° E	56,466288° N	90,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BY	Vipes skola	26,117611° E	56,466358° N	90,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BZ	Vipes skola 1	26,119453° E	56,467114° N	88,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CA	Slipie 1	26,139496° E	56,463705° N	87,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CB	Upmali	26,141987° E	56,463800° N	87,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CC	Ziemeļnieki	26,152996° E	56,441528° N	92,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CD	Ezermui ž a	26,152602° E	56,437223° N	92,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CE	Ezermali	26,140640° E	56,437594° N	90,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CF	Ozolmui ž a	26,145561° E	56,430795° N	92,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CG	Vasarnieki	26,261108° E	56,498230° N	91,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CH	Ata š a	26,251712° E	56,496522° N	91,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CI	Mui ž nieki	26,231972° E	56,492662° N	89,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CJ	Rijasvecumi	26,227814° E	56,501950° N	92,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CK	Kalvani	26,226341° E	56,501709° N	92,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CL	Uzkalnini	26,244752° E	56,493800° N	92,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CM	Cakstes	26,260191° E	56,491064° N	93,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CN	Jaunie Vu š karnieki	26,234910° E	56,484228° N	89,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CO	Upmalnieki	26,227614° E	56,486271° N	89,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CP	Gruguli	26,259452° E	56,498488° N	91,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CQ	Aramsala	26,253669° E	56,486836° N	92,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CR	Alksni š i	26,262738° E	56,486897° N	94,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CS	Lejsalie š i	26,262300° E	56,502792° N	93,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CT	Araji	26,234288° E	56,484761° N	90,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CU	Plavinas	26,258552° E	56,500071° N	92,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CV	Zali š i	26,262376° E	56,498812° N	91,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CW	Grugules	26,256543° E	56,498698° N	92,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CX	Madaras	26,260204° E	56,498671° N	91,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CY	Vu š karnieki	26,241183° E	56,489414° N	92,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CZ	Vecares	26,260016° E	56,497881° N	90,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DA	Strautmali	26,253233° E	56,496637° N	91,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DB	Jaunari	26,259494° E	56,497402° N	91,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DC	Vidsala	26,261621° E	56,480364° N	94,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DD	Jaunie Robe ž nieki	26,169285° E	56,439743° N	89,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DE	Smelceja	26,209466° E	56,440532° N	92,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DF	Kukas	26,171356° E	56,430866° N	92,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DG	O š ini	26,190535° E	56,437029° N	89,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DH	O š ini	26,190590° E	56,437181° N	89,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DI	Robe ž nieki	26,173089° E	56,428132° N	92,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DJ	Pumpuri	26,202157° E	56,433538° N	91,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DK	Pumpuri	26,201785° E	56,433455° N	92,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DL	Berzkalnes	26,173600° E	56,434528° N	89,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DM	Arsmenieki	26,207754° E	56,430248° N	93,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DN	Smelceju majas	26,194039° E	56,430891° N	90,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DO	Zemites	26,207501° E	56,438015° N	91,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DP	Arsmenieki	26,207477° E	56,430056° N	93,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DQ	Upi š i	26,192367° E	56,437127° N	90,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DR	Aizveji	26,201934° E	56,435394° N	92,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DS	Dzervites	26,200128° E	56,428906° N	91,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DT	Jaunmasani	26,193181° E	56,428587° N	90,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DU	Airites	26,203694° E	56,435670° N	91,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DV	Upmalas	26,204770° E	56,429183° N	92,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0

SHADOW - Main Result

Calculation: Alternative - Real Case Curtailment

Calculation Results

Shadow receptor

No.	Name	Shadow, expected values	
		Shadow hours per year [h/year]	Avoided hours per year [h/year]
	A Aizkalnes	0:00	
	B* Zvirgzdini	2:20	8:17
	C* Uplejas	0:26	6:25
	D Druku Vecumi	0:00	
	E Kaijas	0:00	
	F Cvetkovi	0:00	
	G Balo ž i	0:00	
	H* Berzi	0:52	0:36
	I* Kropini	1:57	7:16
	J* Ergli	2:44	10:44
	K Nazari	0:00	
	L* Akoti	0:00	9:54
	M Linares	0:00	
	N Lamani 1	0:00	
	O Ro ž lejas	0:00	
	P Aizupes	0:00	
	Q Kumelites	0:00	
	R Dzila Vada	0:00	
	S* Vecumi	0:10	3:43
	T Rutini	0:00	
	U* Viksnes	1:57	7:43
	V Dimanti	0:00	
	W Rudzi š i	0:00	
	X Podnieki	0:00	
	Y Stimbinaja	0:00	
	Z Marsnica	0:00	
	AA Vilkmui ž a	0:00	
	AB Vecergli	0:00	
	AC Kvie š i	0:00	
	AD* Me ž a Rasas	1:56	4:12
	AE* Dravnieki	4:23	5:28
	AF Ogu Purvs	0:48	
	AG Jaunmedni	0:00	
	AH* Graudini	2:41	4:23
	AI* Birznieki	1:33	3:19
	AJ Irbites	0:00	
	AK* Ruki	2:49	3:50
	AL* Vipmali	3:42	14:21
	AM Galvani 1	0:00	
	AN Pludmales 1	5:54	
	AO* Pludmales	6:14	0:36
	AP* Kalna Galvani	1:58	7:53
	AQ Ziedini	0:00	
	AR Strautini	0:00	
	AS Druvas	3:08	
	AT Saulkrasti	0:00	
	AU Jaundruvas 1	3:33	
	AV Zilites	3:29	
	AW Avotini	0:00	
	AX Biksti	0:00	
	AY Tudalinas	0:00	
	AZ Kalnares	0:00	
	BA* Su š i	2:48	2:16
	BB Jaundruvas	2:56	
	BC Straumenini	0:00	
	BD Krasta Ozoli	2:48	
	BE Galvani	1:52	
	BF Mui ž nieki	0:00	
	BG* Me ž mui ž a	0:03	7:07
	BH* Krastini	0:00	8:08
	BI Strauti	0:00	
	BJ Purenes	0:00	

To be continued on next page...

SHADOW - Main Result

Calculation: Alternative - Real Case Curtailment

...continued from previous page

No.	Name	Shadow, expected values	
		Shadow hours per year [h/year]	Avoided hours per year [h/year]
	BK Uplejas	0:00	
	BL Bazes stacija	0:00	
	BM Spridi š i	0:00	
	BN* Klavas	5:18	28:48
	BO* Kaupres	6:50	9:26
	BP* Kaupres 1	7:25	9:17
	BQ Lici š i	0:00	
	BR* Liepsala	4:13	33:03
	BS Me ž vidi	1:50	
	BT* Me ž a Mui ž a	2:15	3:29
	BU* Vilni š i	3:04	2:45
	BV* Raceni	3:40	3:08
	BW Vipes skola	0:00	
	BX Vipes skola	0:00	
	BY Vipes skola	0:00	
	BZ Vipes skola 1	0:00	
	CA Slipie 1	0:00	
	CB Upmali	2:05	
	CC* Ziemeļnieki	0:00	8:00
	CD Ezermui ž a	0:00	
	CE Ezermali	0:00	
	CF Ozolmui ž a	0:00	
	CG Vasarnieki	0:00	
	CH Ata š a	0:00	
	CI* Mui ž nieki	5:08	26:21
	CJ* Rijasvecumi	2:17	6:57
	CK* Kalvani	0:34	9:52
	CL Uzkalnini	2:45	
	CM Cakstes	0:00	
	CN* Jaunie Vu š karnieki	2:07	9:45
	CO* Upmalnieki	1:24	27:40
	CP Gruguli	0:00	
	CQ Aramsala	0:00	
	CR Alksni š i	0:00	
	CS Lejsalie š i	0:00	
	CT* Araj	0:21	11:59
	CU Plavinas	0:00	
	CV Zali š i	0:00	
	CW Grugules	0:00	
	CX Madaras	0:00	
	CY* Vu š karnieki	5:15	5:03
	CZ Vecares	0:00	
	DA Strautmali	0:00	
	DB Jaunari	0:00	
	DC Vidsala	0:00	
	DD Jaunie Robe ž nieki	0:00	
	DE Smelceja	0:00	
	DF Kukas	0:00	
	DG O š ini	0:00	
	DH O š ini	0:00	
	DI Robe ž nieki	0:00	
	DJ Pumpuri	0:00	
	DK Pumpuri	0:00	
	DL Berzkalnes	0:00	
	DM Arsmenieki	0:00	
	DN Smelceju majas	0:00	
	DO Zemites	0:00	
	DP Arsmenieki	0:00	
	DQ Upi š i	0:00	
	DR Aizveji	0:00	
	DS Dzervites	0:00	
	DT Jaunmasani	0:00	
	DU Airites	0:00	
	DV Upmalas	0:00	

* Receptors where shadow flicker is reduced by curtailment

SHADOW - Main Result

Calculation: Alternative - Real Case Curtailment

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Stopped due to flicker curtailment [h/year]	Expected [h/year]
1	1	60:09	11:59
2	2	72:00	5:36
3	10		0:00
4	15		0:00
5	12		0:40
6	18	4:17	2:40
7	14	31:10	2:21
8	17	117:02	4:15
9	24	113:00	4:48
10	21-A	275:40	1:25
11	22-A	181:52	10:48
12	20-A	81:42	2:07
13	19-A	29:01	1:41
14	16-A		1:24
15	13-A	91:04	2:06
16	11-A		0:00
17	09-A		0:00
18	08-A		4:50
19	03-A	107:19	2:41
20	04-A	16:39	3:17
21	06-A	38:08	2:44
22	31-C	24:00	4:35
23	32-C	62:07	3:54
24	33-C		8:18

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

The calculation of the total expected values for a given receptor assumes a weighted average directional reduction for all WTGs contributing to shadow flicker within the same day. In the case where shadow flicker from different WTGs is not concurrent within the day, the total expected time at a given receptor may deviate marginally from the individual flicker time caused by each turbine separately.

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: A - Aizkalnes

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:40
4	08:47 15:51	08:07 16:53	07:01 17:55	06:39 20:00	05:23 21:03	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
5	08:47 15:50	08:05 16:50	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:18	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:03	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:37
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:14 21:07	04:26 21:59	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	08:44 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:13	04:24 22:02	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:35
12	08:42 16:01	07:50 17:06	06:40 18:08	06:17 20:13	05:06 21:15	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:37 18:22	07:43 16:11	08:38 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:15	05:04 21:17	04:23 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:19	04:23 22:04	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	08:38 16:08	07:41 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:37 16:10	07:38 17:17	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	07:29 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:08	04:52 21:46	05:52 20:40	06:54 19:18	07:56 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:49 20:36	04:46 21:35	04:22 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:45 20:40	04:43 21:39	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08	05:03 21:36	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08	05:05 21:34	06:06 20:22	07:08 19:00	07:11 16:43	08:16 15:45	08:48 15:40
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:32	06:08 20:20	07:10 18:57	07:13 16:40	08:18 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:33 20:50	04:35 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:15 16:39		06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: B - Zvirgzdini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	14:06 (6) 08:13	16:05 (15) 07:09	06:47	05:30	04:33
	15:45	24 14:30 (6) 16:42	4 16:09 (15) 17:44	19:50	20:52	21:50
2	08:48	14:07 (6) 08:11	16:04 (15) 07:06	06:44	05:28	04:32
	15:46	24 14:31 (6) 16:44	8 16:12 (15) 17:46	19:52	20:54	21:51
3	08:48	14:07 (6) 08:09	16:03 (15) 07:04	06:41	05:26	04:31
	15:47	24 14:31 (6) 16:46	12 16:15 (15) 17:48	19:54	20:56	21:52
4	08:47	14:08 (6) 08:07	16:01 (15) 07:01	06:39	05:23	04:30
	15:49	24 14:32 (6) 16:48	15 16:16 (15) 17:51	19:56	20:58	21:54
5	08:47	14:09 (6) 08:05	16:01 (15) 06:58	06:36	05:21	04:29
	15:50	23 14:32 (6) 16:51	18 16:19 (15) 17:53	19:58	21:00	21:55
6	08:46	14:09 (6) 08:03	16:01 (15) 06:56	06:33	05:19	04:28
	15:51	22 14:31 (6) 16:53	21 16:22 (15) 17:55	20:00	21:02	21:56
7	08:46	14:10 (6) 08:01	16:00 (15) 06:53	06:31	05:17	04:27
	15:53	21 14:31 (6) 16:55	23 16:23 (15) 17:57	20:02	21:04	21:57
8	08:45	14:11 (6) 07:58	16:00 (15) 06:51	06:28	05:14	04:26
	15:54	20 14:31 (6) 16:57	23 16:23 (15) 17:59	20:04	21:07	21:58
9	08:44	14:12 (6) 07:56	16:01 (15) 06:48	06:25	05:12	04:26
	15:56	19 14:31 (6) 16:59	23 16:24 (15) 18:01	20:06	21:09	21:59
10	08:44	14:13 (6) 07:54	16:00 (15) 06:45	06:23	05:10	04:25
	15:58	18 14:31 (6) 17:02	23 16:23 (15) 18:03	20:08	21:11	22:00
11	08:43	14:14 (6) 07:52	16:01 (15) 06:43	06:20	05:08	04:24
	15:59	17 14:31 (6) 17:04	22 16:23 (15) 18:06	20:10	21:13	22:01
12	08:42	14:16 (6) 07:50	16:02 (15) 06:40	06:18	05:06	04:24
	16:01	15 14:31 (6) 17:06	21 16:23 (15) 18:08	20:13	21:15	22:02
13	08:41	14:17 (6) 07:47	16:02 (15) 06:37	06:15	05:04	04:23
	16:03	13 14:30 (6) 17:08	20 16:22 (15) 18:10	20:15	21:16	22:03
14	08:40	14:19 (6) 07:45	16:03 (15) 06:35	06:12	05:02	04:23
	16:04	9 14:28 (6) 17:11	18 16:21 (15) 18:12	20:17	21:18	22:04
15	08:39	14:23 (6) 07:43	16:04 (15) 06:32	06:10	05:00	04:23
	16:06	3 14:26 (6) 17:13	16 16:20 (15) 18:14	20:19	21:20	22:05
16	08:38	17:41	16:06 (15) 06:29	06:07	04:58	04:22
	16:08	12 17:15	16:18 (15) 18:16	20:21	21:22	22:05
17	08:36	17:38	16:10 (15) 06:27	06:05	04:56	04:22
	16:10	4 17:17	18:18	20:23	21:24	22:06
18	08:35	17:36	06:24	06:02	04:54	04:22
	16:12	17:20	18:20	20:25	21:26	22:06
19	08:34	17:33	06:21	06:00	04:53	04:22
	16:14	17:22	18:22	20:27	21:28	22:07
20	08:33	17:31	06:19	05:57	04:51	04:22
	16:16	17:24	18:25	20:29	21:30	22:07
21	08:31	17:29	06:16	05:54	04:49	04:22
	16:18	17:26	18:27	20:31	21:32	22:07
22	08:30	17:26	06:13	05:52	04:47	04:22
	16:20	17:29	18:29	20:33	21:33	22:08
23	08:28	17:24	06:11	05:49	04:46	04:23
	16:22	17:31	18:31	20:35	21:35	22:08
24	08:27	17:21	06:08	05:47	04:44	04:23
	16:24	17:33	18:33	20:38	21:37	22:08
25	08:25	17:19	06:05	05:45	04:43	04:23
	16:26	17:35	18:35	20:40	21:39	22:08
26	08:23	17:16	06:03	05:42	04:41	04:24
	16:28	17:37	18:37	20:42	21:40	22:08
27	08:22	17:14	06:00	05:40	04:40	04:24
	16:31	17:40	18:39	20:44	21:42	22:08
28	08:20	17:11	05:57	05:37	04:38	04:25
	16:33	17:42	18:41	20:46	21:44	22:08
29	08:18		05:55	05:35	04:37	04:25
	16:35		18:43	20:48	21:45	22:07
30	08:16		06:52	05:33	04:36	04:26
	16:37		19:45	20:50	21:47	22:07
31	08:14		06:49		04:34	
	16:39		19:48		21:48	
Potential sun hours	235	265	365	425	507	529
Total, worst case	276	283				
Sun reduction	0,15	0,24				
Oper. time red.	0,94	0,94				
Wind dir. red.	0,67	0,68				
Total reduction	0,10	0,15				
Total, real	27	43				

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: B - Zvirgzdini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:30 (15)
2	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:30 (15)
3	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:30 (15)
4	04:29 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:30 (15)
5	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:31 (15)
6	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:31 (15)
7	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:31 (15)
8	04:34 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:33 (15)
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:33 (15)
10	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:35 (15)
11	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:37 (15)
12	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:37 15:39 (15)
13	04:40 21:57	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35 (15)
14	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35 (15)
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35 (15)
16	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35 (15)
17	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35 (15)
18	04:47 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35 (15)
19	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35 (15)
20	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35 (15)
21	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:46 15:36 (15)
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36 (15)
23	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37 (15)
24	04:57 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37 (15)
25	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38 (15)
26	05:01 21:37	06:02 20:28	07:04 19:05	08:06 17:48	08:12 15:47 (15)	08:48 15:39 (15)
27	05:03 21:35	06:04 20:25	07:06 19:02	08:08 17:45	08:14 15:44 (15)	08:48 15:39 (15)
28	05:05 21:34	06:06 20:22	07:08 19:00	08:11 17:43	08:16 15:40 (15)	08:48 14:00 (6)
29	05:07 21:32	06:08 20:20	07:10 18:57	08:13 17:41	08:17 15:37 (15)	08:48 14:07 (6)
30	05:08 21:30	06:10 20:17	07:12 18:54	08:15 17:38	08:19 15:34 (15)	08:48 14:09 (6)
31	05:10 21:28	06:12 20:15	07:17 18:54	08:21 17:36	08:23 15:31 (15)	08:48 14:11 (6)
Potential sun hours	530	470	385	324	248	216
Total, worst case				105	214	737
Sun reduction				0,27	0,09	0,09
Oper. time red.				0,94	0,94	0,94
Wind dir. red.				0,68	0,67	0,67
Total reduction				0,17	0,06	0,05
Total, real				18	13	40

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-MEŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: C - Uplejas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	12:20 (11) 14:09 (9)	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:19 18:51	08:21 16:34
2	08:48 15:46	14:02 (9) 16:44	08:11 17:46	07:06 19:52	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	08:23 16:31
3	08:48 15:47	14:02 (9) 16:46	08:09 17:48	07:04 19:54	06:41 19:54	05:26 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	08:24 16:29
4	08:47 15:48	14:03 (9) 16:48	08:07 17:50	07:01 19:56	06:39 19:56	05:23 20:58	04:30 21:54	04:29 22:05	05:18 21:20	06:20 20:04	07:20 18:43	08:26 16:27
5	08:47 15:50	14:03 (9) 16:50	08:05 17:53	06:58 19:58	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	08:28 16:25
6	08:46 15:51	14:04 (9) 16:53	08:03 17:55	06:56 20:00	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	08:29 16:23
7	08:46 15:53	14:04 (9) 16:55	08:00 17:57	06:53 20:02	06:31 21:04	05:17 21:57	04:27 22:03	04:32 21:13	05:24 19:56	06:26 18:36	07:26 16:21	08:31 15:37
8	08:45 15:54	14:05 (9) 16:57	07:58 17:59	06:51 20:04	06:28 21:06	05:14 21:58	04:26 22:02	04:34 21:11	05:26 19:53	06:28 18:33	07:28 16:19	08:32 15:37
9	08:44 15:56	14:06 (9) 16:59	07:56 18:01	06:48 20:06	06:25 21:08	05:12 21:59	04:26 22:01	04:35 21:09	05:28 19:51	06:30 18:30	07:30 16:17	08:33 15:36
10	08:44 15:57	14:07 (9) 17:02	07:54 18:03	06:45 20:08	06:23 21:10	05:10 22:00	04:25 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	14:08 (9) 17:04	07:52 18:05	06:43 20:10	06:20 21:12	05:08 22:01	04:24 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:35
12	08:42 16:01	14:09 (9) 17:06	07:50 18:08	06:40 20:12	06:17 21:14	05:06 22:02	04:24 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	14:10 (9) 17:08	07:47 18:10	06:37 20:15	06:15 21:16	05:04 22:03	04:23 21:57	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:04	14:11 (9) 17:11	07:45 18:12	06:35 20:17	06:12 21:18	05:02 22:04	04:23 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	08:39 16:06	14:13 (9) 17:13	07:43 18:14	06:32 20:19	06:10 21:20	05:00 22:05	04:23 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:41 15:35
16	08:38 16:08	14:14 (9) 17:15	07:40 18:16	06:29 20:21	06:07 21:22	04:58 22:05	04:22 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:36 16:10	14:17 (9) 17:17	07:38 18:18	06:27 20:23	06:05 21:24	04:56 22:06	04:22 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	14:19 (9) 17:20	07:36 18:20	06:24 20:25	06:02 21:26	04:54 22:06	04:22 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	14:20 (9) 17:22	07:33 18:22	06:21 20:27	05:59 21:28	04:53 22:07	04:22 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:32 16:16	14:21 (9) 17:24	07:31 18:24	06:19 20:29	05:57 21:30	04:51 22:07	04:22 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	14:22 (9) 17:26	07:29 18:27	06:16 20:31	05:54 21:32	04:49 22:07	04:22 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	14:23 (9) 17:29	07:26 18:29	06:13 20:33	05:52 21:33	04:47 22:08	04:22 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	08:28 16:22	14:24 (9) 17:31	07:24 18:31	06:11 20:35	05:49 21:35	04:46 22:08	04:23 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:24	14:25 (9) 17:33	07:21 18:33	06:08 20:38	05:47 21:37	04:44 22:08	04:23 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	14:26 (9) 17:35	07:19 18:35	06:05 20:40	05:45 21:39	04:43 22:08	04:23 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	08:23 16:28	14:27 (9) 17:37	07:16 18:37	06:03 20:42	05:42 21:40	04:41 22:08	04:24 21:37	06:02 20:27	07:04 19:05	08:06 17:48	08:12 15:48	08:48 15:39
27	08:22 16:31	14:28 (9) 17:40	07:14 18:39	06:00 20:44	05:40 21:42	04:40 22:08	04:24 21:35	06:04 20:25	07:06 19:02	08:08 17:45	08:14 15:47	08:48 15:39
28	08:20 16:33	14:29 (9) 17:42	07:11 18:41	05:57 20:46	05:37 21:43	04:38 22:07	04:25 21:34	06:06 20:22	07:08 19:00	08:11 17:43	08:16 15:45	08:48 15:40
29	08:18 16:35	14:30 (9) 17:43	07:08 18:43	05:55 20:48	05:35 21:45	04:37 22:07	04:25 21:32	06:08 20:20	07:10 18:57	08:13 17:40	08:17 15:44	08:48 15:41
30	08:16 16:37	14:31 (9) 17:45	07:06 18:45	05:52 20:50	05:33 21:47	04:36 22:07	04:26 21:30	06:10 20:17	07:12 18:54	08:15 17:38	08:19 15:43	08:48 15:42
31	08:14 16:39	14:32 (9) 17:47	07:04 18:49	05:50 21:48	05:31 21:48	04:34 22:08	04:27 21:28	06:12 20:15	07:14 18:56	08:17 17:36	08:21 15:43	08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case	108										21	273
Sun reduction	0,15										0,09	0,09
Oper. time red.	0,94										0,94	0,94
Wind dir. red.	0,66										0,66	0,66
Total reduction	0,10										0,06	0,05
Total, real	10										1	15

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: D - Druku Vecumi

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:40
4	08:47 15:51	08:07 16:53	07:01 17:55	06:39 20:00	05:23 21:03	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
5	08:47 15:50	08:05 16:51	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:18	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:03	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:37
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:14 21:07	04:26 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	08:44 15:58	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:13	04:24 22:02	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:35
12	08:42 16:01	07:50 17:06	06:40 18:08	06:18 20:13	05:06 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:35
13	08:41 16:03	07:47 17:08	06:38 18:10	06:15 20:15	05:04 21:17	04:23 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:19	04:23 22:04	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	08:38 16:08	07:41 17:15	06:30 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:37 16:10	07:38 17:17	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:33 17:22	06:22 18:22	06:00 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	07:29 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:07	04:52 21:46	05:52 20:40	06:54 19:18	07:56 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:49 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:45 20:40	04:43 21:39	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08	05:03 21:36	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08	05:05 21:34	06:06 20:22	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:40
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:44	08:48 15:41
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31	08:15 16:39		06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
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Table layout: For each day in each month the following matrix apply

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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUHKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: E - Kaijas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:40
4	08:47 15:51	08:07 16:53	07:01 17:55	06:39 20:00	05:23 21:03	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
5	08:47 15:50	08:05 16:50	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:18	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:03	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:37
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:14 21:07	04:26 21:59	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	08:44 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:13	04:24 22:02	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:35
12	08:42 16:01	07:50 17:06	06:40 18:08	06:17 20:13	05:06 21:15	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:37 18:22	07:43 16:11	08:38 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:15	05:04 21:17	04:23 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:19	04:23 22:04	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
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16	08:38 16:08	07:41 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:37 16:10	07:38 17:17	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
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Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: F - Cvetkovi

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

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

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: G - Balo ž i

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:30	04:33	04:27	05:12	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:50	22:07	21:26	20:12	18:52	16:34	15:42
2	08:48	08:11	07:06	06:44	05:28	04:32	04:27	05:14	06:16	07:16	07:22	08:23
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:31	15:41
3	08:48	08:09	07:04	06:41	05:26	04:31	04:28	05:16	06:18	07:18	07:24	08:25
	15:47	16:46	17:48	19:54	20:56	21:53	22:06	21:22	20:07	18:46	16:29	15:40
4	08:47	08:07	07:01	06:39	05:23	04:30	04:29	05:18	06:20	07:20	07:26	08:26
	15:48	16:48	17:51	19:56	20:58	21:54	22:05	21:20	20:04	18:44	16:27	15:39
5	08:47	08:05	06:58	06:36	05:21	04:29	04:30	05:20	06:22	07:22	07:28	08:28
	15:50	16:50	17:53	19:58	21:00	21:55	22:04	21:18	20:02	18:41	16:25	15:39
6	08:46	08:03	06:56	06:33	05:19	04:28	04:31	05:22	06:24	07:24	07:30	08:29
	15:51	16:53	17:55	20:00	21:03	21:56	22:04	21:15	19:59	18:38	16:23	15:38
7	08:46	08:01	06:53	06:31	05:17	04:27	04:32	05:24	06:26	07:26	07:32	08:31
	15:53	16:55	17:57	20:02	21:05	21:57	22:03	21:13	19:56	18:36	16:21	15:37
8	08:45	07:58	06:51	06:28	05:14	04:26	04:33	05:26	06:28	07:28	07:35	08:32
	15:54	16:57	17:59	20:04	21:07	21:59	22:02	21:11	19:54	18:33	16:19	15:37
9	08:44	07:56	06:48	06:25	05:12	04:26	04:35	05:28	06:30	07:30	07:37	08:34
	15:56	16:59	18:01	20:06	21:09	22:00	22:01	21:09	19:51	18:30	16:17	15:36
10	08:44	07:54	06:45	06:23	05:10	04:25	04:36	05:30	06:32	07:32	07:39	08:35
	15:57	17:02	18:03	20:08	21:11	22:01	22:00	21:07	19:48	18:28	16:15	15:36
11	08:43	07:52	06:43	06:20	05:08	04:24	04:37	05:32	06:34	07:34	07:41	08:36
	15:59	17:04	18:06	20:10	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:35
12	08:42	07:50	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:37	07:43	08:38
	16:01	17:06	18:08	20:13	21:15	22:02	21:58	21:02	19:43	18:23	16:11	15:35
13	08:41	07:47	06:38	06:15	05:04	04:23	04:40	05:36	06:38	07:39	07:45	08:39
	16:03	17:08	18:10	20:15	21:17	22:03	21:57	21:00	19:40	18:20	16:09	15:35
14	08:40	07:45	06:35	06:12	05:02	04:23	04:41	05:38	06:40	07:41	07:48	08:40
	16:04	17:11	18:12	20:17	21:19	22:04	21:56	20:57	19:37	18:17	16:07	15:35
15	08:39	07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:50	08:41
	16:06	17:13	18:14	20:19	21:20	22:05	21:55	20:55	19:35	18:15	16:05	15:35
16	08:38	07:41	06:30	06:07	04:58	04:22	04:44	05:42	06:44	07:45	07:52	08:42
	16:08	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:03	15:35
17	08:37	07:38	06:27	06:05	04:56	04:22	04:46	05:44	06:46	07:47	07:54	08:43
	16:10	17:17	18:18	20:23	21:24	22:06	21:52	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:54	04:22	04:47	05:46	06:48	07:49	07:56	08:44
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:48	19:27	18:07	16:00	15:35
19	08:34	07:33	06:22	06:00	04:53	04:22	04:49	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:22	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:58	15:35
20	08:33	07:31	06:19	05:57	04:51	04:22	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:25	20:29	21:30	22:07	21:47	20:43	19:21	18:02	15:57	15:35
21	08:31	07:29	06:16	05:54	04:49	04:22	04:52	05:52	06:54	07:56	08:02	08:46
	16:18	17:26	18:27	20:31	21:32	22:08	21:46	20:40	19:18	18:00	15:55	15:36
22	08:30	07:26	06:13	05:52	04:47	04:22	04:54	05:54	06:56	07:58	08:04	08:46
	16:20	17:29	18:29	20:33	21:34	22:08	21:44	20:38	19:16	17:57	15:54	15:36
23	08:28	07:24	06:11	05:49	04:46	04:22	04:56	05:56	06:58	08:00	08:06	08:47
	16:22	17:31	18:31	20:36	21:35	22:08	21:43	20:35	19:13	17:55	15:52	15:37
24	08:27	07:21	06:08	05:47	04:44	04:23	04:57	05:58	07:00	08:02	08:08	08:47
	16:24	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:10	17:52	15:51	15:37
25	08:25	07:19	06:05	05:45	04:43	04:23	04:59	06:00	07:02	08:04	08:10	08:48
	16:26	17:35	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:49	15:38
26	08:23	07:16	06:03	05:42	04:41	04:24	05:01	06:02	07:04	07:06	08:12	08:48
	16:28	17:37	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:48	15:39
27	08:22	07:14	06:00	05:40	04:40	04:24	05:03	06:04	07:06	07:08	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:08	21:36	20:25	19:02	16:45	15:47	15:39
28	08:20	07:11	05:57	05:37	04:38	04:25	05:05	06:06	07:08	07:11	08:16	08:48
	16:33	17:42	18:41	20:46	21:44	22:08	21:34	20:22	19:00	16:43	15:45	15:40
29	08:18		05:55	05:35	04:37	04:25	05:06	06:08	07:10	07:13	08:18	08:48
	16:35		18:43	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:44	15:41
30	08:16		06:52	05:33	04:36	04:26	05:08	06:10	07:12	07:15	08:19	08:48
	16:37		19:45	20:50	21:47	22:07	21:30	20:17	18:54	16:38	15:43	15:42
31	08:15		06:49		04:34		05:10	06:12		07:17		08:48
	16:39		19:48		21:48		21:28	20:15		16:36		15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: H - Berzi

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	13:26 (15)	08:13	08:51 (10)	07:09	06:47
	15:45	9 13:35 (15)	16:42	23 09:14 (10)	17:44	19:50
2	08:48	13:27 (15)	08:11	08:55 (10)	07:06	06:44
	15:46	9 13:36 (15)	16:44	19 09:14 (10)	17:46	19:52
3	08:48	13:29 (15)	08:09	09:00 (10)	07:04	06:41
	15:47	8 13:37 (15)	16:46	15 09:15 (10)	17:48	19:54
4	08:47	13:32 (15)	08:07	09:01 (10)	07:01	06:39
	15:49	4 13:36 (15)	16:48	13 09:14 (10)	17:51	19:56
5	08:47		08:05	09:04 (10)	06:59	06:36
	15:50		16:51	10 09:14 (10)	17:53	19:58
6	08:46		08:03	09:05 (10)	06:56	06:33
	15:51		16:53	9 09:14 (10)	17:55	20:00
7	08:46		08:01	09:07 (10)	06:53	06:31
	15:53		16:55	6 09:13 (10)	17:57	20:02
8	08:45		07:58	09:07 (10)	06:51	06:28
	15:54		16:57	5 09:12 (10)	17:59	20:04
9	08:44		07:56	09:08 (10)	06:48	06:25
	15:56		17:00	3 09:11 (10)	18:01	20:06
10	08:44		07:54		06:45	06:23
	15:58		17:02		18:03	20:08
11	08:43		07:52		06:43	06:20
	15:59		17:04		18:06	20:10
12	08:42		07:50		06:40	06:18
	16:01		17:06		18:08	20:13
13	08:41		07:47		06:38	06:15
	16:03		17:09		18:10	20:15
14	08:40		07:45		06:35	06:12
	16:05		17:11		18:12	20:17
15	08:39		07:43		06:32	06:10
	16:06		17:13		18:14	20:19
16	08:38		07:41		06:30	06:07
	16:08		17:15		18:16	20:21
17	08:37		07:38		06:27	06:05
	16:10		17:18		18:18	20:23
18	08:35		07:36		06:24	06:02
	16:12		17:20		18:20	20:25
19	08:34		07:33		06:22	06:00
	16:14		17:22		18:23	20:27
20	08:33		07:31		06:19	05:57
	16:16		17:24		18:25	20:29
21	08:31		07:29		06:16	05:55
	16:18		17:26		18:27	20:31
22	08:30		07:26		06:14	05:52
	16:20		17:29		18:29	20:33
23	08:28		07:24		06:11	05:50
	16:22		17:31		18:31	20:36
24	08:27	09:02 (10)	07:21		06:08	05:47
	16:24	5 09:07 (10)	17:33		18:33	20:38
25	08:25	09:00 (10)	07:19		06:05	05:45
	16:26	8 09:08 (10)	17:35		18:35	20:40
26	08:23	08:58 (10)	07:16		06:03	05:42
	16:29	11 09:09 (10)	17:37		18:37	20:42
27	08:22	08:56 (10)	07:14		06:00	05:40
	16:31	15 09:11 (10)	17:40		18:39	20:44
28	08:20	08:54 (10)	07:11		05:57	05:37
	16:33	17 09:11 (10)	17:42		18:41	20:46
29	08:18	08:52 (10)			05:55	05:35
	16:35	20 09:12 (10)			18:43	20:48
30	08:16	08:51 (10)			06:52	05:33
	16:37	22 09:13 (10)			19:46	20:50
31	08:15	08:51 (10)			06:49	04:34
	16:39	22 09:13 (10)			19:48	21:48
Potential sun hours	235		265		365	425
Total, worst case	150		103		507	529
Sun reduction	0,15		0,24			
Oper. time red.	0,94		0,94			
Wind dir. red.	0,60		0,59			
Total reduction	0,09		0,13			
Total, real	13		14			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: H - Berzi

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	07:19	08:21
	22:07	21:26	20:12	18:52	16:34	15:42
2	04:28	05:14	06:16	07:16	07:21	08:38 (10)
	22:06	21:24	20:09	18:49	16:32	15:41
3	04:28	05:16	06:18	07:18	07:24	08:38 (10)
	22:06	21:22	20:07	18:46	16:29	15:40
4	04:29	05:18	06:20	07:20	07:26	08:36 (10)
	22:05	21:20	20:04	18:44	16:27	15:40
5	04:30	05:20	06:22	07:22	07:28	08:36 (10)
	22:04	21:18	20:02	18:41	16:25	15:39
6	04:31	05:22	06:24	07:24	07:30	08:34 (10)
	22:04	21:15	19:59	18:38	16:23	15:38
7	04:32	05:24	06:26	07:26	07:32	08:32 (10)
	22:03	21:13	19:56	18:36	16:21	15:37
8	04:34	05:26	06:28	07:28	07:35	08:31 (10)
	22:02	21:11	19:54	18:33	16:19	15:37
9	04:35	05:28	06:30	07:30	07:37	08:28 (10)
	22:01	21:09	19:51	18:30	16:17	15:36
10	04:36	05:30	06:32	07:32	07:39	08:22 (10)
	22:00	21:06	19:48	18:28	16:15	15:36
11	04:37	05:32	06:34	07:34	07:41	08:22 (10)
	21:59	21:04	19:45	18:25	16:13	15:36
12	04:39	05:34	06:36	07:37	07:43	08:23 (10)
	21:58	21:02	19:43	18:23	16:11	15:35
13	04:40	05:36	06:38	07:39	07:45	08:23 (10)
	21:57	21:00	19:40	18:20	16:09	15:35
14	04:41	05:38	06:40	07:41	07:47	08:25 (10)
	21:56	20:57	19:37	18:17	16:07	15:35
15	04:43	05:40	06:42	07:43	07:50	08:28 (10)
	21:54	20:55	19:35	18:15	16:05	15:35
16	04:44	05:42	06:44	07:45	07:52	08:30 (10)
	21:53	20:52	19:32	18:12	16:03	15:35
17	04:46	05:44	06:46	07:47	07:54	08:33 (10)
	21:52	20:50	19:29	18:10	16:02	15:35
18	04:47	05:46	06:48	07:49	07:56	08:35 (10)
	21:50	20:48	19:27	18:07	16:00	15:35
19	04:49	05:48	06:50	07:51	07:58	08:37 (10)
	21:49	20:45	19:24	18:05	15:58	15:35
20	04:51	05:50	06:52	07:53	08:00	08:40 (10)
	21:47	20:43	19:21	18:02	15:57	15:35
21	04:52	05:52	06:54	07:56	08:02	08:46
	21:46	20:40	19:19	18:00	15:55	15:36
22	04:54	05:54	06:56	07:58	08:04	08:46
	21:44	20:38	19:16	17:57	15:54	15:36
23	04:56	05:56	06:58	08:00	08:06	08:47
	21:43	20:35	19:13	17:55	15:52	15:37
24	04:58	05:58	07:00	08:02	08:08	08:47
	21:41	20:33	19:10	17:52	15:51	15:37
25	04:59	06:00	07:02	08:04	08:10	08:48
	21:39	20:30	19:08	17:50	15:49	15:38
26	05:01	06:02	07:04	07:06	08:12	08:48
	21:37	20:28	19:05	16:48	15:48	15:39
27	05:03	06:04	07:06	07:08	08:14	08:48
	21:36	20:25	19:02	16:45	15:47	15:39
28	05:05	06:06	07:08	07:11	08:16	08:48
	21:34	20:22	19:00	16:43	15:46	15:40
29	05:07	06:08	07:10	07:13	08:18	08:48
	21:32	20:20	18:57	16:41	15:44	15:41
30	05:08	06:10	07:12	07:15	08:19	08:48
	21:30	20:17	18:54	16:38	15:43	15:42
31	05:10	06:12		07:17		08:48
	21:28	20:15		16:36		15:43
Potential sun hours	530	470	385	324	248	216
Total, worst case					228	275
Sun reduction					0,09	0,09
Oper. time red.					0,94	0,94
Wind dir. red.					0,59	0,64
Total reduction					0,05	0,05
Total, real					12	14

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUHKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: I - Kropini

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January			February			March	April	May	June
1	08:48		13:57 (6)	08:13		15:07 (8)	07:09	06:47	05:30	04:33
	15:45	19	14:16 (6)	16:42	20	16:09 (15)	17:44	19:50	20:52	21:50
2	08:48		13:58 (6)	08:11		15:08 (8)	07:06	06:44	05:28	04:32
	15:46	19	14:17 (6)	16:44	23	16:12 (15)	17:46	19:52	20:54	21:51
3	08:48		13:58 (6)	08:09		15:09 (8)	07:04	06:41	05:26	04:31
	15:47	18	14:16 (6)	16:46	24	16:13 (15)	17:48	19:54	20:56	21:52
4	08:47		14:00 (6)	08:07		15:50 (15)	07:01	06:39	05:23	04:30
	15:49	17	14:17 (6)	16:48	23	16:13 (15)	17:51	19:56	20:58	21:54
5	08:47		14:01 (6)	08:05		15:11 (8)	06:58	06:36	05:21	04:29
	15:50	15	14:16 (6)	16:51	24	16:13 (15)	17:53	19:58	21:00	21:55
6	08:46		14:02 (6)	08:03		15:50 (15)	06:56	06:33	05:19	04:28
	15:51	14	14:16 (6)	16:53	23	16:13 (15)	17:55	20:00	21:02	21:56
7	08:46		14:03 (6)	08:01		15:51 (15)	06:53	06:31	05:17	04:27
	15:53	12	14:15 (6)	16:55	23	16:14 (15)	17:57	20:02	21:04	21:57
8	08:45		14:04 (6)	07:58		15:51 (15)	06:51	06:28	05:14	04:26
	15:54	11	14:15 (6)	16:57	22	16:13 (15)	17:59	20:04	21:07	21:58
9	08:44		14:06 (6)	07:56		15:52 (15)	06:48	06:25	05:12	04:26
	15:56	14	15:17 (8)	16:59	20	16:12 (15)	18:01	20:06	21:09	21:59
10	08:44		15:09 (8)	07:54		15:52 (15)	06:45	06:23	05:10	04:25
	15:58	5	15:14 (8)	17:02	19	16:11 (15)	18:03	20:08	21:11	22:00
11	08:43		15:08 (8)	07:52		15:53 (15)	06:43	06:20	05:08	04:24
	15:59	4	15:12 (8)	17:04	18	16:11 (15)	18:06	20:10	21:13	22:01
12	08:42		15:07 (8)	07:50		15:55 (15)	06:40	06:18	05:06	04:24
	16:01	4	15:11 (8)	17:06	14	16:09 (15)	18:08	20:13	21:15	22:02
13	08:41		15:07 (8)	07:47		15:57 (15)	06:37	06:15	05:04	04:23
	16:03	3	15:10 (8)	17:08	10	16:07 (15)	18:10	20:15	21:16	22:03
14	08:40		15:06 (8)	07:45			06:35	06:12	05:02	04:23
	16:04	3	15:09 (8)	17:11			18:12	20:17	21:18	22:04
15	08:39		15:06 (8)	07:43			06:32	06:10	05:00	04:23
	16:06	2	15:08 (8)	17:13			18:14	20:19	21:20	22:05
16	08:38		15:05 (8)	07:41			06:29	06:07	04:58	04:22
	16:08	2	15:07 (8)	17:15			18:16	20:21	21:22	22:05
17	08:36		15:05 (8)	07:38			06:27	06:05	04:56	04:22
	16:10	2	15:07 (8)	17:17			18:18	20:23	21:24	22:06
18	08:35		15:04 (8)	07:36			06:24	06:02	04:54	04:22
	16:12	3	15:07 (8)	17:20			18:20	20:25	21:26	22:06
19	08:34		15:05 (8)	07:33			06:21	06:00	04:53	04:22
	16:14	2	15:07 (8)	17:22			18:22	20:27	21:28	22:07
20	08:33		15:04 (8)	07:31			06:19	05:57	04:51	04:22
	16:16	2	15:06 (8)	17:24			18:25	20:29	21:30	22:07
21	08:31		15:04 (8)	07:29			06:16	05:54	04:49	04:22
	16:18	2	15:06 (8)	17:26			18:27	20:31	21:32	22:07
22	08:30		15:05 (8)	07:26			06:13	05:52	04:47	04:22
	16:20	2	15:07 (8)	17:29			18:29	20:33	21:33	22:08
23	08:28		15:04 (8)	07:24			06:11	05:49	04:46	04:23
	16:22	2	15:06 (8)	17:31			18:31	20:35	21:35	22:08
24	08:27		15:04 (8)	07:21			06:08	05:47	04:44	04:23
	16:24	2	15:06 (8)	17:33			18:33	20:38	21:37	22:08
25	08:25		15:04 (8)	07:19			06:05	05:45	04:43	04:23
	16:26	2	15:06 (8)	17:35			18:35	20:40	21:39	22:08
26	08:23		15:04 (8)	07:16			06:03	05:42	04:41	04:24
	16:28	2	15:06 (8)	17:37			18:37	20:42	21:40	22:08
27	08:22		15:05 (8)	07:14			06:00	05:40	04:40	04:24
	16:31	3	15:57 (15)	17:40			18:39	20:44	21:42	22:08
28	08:20		15:05 (8)	07:11			05:57	05:37	04:38	04:25
	16:33	7	15:59 (15)	17:42			18:41	20:46	21:44	22:08
29	08:18		15:05 (8)				05:55	05:35	04:37	04:25
	16:35	12	16:02 (15)				18:43	20:48	21:45	22:07
30	08:16		15:06 (8)				06:52	05:33	04:36	04:26
	16:37	14	16:04 (15)				19:45	20:50	21:47	22:07
31	08:14		15:06 (8)				06:49		04:34	
	16:39	18	16:07 (15)				19:48		21:48	
Potential sun hours	235			265			365	425	507	529
Total, worst case		237			263					
Sun reduction		0,15			0,24					
Oper. time red.		0,94			0,94					
Wind dir. red.		0,66			0,67					
Total reduction		0,10			0,15					
Total, real		23			40					

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: I - Kropini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October		November		December	
1	04:27	05:12	06:14	07:14		07:19	15:22 (15)	08:21	14:49 (8)
	22:07	21:26	20:12	18:52		16:34	19 15:41 (15)	15:42	4 14:53 (8)
2	04:28	05:14	06:16	07:16		07:21	15:21 (15)	08:23	14:51 (8)
	22:06	21:24	20:09	18:49		16:31	20 15:41 (15)	15:41	4 14:55 (8)
3	04:28	05:16	06:18	07:18		07:24	15:21 (15)	08:24	13:53 (6)
	22:06	21:22	20:07	18:46		16:29	21 15:42 (15)	15:40	9 15:02 (8)
4	04:29	05:18	06:20	07:20		07:26	15:20 (15)	08:26	13:50 (6)
	22:05	21:20	20:04	18:44		16:27	23 15:43 (15)	15:40	14 15:01 (8)
5	04:30	05:20	06:22	07:22		07:28	15:20 (15)	08:28	13:49 (6)
	22:04	21:17	20:01	18:41		16:25	23 15:43 (15)	15:39	11 14:00 (6)
6	04:31	05:22	06:24	07:24		07:30	15:20 (15)	08:29	13:48 (6)
	22:04	21:15	19:59	18:38		16:23	23 15:43 (15)	15:38	13 14:01 (6)
7	04:32	05:24	06:26	07:26		07:32	14:40 (8)	08:31	13:48 (6)
	22:03	21:13	19:56	18:36		16:21	24 15:43 (15)	15:37	15 14:03 (6)
8	04:34	05:26	06:28	07:28		07:34	15:20 (15)	08:32	13:48 (6)
	22:02	21:11	19:53	18:33		16:19	23 15:43 (15)	15:37	16 14:04 (6)
9	04:35	05:28	06:30	07:30		07:37	14:39 (8)	08:34	13:47 (6)
	22:01	21:09	19:51	18:30		16:17	24 15:43 (15)	15:36	18 14:05 (6)
10	04:36	05:30	06:32	07:32		07:39	14:39 (8)	08:35	13:48 (6)
	22:00	21:06	19:48	18:28		16:15	22 15:42 (15)	15:36	18 14:06 (6)
11	04:37	05:32	06:34	07:34		07:41	14:38 (8)	08:36	13:47 (6)
	21:59	21:04	19:45	18:25		16:13	18 15:39 (15)	15:36	20 14:07 (6)
12	04:39	05:34	06:36	07:37		07:43	14:37 (8)	08:37	13:47 (6)
	21:58	21:02	19:43	18:23		16:11	16 15:37 (15)	15:35	20 14:07 (6)
13	04:40	05:36	06:38	07:39		07:45	14:38 (8)	08:39	13:48 (6)
	21:57	20:59	19:40	18:20		16:09	12 15:35 (15)	15:35	20 14:08 (6)
14	04:41	05:38	06:40	07:41		07:47	14:37 (8)	08:40	13:48 (6)
	21:56	20:57	19:37	18:17		16:07	11 15:33 (15)	15:35	21 14:09 (6)
15	04:43	05:40	06:42	07:43		07:50	14:38 (8)	08:41	13:48 (6)
	21:54	20:55	19:35	18:15		16:05	5 15:31 (15)	15:35	21 14:09 (6)
16	04:44	05:42	06:44	07:45		07:52	14:38 (8)	08:42	13:49 (6)
	21:53	20:52	19:32	18:12		16:03	1 14:39 (8)	15:35	21 14:10 (6)
17	04:46	05:44	06:46	07:47		07:54	14:37 (8)	08:43	13:49 (6)
	21:52	20:50	19:29	18:10		16:02	2 14:39 (8)	15:35	22 14:11 (6)
18	04:47	05:46	06:48	07:49		07:56	14:38 (8)	08:44	13:49 (6)
	21:50	20:48	19:27	18:07		16:00	2 14:40 (8)	15:35	22 14:11 (6)
19	04:49	05:48	06:50	07:51		07:58	14:38 (8)	08:44	13:49 (6)
	21:49	20:45	19:24	18:05		15:58	2 14:40 (8)	15:35	22 14:11 (6)
20	04:51	05:50	06:52	07:53		08:00	14:39 (8)	08:45	13:50 (6)
	21:47	20:43	19:21	18:02		15:57	2 14:41 (8)	15:35	22 14:12 (6)
21	04:52	05:52	06:54	07:55		08:02	14:40 (8)	08:46	13:51 (6)
	21:46	20:40	19:18	18:00		15:55	2 14:42 (8)	15:36	22 14:13 (6)
22	04:54	05:54	06:56	07:58		08:04	14:40 (8)	08:46	13:51 (6)
	21:44	20:38	19:16	17:57		15:54	2 14:42 (8)	15:36	22 14:13 (6)
23	04:56	05:56	06:58	08:00		08:06	14:41 (8)	08:47	13:52 (6)
	21:42	20:35	19:13	17:55		15:52	2 14:43 (8)	15:37	22 14:14 (6)
24	04:57	05:58	07:00	08:02		08:08	14:41 (8)	08:47	13:52 (6)
	21:41	20:33	19:10	17:52		15:51	2 14:43 (8)	15:37	22 14:14 (6)
25	04:59	06:00	07:02	08:04		08:10	14:43 (8)	08:48	13:52 (6)
	21:39	20:30	19:08	17:50		15:49	2 14:45 (8)	15:38	22 14:14 (6)
26	05:01	06:02	07:04	07:06		08:12	14:44 (8)	08:48	13:53 (6)
	21:37	20:28	19:05	16:48		15:48	2 14:46 (8)	15:39	21 14:14 (6)
27	05:03	06:04	07:06	07:08		08:14	14:44 (8)	08:48	13:53 (6)
	21:35	20:25	19:02	16:45		15:47	3 14:47 (8)	15:39	22 14:15 (6)
28	05:05	06:06	07:08	07:11		08:16	14:45 (8)	08:48	13:54 (6)
	21:34	20:22	19:00	16:43		15:46	3 14:48 (8)	15:40	21 14:15 (6)
29	05:07	06:08	07:10	07:13	15:29 (15)	08:17	14:46 (8)	08:48	13:54 (6)
	21:32	20:20	18:57	16:41	6 15:35 (15)	15:44	3 14:49 (8)	15:41	21 14:15 (6)
30	05:08	06:10	07:12	07:15	15:25 (15)	08:19	14:48 (8)	08:48	13:55 (6)
	21:30	20:17	18:54	16:38	13 15:38 (15)	15:43	3 14:51 (8)	15:42	21 14:16 (6)
31	05:10	06:12	07:17	07:17	15:24 (15)			08:48	13:56 (6)
	21:28	20:15	16:36	15:40 (15)	16 15:40 (15)			15:43	20 14:16 (6)
Potential sun hours	530	470	385	324		248		216	
Total, worst case				35		317		569	
Sun reduction				0,27		0,09		0,09	
Oper. time red.				0,94		0,94		0,94	
Wind dir. red.				0,67		0,67		0,66	
Total reduction				0,17		0,06		0,05	
Total, real				6		18		30	

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUHKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Shadow receptor: J - Ergli

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Flicker curtailment applied to this receptor

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Reference year for calendar

2025

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January		February		March	April	May	June
1	08:48		14:17 (7)	08:13	08:46 (11)	07:09	06:47	04:33
	15:45	27	14:44 (7)	16:42	09:09 (11)	17:44	19:50	21:50
2	08:48		14:18 (7)	08:11	08:46 (11)	07:06	06:44	04:32
	15:46	27	14:45 (7)	16:44	09:10 (11)	17:46	19:52	21:51
3	08:48		14:18 (7)	08:09	08:46 (11)	07:04	06:41	04:31
	15:47	27	14:45 (7)	16:46	09:11 (11)	17:48	19:54	21:52
4	08:47		14:20 (7)	08:07	08:45 (11)	07:01	06:39	04:30
	15:49	26	14:46 (7)	16:48	09:10 (11)	17:51	19:56	21:54
5	08:47		14:20 (7)	08:05	08:46 (11)	06:58	06:36	04:29
	15:50	26	14:46 (7)	16:51	09:11 (11)	17:53	19:58	21:55
6	08:46		14:20 (7)	08:03	08:46 (11)	06:56	06:33	04:28
	15:51	26	14:46 (7)	16:53	09:11 (11)	17:55	20:00	21:56
7	08:46		14:21 (7)	08:01	08:47 (11)	06:53	06:31	04:27
	15:53	25	14:46 (7)	16:55	09:12 (11)	17:57	20:02	21:57
8	08:45		14:21 (7)	07:58	08:46 (11)	06:51	06:28	04:26
	15:54	25	14:46 (7)	16:57	09:11 (11)	17:59	20:04	21:58
9	08:44		14:22 (7)	07:56	08:47 (11)	06:48	06:25	04:26
	15:56	24	14:46 (7)	17:00	09:11 (11)	18:01	20:06	22:00
10	08:44		14:22 (7)	07:54	08:48 (11)	06:45	06:23	04:25
	15:58	24	14:46 (7)	17:02	09:10 (11)	18:03	20:08	22:01
11	08:43		14:23 (7)	07:52	08:48 (11)	06:43	06:20	04:24
	15:59	24	14:47 (7)	17:04	09:09 (11)	18:06	20:10	22:01
12	08:42		14:24 (7)	07:50	08:50 (11)	06:40	06:18	04:24
	16:01	23	14:47 (7)	17:06	09:08 (11)	18:08	20:13	22:02
13	08:41		14:25 (7)	07:47	08:51 (11)	06:37	06:15	04:23
	16:03	22	14:47 (7)	17:09	09:06 (11)	18:10	20:15	22:03
14	08:40		14:26 (7)	07:45	08:53 (11)	06:35	06:12	04:23
	16:05	20	14:46 (7)	17:11	09:05 (11)	18:12	20:17	22:04
15	08:39		14:27 (7)	07:43		06:32	06:10	04:23
	16:06	19	14:46 (7)	17:13		18:14	20:19	22:05
16	08:38		14:28 (7)	07:41		06:30	06:07	04:23
	16:08	17	14:45 (7)	17:15		18:16	20:21	22:05
17	08:36		14:30 (7)	07:38		06:27	06:05	04:22
	16:10	15	14:45 (7)	17:17		18:18	20:23	22:06
18	08:35		14:31 (7)	07:36		06:24	06:02	04:22
	16:12	12	14:43 (7)	17:20		18:20	20:25	22:06
19	08:34		14:34 (7)	07:33		06:22	06:00	04:22
	16:14	8	14:42 (7)	17:22		18:22	20:27	22:07
20	08:33			07:31		06:19	05:57	04:22
	16:16			17:24		18:25	20:29	22:07
21	08:31			07:29		06:16	05:55	04:22
	16:18			17:26		18:27	20:31	22:07
22	08:30			07:26		06:13	05:52	04:22
	16:20			17:29		18:29	20:33	22:08
23	08:28			07:24		06:11	05:50	04:23
	16:22			17:31		18:31	20:36	22:08
24	08:27			07:21		06:08	05:47	04:23
	16:24			17:33		18:33	20:38	22:08
25	08:25			07:19		06:05	05:45	04:23
	16:26			17:35		18:35	20:40	22:08
26	08:23		08:58 (11)	07:16		06:03	05:42	04:24
	16:29	1	08:59 (11)	17:37		18:37	20:42	22:08
27	08:22		08:56 (11)	07:14		06:00	05:40	04:24
	16:31	6	09:02 (11)	17:40		18:39	20:44	22:08
28	08:20		08:54 (11)	07:11		05:57	05:37	04:25
	16:33	10	09:04 (11)	17:42		18:41	20:46	22:08
29	08:18		08:52 (11)			05:55	05:35	04:25
	16:35	14	09:06 (11)			18:43	20:48	22:07
30	08:16		08:50 (11)			06:52	05:33	04:26
	16:37	17	09:07 (11)			19:45	20:50	22:07
31	08:14		08:48 (11)			06:49		04:34
	16:39	20	09:08 (11)			19:48	21:48	
Potential sun hours	235		265		365	425	507	529
Total, worst case	485		309					
Sun reduction	0,15		0,24					
Oper. time red.	0,94		0,94					
Wind dir. red.	0,66		0,59					
Total reduction	0,10		0,13					
Total, real	46		42					

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: J - Ergli

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	07:19	08:17 (11)
	22:07	21:26	20:12	18:52	16:34	22 15:42
2	04:28	05:14	06:16	07:16	07:21	08:16 (11)
	22:06	21:24	20:09	18:49	16:32	23 15:41
3	04:28	05:16	06:18	07:18	07:24	08:16 (11)
	22:06	21:22	20:07	18:46	16:29	25 15:40
4	04:29	05:18	06:20	07:20	07:26	08:16 (11)
	22:05	21:20	20:04	18:44	16:27	24 15:40
5	04:30	05:20	06:22	07:22	07:28	08:16 (11)
	22:04	21:17	20:01	18:41	16:25	25 15:39
6	04:31	05:22	06:24	07:24	07:30	08:16 (11)
	22:04	21:15	19:59	18:38	16:23	25 15:38
7	04:32	05:24	06:26	07:26	07:32	08:15 (11)
	22:03	21:13	19:56	18:36	16:21	26 15:37
8	04:34	05:26	06:28	07:28	07:35	08:16 (11)
	22:02	21:11	19:53	18:33	16:19	25 15:37
9	04:35	05:28	06:30	07:30	07:37	08:16 (11)
	22:01	21:09	19:51	18:30	16:17	24 15:36
10	04:36	05:30	06:32	07:32	07:39	08:17 (11)
	22:00	21:06	19:48	18:28	16:15	24 15:36
11	04:37	05:32	06:34	07:34	07:41	08:18 (11)
	21:59	21:04	19:45	18:25	16:13	22 15:36
12	04:39	05:34	06:36	07:37	07:43	08:21 (11)
	21:58	21:02	19:43	18:23	16:11	19 15:35
13	04:40	05:36	06:38	07:39	07:45	08:23 (11)
	21:57	21:00	19:40	18:20	16:09	16 15:35
14	04:41	05:38	06:40	07:41	07:47	08:25 (11)
	21:56	20:57	19:37	18:17	16:07	12 15:35
15	04:43	05:40	06:42	07:43	07:50	08:28 (11)
	21:54	20:55	19:35	18:15	16:05	9 15:35
16	04:44	05:42	06:44	07:45	07:52	08:30 (11)
	21:53	20:52	19:32	18:12	16:03	4 15:35
17	04:46	05:44	06:46	07:47	07:54	
	21:52	20:50	19:29	18:10	16:02	
18	04:47	05:46	06:48	07:49	07:56	
	21:50	20:48	19:27	18:07	16:00	
19	04:49	05:48	06:50	07:51	07:58	
	21:49	20:45	19:24	18:05	15:58	
20	04:51	05:50	06:52	07:53	08:00	
	21:47	20:43	19:21	18:02	15:57	
21	04:52	05:52	06:54	07:56	08:02	
	21:46	20:40	19:18	18:00	15:55	
22	04:54	05:54	06:56	07:58	08:04	
	21:44	20:38	19:16	17:57	15:54	
23	04:56	05:56	06:58	08:00	08:06	14:13 (7)
	21:43	20:35	19:13	17:55	15:52	3 14:16 (7)
24	04:58	05:58	07:00	08:02	08:08	14:10 (7)
	21:41	20:33	19:10	17:52	15:51	10 14:20 (7)
25	04:59	06:00	07:02	08:04	08:10	14:09 (7)
	21:39	20:30	19:08	17:50	15:49	13 14:22 (7)
26	05:01	06:02	07:04	07:06	08:12	14:08 (7)
	21:37	20:28	19:05	16:48	15:48	16 14:24 (7)
27	05:03	06:04	07:06	07:08	08:14	14:07 (7)
	21:35	20:25	19:02	16:45	15:47	18 14:25 (7)
28	05:05	06:06	07:08	07:11	08:16	14:06 (7)
	21:34	20:22	19:00	16:43	9 08:33 (11)	15:46
29	05:07	06:08	07:10	07:13	08:21 (11)	08:18
	21:32	20:20	18:57	16:41	15 08:36 (11)	15:44
30	05:08	06:10	07:12	07:15	08:19 (11)	08:19
	21:30	20:17	18:54	16:38	18 08:37 (11)	15:43
31	05:10	06:12	07:17	07:17	08:19 (11)	08:48
	21:28	20:15	16:36	20 08:39 (11)		15:43
Potential sun hours	530	470	385	324	248	216
Total, worst case				62	448	801
Sun reduction				0,27	0,09	0,09
Oper. time red.				0,94	0,94	0,94
Wind dir. red.				0,59	0,61	0,67
Total reduction				0,15	0,05	0,05
Total, real				9	24	43

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: K - Nazari

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:41	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:40
4	08:47 15:51	08:07 16:57	07:01 17:59	06:39 20:00	05:23 21:02	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
5	08:47 15:50	08:05 16:50	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:18	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:37
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:14 21:07	04:26 21:59	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	08:44 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:13	04:24 22:02	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:35
12	08:42 16:01	07:50 17:06	06:40 18:08	06:17 20:13	05:06 21:15	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:37 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:15	05:04 21:17	04:23 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	08:38 16:08	07:41 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	07:29 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:07	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:40	04:42 21:39	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08	05:05 21:34	06:06 20:22	07:08 19:00	07:11 16:43	08:16 15:45	08:48 15:40
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:32	06:08 20:20	07:10 18:57	07:13 16:40	08:18 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: L - Akoti

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:30	04:33	04:27	05:12	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:50	22:07	21:26	20:12	18:51	16:34	15:42
2	08:48	08:11	07:06	06:44	05:28	04:32	04:28	05:14	06:16	07:16	07:21	08:23
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:31	15:41
3	08:48	08:09	07:04	06:41	05:26	04:31	04:28	05:16	06:18	07:18	07:24	08:24
	15:47	16:46	17:48	19:54	20:56	21:52	22:06	21:22	20:07	18:46	16:29	15:40
4	08:47	08:07	07:01	06:39	05:23	04:30	04:29	05:18	06:20	07:20	07:26	08:26
	15:48	16:48	17:50	19:56	20:58	21:54	22:05	21:20	20:04	18:43	16:27	15:40
5	08:47	08:05	06:58	06:36	05:21	04:29	04:30	05:20	06:22	07:22	07:28	08:28
	15:50	16:50	17:53	19:58	21:00	21:55	22:04	21:17	20:01	18:41	16:25	15:39
6	08:46	08:03	06:56	06:33	05:19	04:28	04:31	05:22	06:24	07:24	07:30	08:29
	15:51	16:53	17:55	20:00	21:02	21:56	22:04	21:15	19:59	18:38	16:23	15:38
7	08:46	08:00	06:53	06:31	05:17	04:27	04:32	05:24	06:26	07:26	07:32	08:31
	15:53	16:55	17:57	20:02	21:04	21:57	22:03	21:13	19:56	18:36	16:21	15:37
8	08:45	07:58	06:51	06:28	05:14	04:26	04:34	05:26	06:28	07:28	07:34	08:32
	15:54	16:57	17:59	20:04	21:06	21:58	22:02	21:11	19:53	18:33	16:19	15:37
9	08:44	07:56	06:48	06:25	05:12	04:26	04:35	05:28	06:30	07:30	07:37	08:33
	15:56	16:59	18:01	20:06	21:08	21:59	22:01	21:09	19:51	18:30	16:17	15:36
10	08:44	07:54	06:45	06:23	05:10	04:25	04:36	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:03	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:36
11	08:43	07:52	06:43	06:20	05:08	04:24	04:37	05:32	06:34	07:34	07:41	08:36
	15:59	17:04	18:05	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:35
12	08:42	07:50	06:40	06:17	05:06	04:24	04:39	05:34	06:36	07:36	07:43	08:37
	16:01	17:06	18:08	20:12	21:14	22:02	21:58	21:02	19:43	18:22	16:11	15:35
13	08:41	07:47	06:37	06:15	05:04	04:23	04:40	05:36	06:38	07:39	07:45	08:39
	16:03	17:08	18:10	20:15	21:16	22:03	21:57	20:59	19:40	18:20	16:09	15:35
14	08:40	07:45	06:35	06:12	05:02	04:23	04:41	05:38	06:40	07:41	07:47	08:40
	16:04	17:11	18:12	20:17	21:18	22:04	21:56	20:57	19:37	18:17	16:07	15:35
15	08:39	07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:49	08:41
	16:06	17:13	18:14	20:19	21:20	22:05	21:54	20:55	19:35	18:15	16:05	15:35
16	08:38	07:40	06:29	06:07	04:58	04:22	04:44	05:42	06:44	07:45	07:52	08:42
	16:08	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:03	15:35
17	08:36	07:38	06:27	06:05	04:56	04:22	04:46	05:44	06:46	07:47	07:54	08:43
	16:10	17:17	18:18	20:23	21:24	22:06	21:52	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:54	04:22	04:47	05:46	06:48	07:49	07:56	08:43
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:47	19:27	18:07	16:00	15:35
19	08:34	07:33	06:21	05:59	04:53	04:22	04:49	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:22	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:58	15:35
20	08:32	07:31	06:19	05:57	04:51	04:22	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:24	20:29	21:30	22:07	21:47	20:43	19:21	18:02	15:57	15:35
21	08:31	07:29	06:16	05:54	04:49	04:22	04:52	05:52	06:54	07:55	08:02	08:46
	16:18	17:26	18:27	20:31	21:32	22:07	21:46	20:40	19:18	18:00	15:55	15:36
22	08:30	07:26	06:13	05:52	04:47	04:22	04:54	05:54	06:56	07:58	08:04	08:46
	16:20	17:29	18:29	20:33	21:33	22:08	21:44	20:38	19:16	17:57	15:54	15:36
23	08:28	07:24	06:11	05:49	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:22	17:31	18:31	20:35	21:35	22:08	21:42	20:35	19:13	17:55	15:52	15:37
24	08:27	07:21	06:08	05:47	04:44	04:23	04:57	05:58	07:00	08:02	08:08	08:47
	16:24	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:10	17:52	15:51	15:37
25	08:25	07:19	06:05	05:45	04:43	04:23	04:59	06:00	07:02	08:04	08:10	08:48
	16:26	17:35	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:49	15:38
26	08:23	07:16	06:03	05:42	04:41	04:24	05:01	06:02	07:04	07:06	08:12	08:48
	16:28	17:37	18:37	20:42	21:40	22:08	21:37	20:27	19:05	16:48	15:48	15:39
27	08:22	07:14	06:00	05:40	04:40	04:24	05:03	06:04	07:06	07:08	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:39
28	08:20	07:11	05:57	05:37	04:38	04:25	05:05	06:06	07:08	07:11	08:16	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:34	20:22	19:00	16:43	15:45	15:40
29	08:18		05:55	05:35	04:37	04:25	05:07	06:08	07:10	07:13	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:32	20:20	18:57	16:40	15:44	15:41
30	08:16		06:52	05:33	04:36	04:26	05:08	06:10	07:12	07:15	08:19	08:48
	16:37		19:45	20:50	21:47	22:07	21:30	20:17	18:54	16:38	15:43	15:42
31	08:14		06:49		04:34		05:10	06:12		07:17		08:48
	16:39		19:47		21:48		21:28	20:15		16:36		15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUKKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: M - Linares

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:22 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:53	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:40
4	08:47 15:51	08:07 16:53	07:01 17:55	06:39 20:00	05:23 21:03	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
5	08:47 15:50	08:05 16:50	06:58 17:53	06:36 19:58	05:21 21:01	04:29 21:55	04:30 22:05	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:03	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:37
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:14 21:07	04:26 21:59	04:33 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	08:45 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	08:44 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:07	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:13	04:24 22:02	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:35
12	08:42 16:01	07:50 17:06	06:40 18:08	06:18 20:13	05:06 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:35
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19	08:34 16:14	07:34 17:22	06:22 18:22	06:00 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
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21	08:31 16:18	07:29 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:08	04:52 21:46	05:52 20:40	06:54 19:18	07:56 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:47 21:34	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
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30	08:16 16:37		06:52 19:45	05:33 20:50	04:36 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:49 15:42
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Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: N - Lamani 1

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

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

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: O - Rožlejas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:40
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10	08:44 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:13	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:35
12	08:42 16:01	07:50 17:06	06:40 18:08	06:18 20:13	05:06 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:15	05:04 21:17	04:23 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
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18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
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31	08:14 16:39		06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: P - Aizupes

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:22 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:53	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:40
4	08:47 15:51	08:07 16:57	07:01 17:59	06:39 20:00	05:23 21:03	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
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22	08:30 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:47 21:34	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
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31	08:15 16:39		06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: Q - Kumelites

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:40
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29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:32	06:08 20:20	07:10 18:57	07:13 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: R - Dzila Vada

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:57	04:31 21:53	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:40
4	08:48 15:49	08:07 16:48	07:01 17:51	06:39 19:56	05:23 20:59	04:30 21:54	04:29 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:21 21:01	04:29 21:55	04:30 22:05	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:47 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:03	04:28 21:56	04:31 22:04	05:22 21:16	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:58	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:33 16:21	08:31 15:37
8	08:45 15:54	07:59 16:57	06:51 17:59	06:28 20:04	05:15 21:07	04:26 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	08:45 15:56	07:56 17:00	06:48 18:01	06:26 20:06	05:12 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:11	05:08 21:13	04:24 22:02	04:37 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:06	06:40 18:08	06:18 20:13	05:06 21:15	04:24 22:03	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:35
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:04 21:17	04:23 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:19	04:23 22:04	04:41 21:56	05:38 20:57	06:40 19:38	07:41 18:17	07:48 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:21	04:23 22:05	04:43 21:55	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	08:38 16:08	07:41 17:15	06:30 18:16	06:07 20:21	04:58 21:23	04:22 22:05	04:44 21:53	05:42 20:53	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:37 16:10	07:38 17:18	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:07	04:47 21:51	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:45 15:35
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:48	05:50 20:43	06:52 19:21	07:54 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	07:29 17:26	06:16 18:27	05:55 20:31	04:49 21:32	04:22 22:08	04:52 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:14 18:29	05:52 20:34	04:47 21:34	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:47 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:06 18:35	05:45 20:40	04:43 21:39	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	08:24 16:29	07:16 17:38	06:03 18:37	05:42 20:42	04:41 21:41	04:24 22:08	05:01 21:38	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08	05:03 21:36	06:04 20:25	07:06 19:02	07:09 16:45	08:14 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:49 15:40
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:25 22:08	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:44	08:49 15:41
30	08:17 16:37		06:52 19:46	05:33 20:50	04:36 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:20 15:43	08:49 15:42
31	08:15 16:39		06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:49 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: S - Vecumi

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	08:46 (10) 17:44	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:19 18:52	08:21 15:42
2	08:48 15:46	08:11 16:44	08:44 (10) 17:46	07:06 19:52	06:44 20:54	05:28 21:51	04:32 22:06	04:28 21:24	05:14 20:09	06:16 18:49	07:16 16:32	08:23 15:41
3	08:48 15:47	08:09 16:46	08:42 (10) 17:48	07:04 19:54	06:41 20:56	05:26 21:52	04:31 22:06	04:28 21:22	05:16 20:07	06:18 18:46	07:18 16:29	08:25 15:40
4	08:47 15:49	08:07 16:48	08:40 (10) 17:51	07:01 19:56	06:39 20:58	05:23 21:54	04:30 22:05	04:29 21:20	05:18 20:04	06:20 18:44	07:20 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	08:39 (10) 17:53	06:58 19:58	06:36 21:00	05:21 21:55	04:29 22:04	04:30 21:18	05:20 20:02	06:22 18:41	07:22 16:25	08:28 15:39
6	08:46 15:51	08:03 16:53	08:40 (10) 17:55	06:56 20:00	06:33 21:03	05:19 21:56	04:28 22:04	04:31 21:15	05:22 19:59	06:24 18:38	07:24 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	08:41 (10) 17:57	06:53 20:02	06:31 21:05	05:17 21:57	04:27 22:03	04:32 21:13	05:24 19:56	06:26 18:36	07:26 16:21	08:31 15:37
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:15 21:07	04:26 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:01	06:25 20:06	05:12 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	08:44 15:58	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:13	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:06	06:40 18:08	06:18 20:13	05:06 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:09	06:38 18:10	06:15 20:15	05:04 21:17	04:23 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	08:38 16:08	07:41 17:15	06:30 18:16	06:07 20:21	04:58 21:22	04:23 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:36 16:10	07:38 17:18	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:33 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	07:29 17:26	06:16 18:27	05:55 20:31	04:49 21:32	04:22 22:07	04:52 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:45 20:40	04:43 21:39	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	08:23 16:29	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08	05:03 21:36	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08	05:05 21:34	06:06 20:22	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:40
29	08:18 16:35	08:52 (10) 17:42	05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:44	08:48 15:41
30	08:16 16:37	08:50 (10) 17:42	05:52 19:45	05:33 20:50	04:36 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:15 16:39	08:48 (10) 17:42	05:49 19:48	05:33 20:50	04:34 21:48	04:26 22:07	05:10 21:28	06:12 20:15	07:17 16:36	07:17 15:43	08:19 15:43	08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case	20	43								64		
Sun reduction	0,15	0,24								0,09		
Oper. time red.	0,94	0,94								0,94		
Wind dir. red.	0,60	0,60								0,60		
Total reduction	0,09	0,14								0,05		
Total, real	2	6								3		

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: T - Rutini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:40
4	08:47 15:51	08:07 16:53	07:01 17:55	06:39 20:00	05:23 21:02	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
5	08:47 15:50	08:05 16:50	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:18	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:37
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:14 21:07	04:26 21:59	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	08:44 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:13	04:24 22:02	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:35
12	08:42 16:01	07:50 17:06	06:40 18:08	06:17 20:13	05:06 21:15	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:37 18:22	07:43 16:11	08:38 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:15	05:04 21:17	04:23 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	08:38 16:08	07:41 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	07:29 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:07	04:52 21:46	05:52 20:40	06:54 19:18	07:56 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:49 20:36	04:46 21:35	04:22 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:45 20:40	04:43 21:39	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08	05:03 21:36	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08	05:05 21:34	06:06 20:22	07:08 19:00	07:11 16:43	08:16 15:45	08:48 15:40
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:32	06:08 20:20	07:10 18:57	07:13 16:40	08:18 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:15 16:39		06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: U - Viksnes

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	13:57 (6)	08:13	15:53 (15)	07:09	06:47
	15:45	20	14:17 (6)	16:42	16	16:09 (15)
2	08:48	13:58 (6)	08:11	15:52 (15)	07:06	06:44
	15:46	20	14:18 (6)	16:44	20	16:12 (15)
3	08:48	13:58 (6)	08:09	15:52 (15)	07:04	06:41
	15:47	20	14:18 (6)	16:46	23	16:15 (15)
4	08:47	14:00 (6)	08:07	15:51 (15)	07:01	06:39
	15:49	18	14:18 (6)	16:48	23	16:14 (15)
5	08:47	14:00 (6)	08:05	15:52 (15)	06:58	06:36
	15:50	18	14:18 (6)	16:51	23	16:15 (15)
6	08:46	14:01 (6)	08:03	15:52 (15)	06:56	06:33
	15:51	17	14:18 (6)	16:53	23	16:15 (15)
7	08:46	14:02 (6)	08:01	15:52 (15)	06:53	06:31
	15:53	15	14:17 (6)	16:55	24	16:16 (15)
8	08:45	14:03 (6)	07:58	15:52 (15)	06:51	06:28
	15:54	14	14:17 (6)	16:57	23	16:15 (15)
9	08:44	14:05 (6)	07:56	15:53 (15)	06:48	06:25
	15:56	11	14:16 (6)	16:59	22	16:15 (15)
10	08:44	14:07 (6)	07:54	15:53 (15)	06:45	06:23
	15:58	7	14:14 (6)	17:02	21	16:14 (15)
11	08:43		07:52	15:54 (15)	06:43	06:20
	15:59		17:04	16:13 (15)	18:06	20:10
12	08:42		07:50	15:56 (15)	06:40	06:18
	16:01		17:06	16:13 (15)	18:08	20:13
13	08:41		07:47	15:57 (15)	06:37	06:15
	16:03		17:08	16:10 (15)	18:10	20:15
14	08:40		07:45	16:00 (15)	06:35	06:12
	16:04		17:11	16:08 (15)	18:12	20:17
15	08:39		07:43	06:32	06:10	05:00
	16:06		17:13	18:14	20:19	21:20
16	08:38		07:41	06:29	06:07	04:58
	16:08		17:15	18:16	20:21	21:22
17	08:36		07:38	06:27	06:05	04:56
	16:10		17:17	18:18	20:23	21:24
18	08:35		07:36	06:24	06:02	04:54
	16:12		17:20	18:20	20:25	21:26
19	08:34		07:33	06:21	06:00	04:53
	16:14		17:22	18:22	20:27	21:28
20	08:33		07:31	06:19	05:57	04:51
	16:16		17:24	18:25	20:29	21:30
21	08:31		07:29	06:16	05:54	04:49
	16:18		17:26	18:27	20:31	21:32
22	08:30		07:26	06:13	05:52	04:47
	16:20		17:29	18:29	20:33	21:33
23	08:28		07:24	06:11	05:49	04:46
	16:22		17:31	18:31	20:35	21:35
24	08:27		07:21	06:08	05:47	04:44
	16:24		17:33	18:33	20:38	21:37
25	08:25		07:19	06:05	05:45	04:43
	16:26		17:35	18:35	20:40	21:39
26	08:23		07:16	06:03	05:42	04:41
	16:28		17:37	18:37	20:42	21:40
27	08:22		07:14	06:00	05:40	04:40
	16:31		17:40	18:39	20:44	21:42
28	08:20	15:56 (15)	07:11	05:57	05:37	04:38
	16:33	3	15:59 (15)	17:42	18:41	20:46
29	08:18	15:55 (15)		05:55	05:35	04:37
	16:35	7	16:02 (15)		18:43	20:48
30	08:16	15:54 (15)		06:52	05:33	04:36
	16:37	10	16:04 (15)		19:45	20:50
31	08:14	15:53 (15)		06:49		04:34
	16:39	14	16:07 (15)		19:48	21:48
Potential sun hours	235		265		365	425
Total, worst case	194		275			507
Sun reduction	0,15		0,24			
Oper. time red.	0,94		0,94			
Wind dir. red.	0,66		0,67			
Total reduction	0,10		0,15			
Total, real	19		42			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: U - Viksnes

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	07:19	15:23 (15) 08:21
	22:07	21:26	20:12	18:52	16:34	20 15:43 (15) 15:42
2	04:28	05:14	06:16	07:16	07:21	15:22 (15) 08:23
	22:06	21:24	20:09	18:49	16:31	22 15:44 (15) 15:41 2 13:55 (6)
3	04:28	05:16	06:18	07:18	07:24	15:22 (15) 08:24 13:50 (6)
	22:06	21:22	20:07	18:46	16:29	23 15:45 (15) 15:40 9 13:59 (6)
4	04:29	05:18	06:20	07:20	07:26	15:21 (15) 08:26 13:49 (6)
	22:05	21:20	20:04	18:44	16:27	24 15:45 (15) 15:40 12 14:01 (6)
5	04:30	05:20	06:22	07:22	07:28	15:22 (15) 08:28 13:49 (6)
	22:04	21:17	20:01	18:41	16:25	23 15:45 (15) 15:39 13 14:02 (6)
6	04:31	05:22	06:24	07:24	07:30	15:22 (15) 08:29 13:47 (6)
	22:04	21:15	19:59	18:38	16:23	23 15:45 (15) 15:38 16 14:03 (6)
7	04:32	05:24	06:26	07:26	07:32	15:21 (15) 08:31 13:48 (6)
	22:03	21:13	19:56	18:36	16:21	24 15:45 (15) 15:37 16 14:04 (6)
8	04:34	05:26	06:28	07:28	07:34	15:22 (15) 08:32 13:48 (6)
	22:02	21:11	19:53	18:33	16:19	23 15:45 (15) 15:37 18 14:06 (6)
9	04:35	05:28	06:30	07:30	07:37	15:22 (15) 08:34 13:47 (6)
	22:01	21:09	19:51	18:30	16:17	21 15:43 (15) 15:36 19 14:06 (6)
10	04:36	05:30	06:32	07:32	07:39	15:23 (15) 08:35 13:48 (6)
	22:00	21:06	19:48	18:28	16:15	19 15:42 (15) 15:36 19 14:07 (6)
11	04:37	05:32	06:34	07:34	07:41	15:24 (15) 08:36 13:47 (6)
	21:59	21:04	19:45	18:25	16:13	15 15:39 (15) 15:36 21 14:08 (6)
12	04:39	05:34	06:36	07:37	07:43	15:24 (15) 08:37 13:47 (6)
	21:58	21:02	19:43	18:23	16:11	13 15:37 (15) 15:35 21 14:08 (6)
13	04:40	05:36	06:38	07:39	07:45	15:26 (15) 08:39 13:48 (6)
	21:57	20:59	19:40	18:20	16:09	9 15:35 (15) 15:35 22 14:10 (6)
14	04:41	05:38	06:40	07:41	07:47	15:27 (15) 08:40 13:48 (6)
	21:56	20:57	19:37	18:17	16:07	6 15:33 (15) 15:35 22 14:10 (6)
15	04:43	05:40	06:42	07:43	07:50	15:30 (15) 08:41 13:48 (6)
	21:54	20:55	19:35	18:15	16:05	1 15:31 (15) 15:35 23 14:11 (6)
16	04:44	05:42	06:44	07:45	07:52	08:42 13:49 (6)
	21:53	20:52	19:32	18:12	16:03	15:35 22 14:11 (6)
17	04:46	05:44	06:46	07:47	07:54	08:43 13:49 (6)
	21:52	20:50	19:29	18:10	16:02	15:35 23 14:12 (6)
18	04:47	05:46	06:48	07:49	07:56	08:44 13:50 (6)
	21:50	20:48	19:27	18:07	16:00	15:35 23 14:13 (6)
19	04:49	05:48	06:50	07:51	07:58	08:44 13:49 (6)
	21:49	20:45	19:24	18:05	15:58	15:35 23 14:12 (6)
20	04:51	05:50	06:52	07:53	08:00	08:45 13:50 (6)
	21:47	20:43	19:21	18:02	15:57	15:35 23 14:13 (6)
21	04:52	05:52	06:54	07:55	08:02	08:46 13:51 (6)
	21:46	20:40	19:18	18:00	15:55	15:36 23 14:14 (6)
22	04:54	05:54	06:56	07:58	08:04	08:46 13:51 (6)
	21:44	20:38	19:16	17:57	15:54	15:36 23 14:14 (6)
23	04:56	05:56	06:58	08:00	08:06	08:47 13:52 (6)
	21:42	20:35	19:13	17:55	15:52	15:37 23 14:15 (6)
24	04:57	05:58	07:00	08:02	08:08	08:47 13:52 (6)
	21:41	20:33	19:10	17:52	15:51	15:37 23 14:15 (6)
25	04:59	06:00	07:02	08:04	08:10	08:48 13:52 (6)
	21:39	20:30	19:08	17:50	15:49	15:38 23 14:15 (6)
26	05:01	06:02	07:04	07:06	08:12	08:48 13:53 (6)
	21:37	20:28	19:05	16:48	15:48	15:39 23 14:16 (6)
27	05:03	06:04	07:06	07:08	08:14	08:48 13:53 (6)
	21:35	20:25	19:02	16:45	15:47	15:39 23 14:16 (6)
28	05:05	06:06	07:08	07:11	15:30 (15) 08:16	08:48 13:54 (6)
	21:34	20:22	19:00	16:43	15:36 (15) 15:46	15:40 22 14:16 (6)
29	05:07	06:08	07:10	07:13	15:27 (15) 08:17	08:48 13:54 (6)
	21:32	20:20	18:57	16:41	15:40 (15) 15:44	15:41 23 14:17 (6)
30	05:08	06:10	07:12	07:15	15:25 (15) 08:19	08:48 13:55 (6)
	21:30	20:17	18:54	16:38	15:41 (15) 15:43	15:42 22 14:17 (6)
31	05:10	06:12	07:17	07:17	15:24 (15) 15:43	08:48 13:56 (6)
	21:28	20:15	16:36	19 15:43 (15)	15:43	22 14:18 (6)
Potential sun hours	530	470	385	324	248	216
Total, worst case				54	266	597
Sun reduction				0,27	0,09	0,09
Oper. time red.				0,94	0,94	0,94
Wind dir. red.				0,67	0,67	0,66
Total reduction				0,17	0,06	0,05
Total, real				9	16	32

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: V - Dimanti

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:30	04:33	04:27	05:12	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:50	22:07	21:26	20:12	18:52	16:34	15:42
2	08:48	08:11	07:06	06:44	05:28	04:32	04:28	05:14	06:16	07:16	07:22	08:23
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:31	15:41
3	08:48	08:09	07:04	06:41	05:26	04:31	04:28	05:16	06:18	07:18	07:24	08:25
	15:47	16:46	17:48	19:54	20:56	21:53	22:06	21:22	20:07	18:46	16:29	15:40
4	08:47	08:07	07:01	06:39	05:23	04:30	04:29	05:18	06:20	07:20	07:26	08:26
	15:49	16:48	17:51	19:56	20:58	21:54	22:05	21:20	20:04	18:44	16:27	15:40
5	08:47	08:05	06:59	06:36	05:21	04:29	04:30	05:20	06:22	07:22	07:28	08:28
	15:50	16:51	17:53	19:58	21:01	21:55	22:05	21:18	20:02	18:41	16:25	15:39
6	08:46	08:03	06:56	06:33	05:19	04:28	04:31	05:22	06:24	07:24	07:30	08:29
	15:51	16:53	17:55	20:00	21:03	21:56	22:04	21:15	19:59	18:38	16:23	15:38
7	08:46	08:01	06:53	06:31	05:17	04:27	04:32	05:24	06:26	07:26	07:32	08:31
	15:53	16:55	17:57	20:02	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:37
8	08:45	07:59	06:51	06:28	05:14	04:26	04:34	05:26	06:28	07:28	07:35	08:32
	15:54	16:57	17:59	20:04	21:07	21:59	22:02	21:11	19:54	18:33	16:19	15:37
9	08:45	07:56	06:48	06:25	05:12	04:26	04:35	05:28	06:30	07:30	07:37	08:34
	15:56	17:00	18:01	20:06	21:09	22:00	22:01	21:09	19:51	18:30	16:17	15:36
10	08:44	07:54	06:45	06:23	05:10	04:25	04:36	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:03	20:08	21:11	22:01	22:00	21:07	19:48	18:28	16:15	15:36
11	08:43	07:52	06:43	06:20	05:08	04:24	04:37	05:32	06:34	07:35	07:41	08:36
	15:59	17:04	18:06	20:11	21:13	22:02	21:59	21:04	19:46	18:25	16:13	15:35
12	08:42	07:50	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:37	07:43	08:38
	16:01	17:06	18:08	20:13	21:15	22:02	21:58	21:02	19:43	18:23	16:11	15:35
13	08:41	07:48	06:38	06:15	05:04	04:23	04:40	05:36	06:38	07:39	07:45	08:39
	16:03	17:09	18:10	20:15	21:17	22:03	21:57	21:00	19:40	18:20	16:09	15:35
14	08:40	07:45	06:35	06:12	05:02	04:23	04:41	05:38	06:40	07:41	07:48	08:40
	16:04	17:11	18:12	20:17	21:19	22:04	21:56	20:57	19:37	18:17	16:07	15:35
15	08:39	07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:50	08:41
	16:06	17:13	18:14	20:19	21:21	22:05	21:55	20:55	19:35	18:15	16:05	15:35
16	08:38	07:41	06:30	06:07	04:58	04:22	04:44	05:42	06:44	07:45	07:52	08:42
	16:08	17:15	18:16	20:21	21:22	22:05	21:53	20:53	19:32	18:12	16:03	15:35
17	08:37	07:38	06:27	06:05	04:56	04:22	04:46	05:44	06:46	07:47	07:54	08:43
	16:10	17:17	18:18	20:23	21:24	22:06	21:52	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:54	04:22	04:47	05:46	06:48	07:49	07:56	08:44
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:48	19:27	18:07	16:00	15:35
19	08:34	07:34	06:22	06:00	04:53	04:22	04:49	05:48	06:50	07:51	07:58	08:45
	16:14	17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:58	15:35
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22	08:30	07:26	06:14	05:52	04:47	04:22	04:54	05:54	06:56	07:58	08:04	08:46
	16:20	17:29	18:29	20:34	21:34	22:08	21:44	20:38	19:16	17:57	15:54	15:36
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:22	17:31	18:31	20:36	21:35	22:08	21:43	20:35	19:13	17:55	15:52	15:37
24	08:27	07:21	06:08	05:47	04:44	04:23	04:57	05:58	07:00	08:02	08:08	08:47
	16:24	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:10	17:52	15:51	15:37
25	08:25	07:19	06:05	05:45	04:43	04:23	04:59	06:00	07:02	08:04	08:10	08:48
	16:26	17:35	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:49	15:38
26	08:23	07:16	06:03	05:42	04:41	04:24	05:01	06:02	07:04	07:06	08:12	08:48
	16:29	17:37	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:48	15:39
27	08:22	07:14	06:00	05:40	04:40	04:24	05:03	06:04	07:06	07:09	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:08	21:36	20:25	19:02	16:45	15:47	15:39
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	16:35		18:43	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:44	15:41
30	08:16		06:52	05:33	04:36	04:26	05:08	06:10	07:12	07:15	08:19	08:49
	16:37		19:46	20:50	21:47	22:07	21:30	20:17	18:54	16:38	15:43	15:42
31	08:15		06:49		04:34		05:10	06:12		07:17		08:48
	16:39		19:48		21:48		21:28	20:15		16:36		15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: W - Rudzi š

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:22 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:53	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:40
4	08:47 15:51	08:07 16:53	07:01 17:55	06:39 20:00	05:23 21:03	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
5	08:47 15:50	08:05 16:50	06:58 17:53	06:36 19:58	05:21 21:01	04:29 21:55	04:30 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:03	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
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19	08:34 16:14	07:34 17:22	06:22 18:22	06:00 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	07:29 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:08	04:52 21:46	05:52 20:40	06:54 19:18	07:56 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:47 21:34	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:49 20:36	04:46 21:35	04:22 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
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26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08	05:03 21:36	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08	05:05 21:34	06:06 20:22	07:08 19:00	07:11 16:43	08:16 15:45	08:48 15:40
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:33 20:50	04:36 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:15 16:39		06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: X - Podnieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:41	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:40
4	08:47 15:51	08:07 16:57	07:01 17:59	06:39 20:00	05:23 21:02	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
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29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:32	06:08 20:20	07:10 18:57	07:13 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: Y - Stimbinaja

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:41	07:09 17:44	06:46 19:49	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:40
4	08:47 15:51	08:07 16:57	07:01 17:59	06:38 20:00	05:23 21:02	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
5	08:47 15:50	08:05 16:50	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:16 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:35	07:32 16:21	08:31 15:37
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:18	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:25 21:59	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:16	08:34 15:36
10	08:44 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:12	08:36 15:35
12	08:42 16:01	07:50 17:06	06:40 18:08	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:10	08:37 15:35
13	08:41 16:02	07:47 17:08	06:37 18:10	06:15 20:15	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:39 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:22 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:41 15:35
16	08:38 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:34
17	08:36 16:10	07:38 17:17	06:27 18:18	06:04 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07	04:50 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:56	08:45 15:35
21	08:31 16:18	07:29 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:07	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:08	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:36
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:50	08:47 15:37
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27	08:22 16:30	07:14 17:39	06:00 18:39	05:40 20:44	04:39 21:42	04:24 22:08	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
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30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
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Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: Z - Marsnica

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:41	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:40
4	08:47 15:51	08:07 16:57	07:01 17:59	06:39 20:00	05:23 21:02	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
5	08:47 15:50	08:05 16:50	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:37
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:26 21:59	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:16	08:34 15:36
10	08:44 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:35
12	08:42 16:01	07:50 17:06	06:40 18:08	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
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14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:41 15:35
16	08:38 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	07:29 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:07	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:53	08:46 15:36
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25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:40	04:42 21:39	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
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27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08	05:05 21:34	06:06 20:22	07:08 18:59	07:11 16:43	08:16 15:45	08:48 15:40
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:32	06:08 20:20	07:10 18:57	07:13 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AA - Vilkmuiža

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:09 17:44	06:47 19:49	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:40
4	08:47 15:51	08:07 16:57	07:01 17:59	06:38 20:04	05:23 21:06	04:30 21:58	04:29 22:02	05:18 21:11	06:20 19:53	07:20 18:33	07:26 16:18	08:26 15:37
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6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:16 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:35	07:32 16:21	08:31 15:37
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9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:25 21:59	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:16	08:33 15:36
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12	08:42 16:01	07:50 17:06	06:40 18:08	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:14	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:39 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:41 15:35
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21	08:31 16:18	07:29 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:07	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:46 15:36
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31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
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Total reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AB - Vecergli

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:41	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:48 15:47	08:09 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:40
4	08:47 15:51	08:07 16:57	07:01 17:59	06:39 20:00	05:23 21:02	04:30 21:56	04:29 22:04	05:18 21:15	06:20 19:59	07:20 18:38	07:26 16:23	08:26 15:38
5	08:47 15:50	08:05 16:50	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
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11	08:43 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:12	08:36 15:35
12	08:42 16:01	07:50 17:06	06:40 18:08	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
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22	08:30 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:53	08:46 15:36
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28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:24 22:08	05:05 21:34	06:06 20:22	07:08 18:59	07:10 16:43	08:16 15:45	08:48 15:40
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:32	06:08 20:20	07:10 18:57	07:13 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:47	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	426	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AC - Kvieši

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
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Sun reduction												
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AD - Me ž a Rasas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:13 16:42	07:09 17:44	07:50 (8) 08:15 (8)	06:47 19:50	04:33 21:50
2	08:48 15:46	08:11 16:44	07:06 17:46	07:50 (8) 08:14 (8)	06:44 19:52	04:32 21:51
3	08:48 15:47	08:09 16:46	07:04 17:49	07:50 (8) 08:13 (8)	06:41 19:54	04:31 21:52
4	08:47 15:49	09:29 (7) 08:07 16:48	08:44 (15) 07:01 17:51	07:51 (8) 06:39 19:56	05:23 20:58	04:30 21:54
5	08:47 15:50	09:28 (7) 08:05 16:51	08:43 (15) 06:59 17:53	07:52 (8) 06:36 19:58	05:21 21:01	04:29 21:55
6	08:46 15:51	09:29 (7) 08:03 16:53	08:45 (15) 06:56 17:55	07:53 (8) 06:33 20:00	05:19 21:03	04:28 21:56
7	08:46 15:53	09:26 (7) 08:01 16:55	06:53 17:57	07:55 (8) 20:02	05:17 21:05	04:27 21:57
8	08:45 15:55	09:25 (7) 07:59 16:57	06:51 17:59	06:28 20:04	05:15 21:07	04:27 21:59
9	08:45 15:56	09:25 (7) 07:56 17:00	06:48 18:01	06:26 20:06	05:13 21:09	04:26 22:00
10	08:44 15:58	09:28 (7) 07:54 17:02	06:46 18:04	06:23 20:08	05:10 21:11	04:25 22:01
11	08:43 15:59	09:26 (7) 07:52 17:04	06:43 18:06	06:20 20:11	05:08 21:13	04:25 22:02
12	08:42 16:01	09:26 (7) 07:50 17:06	06:40 18:08	06:18 20:13	05:06 21:15	04:24 22:02
13	08:41 16:03	09:29 (7) 07:48 17:09	06:38 18:10	06:15 20:15	05:04 21:17	04:24 22:03
14	08:40 16:05	09:26 (7) 07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:19	04:23 22:04
15	08:39 16:07	09:28 (7) 07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:21	04:23 22:05
16	08:38 16:08	09:29 (7) 07:41 17:15	06:30 18:16	06:07 20:21	04:58 21:22	04:23 22:05
17	08:37 16:10	09:27 (7) 07:38 17:18	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06
18	08:35 16:12	09:29 (7) 07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:22 22:06
19	08:34 16:14	09:28 (7) 07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:22 22:07
20	08:33 16:16	09:29 (7) 07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07
21	08:31 16:18	09:29 (7) 07:29 17:27	06:16 18:27	05:55 20:31	04:49 21:32	04:22 22:08
22	08:30 16:20	09:30 (7) 07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08
23	08:28 16:22	09:30 (7) 07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08
24	08:27 16:24	09:29 (7) 07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08
25	08:25 16:27	09:30 (7) 07:19 17:35	06:06 18:35	05:45 20:40	04:43 21:39	04:23 22:08
26	08:23 16:29	09:31 (7) 07:16 17:38	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07
30	08:16 16:37		06:52 19:46	05:33 20:50	04:36 21:47	04:26 22:07
31	08:15 16:40		06:49 19:48		04:35 21:48	
Potential sun hours	235	265	365	425	507	529
Total, worst case	42	188	141			
Sun reduction	0,15	0,24	0,39			
Oper. time red.	0,94	0,94	0,94			
Wind dir. red.	0,60	0,62	0,62			
Total reduction	0,09	0,14	0,23			
Total, real	4	26	32			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AD - Me Ža Rasas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October		November		December	
1	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52		07:19 16:34		08:21 15:42	09:08 (7) 09:10 (7)
2	04:28 22:06	05:14 21:24	06:16 20:10	07:16 18:49		07:22 16:32		08:23 15:41	09:08 (7) 09:11 (7)
3	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:46		07:24 16:29		08:25 15:41	09:09 (7) 09:12 (7)
4	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44		07:26 16:27		08:26 15:40	09:10 (7) 09:13 (7)
5	04:30 22:04	05:20 21:18	06:22 20:02	07:22 18:41		07:28 16:25		08:28 15:39	09:11 (7) 09:14 (7)
6	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:38		07:30 16:23		08:29 15:38	09:12 (7) 09:14 (7)
7	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	11	08:31 (8) 08:42 (8)	08:14 (15)	08:31 15:38	09:14 (7) 09:16 (7)
8	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	16	08:29 (8) 08:45 (8)	07:35 16:19	08:15 (15) 08:16 (15)	08:32 15:37
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	19	08:27 (8) 08:46 (8)	07:37 16:17	08:16 (15) 08:17 (15)	08:34 15:36
10	04:36 22:00	05:30 21:07	06:32 19:48	07:33 18:28	22	08:25 (8) 08:47 (8)	07:39 16:15		08:35 15:36
11	04:37 21:59	05:32 21:04	06:34 19:46	07:35 18:25	23	08:24 (8) 08:47 (8)	07:41 16:13		08:36 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	24	08:23 (8) 08:47 (8)	07:43 16:11		08:38 15:35
13	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	25	08:22 (8) 08:47 (8)	07:45 16:09		08:39 15:35
14	04:42 21:56	05:38 20:57	06:40 19:37	07:41 18:18	25	08:23 (8) 08:48 (8)	07:48 16:07		08:40 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	26	08:22 (8) 08:48 (8)	07:50 16:05		08:41 15:35
16	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:12	25	08:22 (8) 08:47 (8)	07:52 16:04	09:04 (7) 09:05 (7)	08:42 15:35
17	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	24	08:22 (8) 08:46 (8)	07:54 16:02		08:43 15:35
18	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:07	23	08:23 (8) 08:46 (8)	07:56 16:00	09:04 (7) 09:05 (7)	08:44 15:35
19	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	21	08:24 (8) 08:45 (8)	07:58 15:58	09:03 (7) 09:04 (7)	08:44 15:35
20	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:02	18	08:26 (8) 08:44 (8)	08:00 15:57	09:04 (7) 09:05 (7)	08:45 15:36
21	04:52 21:46	05:52 20:40	06:54 19:19	07:56 18:00	14	08:28 (8) 08:42 (8)	08:02 15:55	09:04 (7) 09:05 (7)	08:46 15:36
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	9	08:31 (8) 08:40 (8)	08:04 15:54	09:04 (7) 09:05 (7)	08:46 15:36
23	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	3	08:33 (8) 08:36 (8)	08:06 15:52	09:04 (7) 09:05 (7)	08:47 15:37
24	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53		08:08 15:51	09:05 (7) 09:06 (7)	08:07 15:37	09:31 (7) 09:32 (7)
25	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50		08:10 15:49	09:05 (7) 09:07 (7)	08:08 15:38	
26	05:01 21:37	06:02 20:28	07:04 19:05	08:06 16:48	1	08:12 (15) 08:43 (15)	08:12 15:48	09:05 (7) 09:07 (7)	08:48 15:39
27	05:03 21:36	06:04 20:25	07:06 19:02	08:09 16:45	1	08:14 (15) 08:43 (15)	08:14 15:47	09:05 (7) 09:08 (7)	08:48 15:40
28	05:05 21:34	06:06 20:23	07:08 19:00	08:11 16:43		08:16 15:46	09:06 (7) 09:08 (7)	08:48 15:40	
29	05:07 21:32	06:08 20:20	07:10 18:57	08:13 16:41		08:18 15:45	09:06 (7) 09:09 (7)	08:48 15:41	
30	05:09 21:30	06:10 20:17	07:12 18:54	08:15 16:38		08:19 15:43	09:07 (7) 09:09 (7)	08:48 15:42	
31	05:10 21:28	06:12 20:15		07:17 16:36				08:48 15:43	
Potential sun hours	530	470	385	324		248		216	
Total, worst case				330		26			25
Sun reduction				0,27		0,09			0,09
Oper. time red.				0,94		0,94			0,94
Wind dir. red.				0,62		0,60			0,60
Total reduction				0,16		0,05			0,05
Total, real				52		1			1

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AE - Dravnieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	10:07 (5)	08:13	07:09	07:41 (8)	06:47
	15:45	19	10:26 (5)	16:42	17:44	25
2	08:48	10:08 (5)	08:11	07:06	08:06 (8)	19:50
	15:46	19	10:27 (5)	16:44	07:39 (8)	06:44
3	08:48	10:08 (5)	08:09	07:04	08:06 (8)	19:52
	15:47	18	10:26 (5)	16:46	07:38 (8)	06:41
4	08:47	10:10 (5)	08:07	07:01	08:06 (8)	19:54
	15:49	17	10:27 (5)	16:48	07:38 (8)	06:39
5	08:47	10:10 (5)	08:05	08:37 (6)	08:07 (8)	19:56
	15:50	17	10:27 (5)	16:51	07:38 (8)	06:36
6	08:46	10:11 (5)	08:03	08:35 (6)	08:06 (8)	19:58
	15:51	15	10:26 (5)	16:53	07:37 (8)	06:33
7	08:46	10:12 (5)	08:01	08:33 (6)	08:06 (8)	20:00
	15:53	14	10:26 (5)	16:55	07:38 (8)	06:31
8	08:45	10:13 (5)	07:59	08:30 (6)	08:06 (8)	20:02
	15:55	12	10:25 (5)	16:57	07:38 (8)	06:28
9	08:44	10:15 (5)	07:56	08:28 (6)	08:05 (8)	20:04
	15:56	10	10:25 (5)	17:00	07:38 (8)	06:26
10	08:44	10:17 (5)	07:54	08:26 (6)	08:04 (8)	20:06
	15:58	6	10:23 (5)	17:02	07:39 (8)	06:23
11	08:43		07:52	08:24 (6)	08:03 (8)	20:08
	15:59		17:04	08:46 (6)	06:20	05:08
12	08:42		07:50	08:24 (6)	07:39 (8)	06:20
	16:01		17:06	08:46 (6)	08:02 (8)	20:11
13	08:41		07:48	08:24 (6)	08:00 (8)	20:13
	16:03		17:09	08:46 (6)	07:42 (8)	06:15
14	08:40		07:45	08:24 (6)	07:57 (8)	20:15
	16:05		17:11	08:47 (6)	07:45 (8)	06:12
15	08:39		07:43	08:24 (6)	08:04 (8)	20:17
	16:07		17:13	08:46 (6)	07:54 (8)	20:17
16	08:38		07:41	08:25 (6)	06:10	05:00
	16:08		17:15	08:46 (6)	20:19	21:20
17	08:37		07:38	08:26 (6)	06:07	04:58
	16:10		17:18	08:46 (6)	20:21	21:22
18	08:35		07:36	08:27 (6)	06:05	04:56
	16:12		17:20	08:44 (6)	20:23	21:24
19	08:34		07:34	08:27 (6)	06:02	04:55
	16:14		17:22	08:42 (6)	20:25	21:26
20	08:33		07:31	08:30 (6)	06:00	04:53
	16:16		17:24	08:40 (6)	20:27	21:28
21	08:31		07:29	06:16	05:57	04:51
	16:18		17:27	18:27	20:29	21:30
22	08:30		07:26	06:14	05:55	04:49
	16:20		17:29	18:29	20:31	21:32
23	08:28		07:24	06:11	05:52	04:48
	16:22		17:31	18:31	20:34	21:34
24	08:27		07:21	06:08	05:50	04:46
	16:24		17:33	18:33	20:36	21:35
25	08:25		07:19	07:48 (8)	05:47	04:44
	16:27		17:35	11	20:38	21:37
26	08:23		07:16	07:45 (8)	05:45	04:43
	16:29		17:38	16	20:40	21:39
27	08:22		07:14	07:43 (8)	05:42	04:41
	16:31		17:40	21	20:42	21:40
28	08:20		07:11	07:41 (8)	05:40	04:40
	16:33		17:42	23	20:44	21:42
29	08:18			05:55	05:37	04:38
	16:35			18:43	20:46	21:44
30	08:16			06:52	05:35	04:37
	16:37			19:46	20:48	21:45
31	08:15			06:49	05:33	04:36
	16:40			19:48	20:50	21:47
Potential sun hours	235	265	365	425	507	529
Total, worst case	147	337	338			
Sun reduction	0,15	0,24	0,39			
Oper. time red.	0,94	0,94	0,94			
Wind dir. red.	0,61	0,61	0,62			
Total reduction	0,09	0,14	0,23			
Total, real	13	47	77			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: AE - Dravnieki

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	08:22 (8) 07:19	07:54 (6) 08:21
	22:07	21:26	20:12	18:52	15 08:37 (8) 16:34	22 08:16 (6) 15:42
2	04:28	05:14	06:16	07:16	08:19 (8) 07:22	07:57 (6) 08:23
	22:06	21:24	20:10	18:49	20 08:39 (8) 16:32	19 08:16 (6) 15:41
3	04:29	05:16	06:18	07:18	08:17 (8) 07:24	07:59 (6) 08:25
	22:06	21:22	20:07	18:46	23 08:40 (8) 16:29	16 08:15 (6) 15:41
4	04:30	05:18	06:20	07:20	08:16 (8) 07:26	08:01 (6) 08:26
	22:05	21:20	20:04	18:44	24 08:40 (8) 16:27	12 08:13 (6) 15:40
5	04:30	05:20	06:22	07:22	08:15 (8) 07:28	08:04 (6) 08:28
	22:04	21:18	20:02	18:41	26 08:41 (8) 16:25	9 08:13 (6) 15:39
6	04:32	05:22	06:24	07:24	08:14 (8) 07:30	08:06 (6) 08:29
	22:04	21:15	19:59	18:38	27 08:41 (8) 16:23	4 08:10 (6) 15:38
7	04:33	05:24	06:26	07:26	08:13 (8) 07:32	08:31
	22:03	21:13	19:56	18:36	28 08:41 (8) 16:21	15:38
8	04:34	05:26	06:28	07:28	08:13 (8) 07:35	08:32
	22:02	21:11	19:54	18:33	29 08:42 (8) 16:19	15:37
9	04:35	05:28	06:30	07:30	08:13 (8) 07:37	08:34
	22:01	21:09	19:51	18:30	28 08:41 (8) 16:17	15:36
10	04:36	05:30	06:32	07:32	08:13 (8) 07:39	08:35
	22:00	21:07	19:48	18:28	28 08:41 (8) 16:15	15:36
11	04:37	05:32	06:34	07:35	08:13 (8) 07:41	08:36
	21:59	21:04	19:46	18:25	27 08:40 (8) 16:13	15:36
12	04:39	05:34	06:36	07:37	08:13 (8) 07:43	08:38
	21:58	21:02	19:43	18:23	26 08:39 (8) 16:11	15:35
13	04:40	05:36	06:38	07:39	08:13 (8) 07:45	08:39
	21:57	21:00	19:40	18:20	25 08:38 (8) 16:09	15:35
14	04:42	05:38	06:40	07:41	08:14 (8) 07:48	08:40
	21:56	20:57	19:37	18:18	24 08:38 (8) 16:07	15:35
15	04:43	05:40	06:42	07:43	08:15 (8) 07:50	08:41
	21:54	20:55	19:35	18:15	21 08:36 (8) 16:05	15:35
16	04:45	05:42	06:44	07:45	08:17 (8) 07:52	08:42
	21:53	20:53	19:32	18:12	17 08:34 (8) 16:04	15:35
17	04:46	05:44	06:46	07:47	08:19 (8) 07:54	08:43
	21:52	20:50	19:29	18:10	12 08:31 (8) 16:02	15:35
18	04:48	05:46	06:48	07:49	08:23 (8) 07:56	08:44
	21:50	20:48	19:27	18:07	5 08:28 (8) 16:00	15:35
19	04:49	05:48	06:50	07:51	07:58	08:44
	21:49	20:45	19:24	18:05	15:58	15:35
20	04:51	05:50	06:52	07:53	08:00	08:45
	21:47	20:43	19:21	18:02	15:57	15:36
21	04:52	05:52	06:54	07:56	08:02	08:46
	21:46	20:40	19:19	18:00	15:55	15:36
22	04:54	05:54	06:56	07:58	09:02 (6) 08:04	08:46
	21:44	20:38	19:16	17:57	8 09:10 (6) 15:54	15:36
23	04:56	05:56	06:58	08:00	08:59 (6) 08:06	08:47
	21:43	20:35	19:13	17:55	13 09:12 (6) 15:52	15:37
24	04:58	05:58	07:00	08:02	08:57 (6) 08:08	08:47
	21:41	20:33	19:10	17:53	16 09:13 (6) 15:51	15:37
25	04:59	06:00	07:02	08:04	08:56 (6) 08:10	08:48
	21:39	20:30	19:08	17:50	19 09:15 (6) 15:49	15:38
26	05:01	06:02	07:04	07:06	07:55 (6) 08:12	08:48
	21:37	20:28	19:05	16:48	20 08:15 (6) 15:48	15:39
27	05:03	06:04	07:06	07:09	07:54 (6) 08:14	08:48
	21:36	20:25	19:02	16:45	22 08:16 (6) 15:47	15:40
28	05:05	06:06	07:08	07:11	07:54 (6) 08:16	08:48
	21:34	20:23	19:00	16:43	23 08:17 (6) 15:46	15:40
29	05:07	06:08	07:10	07:13	07:54 (6) 08:18	08:48
	21:32	20:20	18:57	16:41	22 08:16 (6) 15:45	15:41
30	05:09	06:10	07:12	08:25 (8) 07:15	07:53 (6) 08:19	08:48
	21:30	20:17	18:54	9 08:34 (8) 16:38	23 08:16 (6) 15:43	15:42
31	05:10	06:12		07:17	07:54 (6)	08:48
	21:28	20:15		16:36	22 08:16 (6)	15:43
Potential sun hours	530	470	385	324	248	216
Total, worst case				593		562
Sun reduction			0,43	0,27	0,09	0,09
Oper. time red.			0,94	0,94	0,94	0,94
Wind dir. red.			0,62	0,62	0,61	0,61
Total reduction			0,25	0,16	0,05	0,05
Total, real			2	93	4	28

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AF - Ogu Purvs

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:48 15:45 23	10:18 (19) 10:41 (19) 16:42	08:13 16:42 17:44	07:09 17:44 19:50	06:47 20:52 21:50	04:33 21:50 22:07	04:27 21:26 21:26	05:12 20:12 18:52	06:14 16:34 15:43	07:14 16:34 15:43	07:19 16:34 15:43	08:21 15:43 15:43	10:14 (19)
2	08:48 15:46 21	10:20 (19) 10:41 (19) 16:44	08:11 16:44 17:46	07:06 17:46 19:52	06:44 20:54 21:51	04:32 21:51 22:06	04:28 21:24 22:06	05:14 20:10 18:49	06:16 16:32 15:42	07:22 16:32 15:42	07:22 16:32 15:42	08:23 15:42 15:42	10:12 (19)
3	08:48 15:47 21	10:20 (19) 10:41 (19) 16:46	08:09 16:46 17:49	07:04 17:49 19:54	06:42 20:56 21:53	04:31 21:53 22:06	04:29 21:22 22:06	05:16 20:07 18:46	06:18 16:29 15:41	07:18 16:29 15:41	07:24 16:29 15:41	08:25 15:41 15:41	10:11 (19)
4	08:47 15:49 21	10:21 (19) 10:42 (19) 16:49	08:07 16:49 17:51	07:01 17:51 19:56	06:39 20:59 21:58	04:30 21:58 22:05	04:30 21:20 22:05	05:18 20:04 18:44	06:20 16:27 15:40	07:20 16:27 15:40	07:26 16:27 15:40	08:26 15:40 15:40	10:10 (19)
5	08:47 15:50 19	10:22 (19) 10:41 (19) 16:51	08:05 16:51 17:53	06:59 17:53 19:58	06:36 21:01 21:01	05:21 21:55 22:05	04:31 21:18 22:05	05:20 20:02 18:41	06:22 16:25 15:39	07:22 16:25 15:39	07:28 16:25 15:39	08:28 15:39 15:39	10:10 (19)
6	08:46 15:52 18	10:23 (19) 10:41 (19) 16:53	08:03 16:53 17:55	06:56 17:55 19:58	06:34 21:03 21:03	05:19 21:56 22:04	04:32 21:15 22:04	05:22 20:02 18:38	06:24 16:23 15:38	07:24 16:23 15:38	07:30 16:23 15:38	08:29 15:38 15:38	10:09 (19)
7	08:46 15:53 17	10:24 (19) 10:41 (19) 16:55	08:01 16:55 17:57	06:53 17:57 19:58	06:31 21:05 21:05	05:17 21:57 22:03	04:33 21:13 21:13	05:24 20:00 18:36	06:26 16:21 15:38	07:26 16:21 15:38	07:33 16:21 15:38	08:31 15:38 15:38	10:09 (19)
8	08:45 15:55 15	10:25 (19) 10:41 (19) 16:57	07:59 16:57 17:59	06:51 17:59 19:58	06:28 21:07 21:07	05:15 21:59 22:02	04:34 21:11 21:11	05:26 20:00 18:33	06:28 16:30 15:37	07:28 16:30 15:37	07:35 16:30 15:37	08:32 15:37 15:37	10:09 (19)
9	08:45 15:56 14	10:26 (19) 10:41 (19) 17:00	07:56 17:00 18:02	06:48 18:02 20:06	06:26 21:09 22:00	05:13 22:00 22:01	04:35 21:09 21:09	05:28 20:00 18:31	06:30 16:17 15:37	07:31 16:17 15:37	07:37 16:17 15:37	08:34 15:37 15:37	10:09 (19)
10	08:44 15:58 11	10:28 (19) 10:41 (19) 17:02	07:54 17:02 18:04	06:46 18:04 20:09	06:23 21:11 22:01	05:10 22:01 22:02	04:36 21:07 21:07	05:30 20:00 18:31	06:32 16:17 15:37	07:33 16:17 15:37	07:39 16:17 15:37	08:35 15:37 15:37	10:10 (19)
11	08:43 15:59 8	10:30 (19) 10:41 (19) 17:04	07:52 17:04 18:06	06:43 18:06 20:11	06:20 21:13 22:02	05:08 22:02 21:59	04:38 21:04 21:04	05:32 20:00 18:31	06:34 16:15 15:36	07:35 16:15 15:36	07:41 16:15 15:36	08:36 15:36 15:36	10:09 (19)
12	08:42 16:01 13	10:38 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
13	08:41 16:03 14	10:39 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
14	08:40 16:05 15	10:40 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
15	08:39 16:07 16	10:41 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
16	08:38 16:08 17	10:42 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
17	08:37 16:10 18	10:43 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
18	08:35 16:12 19	10:44 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
19	08:34 16:14 20	10:45 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
20	08:33 16:16 21	10:46 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
21	08:31 16:18 22	10:47 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
22	08:30 16:20 23	10:48 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
23	08:28 16:22 24	10:49 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
24	08:27 16:24 25	10:50 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
25	08:25 16:27 26	10:51 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
26	08:24 16:29 27	10:52 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
27	08:22 16:31 28	10:53 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
28	08:20 16:33 29	10:54 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
29	08:18 16:35 30	10:55 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
30	08:16 16:37 31	10:56 (19) 17:04 18:06	17:04 18:06 20:11	06:40 18:06 20:11	06:18 21:13 22:02	05:06 22:02 21:59	04:39 21:04 21:04	05:34 20:00 18:31	06:36 16:13 15:36	07:37 16:13 15:36	07:43 16:13 15:36	08:38 15:36 15:36	10:09 (19)
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216	
Total, worst case	188												650
Sun reduction	0,15												0,09
Oper. time red.	0,94												0,94
Wind dir. red.	0,61												0,61
Total reduction	0,09												0,05
Total, real	17												32

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AG - Jaunmedni

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:49	06:41 19:54	05:26 20:56	04:31 21:53	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:41
4	08:47 15:49	08:07 16:48	07:01 17:51	06:39 19:56	05:23 20:59	04:30 21:54	04:29 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:21 21:01	04:29 21:55	04:30 22:05	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:47 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:03	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:58	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:38
8	08:45 15:54	07:59 16:57	06:51 17:59	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	08:45 15:56	07:56 17:00	06:48 18:01	06:26 20:06	05:12 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:11	05:08 21:13	04:25 22:02	04:37 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:06	06:40 18:08	06:18 20:13	05:06 21:15	04:24 22:03	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:35
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:04 21:17	04:24 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:19	04:23 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:21	04:23 22:05	04:43 21:55	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	08:38 16:08	07:41 17:15	06:30 18:16	06:07 20:21	04:58 21:22	04:23 22:05	04:44 21:53	05:42 20:53	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:37 16:10	07:38 17:18	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:22 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:45 15:35
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:02	08:00 15:57	08:45 15:36
21	08:31 16:18	07:29 17:27	06:16 18:27	05:55 20:31	04:49 21:32	04:22 22:08	04:52 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:37
25	08:25 16:27	07:19 17:35	06:06 18:35	05:45 20:40	04:43 21:39	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	08:24 16:29	07:16 17:38	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08	05:03 21:36	06:04 20:25	07:06 19:02	07:09 16:45	08:14 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:58 18:41	05:37 20:46	04:38 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:40
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:25 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:49 15:41
30	08:16 16:37		06:52 19:46	05:33 20:50	04:36 21:47	04:26 22:07	05:09 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:49 15:42
31	08:15 16:40		06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AH - Graudini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:13 16:42	09:28 (7) 09:37 (7)	07:09 17:44	07:40 (8) 08:05 (8)	06:47 19:50
2	08:48 15:46	08:11 16:44	09:29 (7) 09:39 (7)	07:06 17:46	07:39 (8) 08:05 (8)	05:28 19:52
3	08:48 15:47	08:09 16:46	09:31 (7) 09:41 (7)	07:04 17:49	06:41 08:04 (8)	05:26 19:54
4	08:47 15:49	08:07 16:48	09:33 (7) 09:44 (7)	07:01 17:51	06:39 08:05 (8)	05:24 19:56
5	08:47 15:50	08:05 16:51	09:28 (7) 09:29 (7)	06:59 17:53	07:38 (8) 08:04 (8)	05:21 19:58
6	08:46 15:51	08:03 16:53	09:27 (7) 09:29 (7)	06:56 17:55	07:38 (8) 08:04 (8)	05:19 20:00
7	08:46 15:53	08:01 16:55	09:26 (7) 09:29 (7)	06:53 17:57	07:39 (8) 08:04 (8)	05:17 20:02
8	08:45 15:55	07:59 16:57	09:25 (7) 09:28 (7)	06:51 17:59	07:39 (8) 08:02 (8)	05:15 20:04
9	08:44 15:56	07:56 17:00	09:24 (7) 09:28 (7)	06:48 18:01	07:39 (8) 08:01 (8)	05:13 20:06
10	08:44 15:58	07:54 17:02	09:23 (7) 09:28 (7)	06:46 18:04	07:41 (8) 08:00 (8)	05:10 20:08
11	08:43 15:59	07:52 17:04	09:22 (7) 09:28 (7)	06:43 18:06	07:42 (8) 07:58 (8)	05:08 20:11
12	08:42 16:01	07:50 17:06	09:22 (7) 09:29 (7)	06:40 18:08	07:44 (8) 07:55 (8)	05:06 20:13
13	08:41 16:03	07:48 17:09	09:22 (7) 09:29 (7)	06:38 18:10	06:15 20:15	05:04 21:17
14	08:40 16:05	07:45 17:11	09:21 (7) 09:28 (7)	06:35 18:12	06:12 20:17	05:02 21:19
15	08:39 16:07	07:43 17:13	09:21 (7) 09:29 (7)	06:32 18:14	06:10 20:19	05:00 21:20
16	08:38 16:08	07:41 17:15	09:22 (7) 09:29 (7)	06:30 18:16	06:07 20:21	04:58 21:22
17	08:37 16:10	07:38 17:18	09:21 (7) 09:29 (7)	06:27 18:18	06:05 20:23	04:56 21:24
18	08:35 16:12	07:36 17:20	09:22 (7) 09:28 (7)	06:24 18:20	06:02 20:25	04:55 21:26
19	08:34 16:14	07:34 17:22	09:22 (7) 09:29 (7)	06:22 18:23	06:00 20:27	04:53 21:28
20	08:33 16:16	07:31 17:24	09:21 (7) 09:29 (7)	06:19 18:25	05:57 20:29	04:51 21:30
21	08:31 16:18	07:29 17:27	09:22 (7) 09:30 (7)	06:16 18:27	05:55 20:31	04:49 21:32
22	08:30 16:20	07:26 17:29	09:22 (7) 09:30 (7)	06:14 18:29	05:52 20:34	04:48 21:34
23	08:28 16:22	07:24 17:31	09:22 (7) 09:30 (7)	06:11 18:31	05:50 20:36	04:46 21:35
24	08:27 16:24	07:21 17:33	09:22 (7) 09:30 (7)	06:08 18:33	05:47 20:38	04:44 21:37
25	08:25 16:27	07:19 17:35	09:23 (7) 09:31 (7)	06:06 18:35	05:45 20:40	04:43 21:39
26	08:23 16:29	07:16 17:38	09:23 (7) 09:31 (7)	06:03 18:37	05:42 20:42	04:41 21:40
27	08:22 16:31	07:14 17:40	09:23 (7) 09:32 (7)	06:00 18:39	05:40 20:44	04:40 21:42
28	08:20 16:33	07:11 17:42	09:24 (7) 09:32 (7)	05:57 18:41	05:37 20:46	04:38 21:44
29	08:18 16:35	07:09 17:44	09:25 (7) 09:33 (7)	05:55 18:44	05:35 20:48	04:37 21:45
30	08:16 16:37	07:07 17:46	09:25 (7) 09:34 (7)	05:52 19:46	05:33 20:50	04:36 21:47
31	08:15 16:40	07:05 17:48	09:27 (7) 09:35 (7)	06:49 19:48	04:35 21:48	22:07
Potential sun hours	235	265	365	425	507	529
Total, worst case	180	117	271			
Sun reduction	0,15	0,24	0,39			
Oper. time red.	0,94	0,94	0,94			
Wind dir. red.	0,59	0,61	0,62			
Total reduction	0,09	0,14	0,23			
Total, real	15	16	62			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: AH - Graudini

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	07:19	08:21
	22:07	21:26	20:12	18:52	16:34	15:42
2	04:28	05:14	06:16	07:16	08:23 (8)	07:22
	22:06	21:24	20:10	18:49	11 08:34 (8)	16:32
3	04:29	05:16	06:18	07:18	08:20 (8)	07:24
	22:06	21:22	20:07	18:46	16 08:36 (8)	16:29
4	04:30	05:18	06:20	07:20	08:18 (8)	07:26
	22:05	21:20	20:04	18:44	19 08:37 (8)	16:27
5	04:30	05:20	06:22	07:22	08:16 (8)	07:28
	22:04	21:18	20:02	18:41	22 08:38 (8)	16:25
6	04:32	05:22	06:24	07:24	08:15 (8)	07:30
	22:04	21:15	19:59	18:38	24 08:39 (8)	16:23
7	04:33	05:24	06:26	07:26	08:14 (8)	07:32
	22:03	21:13	19:56	18:36	25 08:39 (8)	16:21
8	04:34	05:26	06:28	07:28	08:14 (8)	07:35
	22:02	21:11	19:54	18:33	26 08:40 (8)	16:19
9	04:35	05:28	06:30	07:30	08:13 (8)	07:37
	22:01	21:09	19:51	18:30	27 08:40 (8)	16:17
10	04:36	05:30	06:32	07:33	08:13 (8)	07:39
	22:00	21:07	19:48	18:28	26 08:39 (8)	16:15
11	04:37	05:32	06:34	07:35	08:12 (8)	07:41
	21:59	21:04	19:46	18:25	27 08:39 (8)	16:13
12	04:39	05:34	06:36	07:37	08:12 (8)	07:43
	21:58	21:02	19:43	18:23	26 08:38 (8)	16:11
13	04:40	05:36	06:38	07:39	08:12 (8)	07:45
	21:57	21:00	19:40	18:20	25 08:37 (8)	16:09
14	04:42	05:38	06:40	07:41	08:14 (8)	07:48
	21:56	20:57	19:37	18:18	23 08:37 (8)	16:07
15	04:43	05:40	06:42	07:43	08:15 (8)	07:50
	21:54	20:55	19:35	18:15	21 08:36 (8)	16:05
16	04:45	05:42	06:44	07:45	08:17 (8)	07:52
	21:53	20:53	19:32	18:12	17 08:34 (8)	16:04
17	04:46	05:44	06:46	07:47	08:19 (8)	07:54
	21:52	20:50	19:29	18:10	13 08:32 (8)	16:02
18	04:48	05:46	06:48	07:49	08:22 (8)	07:56
	21:50	20:48	19:27	18:07	8 08:30 (8)	16:00
19	04:49	05:48	06:50	07:51	07:58	08:56 (7)
	21:49	20:45	19:24	18:05	15:58	8 09:04 (7)
20	04:51	05:50	06:52	07:53	08:00	08:57 (7)
	21:47	20:43	19:21	18:02	15:57	8 09:05 (7)
21	04:53	05:52	06:54	07:56	08:02	08:57 (7)
	21:46	20:40	19:19	18:00	15:55	8 09:05 (7)
22	04:54	05:54	06:56	07:58	08:04	08:57 (7)
	21:44	20:38	19:16	17:57	15:54	8 09:05 (7)
23	04:56	05:56	06:58	08:00	08:06	08:58 (7)
	21:43	20:35	19:13	17:55	15:52	7 09:05 (7)
24	04:58	05:58	07:00	08:02	08:08	08:59 (7)
	21:41	20:33	19:10	17:53	15:51	7 09:06 (7)
25	04:59	06:00	07:02	08:04	08:10	08:59 (7)
	21:39	20:30	19:08	17:50	15:49	8 09:07 (7)
26	05:01	06:02	07:04	07:06	08:12	09:00 (7)
	21:37	20:28	19:05	16:48	15:48	7 09:07 (7)
27	05:03	06:04	07:06	07:09	08:14	09:00 (7)
	21:36	20:25	19:02	16:45	15:47	8 09:08 (7)
28	05:05	06:06	07:08	07:11	08:16	09:01 (7)
	21:34	20:23	19:00	16:43	15:46	7 09:08 (7)
29	05:07	06:08	07:10	07:13	08:18	09:02 (7)
	21:32	20:20	18:57	16:41	15:45	7 09:09 (7)
30	05:09	06:10	07:12	07:15	08:19	09:03 (7)
	21:30	20:17	18:54	16:38	15:43	6 09:09 (7)
31	05:10	06:12		07:17		08:48
	21:28	20:15		16:36		15:43
Potential sun hours	530	470	385	324	248	216
Total, worst case				356	195	30
Sun reduction				0,27	0,09	0,09
Oper. time red.				0,94	0,94	0,94
Wind dir. red.				0,62	0,59	0,59
Total reduction				0,16	0,05	0,05
Total, real				56	10	1

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AI - Birznieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:13 16:42	07:09 17:44	08:00 (8) 19:50	05:30 20:52	04:33 21:50
2	08:48 15:46	08:11 16:44	07:06 17:46	08:01 (8) 19:52	05:28 20:54	04:32 21:51
3	08:48 15:47	08:09 16:46	07:04 17:49	08:04 (8) 19:54	05:26 20:56	04:31 21:53
4	08:47 15:49	09:29 (7) 16:48	07:01 17:51	08:12 (8) 19:56	05:23 20:58	04:30 21:54
5	08:47 15:50	09:28 (7) 16:51	06:59 17:53		05:21 21:01	04:29 21:55
6	08:46 15:51	09:27 (7) 16:53	06:56 17:55		05:19 21:03	04:28 21:56
7	08:46 15:53	09:26 (7) 16:55	06:53 17:57		05:17 21:05	04:27 21:57
8	08:45 15:55	09:25 (7) 16:57	06:51 17:59		05:15 21:07	04:27 21:59
9	08:45 15:56	09:24 (7) 17:00	06:48 18:01		05:13 21:09	04:26 22:00
10	08:44 15:58	09:23 (7) 17:02	06:46 18:04		05:10 21:11	04:25 22:01
11	08:43 15:59	09:22 (7) 17:04	06:43 18:06		05:08 21:13	04:25 22:02
12	08:42 16:01	09:21 (7) 17:06	06:40 18:08		05:06 21:15	04:24 22:02
13	08:41 16:03	09:20 (7) 17:09	06:38 18:10		05:04 21:17	04:24 22:03
14	08:40 16:05	09:19 (7) 17:11	06:35 18:12		05:02 21:19	04:23 22:04
15	08:39 16:07	09:18 (7) 17:13	06:32 18:14		05:00 21:21	04:23 22:05
16	08:38 16:08	09:17 (7) 17:15	06:30 18:16		04:58 21:22	04:23 22:05
17	08:37 16:10	09:16 (7) 17:18	06:27 18:18		04:56 21:24	04:22 22:06
18	08:35 16:12	09:15 (7) 17:20	06:24 18:21		04:55 21:26	04:22 22:06
19	08:34 16:14	09:14 (7) 17:22	06:22 18:23		04:53 21:28	04:22 22:07
20	08:33 16:16	09:13 (7) 17:24	06:19 18:25		04:51 21:30	04:22 22:07
21	08:31 16:18	09:12 (7) 17:27	06:16 18:27		04:49 21:32	04:22 22:08
22	08:30 16:20	09:11 (7) 17:29	06:14 18:29		04:48 21:34	04:23 22:08
23	08:28 16:22	09:10 (7) 17:31	06:11 18:31		04:46 21:35	04:23 22:08
24	08:27 16:24	09:09 (7) 17:33	06:08 18:33		04:44 21:37	04:23 22:08
25	08:25 16:27	09:08 (7) 17:35	06:06 18:35		04:43 21:39	04:23 22:08
26	08:23 16:29	09:07 (7) 17:38	06:03 18:37		04:41 21:40	04:24 22:08
27	08:22 16:31	09:06 (7) 17:40	06:00 18:39		04:40 21:42	04:24 22:08
28	08:20 16:33	09:05 (7) 17:42	05:58 18:41		04:38 21:44	04:25 22:08
29	08:18 16:35		05:55 18:44		04:37 21:45	04:25 22:07
30	08:16 16:37		05:52 19:46		04:36 21:47	04:26 22:07
31	08:15 16:40		06:49 19:48		04:35 21:48	
Potential sun hours	235	265	365	425	507	529
Total, worst case	45	238	40			
Sun reduction	0,15	0,24	0,39			
Oper. time red.	0,94	0,94	0,94			
Wind dir. red.	0,60	0,62	0,62			
Total reduction	0,09	0,14	0,23			
Total, real	4	33	9			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AI - Birznieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	07:19	08:21
	22:07	21:26	20:12	18:52	16:34	15:42
2	04:28	05:14	06:16	07:16	07:22	08:23
	22:06	21:24	20:10	18:49	16:32	15:41
3	04:29	05:16	06:18	07:18	07:24	08:25
	22:06	21:22	20:07	18:46	16:29	15:41
4	04:30	05:18	06:20	07:20	07:26	08:26
	22:05	21:20	20:04	18:44	16:27	15:40
5	04:30	05:20	06:22	07:22	07:28	08:28
	22:04	21:18	20:02	18:41	16:25	15:39
6	04:32	05:22	06:24	07:24	07:30	08:29
	22:04	21:15	19:59	18:38	16:23	15:38
7	04:33	05:24	06:26	07:26	07:32	08:31
	22:03	21:13	19:56	18:36	16:21	15:38
8	04:34	05:26	06:28	07:28	07:35	08:32
	22:02	21:11	19:54	18:33	16:19	15:37
9	04:35	05:28	06:30	07:30	07:37	08:34
	22:01	21:09	19:51	18:30	16:17	15:36
10	04:36	05:30	06:32	07:33	07:39	08:35
	22:00	21:07	19:48	18:28	16:15	15:36
11	04:37	05:32	06:34	07:35	08:38 (8)	07:41
	21:59	21:04	19:46	18:25	08:46 (8)	16:13
12	04:39	05:34	06:36	07:37	08:35 (8)	07:43
	21:58	21:02	19:43	18:23	08:49 (8)	16:11
13	04:40	05:36	06:38	07:39	08:33 (8)	07:45
	21:57	21:00	19:40	18:20	08:50 (8)	16:09
14	04:42	05:38	06:40	07:41	08:32 (8)	07:48
	21:56	20:57	19:38	18:18	08:52 (8)	16:07
15	04:43	05:40	06:42	07:43	08:31 (8)	07:50
	21:55	20:55	19:35	18:15	08:52 (8)	16:05
16	04:45	05:42	06:44	07:45	08:30 (8)	07:52
	21:53	20:53	19:32	18:12	08:52 (8)	16:04
17	04:46	05:44	06:46	07:47	08:29 (8)	07:54
	21:52	20:50	19:29	18:10	08:52 (8)	16:02
18	04:48	05:46	06:48	07:49	08:29 (8)	07:56
	21:50	20:48	19:27	18:07	08:53 (8)	16:00
19	04:49	05:48	06:50	07:51	08:29 (8)	07:58
	21:49	20:45	19:24	18:05	08:53 (8)	15:58
20	04:51	05:50	06:52	07:54	08:29 (8)	08:00
	21:47	20:43	19:21	18:02	08:52 (8)	15:57
21	04:52	05:52	06:54	07:56	08:29 (8)	08:02
	21:46	20:40	19:19	18:00	08:51 (8)	15:55
22	04:54	05:54	06:56	07:58	08:31 (8)	08:04
	21:44	20:38	19:16	17:57	08:51 (8)	15:54
23	04:56	05:56	06:58	08:00	08:33 (8)	08:06
	21:43	20:35	19:13	17:55	08:50 (8)	15:52
24	04:58	05:58	07:00	08:02	08:35 (8)	08:08
	21:41	20:33	19:11	17:53	08:48 (8)	15:51
25	04:59	06:00	07:02	08:04	08:38 (8)	08:10
	21:39	20:30	19:08	17:50	08:47 (8)	15:49
26	05:01	06:02	07:04	07:06	07:40 (8)	08:12
	21:37	20:28	19:05	16:48	07:44 (8)	15:48
27	05:03	06:04	07:06	07:09		08:14
	21:36	20:25	19:02	16:45		15:47
28	05:05	06:06	07:08	07:11		08:16
	21:34	20:23	19:00	16:43		15:46
29	05:07	06:08	07:10	07:13		08:18
	21:32	20:20	18:57	16:41		15:45
30	05:09	06:10	07:12	07:15		08:19
	21:30	20:17	18:54	16:38		15:43
31	05:10	06:12		07:17		
	21:28	20:15		16:36		15:43
Potential sun hours	530	470	385	324	248	216
Total, worst case				281		29
Sun reduction				0,27	0,09	0,09
Oper. time red.				0,94	0,94	0,94
Wind dir. red.				0,62	0,60	0,60
Total reduction				0,16	0,05	0,05
Total, real				44	1	1

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AJ - Irbites

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:49	06:41 19:54	05:26 20:56	04:31 21:53	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:25 15:41
4	08:47 15:49	08:07 16:48	07:01 17:51	06:39 19:56	05:23 20:59	04:30 21:54	04:29 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:21 21:01	04:29 21:55	04:30 22:05	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:47 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:03	04:28 21:56	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:58	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:38
8	08:45 15:54	07:59 16:57	06:51 17:59	06:28 20:04	05:15 21:07	04:26 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	08:45 15:56	07:56 17:00	06:48 18:01	06:26 20:06	05:12 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:10 21:11	04:25 22:01	04:36 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:11	05:08 21:13	04:25 22:02	04:37 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:06	06:40 18:08	06:18 20:13	05:06 21:15	04:24 22:03	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:35
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:04 21:17	04:24 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:19	04:23 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:21	04:23 22:05	04:43 21:55	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	08:38 16:08	07:41 17:15	06:30 18:16	06:07 20:21	04:58 21:22	04:23 22:05	04:44 21:53	05:42 20:53	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	08:37 16:10	07:38 17:18	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:22 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	08:34 16:14	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:45 15:35
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:02	08:00 15:57	08:45 15:36
21	08:31 16:18	07:29 17:27	06:16 18:27	05:55 20:31	04:49 21:32	04:22 22:08	04:52 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:22 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:06 18:35	05:45 20:40	04:43 21:39	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	08:24 16:29	07:16 17:38	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08	05:03 21:36	06:04 20:25	07:06 19:02	07:09 16:45	08:14 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:40
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:25 22:08	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:49 15:41
30	08:16 16:37		06:52 19:46	05:33 20:50	04:36 21:47	04:26 22:07	05:09 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:49 15:42
31	08:15 16:40		06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AK - Ruki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	08:13	09:22 (7)	07:09	07:39 (8)	06:47
	15:45	16:42	15	09:37 (7)	17:44	23
2	08:48	08:11	09:23 (7)	07:06	07:38 (8)	19:50
	15:46	16:44	16	09:39 (7)	17:46	24
3	08:48	08:09	09:25 (7)	07:04	07:37 (8)	19:52
	15:47	16:46	16	09:41 (7)	17:49	25
4	08:47	08:07	09:26 (7)	07:01	07:37 (8)	19:54
	15:49	16:48	15	09:41 (7)	17:51	26
5	08:47	08:05	09:29 (7)	06:59	07:36 (8)	19:56
	15:50	16:51	10	09:39 (7)	17:53	26
6	08:46	08:03	09:33 (7)	06:56	07:36 (8)	19:58
	15:52	16:53		17:55	25	08:01 (8)
7	08:46	09:26 (7)	08:01	06:53	07:37 (8)	20:00
	15:53	1	09:27 (7)	16:55	17:57	25
8	08:45	09:25 (7)	07:59	06:51	07:37 (8)	20:02
	15:55	3	09:28 (7)	16:57	17:59	23
9	08:44	09:24 (7)	07:56	06:48	07:37 (8)	20:04
	15:56	4	09:28 (7)	17:00	18:01	22
10	08:44	09:23 (7)	07:54	06:46	07:39 (8)	20:06
	15:58	5	09:28 (7)	17:02	18:04	19
11	08:43	09:22 (7)	07:52	06:43	07:40 (8)	20:08
	15:59	6	09:28 (7)	17:04	18:06	16
12	08:42	09:21 (7)	07:50	06:40	07:42 (8)	20:11
	16:01	8	09:29 (7)	17:06	18:08	11
13	08:41	09:20 (7)	07:48	06:38	07:53 (8)	20:13
	16:03	9	09:29 (7)	17:09	18:10	
14	08:40	09:18 (7)	07:45	06:35		20:15
	16:05	10	09:28 (7)	17:11	18:12	
15	08:39	09:18 (7)	07:43	06:32		20:17
	16:07	11	09:29 (7)	17:13	18:14	
16	08:38	09:18 (7)	07:41	06:30		20:19
	16:08	11	09:29 (7)	17:15	18:16	
17	08:37	09:17 (7)	07:38	06:27		20:21
	16:10	12	09:29 (7)	17:18	18:18	
18	08:35	09:18 (7)	07:36	06:24		20:23
	16:12	10	09:28 (7)	17:20	18:21	
19	08:34	09:17 (7)	07:34	06:22		20:25
	16:14	12	09:29 (7)	17:22	18:23	
20	08:33	09:17 (7)	07:31	06:19		20:27
	16:16	12	09:29 (7)	17:24	18:25	
21	08:31	09:18 (7)	07:29	06:16		20:29
	16:18	12	09:30 (7)	17:27	18:27	
22	08:30	09:18 (7)	07:26	06:14		20:31
	16:20	12	09:30 (7)	17:29	18:29	
23	08:28	09:18 (7)	07:24	06:11		20:34
	16:22	12	09:30 (7)	17:31	18:31	
24	08:27	09:18 (7)	07:21	06:08		20:36
	16:24	12	09:30 (7)	17:33	18:33	
25	08:25	09:18 (7)	07:19	06:06		20:38
	16:27	13	09:31 (7)	17:35	8	07:48 (8)
26	08:23	09:18 (7)	07:16	06:03		05:45
	16:29	13	09:31 (7)	17:38	13	07:56 (8)
27	08:22	09:18 (7)	07:14	06:00		07:45 (8)
	16:31	14	09:32 (7)	17:40	17	07:58 (8)
28	08:20	09:19 (7)	07:11	05:58		07:43 (8)
	16:33	13	09:32 (7)	17:42	21	08:00 (8)
29	08:18	09:19 (7)		05:55		07:40 (8)
	16:35	14	09:33 (7)			18:41
30	08:16	09:20 (7)		06:52		05:55
	16:37	14	09:34 (7)			18:44
31	08:15	09:21 (7)		06:49		06:52
	16:40	14	09:35 (7)			19:46
Potential sun hours	235		265	365	425	507
Total, worst case		257	131	265		529
Sun reduction		0,15	0,24	0,39		
Oper. time red.		0,94	0,94	0,94		
Wind dir. red.		0,59	0,60	0,62		
Total reduction		0,09	0,14	0,23		
Total, real		22	18	60		

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: AK - Ruki

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	07:19	08:21
	22:07	21:26	20:12	18:52	16:34	15:42
2	04:28	05:14	06:16	07:16	08:20 (8)	07:22
	22:06	21:24	20:10	18:49	12	15:41
3	04:29	05:16	06:18	07:18	08:18 (8)	07:24
	22:06	21:22	20:07	18:46	16	15:41
4	04:30	05:18	06:20	07:20	08:16 (8)	07:26
	22:05	21:20	20:04	18:44	19	15:40
5	04:31	05:20	06:22	07:22	08:14 (8)	07:28
	22:04	21:18	20:02	18:41	22	15:39
6	04:32	05:22	06:24	07:24	08:13 (8)	07:30
	22:04	21:15	19:59	18:38	23	15:38
7	04:33	05:24	06:26	07:26	08:12 (8)	07:32
	22:03	21:13	19:56	18:36	25	15:38
8	04:34	05:26	06:28	07:28	08:12 (8)	07:35
	22:02	21:11	19:54	18:33	26	15:37
9	04:35	05:28	06:30	07:30	08:12 (8)	07:37
	22:01	21:09	19:51	18:30	25	15:37
10	04:36	05:30	06:32	07:33	08:11 (8)	07:39
	22:00	21:07	19:48	18:28	26	15:36
11	04:37	05:32	06:34	07:35	08:11 (8)	07:41
	21:59	21:04	19:46	18:25	25	15:36
12	04:39	05:34	06:36	07:37	08:11 (8)	07:43
	21:58	21:02	19:43	18:23	25	15:35
13	04:40	05:36	06:38	07:39	08:11 (8)	07:45
	21:57	21:00	19:40	18:20	23	15:35
14	04:42	05:38	06:40	07:41	08:13 (8)	07:48
	21:56	20:57	19:37	18:18	21	15:35
15	04:43	05:40	06:42	07:43	08:15 (8)	07:50
	21:54	20:55	19:35	18:15	18	15:35
16	04:45	05:42	06:44	07:45	08:17 (8)	07:52
	21:53	20:53	19:32	18:12	14	15:35
17	04:46	05:44	06:46	07:47	08:19 (8)	07:54
	21:52	20:50	19:29	18:10	9	15:35
18	04:48	05:46	06:48	07:49	08:22 (8)	07:56
	21:50	20:48	19:27	18:07	2	15:35
19	04:49	05:48	06:50	07:51	07:58	12
	21:49	20:45	19:24	18:05	15:58	12
20	04:51	05:50	06:52	07:54	08:00	12
	21:47	20:43	19:21	18:02	15:57	12
21	04:53	05:52	06:54	07:56	08:02	12
	21:46	20:40	19:19	18:00	15:55	12
22	04:54	05:54	06:56	07:58	08:04	12
	21:44	20:38	19:16	17:57	15:54	12
23	04:56	05:56	06:58	08:00	08:06	12
	21:43	20:35	19:13	17:55	15:52	12
24	04:58	05:58	07:00	08:02	08:08	11
	21:41	20:33	19:11	17:53	15:51	11
25	04:59	06:00	07:02	08:04	08:10	12
	21:39	20:30	19:08	17:50	15:49	12
26	05:01	06:02	07:04	07:06	08:12	11
	21:37	20:28	19:05	16:48	15:48	11
27	05:03	06:04	07:06	07:09	08:14	11
	21:36	20:25	19:02	16:45	15:47	11
28	05:05	06:06	07:08	07:11	08:16	11
	21:34	20:23	19:00	16:43	15:46	11
29	05:07	06:08	07:10	07:13	08:18	10
	21:32	20:20	18:57	16:41	15:45	10
30	05:09	06:10	07:12	07:15	08:19	8
	21:30	20:17	18:54	16:38	15:43	8
31	05:10	06:12		07:17		
	21:28	20:15		16:36		
Potential sun hours	530	470	385	324	248	216
Total, worst case				331	311	25
Sun reduction				0,27	0,09	0,09
Oper. time red.				0,94	0,94	0,94
Wind dir. red.				0,62	0,59	0,59
Total reduction				0,16	0,05	0,05
Total, real				52	16	1

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AL - Vipmali

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	11:14 (1)	08:13	07:09	06:47	07:23 (18)
	15:45	13	11:27 (1)	16:42	17:44	20:52
2	08:48	11:16 (1)	08:11	07:06	06:44	07:23 (18)
	15:46	11	11:27 (1)	16:44	17:46	20:54
3	08:48	11:17 (1)	08:09	07:04	06:42	07:23 (18)
	15:48	8	11:25 (1)	16:46	17:49	20:56
4	08:47	11:21 (1)	08:07	07:01	06:39	07:23 (18)
	15:49	2	11:23 (1)	16:49	17:51	20:58
5	08:47		08:05	06:59	06:36	07:24 (18)
	15:50		16:51	17:53	19:58	21:01
6	08:46		08:03	06:56	06:34	07:24 (18)
	15:52		16:53	17:55	20:00	21:03
7	08:46		08:01	06:53	06:31	07:25 (18)
	15:53		16:55	17:57	20:02	21:05
8	08:45		07:59	06:51	06:28	07:26 (18)
	15:55		16:58	17:59	20:04	21:07
9	08:44		07:56	06:48	06:26	07:28 (18)
	15:56		17:00	18:02	20:06	21:09
10	08:44		07:54	06:46	06:23	07:29 (18)
	15:58		17:02	18:04	20:09	21:11
11	08:43		07:52	06:43	06:20	07:30 (18)
	16:00		17:04	18:06	20:11	21:13
12	08:42		07:50	06:40	06:18	07:31 (18)
	16:01		17:07	18:08	20:13	21:15
13	08:41		07:48	06:38	06:15	07:32 (18)
	16:03		17:09	18:10	20:15	21:17
14	08:40		07:45	06:35	06:13	07:33 (18)
	16:05		17:11	18:12	20:17	21:19
15	08:39		07:43	06:32	06:10	07:34 (18)
	16:07		17:13	18:14	20:19	21:20
16	08:38		07:41	06:30	06:07	07:35 (18)
	16:09		17:15	18:16	20:21	21:22
17	08:37		07:38	06:27	06:05	07:36 (18)
	16:10		17:18	18:18	20:23	21:24
18	08:35		07:36	06:24	06:02	07:37 (18)
	16:12		17:20	18:21	20:25	21:26
19	08:34		07:34	06:22	06:00	07:38 (18)
	16:14		17:22	18:23	20:27	21:28
20	08:33		07:31	06:19	05:57	07:39 (18)
	16:16		17:24	18:25	20:29	21:30
21	08:31		07:29	06:16	05:55	07:40 (18)
	16:18		17:27	18:27	20:31	21:32
22	08:30		07:26	06:14	05:52	07:41 (18)
	16:20		17:29	18:29	20:34	21:34
23	08:28		07:24	06:11	05:50	07:42 (18)
	16:22		17:31	18:31	20:36	21:35
24	08:27		07:21	06:08	06:36 (18)	07:43 (18)
	16:25		17:33	18:33	20:38	21:37
25	08:25		07:19	06:06	06:33 (18)	07:44 (18)
	16:27		17:35	18:35	20:40	21:39
26	08:23		07:16	06:03	06:30 (18)	07:45 (18)
	16:29		17:38	18:37	20:42	21:40
27	08:22		07:14	06:00	06:28 (18)	07:46 (18)
	16:31		17:40	18:39	20:44	21:42
28	08:20		07:11	05:58	06:26 (18)	07:47 (18)
	16:33		17:42	18:41	20:46	21:44
29	08:18			05:55	06:25 (18)	07:48 (18)
	16:35			18:44	20:48	21:45
30	08:16			06:52	07:25 (18)	07:49 (18)
	16:37			19:46	20:50	21:47
31	08:15			06:50	07:24 (18)	07:50 (18)
	16:40			19:48	21:48	
Potential sun hours	235	265	365	425	507	529
Total, worst case	34		170	202		
Sun reduction	0,15		0,39	0,48		
Oper. time red.	0,94		0,94	0,94		
Wind dir. red.	0,61		0,66	0,66		
Total reduction	0,09		0,24	0,30		
Total, real	3		41	60		

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: AL - Vipmali

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:13	06:14	07:14	07:19	08:21
	22:07	21:26	20:12	18:52	16:34	15:43
2	04:28	05:14	06:16	07:16	07:22	08:23
	22:06	21:24	20:10	18:49	16:32	15:42
3	04:29	05:16	06:18	07:29 (18)	07:18	08:25
	22:06	21:22	20:07	07:36 (18)	18:46	16:30
4	04:30	05:18	06:20	07:25 (18)	07:20	08:26
	22:05	21:20	20:04	07:39 (18)	18:44	16:27
5	04:31	05:20	06:22	07:23 (18)	07:22	08:28
	22:04	21:18	20:02	07:41 (18)	18:41	16:25
6	04:32	05:22	06:24	07:21 (18)	07:24	08:29
	22:04	21:15	19:59	07:42 (18)	18:38	16:23
7	04:33	05:24	06:26	07:20 (18)	07:26	08:31
	22:03	21:13	19:56	07:43 (18)	18:36	16:21
8	04:34	05:26	06:28	07:19 (18)	07:28	08:32
	22:02	21:11	19:54	07:44 (18)	18:33	16:19
9	04:35	05:28	06:30	07:17 (18)	07:31	08:34
	22:01	21:09	19:51	07:43 (18)	18:31	16:17
10	04:36	05:30	06:32	07:16 (18)	07:33	08:35
	22:00	21:07	19:48	07:43 (18)	18:28	16:15
11	04:38	05:32	06:34	07:15 (18)	07:35	08:36
	21:59	21:04	19:46	07:43 (18)	18:25	16:13
12	04:39	05:34	06:36	07:15 (18)	07:37	08:38
	21:58	21:02	19:43	07:43 (18)	18:23	16:11
13	04:40	05:36	06:38	07:15 (18)	07:39	08:39
	21:57	21:00	19:40	07:42 (18)	18:20	16:09
14	04:42	05:38	06:40	07:15 (18)	07:41	08:40
	21:56	20:57	19:38	07:42 (18)	18:18	16:07
15	04:43	05:40	06:42	07:15 (18)	07:43	08:41
	21:54	20:55	19:35	07:41 (18)	18:15	16:05
16	04:45	05:42	06:44	07:16 (18)	07:45	08:42
	21:53	20:53	19:32	07:40 (18)	18:13	16:04
17	04:46	05:44	06:46	07:17 (18)	07:47	08:43
	21:52	20:50	19:29	07:39 (18)	18:10	16:02
18	04:48	05:46	06:48	07:19 (18)	07:49	08:44
	21:50	20:48	19:27	07:37 (18)	18:07	16:00
19	04:49	05:48	06:50	07:21 (18)	07:51	08:44
	21:49	20:45	19:24	07:35 (18)	18:05	15:59
20	04:51	05:50	06:52	07:23 (18)	07:54	08:45
	21:47	20:43	19:21	07:32 (18)	18:02	15:57
21	04:53	05:52	06:54		07:56	08:46
	21:46	20:40	19:19		18:00	15:55
22	04:54	05:54	06:56		07:58	08:46
	21:44	20:38	19:16		17:58	15:54
23	04:56	05:56	06:58		08:00	08:47
	21:43	20:35	19:13		17:55	15:52
24	04:58	05:58	07:00		08:02	08:47
	21:41	20:33	19:11		17:53	15:51
25	05:00	06:00	07:02		08:04	08:48
	21:39	20:30	19:08		17:50	15:50
26	05:01	06:02	07:04		07:06	08:48
	21:37	20:28	19:05		16:48	15:48
27	05:03	06:04	07:06		07:09	08:48
	21:36	20:25	19:02		16:46	15:47
28	05:05	06:06	07:08		07:11	08:48
	21:34	20:23	19:00		16:43	15:46
29	05:07	06:08	07:10		07:13	08:48
	21:32	20:20	18:57		16:41	15:45
30	05:09	06:10	07:12		07:15	08:48
	21:30	20:17	18:54		16:39	15:44
31	05:11	06:12			07:17	08:48
	21:28	20:15			16:36	15:44
Potential sun hours	530	470	385	324	248	216
Total, worst case			384			364
Sun reduction			0,43			0,09
Oper. time red.			0,94			0,94
Wind dir. red.			0,66			0,61
Total reduction			0,26			0,05
Total, real			101			18

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AM - Galvani 1

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:20 16:34	08:21 15:43
2	08:48 15:46	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:46	07:04 17:49	06:42 19:54	05:26 20:57	04:31 21:53	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:30 21:54	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:29 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:16	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:45 15:56	07:56 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:02	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:55	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:16	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:35
19	08:34 16:14	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:16	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:08	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:47 20:38	04:45 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:38
26	08:24 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:07 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:40	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:49 15:42
30	08:17 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:49 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	529	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Shadow receptor: AN - Pludmales 1

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Reference year for calendar

2025

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	08:13	07:09	06:47	07:14 (21)	05:31
	15:45	16:42	17:44	19:50	08:05 (2)	20:52
2	08:48	08:11	07:06	06:44	07:12 (21)	05:28
	15:46	16:44	17:46	19:52	08:01 (2)	20:54
3	08:48	08:09	07:04	06:42	07:09 (21)	05:26
	15:48	16:46	17:49	19:54	07:24 (21)	20:56
4	08:47	08:07	07:01	06:39	07:06 (21)	05:24
	15:49	16:49	17:51	19:56	07:24 (21)	20:58
5	08:47	08:05	06:59	06:36	07:04 (21)	05:21
	15:50	16:51	17:53	19:58	07:25 (21)	21:00
6	08:46	08:03	06:56	06:34	07:02 (21)	05:19
	15:52	16:53	17:55	20:00	07:25 (21)	21:03
7	08:46	08:01	06:53	06:31	07:02 (21)	05:17
	15:53	16:55	17:57	20:02	07:25 (21)	21:05
8	08:45	07:58	06:51	06:28	07:01 (21)	05:15
	15:55	16:58	17:59	20:04	07:25 (21)	21:07
9	08:44	07:56	06:48	06:26	07:01 (21)	05:13
	15:56	17:00	18:02	20:06	07:24 (21)	21:09
10	08:44	07:54	06:46	06:23	07:02 (21)	05:11
	15:58	17:02	18:04	20:09	07:24 (21)	21:11
11	08:43	07:52	06:43	06:20	07:01 (21)	05:09
	16:00	17:04	18:06	20:11	07:22 (21)	21:13
12	08:42	07:50	06:40	06:18	07:02 (21)	05:07
	16:01	17:07	18:08	20:13	07:22 (21)	21:15
13	08:41	07:48	06:38	06:15	07:03 (21)	05:04
	16:03	17:09	18:10	20:15	07:20 (21)	21:17
14	08:40	07:45	06:35	06:13	07:05 (21)	05:02
	16:05	17:11	18:12	20:17	07:18 (21)	21:18
15	08:39	07:43	06:32	06:10	07:07 (21)	05:01
	16:07	17:13	18:14	20:19	07:15 (21)	21:20
16	08:38	07:41	06:30	06:08		04:59
	16:09	17:16	18:16	11 07:08 (2)		21:22
17	08:36	07:38	06:27	06:05		04:57
	16:11	17:18	18:18	16 07:11 (2)		21:24
18	08:35	07:36	06:24	06:02		04:55
	16:12	17:20	18:21	20 07:12 (2)		21:26
19	08:34	07:34	06:22	06:00		04:53
	16:14	17:22	18:23	23 07:13 (2)		21:28
20	08:33	07:31	06:19	05:57		04:51
	16:16	17:24	18:25	25 07:15 (2)		21:30
21	08:31	07:29	06:16	05:55		04:50
	16:18	17:27	18:27	27 07:15 (2)		21:32
22	08:30	07:26	06:14	05:52		04:48
	16:21	17:29	18:29	28 07:15 (2)		21:33
23	08:28	07:24	06:11	05:50		04:46
	16:23	17:31	18:31	28 07:14 (2)		21:35
24	08:27	07:21	06:08	05:47		04:45
	16:25	17:33	18:33	29 07:15 (2)		21:37
25	08:25	07:19	06:06	05:45		04:43
	16:27	17:36	18:35	28 07:14 (2)		21:39
26	08:23	07:16	06:03	05:42		04:42
	16:29	17:38	18:37	28 07:13 (2)		21:40
27	08:22	07:14	06:00	05:40		04:40
	16:31	17:40	18:39	27 07:13 (2)		21:42
28	08:20	07:11	05:58	05:38		04:39
	16:33	17:42	18:41	26 07:12 (2)		21:44
29	08:18		05:55	05:35		04:37
	16:35		18:44	24 07:10 (2)		21:45
30	08:16		06:52	05:33		04:36
	16:38		19:46	22 08:10 (2)		21:47
31	08:15		06:50	07:49 (2)		04:35
	16:40		19:48	18 08:07 (2)		21:48
Potential sun hours	235	265	365	425	507	528
Total, worst case			380		287	
Sun reduction			0,39		0,48	
Oper. time red.			0,94		0,94	
Wind dir. red.			0,64		0,66	
Total reduction			0,23		0,30	
Total, real			89		86	

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AN - Pludmales 1

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:13	06:14	07:01 (21)	07:14	07:19
	22:07	21:26	20:12	07:21 (21)	18:52	16:34
2	04:28	05:15	06:16	07:00 (21)	07:16	07:22
	22:06	21:24	20:10	07:22 (21)	18:49	16:32
3	04:29	05:16	06:18	06:59 (21)	07:18	07:24
	22:06	21:22	20:07	07:22 (21)	18:46	16:30
4	04:30	05:18	06:20	06:59 (21)	07:20	07:26
	22:05	21:20	20:04	07:22 (21)	18:44	16:27
5	04:31	05:20	06:22	06:58 (21)	07:22	07:28
	22:04	21:18	20:02	07:22 (21)	18:41	16:25
6	04:32	05:22	06:24	06:58 (21)	07:24	07:30
	22:04	21:15	19:59	07:21 (21)	18:39	16:23
7	04:33	05:24	06:26	06:58 (21)	07:26	07:32
	22:03	21:13	19:56	07:21 (21)	18:36	16:21
8	04:34	05:26	06:28	07:00 (21)	07:28	07:35
	22:02	21:11	19:54	07:20 (21)	18:33	16:19
9	04:35	05:28	06:30	07:01 (21)	07:30	07:37
	22:01	21:09	19:51	07:18 (21)	18:31	16:17
10	04:37	05:30	06:32	07:03 (21)	07:33	07:39
	22:00	21:06	19:48	07:16 (21)	18:28	16:15
11	04:38	05:32	06:34	07:05 (21)	07:35	07:41
	21:59	21:04	19:46	07:55 (2)	18:25	16:13
12	04:39	05:34	06:36	07:07 (21)	07:37	07:43
	21:58	21:02	19:43	07:58 (2)	18:23	16:11
13	04:40	05:36	06:38	07:39 (2)	07:39	07:45
	21:57	21:00	19:40	07:59 (2)	18:20	16:09
14	04:42	05:38	06:40	07:38 (2)	07:41	07:47
	21:56	20:57	19:38	08:00 (2)	18:18	16:07
15	04:43	05:40	06:42	07:36 (2)	07:43	07:50
	21:54	20:55	19:35	08:01 (2)	18:15	16:06
16	04:45	05:42	06:44	07:35 (2)	07:45	07:52
	21:53	20:52	19:32	08:02 (2)	18:13	16:04
17	04:46	05:44	06:46	07:35 (2)	07:47	07:54
	21:52	20:50	19:29	08:02 (2)	18:10	16:02
18	04:48	05:46	06:48	07:34 (2)	07:49	07:56
	21:50	20:48	19:27	08:02 (2)	18:08	16:00
19	04:50	05:48	06:50	07:33 (2)	07:51	07:58
	21:49	20:45	19:24	08:02 (2)	18:05	15:59
20	04:51	05:50	06:52	07:33 (2)	07:54	08:00
	21:47	20:43	19:21	08:01 (2)	18:03	15:57
21	04:53	05:52	06:54	07:33 (2)	07:56	08:02
	21:46	20:40	19:19	08:01 (2)	18:00	15:56
22	04:54	05:54	06:56	07:33 (2)	07:58	08:04
	21:44	20:38	19:16	08:00 (2)	17:58	15:54
23	04:56	05:56	06:58	07:33 (2)	08:00	08:06
	21:42	20:35	19:13	07:59 (2)	17:55	15:53
24	04:58	05:58	07:00	07:33 (2)	08:02	08:08
	21:41	20:33	19:11	07:58 (2)	17:53	15:51
25	05:00	06:00	07:02	07:34 (2)	08:04	08:10
	21:39	20:30	19:08	07:57 (2)	17:50	15:50
26	05:02	06:02	07:04	07:35 (2)	07:06	08:12
	21:37	20:28	19:05	07:55 (2)	16:48	15:48
27	05:03	06:04	07:06	07:37 (2)	07:09	08:14
	21:35	20:25	19:03	07:53 (2)	16:46	15:47
28	05:05	06:06	07:12 (21)	07:39 (2)	07:11	08:16
	21:34	20:23	19:00	07:50 (2)	16:43	15:46
29	05:07	06:08	07:10 (21)	07:13	08:17	08:48
	21:32	20:20	18:57	16:41	15:45	15:42
30	05:09	06:10	07:12 (21)	07:15	08:19	08:48
	21:30	20:17	18:54	16:39	15:44	15:43
31	05:11	06:12	07:14 (21)	07:17		08:48
	21:28	20:15	18:52	16:36		15:44
Potential sun hours	529	470	385	324	248	216
Total, worst case		46	631			
Sun reduction		0,51	0,43			
Oper. time red.		0,94	0,94			
Wind dir. red.		0,66	0,65			
Total reduction		0,32	0,26			
Total, real		15	165			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AO - Pludmales

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:13 16:42	09:06 (23) 09:07 (23)	07:09 17:44	06:47 19:50	07:14 (21) 08:05 (2)
2	08:48 15:46	08:11 16:44		07:06 17:46	21 19:52	05:28 08:03 (2)
3	08:48 15:48	08:09 16:46		07:04 17:49	21 19:54	05:26 07:09 (21)
4	08:47 15:49	08:07 16:49		07:01 17:51	13 19:56	05:24 07:22 (21)
5	08:47 15:50	08:05 16:51		06:59 17:53	17 19:58	05:21 07:06 (21)
6	08:46 15:52	08:03 16:53		06:56 17:55	20 20:00	05:19 07:24 (21)
7	08:46 15:53	08:01 16:55		06:53 17:57	23 20:02	05:17 07:01 (21)
8	08:45 15:55	07:58 16:58		06:51 17:59	24 20:04	05:15 07:25 (21)
9	08:44 15:56	07:56 17:00		06:48 18:02	24 20:06	05:13 07:00 (21)
10	08:44 15:58	07:54 17:02		06:46 18:04	23 20:08	05:11 07:23 (21)
11	08:43 16:00	07:52 17:04		06:43 18:06	23 20:10	05:09 07:00 (21)
12	08:42 16:01	07:50 17:07		06:40 18:08	22 20:11	05:06 07:22 (21)
13	08:41 16:03	07:48 17:09		06:38 18:10	20 20:13	05:04 07:01 (21)
14	08:40 16:05	07:45 17:11		06:35 18:12	19 20:15	05:02 07:20 (21)
15	08:39 16:07	07:43 17:13		06:32 18:14	16 20:17	05:01 07:19 (21)
16	08:38 16:09	07:41 17:16		06:30 18:16	12 20:19	04:59 07:16 (21)
17	08:36 16:11	07:38 17:18	06:58 (2)	06:08 18:18	4 20:21	04:57 07:12 (21)
18	08:35 16:12	07:36 17:20	06:55 (2)	06:05 18:21		04:55 07:11 (2)
19	08:34 16:14	07:34 17:22	06:52 (2)	06:02 18:23		04:53 07:10 (2)
20	08:33 16:16	07:31 17:24	06:50 (2)	05:57 18:25		04:51 07:12 (2)
21	08:31 16:18	07:29 17:27	06:49 (2)	05:54 18:27		04:49 07:14 (2)
22	08:30 16:21	07:26 17:29	06:48 (2)	05:51 18:29		04:48 07:14 (2)
23	08:28 16:23	07:24 17:31	06:46 (2)	05:48 18:31		04:46 07:14 (2)
24	08:27 16:25	07:21 17:33	06:44 (2)	05:45 18:33		04:45 07:14 (2)
25	08:25 16:27	07:19 17:36	06:42 (2)	05:42 18:35		04:43 07:14 (2)
26	08:23 16:29	07:16 17:38	06:40 (2)	05:39 18:37		04:42 07:13 (2)
27	08:22 16:31	07:14 17:40	06:38 (2)	05:36 18:39		04:40 07:13 (2)
28	08:20 16:33	07:11 17:42	06:35 (2)	05:33 18:41		04:39 07:12 (2)
29	08:18 16:35	07:09 17:44	06:32 (2)	05:30 18:43		04:37 07:12 (2)
30	08:16 16:38	07:07 17:46	06:30 (2)	05:27 18:45		04:36 07:10 (2)
31	08:15 16:40	07:05 17:48	06:28 (2)	05:24 18:47		04:35 07:10 (2)
Potential sun hours	235	265	365	425	507	528
Total, worst case	92	1	380	302		
Sun reduction	0,15	0,24	0,39	0,48		
Oper. time red.	0,94	0,94	0,94	0,94		
Wind dir. red.	0,58	0,58	0,64	0,66		
Total reduction	0,08	0,13	0,23	0,30		
Total, real	8	0	89	90		

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AO - Pludmales

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:13	06:14	07:00 (21)	07:14	07:19
	22:07	21:26	20:12	07:21 (21)	18:52	16:34
2	04:28	05:15	06:16	06:59 (21)	07:16	07:22
	22:06	21:24	20:10	07:21 (21)	18:49	16:32
3	04:29	05:16	06:18	06:58 (21)	07:18	07:24
	22:06	21:22	20:07	07:21 (21)	18:46	16:30
4	04:30	05:18	06:20	06:58 (21)	07:20	07:26
	22:05	21:20	20:04	07:21 (21)	18:44	16:27
5	04:31	05:20	06:22	06:58 (21)	07:22	07:28
	22:04	21:18	20:02	07:21 (21)	18:41	16:25
6	04:32	05:22	06:24	06:58 (21)	07:24	07:30
	22:04	21:15	19:59	07:20 (21)	18:39	16:23
7	04:33	05:24	06:26	06:58 (21)	07:26	07:32
	22:03	21:13	19:56	07:20 (21)	18:36	16:21
8	04:34	05:26	06:28	07:00 (21)	07:28	07:35
	22:02	21:11	19:54	07:19 (21)	18:33	16:19
9	04:35	05:28	06:30	07:01 (21)	07:30	07:37
	22:01	21:09	19:51	07:17 (21)	18:31	16:17
10	04:37	05:30	06:32	07:03 (21)	07:33	07:39
	22:00	21:06	19:48	07:53 (2)	18:28	16:15
11	04:38	05:32	06:34	07:05 (21)	07:35	07:41
	21:59	21:04	19:46	07:56 (2)	18:25	16:13
12	04:39	05:34	06:36	07:07 (21)	07:37	07:43
	21:58	21:02	19:43	07:58 (2)	18:23	16:11
13	04:40	05:36	06:38	07:38 (2)	07:39	07:45
	21:57	21:00	19:40	08:00 (2)	18:20	16:09
14	04:42	05:38	06:40	07:37 (2)	07:41	07:47
	21:56	20:57	19:38	08:00 (2)	18:18	16:07
15	04:43	05:40	06:42	07:35 (2)	07:43	07:50
	21:54	20:55	19:35	08:01 (2)	18:15	16:06
16	04:45	05:42	06:44	07:34 (2)	07:45	07:52
	21:53	20:52	19:32	08:01 (2)	18:13	16:04
17	04:46	05:44	06:46	07:34 (2)	07:47	07:54
	21:52	20:50	19:29	08:02 (2)	18:10	16:02
18	04:48	05:46	06:48	07:33 (2)	07:49	07:56
	21:50	20:48	19:27	08:01 (2)	18:08	16:00
19	04:50	05:48	06:50	07:33 (2)	07:51	07:58
	21:49	20:45	19:24	08:01 (2)	18:05	15:59
20	04:51	05:50	06:52	07:32 (2)	07:54	08:00
	21:47	20:43	19:21	08:01 (2)	18:03	15:57
21	04:53	05:52	06:54	07:32 (2)	07:56	08:02
	21:46	20:40	19:19	08:00 (2)	18:00	15:56
22	04:54	05:54	06:56	07:32 (2)	07:58	08:04
	21:44	20:38	19:16	07:59 (2)	17:58	15:54
23	04:56	05:56	06:58	07:33 (2)	08:00	08:06
	21:42	20:35	19:13	07:59 (2)	17:55	15:53
24	04:58	05:58	07:00	07:33 (2)	08:02	08:08
	21:41	20:33	19:11	07:57 (2)	17:53	15:51
25	05:00	06:00	07:02	07:34 (2)	08:04	08:10
	21:39	20:30	19:08	07:56 (2)	17:50	15:50
26	05:02	06:02	07:04	07:35 (2)	07:06	08:12
	21:37	20:28	19:05	07:54 (2)	16:48	15:48
27	05:03	06:04	07:06	07:37 (2)	07:09	08:14
	21:35	20:25	19:03	07:51 (2)	16:46	15:47
28	05:05	06:06	07:08 (21)	07:40 (2)	07:11	08:16
	21:34	20:23	19:00	07:47 (2)	16:43	15:46
29	05:07	06:08	07:05 (21)	07:13	08:17	08:23
	21:32	20:20	18:57	16:41	15:45	15:42
30	05:09	06:10	07:02 (21)	07:15	08:19	08:25
	21:30	20:17	18:54	16:39	15:44	15:43
31	05:11	06:12	07:01 (21)	07:17		08:27
	21:28	20:15	18:51	16:36		15:44
Potential sun hours	529	470	385	324	248	216
Total, worst case			630			
Sun reduction		0,51	0,43		0,09	
Oper. time red.		0,94	0,94		0,94	
Wind dir. red.		0,66	0,65		0,58	
Total reduction		0,32	0,26		0,05	
Total, real		18	165		5	

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: AP - Kalna Galvani

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:48 15:45	08:13 16:42	07:09 17:44		06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12		07:14 18:52	23	07:45 (20) 08:08 (20)	07:19 16:34	08:21 15:43
2	08:48 15:46	08:11 16:44	07:06 17:46		06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:10		07:16 18:49	20	07:47 (20) 08:07 (20)	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:46	07:04 17:49		06:42 19:54	05:26 20:56	04:31 21:52	04:29 22:06	05:16 21:22	06:18 20:07		07:18 18:46	17	07:49 (20) 08:06 (20)	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51		06:39 19:56	05:24 20:59	04:30 21:54	04:30 22:05	05:18 21:20	06:20 20:04		07:20 18:44	14	07:51 (20) 08:05 (20)	07:26 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53		06:36 19:58	05:21 21:01	04:29 21:55	04:31 22:04	05:20 21:18	06:22 20:02		07:22 18:41	10	07:53 (20) 08:03 (20)	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55		06:34 20:00	05:19 21:03	04:28 21:56	04:32 22:04	05:22 21:15	06:24 19:59		07:24 18:39	5	07:55 (20) 08:00 (20)	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57		06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56		07:26 18:36			07:32 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 17:59	5	07:19 (20) 07:24 (20)	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54		07:28 18:33			07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:02	10	07:16 (20) 07:26 (20)	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51		07:31 18:31			07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	14	07:14 (20) 07:28 (20)	05:11 21:11	04:25 22:01	04:36 22:00	05:30 21:07	06:32 19:48		07:33 18:28			07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	17	07:11 (20) 07:28 (20)	05:08 21:13	04:25 22:02	04:38 21:59	05:32 21:04	06:34 19:46		07:35 18:25			07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:07	06:40 18:08	20	07:08 (20) 07:28 (20)	05:06 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43		07:37 18:23			07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	23	07:06 (20) 07:29 (20)	05:04 21:17	04:24 22:03	04:40 21:57	05:36 21:00	06:38 19:40		07:39 18:20			07:45 16:09	08:39 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	24	07:05 (20) 07:29 (20)	05:02 21:19	04:23 22:04	04:42 21:56	05:38 20:57	06:40 19:38		07:41 18:18			07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	24	07:04 (20) 07:28 (20)	05:00 21:21	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35		07:43 18:15			07:50 16:05	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:16	23	07:04 (20) 07:27 (20)	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32		07:45 18:13			07:52 16:04	08:42 15:35
17	08:37 16:10	07:38 17:18	06:27 18:19	22	07:05 (20) 07:27 (20)	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:29		07:47 18:10			07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:21	21	07:05 (20) 07:26 (20)	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27		07:49 18:08			07:56 16:00	08:44 15:35
19	08:34 16:14	07:34 17:22	06:22 18:23	20	07:05 (20) 07:25 (20)	04:53 21:28	04:23 22:07	04:49 21:49	05:48 20:45	06:50 19:24		07:51 18:05			07:58 15:59	08:44 15:36
20	08:33 16:16	07:31 17:24	06:19 18:25	17	07:07 (20) 07:24 (20)	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21		07:54 18:03			08:00 15:57	08:45 15:36
21	08:31 16:18	07:29 17:27	06:16 18:27	13	07:08 (20) 07:21 (20)	04:55 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19		07:56 18:00			08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:14 18:29	6	07:11 (20) 07:17 (20)	04:52 21:34	04:23 22:08	04:54 21:44	05:54 20:38	06:56 19:16	9	07:55 (20) 08:04 (20)	7	07:58 08:04 (20)	08:04 17:58	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31		05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	14	07:52 (20) 08:06 (20)	8	07:52 (20) 08:06 (20)	08:00 17:55	08:47 15:37
24	08:27 16:25	07:21 17:33	06:08 18:33		05:47 20:38	04:45 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	18	07:50 (20) 08:08 (20)	7	07:50 (20) 08:08 (20)	08:02 17:53	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35		05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	21	07:48 (20) 08:09 (20)	6	07:48 (20) 08:09 (20)	08:04 17:50	08:48 15:38
26	08:23 16:29	07:16 17:38	06:03 18:37		05:42 20:42	04:42 21:40	04:24 22:08	05:01 21:37	06:02 20:28	07:04 19:05	22	07:47 (20) 08:09 (20)	5	07:47 (20) 08:09 (20)	07:06 16:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39		05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	23	07:46 (20) 08:09 (20)	4	07:46 (20) 08:09 (20)	07:09 16:46	08:48 15:40
28	08:20 16:33	07:11 17:42	05:58 18:42		05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	24	07:45 (20) 08:09 (20)	3	07:45 (20) 08:09 (20)	07:11 16:43	08:48 15:41
29	08:18 16:35	07:05 18:44	05:55 18:44		05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	24	07:45 (20) 08:09 (20)	2	07:45 (20) 08:09 (20)	07:13 16:41	08:48 15:42
30	08:16 16:38	06:52 19:46	05:52 19:46		05:33 20:50	04:36 21:47	04:26 22:07	05:09 21:30	06:10 20:17	07:12 18:54	24	07:45 (20) 08:09 (20)	1	07:45 (20) 08:09 (20)	07:15 16:39	08:48 15:43
31	08:15 16:40	06:50 19:48	06:50 19:48		05:35 21:48	04:35 21:48	04:26 21:28	05:11 20:15	06:12 20:15	07:17 16:36		07:45 (20) 08:09 (20)			07:17 16:36	08:48 15:44
Potential sun hours	235	265	365		425	507	529	530	470	385		324		248	216	
Total, worst case				259						179		89				
Sun reduction				0,39						0,43		0,27				
Oper. time red.				0,94						0,94		0,94				
Wind dir. red.				0,63						0,63		0,63				
Total reduction				0,23						0,25		0,16				
Total, real				59						45		14				

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AQ - Ziedini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:20 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:57	04:32 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:31 21:54	04:30 22:05	05:19 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:30 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:16	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:56	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:45 15:57	07:56 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:02	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:26	07:41 16:13	08:36 15:36
12	08:42 16:02	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:33 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:17	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:25 18:21	06:03 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:36
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:22	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:48 20:38	04:45 21:37	04:24 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:39
26	08:24 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:07 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:40	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:36		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:17 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:18	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AR - Strautini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:20 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:57	04:32 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:31 21:54	04:30 22:05	05:19 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:51	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:30 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:16	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:56	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:45 15:57	07:57 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:02	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:26	07:41 16:13	08:36 15:36
12	08:42 16:02	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:33 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:55	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:17	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:25 18:21	06:03 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:36
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:22	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:17 18:27	05:55 20:32	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:48 20:38	04:45 21:37	04:24 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:39
26	08:24 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:07 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:40	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:36		05:55 18:44	05:35 20:48	04:38 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:17 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:18	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AS - Druvas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March		April		May	June	July	August	September		October	November	December
1	08:48	08:13	07:09		06:47		05:31	04:34	04:27	05:13	06:14		07:14	07:19	08:21
	15:45	16:42	17:44		19:50	13	08:02 (1)	21:50	22:07	21:26	20:12		18:52	16:34	15:43
2	08:48	08:11	07:06		06:44		07:54 (1)	05:28	04:33	04:28	05:15		07:16	07:22	08:23
	15:46	16:44	17:47		19:52	4	07:58 (1)	20:54	21:51	22:06	21:24		18:49	16:32	15:42
3	08:48	08:09	07:04		06:42			05:26	04:31	04:29	05:16		07:18	07:24	08:25
	15:48	16:46	17:49		19:54			20:56	21:52	22:06	21:22		18:47	16:30	15:41
4	08:47	08:07	07:01		06:39			05:24	04:30	04:30	05:18		07:20	07:26	08:26
	15:49	16:49	17:51		19:56			20:59	21:54	22:05	21:20		18:44	16:27	15:40
5	08:47	08:05	06:59		06:36			05:22	04:29	04:31	05:20		07:22	07:28	08:28
	15:50	16:51	17:53		19:58			21:01	21:55	22:04	21:18		18:41	16:25	15:39
6	08:46	08:03	06:56		06:34			05:19	04:29	04:32	05:22		07:24	07:30	08:29
	15:52	16:53	17:55		20:00			21:03	21:56	22:04	21:15		18:39	16:23	15:39
7	08:46	08:01	06:54		06:31			05:17	04:28	04:33	05:24		07:26	07:32	08:31
	15:53	16:55	17:57		20:02			21:05	21:57	22:03	21:13		18:36	16:21	15:38
8	08:45	07:59	06:51		06:28			05:15	04:27	04:34	05:26		07:29	07:35	08:32
	15:55	16:58	17:59		20:04			21:07	21:59	22:02	21:11		18:33	16:19	15:37
9	08:44	07:56	06:48		06:26			05:13	04:26	04:35	05:28		07:31	07:37	08:34
	15:56	17:00	18:02		20:07			21:09	22:00	22:01	21:09		18:31	16:17	15:37
10	08:44	07:54	06:46		06:23			05:11	04:26	04:37	05:30		07:33	07:39	08:35
	15:58	17:02	18:04		20:09			21:11	22:01	22:00	21:07		18:28	16:15	15:36
11	08:43	07:52	06:43		06:21			05:09	04:25	04:38	05:32		07:35	07:41	08:36
	16:00	17:04	18:06		20:11			21:13	22:01	21:59	21:04	8	07:52 (1)	18:25	16:13
12	08:42	07:50	06:40		06:18			05:07	04:24	04:39	05:34		07:40 (1)	07:37	07:43
	16:01	17:07	18:08		20:13			21:15	22:02	21:58	21:02	15	07:55 (1)	18:23	16:11
13	08:41	07:48	06:38		06:15			05:05	04:24	04:40	05:36		07:38 (1)	07:39	07:45
	16:03	17:09	18:10		20:15			21:17	22:03	21:57	21:00	19	07:57 (1)	18:20	16:09
14	08:40	07:45	06:35		06:13			05:03	04:24	04:42	05:38		07:37 (1)	07:41	07:48
	16:05	17:11	18:12		20:17			21:19	22:04	21:56	20:57	21	07:58 (1)	18:18	16:07
15	08:39	07:43	06:32		06:10			05:01	04:23	04:43	05:40		07:35 (1)	07:43	07:50
	16:07	17:13	18:14		20:19			21:21	22:05	21:54	20:55	24	07:59 (1)	18:15	16:06
16	08:38	07:41	06:30		06:08			04:59	04:23	04:45	05:42		07:34 (1)	07:45	07:52
	16:09	17:16	18:16	8	07:05 (1)	20:21		21:22	22:05	21:53	20:53	25	07:59 (1)	18:13	16:04
17	08:37	07:38	06:27		06:05			04:57	04:23	04:46	05:44		07:33 (1)	07:47	07:54
	16:11	17:18	18:19	14	07:09 (1)	20:23		21:24	22:06	21:52	20:50	27	08:00 (1)	18:10	16:02
18	08:35	07:36	06:24		06:02			04:55	04:23	04:48	05:46		07:33 (1)	07:49	07:56
	16:13	17:20	18:21	18	07:10 (1)	20:25		21:26	22:06	21:50	20:48	27	08:00 (1)	18:08	16:00
19	08:34	07:34	06:22		06:00			04:53	04:23	04:50	05:48		07:32 (1)	07:51	07:58
	16:14	17:22	18:23	22	07:11 (1)	20:27		21:28	22:07	21:49	20:45	28	08:00 (1)	18:05	15:59
20	08:33	07:31	06:19		06:08			04:51	04:23	04:51	05:50		07:32 (1)	07:54	08:00
	16:16	17:25	18:25	24	07:12 (1)	20:29		21:30	22:07	21:47	20:43	27	07:59 (1)	18:03	15:57
21	08:31	07:29	06:16		06:07			04:50	04:23	04:53	05:52		07:31 (1)	07:56	08:02
	16:19	17:27	18:27	25	07:12 (1)	20:32		21:32	22:07	21:46	20:40	28	07:59 (1)	18:00	15:56
22	08:30	07:26	06:14		06:06			04:48	04:23	04:55	05:54		07:31 (1)	07:58	08:04
	16:21	17:29	18:29	26	07:12 (1)	20:34		21:34	22:08	21:44	20:38	27	07:58 (1)	17:58	15:54
23	08:28	07:24	06:11		06:06			04:46	04:23	04:56	05:56		07:32 (1)	08:00	08:06
	16:23	17:31	18:31	27	07:13 (1)	20:36		21:35	22:08	21:43	20:35	25	07:57 (1)	17:55	15:53
24	08:27	07:21	06:08		06:05			04:45	04:23	04:58	05:58		07:32 (1)	08:02	08:08
	16:25	17:33	18:33	28	07:13 (1)	20:38		21:37	22:08	21:41	20:33	24	07:56 (1)	17:53	15:51
25	08:25	07:19	06:06		06:05			04:43	04:24	05:00	06:00		07:33 (1)	08:04	08:10
	16:27	17:36	18:35	27	07:12 (1)	20:40		21:39	22:08	21:39	20:30	21	07:54 (1)	17:50	15:50
26	08:23	07:17	06:03		06:04			04:42	04:24	05:02	06:02		07:35 (1)	07:06	08:12
	16:29	17:38	18:37	27	07:11 (1)	20:42		21:40	22:08	21:37	20:28	18	07:53 (1)	16:48	15:48
27	08:22	07:14	06:00		06:05			04:40	04:25	05:03	06:04		07:37 (1)	07:09	08:14
	16:31	17:40	18:39	26	07:11 (1)	20:44		21:42	22:08	21:36	20:25	13	07:50 (1)	16:46	15:47
28	08:20	07:11	05:58		06:05			04:39	04:25	05:05	06:06		07:39 (1)	07:11	08:16
	16:33	17:42	18:42	25	07:10 (1)	20:46		21:44	22:08	21:34	20:23	7	07:46 (1)	16:43	15:46
29	08:18		05:55		06:05			04:37	04:26	05:07	06:08		07:13	08:18	08:48
	16:35		18:44	23	07:08 (1)	20:48		21:45	22:07	21:32	20:20		16:41	15:45	15:42
30	08:16		06:52		07:47 (1)	05:33		04:36	04:27	05:09	06:10		07:15	08:19	08:48
	16:38		19:46	20	08:07 (1)	20:50		21:47	22:07	21:30	20:17		16:39	15:44	15:43
31	08:15		06:50		07:47 (1)			04:35		05:11	06:12		07:17		08:48
	16:40		19:48	18	08:05 (1)			21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	265	365		425			507	528	529	470		385	324	248
Total, worst case				358		17									216
Sun reduction				0,39		0,48							384		
Oper. time red.				0,94		0,94									
Wind dir. red.				0,64		0,64									
Total reduction				0,23		0,29									
Total, real				84		5							99		

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AT - Saulkrasti

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:20 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:57	04:32 21:53	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:31 21:54	04:30 22:05	05:19 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:51	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:30 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:16	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:56	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:05	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:45 15:57	07:57 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:37
11	08:43 16:00	07:52 17:05	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:02	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:26	07:41 16:13	08:36 15:36
12	08:42 16:02	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:46 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:33 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:55	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:17	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:25 18:21	06:03 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:36
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:30	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:22	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:17 18:27	05:55 20:32	04:50 21:32	04:23 22:08	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:48 20:38	04:45 21:37	04:24 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:39
26	08:24 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:07 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:40	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:36		05:55 18:44	05:35 20:48	04:38 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:49 15:42
30	08:17 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:18	07:12 18:55	07:15 16:39	08:19 15:44	08:49 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AU - Jaundruvas 1

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

		January	February	March			April			May	June	July	August	September		October	November	December
	1	08:48	08:13	07:09			06:47			07:29 (1)	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
		15:45	16:42	17:44			19:50	27		07:56 (1)	20:52	21:50	22:07	21:26	20:12	18:52	16:34	15:43
	2	08:48	08:11	07:06			06:44			07:29 (1)	05:28	04:33	04:28	05:15	06:16	07:16	07:22	08:23
		15:46	16:44	17:47			19:52	27		07:56 (1)	20:54	21:51	22:06	21:24	20:10	18:49	16:32	15:42
	3	08:48	08:09	07:04			06:42			07:29 (1)	05:26	04:31	04:29	05:16	06:18	07:18	07:24	08:25
		15:48	16:46	17:49			19:54	26		07:55 (1)	20:56	21:52	22:06	21:22	20:07	18:47	16:30	15:41
	4	08:47	08:07	07:01			06:39			07:30 (1)	05:24	04:30	04:30	05:18	06:20	07:20	07:26	08:26
		15:49	16:49	17:51			19:56	25		07:55 (1)	20:59	21:54	22:05	21:20	20:04	18:44	16:27	15:40
	5	08:47	08:05	06:59			06:36			07:31 (1)	05:22	04:29	04:31	05:20	06:22	07:32 (1)	07:22	08:28
		15:50	16:51	17:53			19:58	22		07:53 (1)	21:01	21:55	22:04	21:18	20:02	18:41	16:25	15:39
	6	08:46	08:03	06:56			06:34			07:31 (1)	05:19	04:29	04:32	05:22	06:24	07:29 (1)	07:24	08:30
		15:52	16:53	17:55			20:00	20		07:51 (1)	21:03	21:56	22:04	21:15	19:59	17:46 (1)	18:39	16:23
	7	08:46	08:01	06:54			06:31			07:34 (1)	05:17	04:28	04:33	05:24	06:26	07:27 (1)	07:26	08:31
		15:53	16:55	17:57			20:02	15		07:49 (1)	21:05	21:57	22:03	21:13	19:56	20:07:47 (1)	18:36	16:21
	8	08:45	07:59	06:51			06:28			07:36 (1)	05:15	04:27	04:34	05:26	06:28	07:25 (1)	07:29	08:32
		15:55	16:58	17:59			20:04	9		07:45 (1)	21:07	21:58	22:02	21:11	19:54	23:07:48 (1)	18:33	16:19
	9	08:44	07:56	06:48			06:26			05:13	04:26	04:35	05:28	06:30	07:24 (1)	07:31	07:37	08:34
		15:56	17:00	18:02			20:07			21:09	22:00	22:01	21:09	19:51	25:07:49 (1)	18:31	16:17	15:37
	10	08:44	07:54	06:46			06:23			05:11	04:26	04:37	05:30	06:32	07:22 (1)	07:33	07:39	08:35
		15:58	17:02	18:04			20:09			21:11	22:01	22:00	21:07	19:48	27:07:49 (1)	18:28	16:15	15:36
	11	08:43	07:52	06:43			06:21			05:09	04:25	04:38	05:32	06:34	07:21 (1)	07:35	07:41	08:36
		16:00	17:04	18:06			20:11			21:13	22:01	21:59	21:04	19:46	28:07:49 (1)	18:25	16:13	15:36
	12	08:42	07:50	06:40			06:18			05:07	04:24	04:39	05:34	06:36	07:21 (1)	07:37	07:43	08:38
		16:01	17:07	18:08			20:13			21:15	22:02	21:58	21:02	19:43	28:07:49 (1)	18:23	16:11	15:36
	13	08:41	07:48	06:38			06:15			05:05	04:24	04:41	05:36	06:38	07:20 (1)	07:39	07:45	08:39
		16:03	17:09	18:10			20:15			21:17	22:03	21:57	21:00	19:40	29:07:49 (1)	18:20	16:09	15:35
	14	08:40	07:45	06:35			06:13			05:03	04:24	04:42	05:38	06:40	07:20 (1)	07:41	07:48	08:40
		16:05	17:11	18:12			20:17			21:19	22:04	21:56	20:57	19:38	28:07:48 (1)	18:18	16:07	15:35
	15	08:39	07:43	06:32			06:10			05:01	04:23	04:43	05:40	06:42	07:20 (1)	07:43	07:50	08:41
		16:07	17:13	18:14			20:19			21:20	22:05	21:54	20:55	19:35	28:07:48 (1)	18:15	16:06	15:35
	16	08:38	07:41	06:30			06:08			04:59	04:23	04:45	05:42	06:44	07:20 (1)	07:45	07:52	08:42
		16:09	17:16	18:16			20:21			21:22	22:05	21:53	20:53	19:32	27:07:47 (1)	18:13	16:04	15:35
	17	08:37	07:38	06:27			06:05			04:57	04:23	04:46	05:44	06:46	07:20 (1)	07:47	07:54	08:43
		16:11	17:18	18:19			20:23			21:24	22:06	21:52	20:50	19:30	26:07:46 (1)	18:10	16:02	15:35
	18	08:35	07:36	06:24			06:02			04:55	04:23	04:48	05:46	06:48	07:21 (1)	07:49	07:56	08:44
		16:13	17:20	18:21			20:25			21:26	22:06	21:50	20:48	19:27	24:07:45 (1)	18:08	16:00	15:35
	19	08:34	07:34	06:22			06:00			04:53	04:23	04:50	05:48	06:50	07:21 (1)	07:51	07:58	08:44
		16:14	17:22	18:23			20:27			21:28	22:07	21:49	20:45	19:24	23:07:44 (1)	18:05	15:57	15:36
	20	08:33	07:31	06:19			05:57			04:51	04:23	04:51	05:50	06:52	07:23 (1)	07:54	08:00	08:45
		16:16	17:25	18:25			20:29			21:30	22:07	21:47	20:43	19:21	19:07:42 (1)	18:03	15:57	15:36
	21	08:31	07:29	06:16			05:55			04:50	04:23	04:53	05:52	06:54	07:25 (1)	07:56	08:02	08:46
		16:19	17:27	18:27			20:31			21:32	22:07	21:46	20:40	19:19	15:07:40 (1)	18:00	15:56	15:36
	22	08:30	07:26	06:14			05:52			04:48	04:23	04:55	05:54	06:56	07:27 (1)	07:58	08:04	08:46
		16:21	17:29	18:29	11		06:52 (1)	20:34		21:34	22:08	21:44	20:38	19:16	10:07:37 (1)	17:58	15:54	15:37
	23	08:28	07:24	06:11			06:39 (1)	05:50		04:46	04:23	04:56	05:56	06:58		08:00	08:06	08:47
		16:23	17:31	18:31	16		06:55 (1)	20:36		21:35	22:08	21:43	20:35	19:13		17:55	15:53	15:37
	24	08:27	07:21	06:08			06:36 (1)	05:47		04:45	04:23	04:58	05:58	07:00		08:02	08:08	08:47
		16:25	17:33	18:33	20		06:56 (1)	20:38		21:37	22:08	21:41	20:33	19:11		17:53	15:51	15:38
	25	08:25	07:19	06:06			06:34 (1)	05:45		04:43	04:24	05:00	06:00	07:02		08:04	08:10	08:48
		16:27	17:36	18:35	23		06:57 (1)	20:40		21:39	22:08	21:39	20:30	19:08		17:50	15:50	15:38
	26	08:23	07:17	06:03			06:32 (1)	05:43		04:42	04:24	05:02	06:02	07:04		07:06	08:12	08:48
		16:29	17:38	18:37	25		06:57 (1)	20:42		21:40	22:08	21:37	20:28	19:05		16:48	15:48	15:39
	27	08:22	07:14	06:00			06:32 (1)	05:40		04:40	04:25	05:03	06:04	07:06		07:09	08:14	08:48
		16:31	17:40	18:39	26		06:58 (1)	20:44		21:42	22:08	21:36	20:25	19:03		16:46	15:47	15:40
	28	08:20	07:11	05:58			06:30 (1)	05:38		04:39	04:25	05:05	06:06	07:08		07:11	08:16	08:48
		16:33	17:42	18:42	28		06:58 (1)	20:46		21:44	22:08	21:34	20:23	19:00		16:43	15:46	15:41
	29	08:18		05:55			06:29 (1)	05:35		04:37	04:26	05:07	06:08	07:10		07:13	08:18	08:48
		16:35		18:44	29		06:58 (1)	20:48		21:45	22:07	21:32	20:20	18:57		16:41	15:45	15:42
	30	08:16		06:52			07:30 (1)	05:33		04:36	04:27	05:09	06:10	07:12		07:15	08:19	08:48
		16:38		19:46	28		07:58 (1)	20:50		21:47	22:07	21:30	20:17	18:55		16:39	15:44	15:43
	31	08:15		06:50			07:29 (1)	05:31		04:35		05:11	06:12			07:17		08:48
		16:40		19:48	28		07:57 (1)			21:48		21:28	20:15			16:36		15:44
Potential sun hours		235	265	365			425			507	528	529	470	385		324	248	216
Total, worst case				234			171							409				
Sun reduction				0,39			0,48							0,43				
Oper. time red.				0,94			0,94							0,94				
Wind dir. red.				0,65			0,65							0,65				
Total reduction				0,24			0,29							0,26				
Total, real				56			50							107				

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Shadow receptor: AV - Zilites

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Reference year for calendar

2025

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	08:13	07:09	06:47	07:18 (1)	04:34
	15:45	16:42	17:44	19:50	07:44 (1)	21:50
2	08:48	08:11	07:06	06:44	07:18 (1)	04:33
	15:46	16:44	17:47	19:52	07:45 (1)	21:51
3	08:48	08:09	07:04	06:42	07:17 (1)	04:31
	15:48	16:46	17:49	19:54	07:44 (1)	21:52
4	08:47	08:07	07:01	06:39	07:17 (1)	04:30
	15:49	16:49	17:51	19:56	07:44 (1)	21:54
5	08:47	08:05	06:59	06:36	07:17 (1)	04:29
	15:50	16:51	17:53	19:58	07:44 (1)	21:55
6	08:46	08:03	06:56	06:34	07:16 (1)	04:29
	15:52	16:53	17:55	20:00	07:43 (1)	21:56
7	08:46	08:01	06:54	06:31	07:17 (1)	04:28
	15:53	16:55	17:57	20:02	07:42 (1)	21:57
8	08:45	07:59	06:51	06:28	07:17 (1)	04:27
	15:55	16:58	17:59	20:04	07:41 (1)	21:58
9	08:44	07:56	06:48	06:26	07:18 (1)	04:26
	15:56	17:00	18:02	20:07	07:40 (1)	22:00
10	08:44	07:54	06:46	06:23	07:19 (1)	04:26
	15:58	17:02	18:04	20:09	07:38 (1)	22:01
11	08:43	07:52	06:43	06:21	07:20 (1)	04:25
	16:00	17:04	18:06	20:11	07:36 (1)	22:01
12	08:42	07:50	06:40	06:18	07:23 (1)	04:24
	16:01	17:07	18:08	20:13	07:33 (1)	22:02
13	08:41	07:48	06:38	06:15		04:24
	16:03	17:09	18:10	20:15		22:03
14	08:40	07:45	06:35	06:13		04:24
	16:05	17:11	18:12	20:17		22:04
15	08:39	07:43	06:32	06:10		04:23
	16:07	17:13	18:14	20:19		22:05
16	08:38	07:41	06:30	06:08		04:23
	16:09	17:16	18:16	20:21		22:05
17	08:37	07:38	06:27	06:05		04:23
	16:11	17:18	18:19	20:23		22:06
18	08:35	07:36	06:24	06:02		04:23
	16:13	17:20	18:21	20:25		22:06
19	08:34	07:34	06:22	06:00		04:23
	16:14	17:22	18:23	20:27		22:07
20	08:33	07:31	06:19	05:57		04:23
	16:16	17:25	18:25	20:29		22:07
21	08:31	07:29	06:16	05:55		04:23
	16:19	17:27	18:27	20:31		22:07
22	08:30	07:26	06:14	05:52		04:23
	16:21	17:29	18:29	20:34		22:08
23	08:28	07:24	06:11	05:50		04:23
	16:23	17:31	18:31	20:36		22:08
24	08:27	07:21	06:08	05:47		04:23
	16:25	17:33	18:33	20:38		22:08
25	08:25	07:19	06:06	05:45		04:24
	16:27	17:36	18:35	20:40		22:08
26	08:23	07:17	06:03	06:30 (1)		04:24
	16:29	17:38	18:37	06:36 (1)		22:08
27	08:22	07:14	06:00	06:28 (1)		04:25
	16:31	17:40	18:39	06:40 (1)		22:08
28	08:20	07:11	05:58	06:25 (1)		04:25
	16:33	17:42	18:42	06:42 (1)		22:08
29	08:18		05:55	06:22 (1)		04:26
	16:35		18:44	06:42 (1)		22:07
30	08:16		06:52	07:20 (1)		04:27
	16:38		19:46	07:44 (1)		22:07
31	08:15		06:50	07:19 (1)		
	16:40		19:48	07:44 (1)		
Potential sun hours	235	265	365	425	507	528
Total, worst case			104		277	
Sun reduction			0,39		0,48	
Oper. time red.			0,94		0,94	
Wind dir. red.			0,66		0,66	
Total reduction			0,24		0,30	
Total, real			25		82	

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AV - Zilites

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:13	06:14	07:20 (1)	07:14	07:19
	22:07	21:26	20:12	13 07:33 (1)	18:52	16:34
2	04:28	05:15	06:16	07:18 (1)	07:16	07:22
	22:06	21:24	20:10	17 07:35 (1)	18:49	16:32
3	04:29	05:17	06:18	07:16 (1)	07:18	07:24
	22:06	21:22	20:07	21 07:37 (1)	18:47	16:30
4	04:30	05:18	06:20	07:15 (1)	07:20	07:26
	22:05	21:20	20:04	23 07:38 (1)	18:44	16:27
5	04:31	05:20	06:22	07:14 (1)	07:22	07:28
	22:04	21:18	20:02	24 07:38 (1)	18:41	16:25
6	04:32	05:22	06:24	07:13 (1)	07:24	07:30
	22:04	21:15	19:59	26 07:39 (1)	18:39	16:23
7	04:33	05:24	06:26	07:12 (1)	07:26	07:32
	22:03	21:13	19:56	27 07:39 (1)	18:36	16:21
8	04:34	05:26	06:28	07:12 (1)	07:29	07:35
	22:02	21:11	19:54	27 07:39 (1)	18:33	16:19
9	04:35	05:28	06:30	07:11 (1)	07:31	07:37
	22:01	21:09	19:51	28 07:39 (1)	18:31	16:17
10	04:37	05:30	06:32	07:10 (1)	07:33	07:39
	22:00	21:07	19:48	27 07:37 (1)	18:28	16:15
11	04:38	05:32	06:34	07:10 (1)	07:35	07:41
	21:59	21:04	19:46	27 07:37 (1)	18:25	16:13
12	04:39	05:34	06:36	07:10 (1)	07:37	07:43
	21:58	21:02	19:43	26 07:36 (1)	18:23	16:11
13	04:41	05:36	06:38	07:10 (1)	07:39	07:45
	21:57	21:00	19:40	25 07:35 (1)	18:20	16:09
14	04:42	05:38	06:40	07:11 (1)	07:41	07:48
	21:56	20:57	19:38	23 07:34 (1)	18:18	16:07
15	04:43	05:40	06:42	07:13 (1)	07:43	07:50
	21:54	20:55	19:35	19 07:32 (1)	18:15	16:06
16	04:45	05:42	06:44	07:15 (1)	07:45	07:52
	21:53	20:53	19:32	15 07:30 (1)	18:13	16:04
17	04:46	05:44	06:46	07:17 (1)	07:47	07:54
	21:52	20:50	19:30	11 07:28 (1)	18:10	16:02
18	04:48	05:46	06:48		07:49	07:56
	21:50	20:48	19:27		18:08	16:00
19	04:50	05:48	06:50		07:51	07:58
	21:49	20:45	19:24		18:05	15:59
20	04:51	05:50	06:52		07:54	08:00
	21:47	20:43	19:21		18:03	15:57
21	04:53	05:52	06:54		07:56	08:02
	21:46	20:40	19:19		18:00	15:56
22	04:55	05:54	06:56		07:58	08:04
	21:44	20:38	19:16		17:58	15:54
23	04:56	05:56	06:58		08:00	08:06
	21:43	20:35	19:13		17:55	15:53
24	04:58	05:58	07:00		08:02	08:08
	21:41	20:33	19:11		17:53	15:51
25	05:00	06:00	07:02		08:04	08:10
	21:39	20:30	19:08		17:50	15:50
26	05:02	06:02	07:04		07:06	08:12
	21:37	20:28	19:05		16:48	15:48
27	05:03	06:04	07:06		07:09	08:14
	21:36	20:25	19:03		16:46	15:47
28	05:05	06:06	07:08		07:11	08:16
	21:34	20:23	19:00		16:43	15:46
29	05:07	06:08	07:10		07:13	08:18
	21:32	20:20	18:57		16:41	15:45
30	05:09	06:10	07:12		07:15	08:19
	21:30	20:17	18:55		16:39	15:44
31	05:11	06:12	07:24 (1)		07:17	08:48
	21:28	20:15	07:30 (1)		16:36	15:44
Potential sun hours	529	470	385		324	248
Total, worst case		6	379			
Sun reduction		0,51	0,43			
Oper. time red.		0,94	0,94			
Wind dir. red.		0,66	0,66			
Total reduction		0,32	0,27			
Total, real		2	100			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AW - Avotini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:20 16:34	08:21 15:43
2	08:48 15:46	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:46	07:04 17:49	06:42 19:54	05:26 20:57	04:31 21:53	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:30 21:54	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:29 21:55	04:31 22:05	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:16	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:45 15:56	07:57 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:02	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:46 16:09	08:39 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:55	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:16	06:08 20:21	04:59 21:23	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:35
19	08:34 16:14	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:45 15:36
20	08:33 16:16	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:18	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:08	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:47 20:38	04:45 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:38
26	08:24 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:07 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:40	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:49 15:42
30	08:17 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:18	07:12 18:55	07:15 16:39	08:19 15:44	08:49 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15		07:17 16:36		08:48 15:44
Potential sun hours	235	265	365	425	507	529	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUHKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AX - Biksti

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:20 16:34	08:21 15:43
2	08:48 15:46	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:46	07:04 17:49	06:42 19:54	05:26 20:57	04:31 21:53	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:30 21:54	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:29 21:55	04:31 22:05	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:28 21:56	04:32 22:04	05:22 21:16	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 17:59	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:45 15:56	07:57 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:25 22:01	04:36 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:02	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:04 21:17	04:24 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:46 16:09	08:39 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:02 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:55	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:16	06:08 20:21	04:59 21:23	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:35
19	08:34 16:14	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:45 15:36
20	08:33 16:16	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:18	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:08	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:47 20:38	04:45 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:38
26	08:24 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:07 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:49 15:42
30	08:17 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:49 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15		07:17 16:36		08:48 15:44
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AY - Tudalinas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:56	04:32 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:30 21:54	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:30 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:02	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:26	07:41 16:13	08:36 15:36
12	08:42 16:02	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:16	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:24 18:21	06:03 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:36
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:47 20:38	04:45 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:39
26	08:23 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:40	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: AZ - Kalnares

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:46	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:46	07:04 17:49	06:42 19:54	05:26 20:57	04:31 21:53	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:30 21:54	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:29 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:16	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 17:59	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:45 15:56	07:56 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:36 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:02	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:04 21:17	04:24 22:03	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:02 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:55	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:16	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:35
19	08:34 16:14	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	08:33 16:16	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:18	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:08	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:47 20:38	04:45 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:38
26	08:24 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:17 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:49 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	529	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: BA - Suši

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	09:41 (20)	08:13	08:46 (18)	07:09	06:47
	15:45	24 10:05 (20)	16:42	9 08:55 (18)	17:44	19:50
2	08:48	09:42 (20)	08:11	08:44 (18)	07:06	06:44
	15:46	24 10:06 (20)	16:44	13 08:57 (18)	17:46	19:52
3	08:48	09:42 (20)	08:09	08:42 (18)	07:04	06:42
	15:47	24 10:06 (20)	16:46	17 08:59 (18)	17:49	19:54
4	08:47	09:43 (20)	08:07	08:39 (18)	07:01	06:39
	15:49	24 10:07 (20)	16:49	20 08:59 (18)	17:51	19:56
5	08:47	09:43 (20)	08:05	08:37 (18)	06:59	06:36
	15:50	24 10:07 (20)	16:51	23 09:00 (18)	17:53	19:58
6	08:46	09:43 (20)	08:03	08:37 (18)	06:56	06:34
	15:52	25 10:08 (20)	16:53	24 09:01 (18)	17:55	20:00
7	08:46	09:44 (20)	08:01	08:37 (18)	06:53	06:31
	15:53	24 10:08 (20)	16:55	25 09:02 (18)	17:57	20:02
8	08:45	09:44 (20)	07:59	08:36 (18)	06:51	06:28
	15:55	24 10:08 (20)	16:58	26 09:02 (18)	17:59	20:04
9	08:45	09:45 (20)	07:56	08:36 (18)	06:48	06:26
	15:56	23 10:08 (20)	17:00	26 09:02 (18)	18:02	20:06
10	08:44	09:46 (20)	07:54	08:36 (18)	06:46	06:23
	15:58	23 10:09 (20)	17:02	27 09:03 (18)	18:04	20:09
11	08:43	09:46 (20)	07:52	08:36 (18)	06:43	06:20
	16:00	23 10:09 (20)	17:04	26 09:02 (18)	18:06	20:11
12	08:42	09:47 (20)	07:50	08:37 (18)	06:40	06:18
	16:01	22 10:09 (20)	17:06	25 09:02 (18)	18:08	20:13
13	08:41	09:48 (20)	07:48	08:37 (18)	06:38	06:15
	16:03	21 10:09 (20)	17:09	24 09:01 (18)	18:10	20:15
14	08:40	09:48 (20)	07:45	08:38 (18)	06:35	06:13
	16:05	21 10:09 (20)	17:11	23 09:01 (18)	18:12	20:17
15	08:39	09:50 (20)	07:43	08:39 (18)	06:32	06:10
	16:07	19 10:09 (20)	17:13	22 09:01 (18)	18:14	20:19
16	08:38	09:51 (20)	07:41	08:39 (18)	06:30	06:07
	16:08	18 10:09 (20)	17:15	20 08:59 (18)	18:16	20:21
17	08:37	09:52 (20)	07:38	08:41 (18)	06:27	06:05
	16:10	16 10:08 (20)	17:18	17 08:58 (18)	18:18	20:23
18	08:35	09:54 (20)	07:36	08:43 (18)	06:24	06:02
	16:12	14 10:08 (20)	17:20	12 08:55 (18)	18:21	20:25
19	08:34	09:55 (20)	07:34	08:48 (18)	06:22	06:00
	16:14	11 10:06 (20)	17:22	3 08:51 (18)	18:23	20:27
20	08:33	09:57 (20)	07:31		06:19	05:57
	16:16	7 10:04 (20)	17:24		18:25	20:29
21	08:31		07:29		06:16	05:55
	16:18		17:27		18:27	20:31
22	08:30		07:26		06:14	05:52
	16:20		17:29		18:29	20:34
23	08:28		07:24		06:11	05:50
	16:22		17:31		18:31	20:36
24	08:27		07:21		06:08	05:47
	16:25		17:33		18:33	20:38
25	08:25		07:19		06:06	05:45
	16:27		17:35		18:35	20:40
26	08:23		07:16		06:03	05:42
	16:29		17:38		18:37	20:42
27	08:22		07:14		06:00	05:40
	16:31		17:40		18:39	20:44
28	08:20		07:11		05:58	05:38
	16:33		17:42		18:41	20:46
29	08:18				05:55	05:35
	16:35				18:44	20:48
30	08:16				06:52	05:33
	16:37				19:46	20:50
31	08:15	08:48 (18)			06:50	04:35
	16:40	4 08:52 (18)			19:48	21:48
Potential sun hours	235		265		365	425
Total, worst case		415		382		507
Sun reduction		0,15		0,24		
Oper. time red.		0,94		0,94		
Wind dir. red.		0,60		0,60		
Total reduction		0,09		0,14		
Total, real		36		52		

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: BA - Suši

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	07:19	08:05 (18)
	22:07	21:26	20:12	18:52	16:34	27 08:32 (18)
2	04:28	05:14	06:16	07:16	07:22	08:06 (18)
	22:06	21:24	20:10	18:49	16:32	26 08:32 (18)
3	04:29	05:16	06:18	07:18	07:24	08:06 (18)
	22:06	21:22	20:07	18:46	16:30	26 08:32 (18)
4	04:30	05:18	06:20	07:20	07:26	08:06 (18)
	22:05	21:20	20:04	18:44	16:27	25 08:31 (18)
5	04:31	05:20	06:22	07:22	07:28	08:07 (18)
	22:04	21:18	20:02	18:41	16:25	24 08:31 (18)
6	04:32	05:22	06:24	07:24	07:30	08:07 (18)
	22:04	21:15	19:59	18:38	16:23	23 08:30 (18)
7	04:33	05:24	06:26	07:26	07:32	08:09 (18)
	22:03	21:13	19:56	18:36	16:21	21 08:30 (18)
8	04:34	05:26	06:28	07:28	07:35	08:11 (18)
	22:02	21:11	19:54	18:33	16:19	18 08:29 (18)
9	04:35	05:28	06:30	07:30	07:37	08:13 (18)
	22:01	21:09	19:51	18:31	16:17	15 08:28 (18)
10	04:36	05:30	06:32	07:33	07:39	08:16 (18)
	22:00	21:07	19:48	18:28	16:15	11 08:27 (18)
11	04:38	05:32	06:34	07:35	07:41	08:18 (18)
	21:59	21:04	19:46	18:25	16:13	7 08:25 (18)
12	04:39	05:34	06:36	07:37	07:43	08:21 (18)
	21:58	21:02	19:43	18:23	16:11	1 08:22 (18)
13	04:40	05:36	06:38	07:39	07:45	08:23
	21:57	21:00	19:40	18:20	16:09	15:35
14	04:42	05:38	06:40	07:41	07:48	08:40
	21:56	20:57	19:38	18:18	16:07	15:35
15	04:43	05:40	06:42	07:43	07:50	08:41
	21:55	20:55	19:35	18:15	16:05	15:35
16	04:45	05:42	06:44	07:45	07:52	08:42
	21:53	20:53	19:32	18:12	16:04	15:35
17	04:46	05:44	06:46	07:47	07:54	08:43
	21:52	20:50	19:29	18:10	16:02	15:35
18	04:48	05:46	06:48	07:49	07:56	08:44
	21:50	20:48	19:27	18:07	16:00	15:35
19	04:49	05:48	06:50	07:51	07:58	08:44
	21:49	20:45	19:24	18:05	15:59	15:35
20	04:51	05:50	06:52	07:54	08:00	08:45
	21:47	20:43	19:21	18:02	15:57	15:36
21	04:53	05:52	06:54	07:56	08:02	08:46
	21:46	20:40	19:19	18:00	15:55	15:36
22	04:54	05:54	06:56	07:58	08:04	08:46
	21:44	20:38	19:16	17:58	15:54	15:37
23	04:56	05:56	06:58	08:00	08:06	09:33 (20)
	21:43	20:35	19:13	17:55	15:52	8 09:41 (20)
24	04:58	05:58	07:00	08:02	08:08	09:32 (20)
	21:41	20:33	19:11	17:53	15:51	12 09:44 (20)
25	05:00	06:00	07:02	08:04	08:10	09:31 (20)
	21:39	20:30	19:08	17:50	15:50	15 09:46 (20)
26	05:01	06:02	07:04	07:06	08:10 (18)	08:48
	21:37	20:28	19:05	16:48	15:48	17 09:47 (20)
27	05:03	06:04	07:06	07:09	08:08 (18)	08:48
	21:36	20:25	19:02	16:45	15:47	19 09:48 (20)
28	05:05	06:06	07:08	07:11	08:08 (18)	08:48
	21:34	20:23	19:00	16:43	15:46	19 09:48 (20)
29	05:07	06:08	07:10	07:13	08:07 (18)	08:48
	21:32	20:20	18:57	16:41	15:45	20 09:49 (20)
30	05:09	06:10	07:12	07:15	08:06 (18)	08:48
	21:30	20:17	18:54	16:38	15:44	22 09:50 (20)
31	05:11	06:12	07:14	07:17	08:06 (18)	08:48
	21:28	20:15	18:52	16:36	15:44	24 10:05 (20)
Potential sun hours	530	470	385	324	248	216
Total, worst case				163	356	741
Sun reduction				0,27	0,09	0,09
Oper. time red.				0,94	0,94	0,94
Wind dir. red.				0,60	0,60	0,60
Total reduction				0,15	0,05	0,05
Total, real				25	19	36

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BB - Jaundruvas

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March		April		May	June	July	August	September		October	November	December
1	08:48	08:13	07:09		06:47								07:14	07:19	08:21
	15:45	16:42	17:44		19:50	15	07:45 (1)	05:31	04:34	04:27	05:13	06:14	18:52	16:34	15:43
2	08:48	08:11	07:06		06:44		08:00 (1)	20:52	21:50	22:07	21:26	20:12	07:16	07:22	08:23
	15:46	16:44	17:47		19:52	9	07:48 (1)	05:28	04:33	04:28	05:15	06:16	18:49	16:32	15:42
3	08:48	08:09	07:04		06:42			20:54	21:51	22:06	21:24	20:10	07:18	07:24	08:25
	15:48	16:46	17:49		19:54			05:26	04:31	04:29	05:16	06:18	18:47	16:30	15:41
4	08:47	08:07	07:01		06:39			20:56	21:52	22:06	21:22	20:07	07:20	07:26	08:26
	15:49	16:49	17:51		19:56			05:24	04:30	04:30	05:18	06:20	18:44	16:27	15:40
5	08:47	08:05	06:59		06:36			20:59	21:54	22:05	21:20	20:04	07:22	07:28	08:28
	15:50	16:51	17:53		19:58			05:22	04:29	04:31	05:20	06:22	18:41	16:25	15:39
6	08:46	08:03	06:56		06:34			21:01	21:55	22:04	21:18	20:02	07:24	07:30	08:29
	15:52	16:53	17:55		20:00			05:19	04:29	04:32	05:22	06:24	18:39	16:23	15:39
7	08:46	08:01	06:54		06:31			21:03	21:56	22:04	21:15	19:59	07:26	07:32	08:31
	15:53	16:55	17:57		20:02			05:17	04:28	04:33	05:24	06:26	18:36	16:21	15:38
8	08:45	07:59	06:51		06:28			21:05	21:57	22:03	21:13	19:56	07:29	07:35	08:32
	15:55	16:58	17:59		20:04			05:15	04:27	04:34	05:26	06:28	18:33	16:19	15:37
9	08:44	07:56	06:48		06:26			21:07	21:59	22:02	21:11	19:54	07:31	07:37	08:34
	15:56	17:00	18:02		20:07			05:13	04:26	04:35	05:28	06:30	18:31	16:17	15:37
10	08:44	07:54	06:46		06:23			21:09	22:00	22:01	21:09	19:51	07:33	07:39	08:35
	15:58	17:02	18:04		20:09			05:11	04:26	04:37	05:30	06:32	18:28	16:15	15:36
11	08:43	07:52	06:43		06:21			21:11	22:01	22:00	21:07	19:48	07:39 (1)	07:35	07:41
	16:00	17:04	18:06		20:11			05:09	04:25	04:38	05:32	06:34	18:25	16:13	15:36
12	08:42	07:50	06:40		06:18			21:13	22:01	21:59	21:04	19:46	07:37 (1)	07:37	07:43
	16:01	17:07	18:08		20:13			05:07	04:24	04:39	05:34	06:36	18:23	16:11	15:36
13	08:41	07:48	06:38		06:15			21:15	22:02	21:58	21:02	19:43	07:53 (1)	07:39	07:45
	16:03	17:09	18:10		20:15			05:05	04:24	04:40	05:36	06:38	18:20	16:09	15:35
14	08:40	07:45	06:35		06:13			21:17	22:03	21:57	21:00	19:40	07:54 (1)	07:41	07:48
	16:05	17:11	18:12		20:17			05:03	04:24	04:42	05:38	06:40	18:22	16:07	15:35
15	08:39	07:43	06:32		06:10			21:19	22:04	21:56	20:57	19:38	07:55 (1)	07:43	07:50
	16:07	17:13	18:14		20:19			05:01	04:23	04:43	05:40	06:42	18:15	16:06	15:35
16	08:38	07:41	06:30		06:08			21:21	22:05	21:54	20:55	19:35	07:56 (1)	07:45	07:52
	16:09	17:16	18:16		20:21			04:59	04:23	04:45	05:42	06:44	18:13	16:04	15:35
17	08:37	07:38	06:27		06:05			21:22	22:05	21:53	20:53	19:32	07:56 (1)	07:47	07:54
	16:11	17:18	18:19	7	07:02 (1)	20:23		04:57	04:23	04:46	05:44	06:46	18:10	16:02	15:35
18	08:35	07:36	06:24		06:02			21:24	22:06	21:52	20:50	19:30	07:56 (1)	07:49	07:56
	16:13	17:20	18:21	13	07:05 (1)	20:25		04:55	04:23	04:48	05:46	06:48	18:08	16:00	15:35
19	08:34	07:34	06:22		06:00			21:26	22:06	21:50	20:48	19:27	07:56 (1)	07:51	07:58
	16:14	17:22	18:23	17	07:06 (1)	20:27		04:53	04:23	04:50	05:48	06:50	18:05	15:59	15:36
20	08:33	07:31	06:19		06:47 (1)	05:57		21:28	22:07	21:49	20:45	19:24	07:56 (1)	07:54	08:00
	16:16	17:25	18:25	21	07:08 (1)	20:29		04:51	04:23	04:51	05:50	06:52	18:03	15:57	15:36
21	08:31	07:29	06:16		06:45 (1)	05:55		21:30	22:07	21:47	20:43	19:21	07:56 (1)	07:56	08:02
	16:19	17:27	18:27	23	07:08 (1)	20:32		04:50	04:23	04:53	05:52	06:54	18:00	15:56	15:36
22	08:30	07:26	06:14		06:44 (1)	05:52		21:32	22:07	21:46	20:40	19:19	07:55 (1)	07:58	08:04
	16:21	17:29	18:29	25	07:09 (1)	20:34		04:48	04:23	04:55	05:54	06:56	18:04	15:54	15:37
23	08:28	07:24	06:11		06:43 (1)	05:50		21:34	22:08	21:44	20:38	19:16	07:54 (1)	07:58	08:06
	16:23	17:31	18:31	26	07:09 (1)	20:36		04:46	04:23	04:56	05:56	06:58	18:00	15:53	15:37
24	08:27	07:21	06:08		06:43 (1)	05:47		21:35	22:08	21:43	20:35	19:13	07:53 (1)	07:55	08:08
	16:25	17:33	18:33	26	07:09 (1)	20:38		04:45	04:23	04:58	05:58	07:00	18:02	15:51	15:38
25	08:25	07:19	06:06		06:42 (1)	05:45		21:37	22:08	21:41	20:33	19:11	07:52 (1)	07:53	08:10
	16:27	17:36	18:35	27	07:09 (1)	20:40		04:43	04:24	05:00	06:00	07:02	18:04	15:50	15:38
26	08:23	07:17	06:03		06:41 (1)	05:43		21:39	22:08	21:39	20:30	19:08	07:50 (1)	07:50	08:12
	16:29	17:38	18:37	27	07:08 (1)	20:42		04:42	04:24	05:02	06:02	07:04	18:05	15:48	15:39
27	08:22	07:14	06:00		06:42 (1)	05:40		21:40	22:08	21:37	20:28	19:05	07:47 (1)	07:48	08:14
	16:31	17:40	18:39	26	07:08 (1)	20:44		04:40	04:25	05:03	06:04	07:06	18:06	15:47	15:40
28	08:20	07:11	05:58		06:42 (1)	05:38		21:42	22:08	21:36	20:25	19:03	07:44 (1)	07:46	08:16
	16:33	17:42	18:42	25	07:07 (1)	20:46		04:39	04:25	05:05	06:06	07:08	18:07	15:46	15:41
29	08:18		05:55		06:42 (1)	05:35		21:44	22:08	21:34	20:23	19:00	07:11	07:13	08:18
	16:35		18:44	23	07:05 (1)	20:48		04:37	04:26	05:07	06:08	07:10	18:08	15:45	15:42
30	08:16		06:52		07:43 (1)	05:33		21:45	22:07	21:32	20:20	18:57	07:15	07:15	08:19
	16:38		19:46	22	08:05 (1)	20:50		04:36	04:27	05:09	06:10	07:12	18:39	15:44	15:43
31	08:15		06:50		07:44 (1)			21:47	22:07	21:30	20:17	18:55	07:17	07:17	08:48
	16:40		19:48	19	08:03 (1)			04:35		05:11	06:12		18:36		15:44
Potential sun hours	235	265	365		425			21:48		21:28	20:15		324	248	216
Total, worst case				327		24		507	528	529	470	385			
Sun reduction				0,39		0,48						355			
Oper. time red.				0,94		0,94						0,43			
Wind dir. red.				0,64		0,64						0,64			
Total reduction				0,24		0,29						0,26			
Total, real				77		7						92			

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUKKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BC - Straumenini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:57	04:32 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:31 21:54	04:30 22:05	05:19 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:30 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:16	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:45 15:57	07:56 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:02	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:26	07:41 16:13	08:36 15:36
12	08:42 16:02	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:17	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:25 18:21	06:03 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:36
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:48 20:38	04:45 21:37	04:24 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:39
26	08:24 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:07 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:40	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:36		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:17 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15		07:17 16:36		08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BD - Krasta Ozoli

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	[January	[February	[March		[April		[May	[June	[July	[August	[September		[October	[November	[December		
1	08:48	08:13	07:09		06:47		07:16 (1)	05:31	04:34	04:27	05:13		06:14		07:14	07:19	08:21
	15:45	16:42	17:44		19:50	24	07:40 (1)	20:52	21:50	22:07	21:26		20:12		18:52	16:34	15:43
2	08:48	08:11	07:06		06:44		07:16 (1)	05:28	04:33	04:28	05:15		06:16	07:19 (1)	07:16	07:22	08:23
	15:46	16:44	17:47		19:52	25	07:41 (1)	20:54	21:51	22:06	21:24	10	20:10	07:29 (1)	18:49	16:32	15:42
3	08:48	08:09	07:04		06:42		07:15 (1)	05:26	04:31	04:29	05:17		06:18	07:17 (1)	07:18	07:24	08:25
	15:48	16:46	17:49		19:54	25	07:40 (1)	20:56	21:52	22:06	21:22	14	20:07	07:31 (1)	18:47	16:30	15:41
4	08:47	08:07	07:01		06:39		07:16 (1)	05:24	04:30	04:30	05:18		06:20	07:15 (1)	07:20	07:26	08:26
	15:49	16:49	17:51		19:56	25	07:41 (1)	20:59	21:54	22:05	21:20	18	20:04	07:33 (1)	18:44	16:28	15:40
5	08:47	08:05	06:59		06:36		07:15 (1)	05:22	04:29	04:31	05:20		06:22	07:13 (1)	07:22	07:28	08:28
	15:50	16:51	17:53		19:58	25	07:40 (1)	21:01	21:55	22:04	21:18	21	20:02	07:34 (1)	18:41	16:25	15:39
6	08:46	08:03	06:56		06:34		07:15 (1)	05:19	04:29	04:32	05:22		06:24	07:12 (1)	07:24	07:30	08:29
	15:52	16:53	17:55		20:00	23	07:38 (1)	21:03	21:56	22:04	21:15	19:59	22	07:34 (1)	18:39	16:23	15:39
7	08:46	08:01	06:54		06:31		07:16 (1)	05:17	04:28	04:33	05:24		06:26	07:11 (1)	07:26	07:32	08:31
	15:53	16:55	17:57		20:02	22	07:38 (1)	21:05	21:57	22:03	21:13	19:56	24	07:35 (1)	18:36	16:21	15:38
8	08:45	07:59	06:51		06:28		07:17 (1)	05:15	04:27	04:34	05:26		06:28	07:10 (1)	07:29	07:35	08:32
	15:55	16:58	17:59		20:04	19	07:36 (1)	21:07	21:58	22:02	21:11	19:54	25	07:35 (1)	18:33	16:19	15:37
9	08:44	07:56	06:48		06:26		07:18 (1)	05:13	04:26	04:35	05:28		06:30	07:10 (1)	07:31	07:37	08:34
	15:56	17:00	18:02		20:07	17	07:35 (1)	21:09	22:00	22:01	21:09	19:51	25	07:35 (1)	18:31	16:17	15:37
10	08:44	07:54	06:46		06:23		07:20 (1)	05:11	04:26	04:37	05:30		06:32	07:09 (1)	07:33	07:39	08:35
	15:58	17:02	18:04		20:09	12	07:32 (1)	21:11	22:01	22:00	21:07	19:48	25	07:34 (1)	18:28	16:15	15:36
11	08:43	07:52	06:43		06:21		07:23 (1)	05:09	04:25	04:38	05:32		06:34	07:09 (1)	07:35	07:41	08:36
	16:00	17:04	18:06		20:11	5	07:28 (1)	21:13	22:01	21:59	21:04	19:46	24	07:33 (1)	18:25	16:13	15:36
12	08:42	07:50	06:40		06:18			05:07	04:24	04:39	05:34		06:36	07:09 (1)	07:37	07:43	08:38
	16:01	17:07	18:08		20:13			21:15	22:02	21:58	21:02	19:43	24	07:33 (1)	18:23	16:11	15:36
13	08:41	07:48	06:38		06:15			05:05	04:24	04:41	05:36		06:38	07:09 (1)	07:39	07:45	08:39
	16:03	17:09	18:10		20:15			21:17	22:03	21:57	21:00	19:40	23	07:32 (1)	18:20	16:09	15:36
14	08:40	07:45	06:35		06:13			05:03	04:24	04:42	05:38		06:40	07:11 (1)	07:41	07:48	08:40
	16:05	17:11	18:12		20:17			21:19	22:04	21:56	20:57	19:38	20	07:31 (1)	18:18	16:07	15:35
15	08:39	07:43	06:32		06:10			05:01	04:23	04:43	05:40	06:42		07:13 (1)	07:43	07:50	08:41
	16:07	17:13	18:14		20:19			21:21	22:05	21:54	20:55	19:35	16	07:29 (1)	18:15	16:06	15:35
16	08:38	07:41	06:30		06:08			04:59	04:23	04:45	05:42	06:44		07:15 (1)	07:45	07:52	08:42
	16:09	17:16	18:16		20:21			21:22	22:05	21:53	20:53	19:32	12	07:27 (1)	18:13	16:04	15:35
17	08:37	07:38	06:27		06:05			04:57	04:23	04:46	05:44	06:46		07:17 (1)	07:47	07:54	08:43
	16:11	17:18	18:19		20:23			21:24	22:06	21:52	20:50	19:30	8	07:25 (1)	18:10	16:02	15:35
18	08:35	07:36	06:24		06:02			04:55	04:23	04:48	05:46	06:48			07:49	07:56	08:44
	16:13	17:20	18:21		20:25			21:26	22:06	21:50	20:48	19:27			18:08	16:00	15:35
19	08:34	07:34	06:22		06:00			04:53	04:23	04:50	05:48	06:50			07:51	07:58	08:44
	16:15	17:22	18:23		20:27			21:28	22:07	21:49	20:45	19:24			18:05	15:59	15:36
20	08:33	07:31	06:19		05:57			04:51	04:23	04:51	05:50	06:52			07:54	08:00	08:45
	16:17	17:25	18:25		20:29			21:30	22:07	21:47	20:43	19:21			18:03	15:57	15:36
21	08:31	07:29	06:16		05:55			04:50	04:23	04:53	05:52	06:54			07:56	08:02	08:46
	16:19	17:27	18:27		20:32			21:32	22:07	21:46	20:40	19:19			18:00	15:56	15:36
22	08:30	07:26	06:14		05:52			04:48	04:23	04:55	05:54	06:56			07:58	08:04	08:46
	16:21	17:29	18:29		20:34			21:34	22:08	21:44	20:38	19:16			17:58	15:54	15:37
23	08:28	07:24	06:11		05:50			04:46	04:23	04:56	05:56	06:58			08:00	08:06	08:47
	16:23	17:31	18:31		20:36			21:35	22:08	21:43	20:35	19:13			17:55	15:53	15:37
24	08:27	07:21	06:08		05:47			04:45	04:23	04:58	05:58	07:00			08:02	08:08	08:47
	16:25	17:33	18:33		20:38			21:37	22:08	21:41	20:33	19:11			17:53	15:51	15:38
25	08:25	07:19	06:06		05:45			04:43	04:24	05:00	06:00	07:02			08:04	08:10	08:48
	16:27	17:36	18:35		20:40			21:39	22:08	21:39	20:30	19:08			17:50	15:50	15:38
26	08:23	07:17	06:03		05:43			04:42	04:24	05:02	06:02	07:04			07:06	08:12	08:48
	16:29	17:38	18:37	2	06:32 (1)			21:40	22:08	21:37	20:28	19:05			16:48	15:48	15:39
27	08:22	07:14	06:00		06:28 (1)			04:40	04:25	05:03	06:04	07:06			07:09	08:14	08:48
	16:31	17:40	18:39	9	06:37 (1)			21:42	22:08	21:36	20:25	19:03			16:46	15:47	15:40
28	08:20	07:11	05:58		06:25 (1)			04:39	04:25	05:05	06:06	07:08			07:11	08:16	08:48
	16:33	17:42	18:42	13	06:38 (1)			21:44	22:08	21:34	20:23	19:00			16:43	15:46	15:41
29	08:18		05:55		06:22 (1)			04:37	04:26	05:07	06:08	07:10			07:13	08:18	08:48
	16:35		18:44	17	06:39 (1)			21:45	22:07	21:32	20:20	18:57			16:41	15:45	15:42
30	08:16		06:52		07:20 (1)			04:36	04:27	05:09	06:10	07:12			07:15	08:19	08:48
	16:38		19:46	20	07:40 (1)			21:47	22:07	21:30	20:17	18:55			16:39	15:44	15:43
31	08:15		06:50		07:17 (1)			04:35		05:11	06:12				07:17		08:48
	16:40		19:48	24	07:41 (1)			21:48		21:28	20:15				16:36		15:44
Potential sun hours	235	265	365		425			507	528	529	470	385			324	248	216
Total, worst case				85		222						311					
Sun reduction				0,39		0,48						0,43					
Oper. time red.				0,94		0,94						0,94					
Wind dir. red.				0,66		0,66						0,66					
Total reduction				0,24		0,30						0,27					
Total, real				20		66						83					

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: BE - Galvani

Assumptions for shadow calculations

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:48	08:13	07:09		06:47	05:31	04:34	04:27	05:13	06:14		07:14		07:45 (19)	07:19	08:21
	15:45	16:42	17:44		19:50	20:52	21:50	22:07	21:26	20:12		18:52	20	08:05 (19)	16:34	15:43
2	08:48	08:11	07:06		06:44	05:28	04:32	04:28	05:14	06:16		07:16		07:47 (19)	07:22	08:23
	15:46	16:44	17:46		19:52	20:54	21:51	22:06	21:24	20:10		18:49	17	08:04 (19)	16:32	15:42
3	08:48	08:09	07:04		06:42	05:26	04:31	04:29	05:16	06:18		07:18		07:49 (19)	07:24	08:25
	15:48	16:46	17:49		19:54	20:57	21:53	22:06	21:22	20:07		18:46	14	08:03 (19)	16:30	15:41
4	08:47	08:07	07:01		06:39	05:24	04:30	04:30	05:18	06:20		07:20		07:51 (19)	07:26	08:26
	15:49	16:49	17:51		19:56	20:59	21:54	22:05	21:20	20:04		18:44	10	08:01 (19)	16:27	15:40
5	08:47	08:05	06:59		06:36	05:21	04:29	04:31	05:20	06:22		07:22		07:53 (19)	07:28	08:28
	15:50	16:51	17:53		19:58	21:01	21:55	22:05	21:18	20:02		18:41	5	07:58 (19)	16:25	15:39
6	08:46	08:03	06:56		06:34	05:19	04:28	04:32	05:22	06:24		07:24			07:30	08:29
	15:52	16:53	17:55		20:00	21:03	21:56	22:04	21:16	19:59		18:39			16:23	15:38
7	08:46	08:01	06:54		06:31	05:17	04:28	04:33	05:24	06:26		07:26			07:33	08:31
	15:53	16:55	17:57		20:02	21:05	21:57	22:03	21:13	19:56		18:36			16:21	15:38
8	08:45	07:59	06:51		06:28	05:15	04:27	04:34	05:26	06:28		07:29			07:35	08:32
	15:55	16:58	17:59		20:04	21:07	21:59	22:02	21:11	19:54		18:33			16:19	15:37
9	08:45	07:56	06:48		07:16 (19)	06:26	05:13	04:26	04:35	05:28		07:31			07:37	08:34
	15:56	17:00	18:02	5	07:21 (19)	20:07	21:09	22:00	22:01	21:09		18:31			16:17	15:37
10	08:44	07:54	06:46		07:14 (19)	06:23	05:11	04:25	04:36	05:30		07:33			07:39	08:35
	15:58	17:02	18:04	10	07:24 (19)	20:09	21:11	22:01	22:00	21:07		18:28			16:15	15:36
11	08:43	07:52	06:43		07:11 (19)	06:20	05:08	04:25	04:38	05:32		07:35			07:41	08:36
	16:00	17:04	18:06	14	07:25 (19)	20:11	21:13	22:02	21:59	21:04		18:25			16:13	15:36
12	08:42	07:50	06:40		07:08 (19)	06:18	05:06	04:24	04:39	05:34		07:37			07:43	08:38
	16:01	17:07	18:08	17	07:25 (19)	20:13	21:15	22:02	21:58	21:02		18:23			16:11	15:36
13	08:41	07:48	06:38		07:06 (19)	06:15	05:04	04:24	04:40	05:36		07:39			07:45	08:39
	16:03	17:09	18:10	20	07:26 (19)	20:15	21:17	22:03	21:57	21:00		18:20			16:09	15:35
14	08:40	07:45	06:35		07:03 (19)	06:13	05:02	04:23	04:42	05:38		07:41			07:48	08:40
	16:05	17:11	18:12	23	07:26 (19)	20:17	21:19	22:04	21:56	20:57		18:18			16:07	15:35
15	08:39	07:43	06:32		07:02 (19)	06:10	05:00	04:23	04:43	05:40		07:43			07:50	08:41
	16:07	17:13	18:14	24	07:26 (19)	20:19	21:21	22:05	21:55	20:55		18:15			16:05	15:35
16	08:38	07:41	06:30		07:02 (19)	06:08	04:59	04:23	04:45	05:42		07:45			07:52	08:42
	16:09	17:16	18:16	23	07:25 (19)	20:21	21:22	22:05	21:53	20:53		18:13			16:04	15:35
17	08:37	07:38	06:27		07:03 (19)	06:05	04:57	04:23	04:46	05:44		07:47			07:54	08:43
	16:10	17:18	18:19	22	07:25 (19)	20:23	21:24	22:06	21:52	20:50		18:10			16:02	15:35
18	08:35	07:36	06:24		07:02 (19)	06:02	04:55	04:23	04:48	05:46		07:49			07:56	08:44
	16:12	17:20	18:21	22	07:24 (19)	20:25	21:26	22:06	21:50	20:48		18:08			16:00	15:35
19	08:34	07:34	06:22		07:03 (19)	06:00	04:53	04:23	04:49	05:48		07:51			07:58	08:44
	16:14	17:22	18:23	20	07:23 (19)	20:27	21:28	22:07	21:49	20:45		18:05			15:59	15:36
20	08:33	07:31	06:19		07:04 (19)	05:57	04:51	04:23	04:51	05:50		07:54			08:00	08:45
	16:16	17:24	18:25	18	07:22 (19)	20:29	21:30	22:07	21:47	20:43		18:03			15:57	15:36
21	08:31	07:29	06:16		07:05 (19)	05:55	04:49	04:23	04:53	05:52		07:57 (19)			08:02	08:46
	16:18	17:27	18:27	15	07:20 (19)	20:32	21:32	22:08	21:46	20:40		18:00	2	07:59 (19)	15:55	15:36
22	08:30	07:26	06:14		07:06 (19)	05:52	04:48	04:23	04:54	05:54		07:52 (19)			08:04	08:46
	16:20	17:29	18:29	11	07:17 (19)	20:34	21:34	22:08	21:44	20:38		18:03 (19)	11	08:03 (19)	15:54	15:37
23	08:28	07:24	06:11		05:50	04:46	04:23	04:56	05:56	06:58		07:49 (19)			08:06	08:47
	16:23	17:31	18:31		20:36	21:35	22:08	21:43	20:35	19:13		18:05 (19)	16	08:05 (19)	15:52	15:37
24	08:27	07:22	06:08		05:47	04:45	04:23	04:58	05:58	07:00		07:47 (19)			08:08	08:47
	16:25	17:33	18:33		20:38	21:37	22:08	21:41	20:33	19:11		18:06 (19)	19	08:06 (19)	15:51	15:38
25	08:25	07:19	06:06		05:45	04:43	04:24	05:00	06:00	07:02		07:46 (19)			08:10	08:48
	16:27	17:36	18:35		20:40	21:39	22:08	21:39	20:30	19:08		18:07 (19)	21	08:07 (19)	15:50	15:38
26	08:24	07:17	06:03		05:42	04:42	04:24	05:01	06:02	07:04		07:45 (19)			08:12	08:48
	16:29	17:38	18:37		20:42	21:40	22:08	21:37	20:28	19:05		18:07 (19)	22	08:07 (19)	15:48	15:39
27	08:22	07:14	06:00		05:40	04:40	04:25	05:03	06:04	07:06		07:44 (19)			08:14	08:48
	16:31	17:40	18:39		20:44	21:42	22:08	21:36	20:25	19:03		18:07 (19)	23	08:07 (19)	15:47	15:40
28	08:20	07:11	05:58		05:38	04:39	04:25	05:05	06:06	07:08		07:44 (19)			08:16	08:48
	16:33	17:42	18:42		20:46	21:44	22:08	21:34	20:23	19:00		18:07 (19)	23	08:07 (19)	15:46	15:41
29	08:18		05:55		05:35	04:37	04:26	05:07	06:08	07:10		07:43 (19)			08:18	08:49
	16:35		18:44		20:48	21:45	22:07	21:32	20:20	18:57		18:07 (19)	24	08:07 (19)	15:45	15:42
30	08:17		06:52		05:33	04:36	04:26	05:09	06:10	07:12		07:43 (19)			08:19	08:49
	16:38		19:46		20:50	21:47	22:07	21:30	20:17	18:55		08:06 (19)	23	08:06 (19)	15:44	15:43
31	08:15		06:50			04:35		05:11	06:12			07:17				08:48
	16:40		19:48			21:48		21:28	20:15			16:36				15:44
Potential sun hours	235	265	365		425	507	529	530	470	385		324		248	216	
Total, worst case				244						184		66				
Sun reduction				0,39						0,43		0,27				
Oper. time red.				0,94						0,94		0,94				
Wind dir. red.				0,63						0,63		0,63				
Total reduction				0,23						0,25		0,16				
Total, real				56						47		11				

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BF - Muižnieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:56	04:32 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:31 21:54	04:30 22:05	05:19 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:51	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:30 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:16	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:56	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:44 15:57	07:56 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:37
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:26	07:41 16:13	08:36 15:36
12	08:42 16:02	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:33 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:17	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:47 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:25 18:21	06:03 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:36
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:22	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:17 18:27	05:55 20:32	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:48 20:38	04:45 21:37	04:24 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:39
26	08:23 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:07 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:40	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:36		05:55 18:44	05:35 20:48	04:38 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:17 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: BG - Me ž mui ž a

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	05:55 (1) 05:56 (1)	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:46	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	05:55 (1) 05:56 (1)	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:46	07:04 17:49	06:42 19:54	05:26 20:56	04:31 21:52	04:29 22:06	05:17 21:22	05:55 (1) 05:56 (1)	06:18 20:07	07:18 18:47	07:24 16:30	08:24 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:30 21:54	04:30 22:05	05:18 21:20		06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:29 21:55	04:31 22:04	05:20 21:18	05:56 (1) 05:57 (1)	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:15		06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13		06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 17:59	06:28 20:04	05:15 21:07	05:46 (1) 05:47 (1)	04:27 21:58	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:02	06:26 20:06	05:13 21:09	05:45 (1) 05:46 (1)	04:26 22:01	04:35 21:59	05:28 21:07	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:54	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:00	04:37 22:00	05:30 21:07		06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	05:45 (1) 05:46 (1)	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:24 22:02	04:39 21:58	05:34 21:02	05:34 19:43	06:36 18:23	07:37 18:23	07:43 16:11	08:37 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	05:44 (1) 05:45 (1)	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	05:38 19:38	06:40 18:18	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:20	04:23 22:05	04:43 21:54	05:40 20:55	05:40 19:38	06:42 18:14	07:43 18:14	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:16	06:08 20:21	04:59 21:22	05:44 (1) 05:45 (1)	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	05:44 19:30	06:46 18:10	07:47 18:08	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	05:46 19:27	06:48 18:07	07:49 17:51	07:56 16:00	08:44 15:35
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	05:48 19:24	06:50 18:05	07:51 17:53	07:58 16:00	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	05:50 19:21	06:52 18:03	07:54 17:55	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:31	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	05:52 19:19	06:54 18:00	07:56 17:58	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:33	04:23 22:08	04:55 21:44	05:54 20:38	05:54 19:16	06:56 17:58	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	05:56 19:13	06:58 17:55	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:21 17:33	06:08 18:33	05:47 20:38	04:45 21:37	04:23 22:08	04:58 21:41	05:58 20:33	05:58 19:11	07:00 17:53	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	06:00 19:08	07:02 17:50	08:04 17:50	08:10 15:50	08:48 15:39
26	08:23 16:29	07:16 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	06:02 19:05	07:04 16:48	07:06 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	05:54 (1) 05:55 (1)	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	06:06 19:00	07:08 16:43	07:11 16:43	08:16 15:46	08:48 15:41
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30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	05:54 (1) 05:55 (1)	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15			07:17 16:36		08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470		385	324	248	216
Total, worst case					5			2		4			
Sun reduction					0,53			0,51		0,51			
Oper. time red.					0,94			0,94		0,94			
Wind dir. red.					0,68			0,68		0,68			
Total reduction					0,34			0,32		0,33			
Total, real					2			1		1			

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUHKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: BH - Krastini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:46	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:46	07:04 17:49	06:42 19:54	05:26 20:56	04:31 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:24 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:30 21:54	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:29 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 17:59	06:28 20:04	05:15 21:07	04:27 21:58	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:02	06:26 20:06	05:13 21:09	04:26 21:59	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:00	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:37 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
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16	08:38 16:09	07:41 17:16	06:30 18:16	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:35
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:31	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:33	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:21 17:33	06:08 18:33	05:47 20:38	04:45 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:39
26	08:23 16:29	07:16 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BI - Strauti

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:56	04:32 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:31 21:54	04:30 22:05	05:19 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
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8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:44 15:57	07:56 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
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15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:17	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:24 18:21	06:03 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:36
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
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28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:36		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BJ - Purenes

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:56	04:32 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:31 21:54	04:30 22:05	05:19 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:51	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:30 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
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10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:26	07:41 16:13	08:36 15:36
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13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:17	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:25 18:21	06:03 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:36
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
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31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BK - Uplejas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:56	04:32 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:31 21:54	04:30 22:05	05:19 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:30 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:44 15:57	07:56 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:26	07:41 16:13	08:36 15:36
12	08:42 16:02	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
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19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
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21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
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28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:36		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BL - Bazes stacija

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

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

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BM - Spridi š i

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:22	08:23
	15:47	16:44	17:47	19:52	20:54	21:51	22:06	21:24	20:10	18:49	16:32	15:42
3	08:48	08:09	07:04	06:42	05:26	04:32	04:29	05:17	06:18	07:18	07:24	08:25
	15:48	16:47	17:49	19:54	20:56	21:52	22:06	21:22	20:07	18:47	16:30	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:30	05:19	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:59	21:54	22:05	21:20	20:04	18:44	16:28	15:40
5	08:47	08:05	06:59	06:36	05:22	04:30	04:31	05:20	06:22	07:22	07:28	08:28
	15:51	16:51	17:53	19:58	21:01	21:55	22:04	21:18	20:02	18:41	16:25	15:39
6	08:46	08:03	06:56	06:34	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:03	21:56	22:04	21:15	19:59	18:39	16:23	15:39
7	08:46	08:01	06:54	06:31	05:17	04:28	04:33	05:24	06:26	07:27	07:33	08:31
	15:53	16:56	17:57	20:02	21:05	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:59	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:29	07:35	08:32
	15:55	16:58	18:00	20:04	21:07	21:59	22:02	21:11	19:54	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:31	07:37	08:34
	15:57	17:00	18:02	20:07	21:09	22:00	22:01	21:09	19:51	18:31	16:17	15:37
10	08:44	07:54	06:46	06:23	05:11	04:26	04:37	05:30	06:32	07:33	07:39	08:35
	15:58	17:02	18:04	20:09	21:11	22:01	22:00	21:07	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:21	05:09	04:25	04:38	05:32	06:34	07:35	07:41	08:36
	16:00	17:04	18:06	20:11	21:13	22:01	21:59	21:04	19:46	18:26	16:13	15:36
12	08:42	07:50	06:40	06:18	05:07	04:25	04:39	05:34	06:36	07:37	07:43	08:38
	16:02	17:07	18:08	20:13	21:15	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:48	06:38	06:15	05:05	04:24	04:41	05:36	06:38	07:39	07:45	08:39
	16:03	17:09	18:10	20:15	21:17	22:03	21:57	21:00	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:42	05:38	06:40	07:41	07:48	08:40
	16:05	17:11	18:12	20:17	21:19	22:04	21:56	20:57	19:38	18:18	16:07	15:35
15	08:39	07:43	06:33	06:10	05:01	04:23	04:43	05:40	06:42	07:43	07:50	08:41
	16:07	17:13	18:14	20:19	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:35
16	08:38	07:41	06:30	06:08	04:59	04:23	04:45	05:42	06:44	07:45	07:52	08:42
	16:09	17:16	18:17	20:21	21:22	22:05	21:53	20:53	19:32	18:13	16:04	15:35
17	08:37	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:54	08:43
	16:11	17:18	18:19	20:23	21:24	22:06	21:52	20:50	19:30	18:10	16:02	15:35
18	08:35	07:36	06:25	06:03	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:44
	16:13	17:20	18:21	20:25	21:26	22:06	21:50	20:48	19:27	18:08	16:00	15:36
19	08:34	07:34	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:52	07:58	08:44
	16:15	17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:54	08:00	08:45
	16:17	17:25	18:25	20:29	21:30	22:07	21:47	20:43	19:22	18:03	15:57	15:36
21	08:31	07:29	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:56	08:02	08:46
	16:19	17:27	18:27	20:32	21:32	22:07	21:46	20:40	19:19	18:00	15:56	15:36
22	08:30	07:26	06:14	05:52	04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29	20:34	21:34	22:08	21:44	20:38	19:16	17:58	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:23	17:31	18:31	20:36	21:35	22:08	21:43	20:35	19:13	17:55	15:53	15:37
24	08:27	07:22	06:08	05:48	04:45	04:24	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:11	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:48
	16:27	17:36	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:17	06:03	05:43	04:42	04:24	05:02	06:02	07:04	07:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:49	15:39
27	08:22	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	07:09	08:14	08:48
	16:31	17:40	18:40	20:44	21:42	22:08	21:36	20:25	19:03	16:46	15:47	15:40
28	08:20	07:12	05:58	05:38	04:39	04:25	05:05	06:06	07:08	07:11	08:16	08:48
	16:33	17:42	18:42	20:46	21:44	22:08	21:34	20:23	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:38	04:26	05:07	06:08	07:10	07:13	08:18	08:48
	16:36		18:44	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:46	20:50	21:47	22:07	21:30	20:17	18:55	16:39	15:44	15:43
31	08:15		06:50		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: BN - Klavas

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

January		February		March		April		May		June	
1	08:48	08:13	08:56 (22)	07:09		06:47	05:31	04:34			
	15:45	16:42	25 09:21 (22)	17:44		19:50	20:52	21:49			
2	08:48	08:11	08:56 (22)	07:06		06:44	05:28	04:33			
	15:46	16:44	25 09:21 (22)	17:46		19:52	20:54	21:51			
3	08:48	08:09	08:56 (23)	07:04		06:42	05:26	04:31			
	15:48	16:46	24 09:20 (22)	17:49		19:54	20:56	21:52			
4	08:47	08:07	08:55 (23)	07:01		06:39	05:24	04:30			
	15:49	16:49	25 09:20 (22)	17:51		19:56	20:58	21:54			
5	08:47	08:05	08:55 (23)	06:59		06:36	05:21	04:29			
	15:50	16:51	25 09:20 (22)	17:53		19:58	21:00	21:55			
6	08:46	08:03	08:55 (23)	06:56		06:34	05:19	04:29			
	15:52	16:53	25 09:20 (22)	17:55		20:00	21:02	21:56			
7	08:46	08:01	08:54 (23)	06:53		06:31	05:17	04:28			
	15:53	16:55	25 09:19 (22)	17:57		20:02	21:04	21:57			
8	08:45	07:58	08:54 (23)	06:51		06:28	05:15	04:27			
	15:55	16:58	24 09:18 (22)	17:59		20:04	21:06	21:58			
9	08:44	07:56	08:55 (23)	06:48		06:26	05:13	04:26			
	15:56	17:00	22 09:17 (22)	18:02		20:06	21:09	21:59			
10	08:44	07:54	08:54 (23)	06:46		06:23	05:11	04:26			
	15:58	17:02	20 09:14 (22)	18:04		20:08	21:11	22:00			
11	08:43	07:52	08:55 (23)	06:43		06:20	05:09	04:25			
	16:00	17:04	13 09:08 (23)	18:06		20:11	21:13	22:01			
12	08:42	07:50	08:55 (23)	06:40		06:18	05:06	04:24			
	16:01	17:07	14 09:09 (23)	18:08	8 07:16 (24)	20:13	21:14	22:02			
13	08:41	07:47	08:55 (23)	06:38		06:15	05:04	04:24			
	16:03	17:09	15 09:10 (23)	18:10	13 07:18 (24)	20:15	21:16	22:03			
14	08:40	07:45	08:56 (23)	06:35		06:13	05:02	04:24			
	16:05	17:11	15 09:11 (23)	18:12	18 07:21 (24)	20:17	21:18	22:04			
15	08:39	07:43	08:56 (23)	06:32		06:10	05:01	04:23			
	16:07	17:13	15 09:11 (23)	18:14	22 07:22 (24)	20:19	21:20	22:04			
16	08:38	07:41	08:57 (23)	06:30		06:07	04:59	04:23			
	16:09	17:16	16 09:13 (23)	18:16	24 07:22 (24)	20:21	21:22	22:05			
17	08:36	07:38	08:57 (23)	06:27		06:05	04:57	04:23			
	16:11	17:18	17 09:14 (23)	18:18	26 07:24 (24)	20:23	21:24	22:06			
18	08:35	07:36	08:58 (23)	06:24		06:02	04:55	04:23			
	16:12	17:20	19 09:17 (23)	18:21	27 07:24 (24)	20:25	21:26	22:06			
19	08:34	07:34	08:59 (23)	06:22		06:00	04:53	04:23			
	16:14	17:22	21 09:20 (23)	18:23	27 07:23 (24)	20:27	21:28	22:07			
20	08:32	07:31	09:01 (23)	06:19		06:56 (24)	05:57	04:51	04:23		
	16:16	17:24	25 09:26 (23)	18:25	28 07:24 (24)	20:29	21:30	22:07			
21	08:31	09:07 (22)	07:29	09:02 (23)	06:16	06:55 (24)	05:55	04:50	04:23		
	16:18	09:10 (22)	17:27	09:24 (23)	18:27	28 07:23 (24)	20:31	21:32	22:07		
22	08:30	09:06 (22)	07:26	09:05 (23)	06:14	06:55 (24)	05:52	04:48	04:23		
	16:21	09:13 (22)	17:29	09:21 (23)	18:29	27 07:22 (24)	20:33	21:33	22:07		
23	08:28	09:04 (22)	07:24	09:09 (23)	06:11	06:55 (24)	05:50	04:46	04:23		
	16:23	09:14 (22)	17:31	09:16 (23)	18:31	26 07:21 (24)	20:36	21:35	22:08		
24	08:27	09:02 (22)	07:21		06:08	06:56 (24)	05:47	04:45	04:23		
	16:25	09:16 (22)	17:33		18:33	25 07:21 (24)	20:38	21:37	22:08		
25	08:25	09:00 (22)	07:19		06:06	06:56 (24)	05:45	04:43	04:24		
	16:27	09:17 (22)	17:36		18:35	24 07:20 (24)	20:40	21:39	22:08		
26	08:23	08:58 (22)	07:16		06:03	06:56 (24)	05:42	04:42	04:24		
	16:29	09:18 (22)	17:38		18:37	22 07:18 (24)	20:42	21:40	22:08		
27	08:22	08:56 (22)	07:14		06:00	06:58 (24)	05:40	04:40	04:25		
	16:31	09:18 (22)	17:40		18:39	19 07:17 (24)	20:44	21:42	22:08		
28	08:20	08:56 (22)	07:11		05:58	06:59 (24)	05:38	04:39	04:25		
	16:33	09:19 (22)	17:42		18:41	15 07:14 (24)	20:46	21:43	22:07		
29	08:18	08:56 (22)			05:55	07:02 (24)	05:35	04:37	04:26		
	16:35	09:20 (22)			18:44	8 07:10 (24)	20:48	21:45	22:07		
30	08:16	08:56 (22)			06:52		05:33	04:36	04:27		
	16:38	09:20 (22)			19:46		20:50	21:47	22:07		
31	08:14	08:56 (22)			06:50			04:35			
	16:40	09:21 (22)			19:48			21:48			
Potential sun hours	235		265		365		425	507	528		
Total, worst case		189		455		387					
Sun reduction		0,15		0,24		0,39					
Oper. time red.		0,94		0,94		0,94					
Wind dir. red.		0,58		0,58		0,63					
Total reduction		0,08		0,13		0,23					
Total, real		16		60		90					

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: BN - Klavas

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:13	06:14	07:14	07:45 (24)	08:24 (23)
2	04:28	05:15	06:16	07:16	07:47 (24)	08:24 (23)
3	04:29	05:16	06:18	07:18	07:49 (24)	08:24 (23)
4	04:30	05:18	06:20	07:20	07:51 (24)	08:24 (23)
5	04:31	05:20	06:22	07:22	07:53 (24)	08:24 (23)
6	04:32	05:22	06:24	07:24	07:55 (24)	08:24 (23)
7	04:33	05:24	06:26	07:26	07:57 (24)	08:24 (23)
8	04:34	05:26	06:28	07:28	07:59 (24)	08:24 (23)
9	04:35	05:28	06:30	07:30	08:01 (24)	08:24 (23)
10	04:37	05:30	06:32	07:33	08:03 (24)	08:24 (23)
11	04:38	05:32	06:34	07:35	08:05 (24)	08:24 (23)
12	04:39	05:34	06:36	07:37	08:07 (24)	08:24 (23)
13	04:40	05:36	06:38	07:39	08:09 (24)	08:24 (23)
14	04:42	05:38	06:40	07:41	08:11 (24)	08:24 (23)
15	04:43	05:40	06:42	07:43	08:13 (24)	08:24 (23)
16	04:45	05:42	06:44	07:45	08:15 (24)	08:24 (23)
17	04:46	05:44	06:46	07:47	08:17 (24)	08:24 (23)
18	04:48	05:46	06:48	07:49	08:19 (24)	08:24 (23)
19	04:50	05:48	06:50	07:51	08:21 (24)	08:24 (23)
20	04:51	05:50	06:52	07:53	08:23 (24)	08:24 (23)
21	04:53	05:52	06:54	07:55	08:25 (24)	08:24 (23)
22	04:54	05:54	06:56	07:57	08:27 (24)	08:24 (23)
23	04:56	05:56	06:58	07:59	08:29 (24)	08:24 (23)
24	04:58	05:58	07:00	08:02	08:31 (24)	08:24 (23)
25	05:00	06:00	07:02	08:04	08:33 (24)	08:24 (23)
26	05:02	06:02	07:04	08:06	08:35 (24)	08:24 (23)
27	05:03	06:04	07:06	08:08	08:37 (24)	08:24 (23)
28	05:05	06:06	07:08	08:10	08:39 (24)	08:24 (23)
29	05:07	06:08	07:10	08:12	08:41 (24)	08:24 (23)
30	05:09	06:10	07:12	08:14	08:43 (24)	08:24 (23)
31	05:11	06:12	07:14	08:16	08:45 (24)	08:24 (23)
Potential sun hours	529	470	385	324	248	216
Total, worst case			375	234	435	
Sun reduction			0,43	0,27	0,09	
Oper. time red.			0,94	0,94	0,94	
Wind dir. red.			0,63	0,59	0,58	
Total reduction			0,26	0,15	0,05	
Total, real			96	35	22	

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: BO - Kaupres

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March		April		May		June
1	08:48 15:45	08:13 16:42	07:09 17:44		06:47 19:50		05:31 20:52	23	06:02 (24) 21:49
2	08:48 15:47	08:11 16:44	07:06 17:46		06:44 19:52		05:28 20:54	24	06:01 (24) 21:51
3	08:47 15:48	08:09 16:46	07:04 17:49		06:42 19:54		05:26 20:56	24	06:00 (24) 21:52
4	08:47 15:49	08:07 16:49	07:01 17:51		06:39 19:56		05:24 20:58	24	06:00 (24) 21:54
5	08:47 15:50	08:05 16:51	06:59 17:53		06:36 19:58		05:22 21:00	24	06:00 (24) 21:55
6	08:46 15:52	08:03 16:53	06:56 17:55		06:34 20:00		05:19 21:02	24	06:00 (24) 21:56
7	08:46 15:53	08:01 16:55	06:53 17:57		06:31 20:02		05:17 21:04	23	06:01 (24) 21:57
8	08:45 15:55	07:58 16:58	06:51 17:59		06:28 20:04		05:15 21:06	22	06:01 (24) 21:58
9	08:44 15:56	07:56 17:00	06:48 18:02		06:26 20:06		05:13 21:08	21	06:01 (24) 21:59
10	08:43 15:58	07:54 17:02	06:46 18:04	8	07:14 (22) 07:22 (22)	06:23 20:08	05:11 21:10	19	06:02 (24) 22:00
11	08:43 16:00	07:52 17:04	06:43 18:06	13	07:11 (22) 07:24 (22)	06:20 20:11	05:09 21:12	17	06:04 (24) 22:01
12	08:42 16:01	07:50 17:07	06:40 18:08	18	07:08 (22) 07:26 (22)	06:18 20:13	05:07 21:14	15	06:05 (24) 22:02
13	08:41 16:03	07:47 17:09	06:38 18:10	22	07:05 (22) 07:27 (22)	06:15 20:15	05:05 21:16	12	06:06 (24) 22:03
14	08:40 16:05	07:45 17:11	06:35 18:12	24	07:04 (22) 07:28 (22)	06:13 20:17	05:03 21:18	8	06:08 (24) 22:04
15	08:39 16:07	07:43 17:13	06:32 18:14	25	07:03 (22) 07:28 (22)	06:10 20:19	05:01 21:20		04:23 22:04
16	08:38 16:09	07:41 17:16	06:30 18:16	26	07:02 (22) 07:28 (22)	06:08 20:21	04:59 21:22		04:23 22:05
17	08:36 16:11	07:38 17:18	06:27 18:18	27	07:02 (22) 07:29 (22)	06:05 20:23	04:57 21:24		04:23 22:06
18	08:35 16:13	07:36 17:20	06:24 18:21	27	07:01 (22) 07:28 (22)	06:02 20:25	04:55 21:26		04:23 22:06
19	08:34 16:15	07:33 17:22	06:22 18:23	28	07:00 (22) 07:28 (22)	06:00 20:27	04:53 21:28		04:23 22:07
20	08:32 16:17	07:31 17:24	06:19 18:25	27	07:01 (22) 07:28 (22)	05:57 20:29	04:51 21:30		04:23 22:07
21	08:31 16:19	07:29 17:27	06:16 18:27	26	07:01 (22) 07:27 (22)	05:55 20:31	04:50 21:31		04:23 22:07
22	08:30 16:21	07:26 17:29	06:14 18:29	25	07:01 (22) 07:26 (22)	05:52 20:33	04:48 21:33		04:23 22:07
23	08:28 16:23	07:24 17:31	06:11 18:31	23	07:01 (22) 07:24 (22)	05:50 20:36	04:46 21:35		04:23 22:08
24	08:27 16:25	07:21 17:33	06:08 18:33	20	07:03 (22) 07:23 (22)	05:47 20:38	04:45 21:37		04:23 22:08
25	08:25 16:27	07:19 17:36	06:06 18:35	17	07:04 (22) 07:21 (22)	05:45 20:40	04:43 21:38		04:24 22:08
26	08:23 16:29	07:16 17:38	06:03 18:37	13	07:05 (22) 07:18 (22)	05:43 20:42	04:42 21:40		04:24 22:08
27	08:22 16:31	07:14 17:40	06:00 18:39		05:40 20:44	05:40 21:42	04:40 21:42		04:25 22:08
28	08:20 16:33	07:11 17:42	05:58 18:41		05:38 20:46	05:38 21:43	04:39 21:43		04:25 22:07
29	08:18 16:35		05:55 18:44		05:35 20:48	05:35 21:45	04:37 21:45		04:26 22:07
30	08:16 16:38		06:52 19:46		05:33 20:50	05:33 21:47	04:36 21:47		04:27 22:07
31	08:14 16:40		06:50 19:48			04:35 21:48			
Potential sun hours	235	265	365		425		507		528
Total, worst case			369		82		280		
Sun reduction			0,39		0,48		0,53		
Oper. time red.			0,94		0,94		0,94		
Wind dir. red.			0,63		0,67		0,67		
Total reduction			0,23		0,30		0,33		
Total, real			85		25		93		

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Shadow receptor: BO - Kaupres

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Flicker curtailment applied to this receptor

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Reference year for calendar

2025

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27 22:06	05:13 21:26 15	06:15 (24) 06:30 (24) 20:12	07:14 18:52 21	07:45 (22) 08:06 (22)	07:19 16:34 15:43
2	04:28 22:06	05:15 21:24 17	06:14 (24) 06:31 (24) 20:09	07:16 18:49 18	07:47 (22) 08:05 (22)	07:21 16:32 15:42
3	04:29 22:05	05:17 21:22 20	06:12 (24) 06:32 (24) 20:07	07:18 18:46 13	07:49 (22) 08:02 (22)	07:24 16:30 15:41
4	04:30 22:05	05:18 21:20 20	06:12 (24) 06:32 (24) 20:04	07:20 18:44 8	07:51 (22) 07:59 (22)	07:26 16:27 15:40
5	04:31 22:04	05:20 21:17 22	06:11 (24) 06:33 (24) 20:02	07:22 18:41		07:28 16:25 15:39
6	04:32 22:03	05:22 21:15 23	06:11 (24) 06:34 (24) 19:59	07:24 18:38		07:30 16:23 15:39
7	04:33 22:03	05:24 21:13 23	06:10 (24) 06:33 (24) 19:56	07:26 18:36		07:32 16:21 15:38
8	04:34 22:02	05:26 21:11 24	06:10 (24) 06:34 (24) 19:54	07:28 18:33		07:34 16:19 15:37
9	04:35 22:01	05:28 21:09 24	06:10 (24) 06:34 (24) 19:51	07:30 18:31		07:37 16:17 15:37
10	04:37 22:00	05:30 21:06 24	06:10 (24) 06:34 (24) 19:48	07:33 18:28		07:39 16:15 15:36
11	04:38 21:59	05:32 21:04 24	06:10 (24) 06:34 (24) 19:46	07:35 18:25		07:41 16:13 15:36
12	04:39 21:58	05:34 21:02 24	06:10 (24) 06:34 (24) 19:43	07:37 18:23		07:43 16:11 15:36
13	04:41 21:57	05:36 21:00 22	06:10 (24) 06:32 (24) 19:40	07:39 18:20		07:45 16:09 15:36
14	04:42 21:55	05:38 20:57 20	06:12 (24) 06:32 (24) 19:38	07:41 18:18		07:47 16:07 15:35
15	04:43 21:54	05:40 20:55 17	06:14 (24) 06:31 (24) 19:35	07:43 18:15		07:50 16:06 15:35
16	04:45 21:53	05:42 20:52 14	06:16 (24) 06:30 (24) 19:32	07:45 18:13		07:52 16:04 15:35
17	04:46 21:52	05:44 20:50 10	06:18 (24) 06:28 (24) 19:29	07:47 18:10	07:58 (22) 08:03 (22)	07:54 16:02 15:35
18	04:48 21:50	05:46 20:48 6	06:20 (24) 06:26 (24) 19:27	07:49 18:08	07:53 (22) 08:07 (22)	07:56 16:00 15:36
19	04:50 21:49	05:48 20:45	06:50 19:24 18	07:51 (22) 08:09 (22)	07:51 18:05	07:58 15:59 15:36
20	04:51 21:47	05:50 20:43	06:52 19:21 21	07:49 (22) 08:10 (22)	07:53 18:03	08:00 15:57 15:36
21	04:53 21:46	05:52 20:40	06:54 19:19 23	07:48 (22) 08:11 (22)	07:56 18:00	08:02 15:56 15:36
22	04:55 21:44	05:54 20:38	06:56 19:16 25	07:46 (22) 08:11 (22)	07:58 17:58	08:04 15:54 15:37
23	04:56 21:42	05:56 20:35	06:58 19:13 27	07:45 (22) 08:12 (22)	08:00 17:55	08:06 15:53 15:37
24	04:58 21:41	05:58 20:33	07:00 19:11 27	07:45 (22) 08:12 (22)	08:02 17:53	08:08 15:51 15:38
25	05:00 21:39	06:00 20:30	07:02 19:08 28	07:44 (22) 08:12 (22)	08:04 17:50	08:10 15:50 15:39
26	05:02 21:37	06:02 20:28	07:04 19:05 27	07:44 (22) 08:11 (22)	07:06 16:48	08:12 15:49 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02 27	07:44 (22) 08:11 (22)	07:08 16:46	08:14 15:47 15:40
28	05:05 21:34	06:06 20:22	07:08 19:00 27	07:43 (22) 08:10 (22)	07:11 16:43	08:16 15:46 15:41
29	05:07 21:32	06:08 20:20	07:10 18:57 25	07:44 (22) 08:09 (22)	07:13 16:41	08:17 15:45 15:42
30	05:09 21:30	06:10 20:17	07:12 18:54 24	07:44 (22) 08:08 (22)	07:15 16:39	08:19 15:44 15:43
31	05:11 21:28	06:12 20:15			07:17 16:36	08:48 15:44
Potential sun hours	529	470	385	324	248	217
Total, worst case	17	349	318	60		
Sun reduction	0,51	0,51	0,43	0,27		
Oper. time red.	0,94	0,94	0,94	0,94		
Wind dir. red.	0,67	0,67	0,63	0,63		
Total reduction	0,32	0,32	0,25	0,16		
Total, real	5	112	81	10		

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: BP - Kaupres 1

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	06:02 (24) 07:23 (23)
2	08:48 15:47	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	06:01 (24) 07:22 (23)
3	08:47 15:48	08:09 16:46	07:04 17:49	06:42 19:54	05:26 20:56	06:00 (24) 07:19 (23)
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:58	06:00 (24) 07:17 (23)
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:00	06:00 (24) 07:14 (23)
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:02	06:00 (24) 06:24 (24)
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:04	06:00 (24) 06:24 (24)
8	08:45 15:55	07:58 16:58	06:51 17:59	06:28 20:04	05:15 21:06	06:01 (24) 06:23 (24)
9	08:44 15:56	07:56 17:00	06:48 18:02	06:26 20:06	05:13 21:08	06:01 (24) 06:23 (24)
10	08:43 15:58	07:54 17:02	06:46 18:04	06:23 20:08	05:11 21:10	06:02 (24) 06:22 (24)
11	08:43 16:00	07:52 17:04	06:43 18:06	06:20 20:11	05:09 21:12	06:03 (24) 06:22 (24)
12	08:42 16:01	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:14	06:04 (24) 06:20 (24)
13	08:41 16:03	07:47 17:09	06:38 18:10	06:15 20:15	05:05 21:16	06:05 (24) 06:19 (24)
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:18	06:07 (24) 06:16 (24)
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:20	06:16 (24) 06:16 (24)
16	08:38 16:09	07:41 17:16	06:30 18:16	06:08 20:21	04:59 21:22	06:16 (24) 06:16 (24)
17	08:36 16:11	07:38 17:18	06:27 18:18	06:05 20:23	04:57 21:24	06:16 (24) 06:16 (24)
18	08:35 16:13	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	06:16 (24) 06:16 (24)
19	08:34 16:15	07:33 17:22	06:22 18:23	06:00 20:27	04:53 21:28	06:16 (24) 06:16 (24)
20	08:32 16:17	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	06:16 (24) 06:16 (24)
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:31	04:50 21:31	06:16 (24) 06:16 (24)
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:33	04:48 21:33	06:16 (24) 06:16 (24)
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	06:16 (24) 06:16 (24)
24	08:27 16:25	07:21 17:33	06:08 18:33	05:47 20:38	04:45 21:37	06:16 (24) 06:16 (24)
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:38	06:16 (24) 06:16 (24)
26	08:23 16:29	07:16 17:38	06:03 18:37	05:43 20:42	04:42 21:40	06:16 (24) 06:16 (24)
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	06:16 (24) 06:16 (24)
28	08:20 16:33	07:11 17:42	05:58 18:41	05:38 20:46	04:39 21:43	06:16 (24) 06:16 (24)
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	06:16 (24) 06:16 (24)
30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:47	06:16 (24) 06:16 (24)
31	08:14 16:40		06:50 19:48		04:35 21:48	06:16 (24) 06:16 (24)
Potential sun hours	235	265	365	425	507	528
Total, worst case			376	116	300	
Sun reduction			0,39	0,48	0,53	
Oper. time red.			0,94	0,94	0,94	
Wind dir. red.			0,63	0,67	0,67	
Total reduction			0,23	0,30	0,33	
Total, real			86	35	100	

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: BP - Kaupres 1

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

July		August		September		October		November		December	
1	04:27	05:13	06:15 (24)	06:14	07:28 (23)	07:14	07:45 (22)	07:19	08:21		
	22:06	21:26	15 06:30 (24)	20:12	1 07:29 (23)	18:52	23 08:08 (22)	16:34	15:43		
2	04:28	05:15	06:14 (24)	06:16	07:26 (23)	07:16	07:47 (22)	07:21	08:23		
	22:06	21:24	18 06:32 (24)	20:09	1 07:27 (23)	18:49	20 08:07 (22)	16:32	15:42		
3	04:29	05:17	06:12 (24)	06:18	07:24 (23)	07:18	07:49 (22)	07:24	08:24		
	22:05	21:22	20 06:32 (24)	20:07	2 07:26 (23)	18:46	15 08:04 (22)	16:30	15:41		
4	04:30	05:18	06:12 (24)	06:20	07:22 (23)	07:20	07:51 (22)	07:26	08:26		
	22:05	21:20	21 06:33 (24)	20:04	2 07:24 (23)	18:44	11 08:02 (22)	16:27	15:40		
5	04:31	05:20	06:11 (24)	06:22	07:19 (23)	07:22		07:28	08:28		
	22:04	21:17	22 06:33 (24)	20:02	2 07:21 (23)	18:41		16:25	15:39		
6	04:32	05:22	06:11 (24)	06:24	07:15 (23)	07:24		07:30	08:29		
	22:03	21:15	23 06:34 (24)	19:59	2 07:17 (23)	18:38		16:23	15:39		
7	04:33	05:24	06:10 (24)	06:26		07:26		07:32	08:31		
	22:03	21:13	24 06:34 (24)	19:56		18:36		16:21	15:38		
8	04:34	05:26	06:10 (24)	06:28		07:28		07:34	08:32		
	22:02	21:11	28 07:22 (23)	19:54		18:33		16:19	15:37		
9	04:35	05:28	06:10 (24)	06:30		07:30		07:37	08:33		
	22:01	21:09	26 07:26 (23)	19:51		18:31		16:17	15:37		
10	04:37	05:30	06:10 (24)	06:32		07:33		07:39	08:35		
	22:00	21:06	26 07:28 (23)	19:48		18:28		16:15	15:36		
11	04:38	05:32	06:10 (24)	06:34		07:35		07:41	08:36		
	21:59	21:04	26 07:30 (23)	19:46		18:25		16:13	15:36		
12	04:39	05:34	06:10 (24)	06:36		07:37		07:43	08:37		
	21:58	21:02	25 07:31 (23)	19:43		18:23		16:11	15:36		
13	04:41	05:36	06:10 (24)	06:38		07:39		07:45	08:38		
	21:57	21:00	24 07:32 (23)	19:40		18:20		16:09	15:36		
14	04:42	05:38	06:12 (24)	06:40		07:41		07:47	08:40		
	21:55	20:57	22 07:33 (23)	19:38		18:18		16:07	15:35		
15	04:43	05:40	06:14 (24)	06:42		07:43		07:50	08:41		
	21:54	20:55	19 07:34 (23)	19:35		18:15		16:06	15:35		
16	04:45	05:42	06:16 (24)	06:44		07:45		07:52	08:42		
	21:53	20:52	16 07:35 (23)	19:32		18:13		16:04	15:35		
17	04:46	05:44	06:18 (24)	06:46		07:47		07:54	08:43		
	21:52	20:50	11 07:35 (23)	19:29		18:10		16:02	15:35		
18	04:48	05:46	06:20 (24)	06:48		07:55 (22)	07:49	07:56	08:43		
	21:50	20:48	8 07:36 (23)	19:27	12 08:07 (22)	18:08		16:00	15:36		
19	04:50	05:48	07:35 (23)	06:50		07:52 (22)	07:51	07:58	08:44		
	21:49	20:45	1 07:36 (23)	19:24	18 08:10 (22)	18:05		15:59	15:36		
20	04:51	05:50	07:35 (23)	06:52		07:50 (22)	07:53	08:00	08:45		
	21:47	20:43	1 07:36 (23)	19:21	21 08:11 (22)	18:03		15:57	15:36		
21	04:53	05:52	07:34 (23)	06:54		07:49 (22)	07:56	08:02	08:46		
	21:46	20:40	2 07:36 (23)	19:19	23 08:12 (22)	18:00		15:56	15:36		
22	04:55	05:54	07:34 (23)	06:56		07:48 (22)	07:58	08:04	08:46		
	21:44	20:38	2 07:36 (23)	19:16	24 08:12 (22)	17:58		15:54	15:37		
23	04:56	05:56	07:34 (23)	06:58		07:47 (22)	08:00	08:06	08:47		
	21:42	20:35	2 07:36 (23)	19:13	26 08:13 (22)	17:55		15:53	15:37		
24	04:58	05:58	07:34 (23)	07:00		07:46 (22)	08:02	08:08	08:47		
	21:41	20:33	1 07:35 (23)	19:11	27 08:13 (22)	17:53		15:51	15:38		
25	05:00	06:00	07:34 (23)	07:02		07:45 (22)	08:04	08:10	08:47		
	21:39	20:30	1 07:35 (23)	19:08	28 08:13 (22)	17:50		15:50	15:39		
26	05:02	06:02	07:34 (23)	07:04		07:45 (22)	07:06	08:12	08:48		
	21:37	20:28	1 07:35 (23)	19:05	28 08:13 (22)	16:48		15:49	15:39		
27	05:03	06:04	07:33 (23)	07:06		07:45 (22)	07:08	08:14	08:48		
	21:35	20:25	1 07:34 (23)	19:02	27 08:12 (22)	16:46		15:47	15:40		
28	05:05	06:06	07:33 (23)	07:08		07:44 (22)	07:11	08:16	08:48		
	21:34	20:22	1 07:34 (23)	19:00	27 08:11 (22)	16:43		15:46	15:41		
29	05:07	06:08	07:32 (23)	07:10		07:45 (22)	07:13	08:17	08:48		
	21:32	20:20	1 07:33 (23)	18:57	26 08:11 (22)	16:41		15:45	15:42		
30	05:09	06:10	07:30 (23)	07:12		07:45 (22)	07:15	08:19	08:48		
	21:30	8 06:26 (24)	20:17	1 07:31 (23)	25 08:10 (22)	16:39		15:44	15:43		
31	05:11	06:16 (24)	06:12	07:29 (23)		07:17			08:48		
	21:28	13 06:29 (24)	20:15	1 07:30 (23)		16:36			15:44		
Potential sun hours	529		470		385		324		248		217
Total, worst case			390		322		69				
Sun reduction	0,51		0,51		0,43		0,27				
Oper. time red.	0,94		0,94		0,94		0,94				
Wind dir. red.	0,67		0,67		0,63		0,63				
Total reduction	0,32		0,32		0,25		0,16				
Total, real	7		125		82		11				

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUHKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BQ - Lici š i

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:31	04:34	04:27	05:13	06:14	07:14	07:20	08:21
	15:45	16:42	17:44	19:50	20:52	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:22	08:23
	15:47	16:44	17:47	19:52	20:54	21:51	22:06	21:24	20:10	18:49	16:32	15:42
3	08:48	08:09	07:04	06:42	05:26	04:32	04:29	05:17	06:18	07:18	07:24	08:25
	15:48	16:47	17:49	19:54	20:57	21:52	22:06	21:22	20:07	18:47	16:30	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:30	05:19	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:59	21:54	22:05	21:20	20:04	18:44	16:28	15:40
5	08:47	08:05	06:59	06:36	05:22	04:30	04:31	05:20	06:22	07:22	07:28	08:28
	15:51	16:51	17:53	19:58	21:01	21:55	22:04	21:18	20:02	18:41	16:25	15:39
6	08:46	08:03	06:56	06:34	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:03	21:56	22:04	21:16	19:59	18:39	16:23	15:39
7	08:46	08:01	06:54	06:31	05:17	04:28	04:33	05:24	06:26	07:27	07:33	08:31
	15:53	16:56	17:57	20:02	21:05	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:59	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:29	07:35	08:32
	15:55	16:58	18:00	20:05	21:07	21:59	22:02	21:11	19:54	18:33	16:19	15:37
9	08:45	07:57	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:31	07:37	08:34
	15:57	17:00	18:02	20:07	21:09	22:00	22:01	21:09	19:51	18:31	16:17	15:37
10	08:44	07:54	06:46	06:23	05:11	04:26	04:37	05:30	06:32	07:33	07:39	08:35
	15:58	17:02	18:04	20:09	21:11	22:01	22:00	21:07	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:21	05:09	04:25	04:38	05:32	06:34	07:35	07:41	08:36
	16:00	17:05	18:06	20:11	21:13	22:02	21:59	21:04	19:46	18:26	16:13	15:36
12	08:42	07:50	06:40	06:18	05:07	04:25	04:39	05:34	06:36	07:37	07:43	08:38
	16:02	17:07	18:08	20:13	21:15	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:48	06:38	06:15	05:05	04:24	04:41	05:36	06:38	07:39	07:46	08:39
	16:03	17:09	18:10	20:15	21:17	22:03	21:57	21:00	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:42	05:38	06:40	07:41	07:48	08:40
	16:05	17:11	18:12	20:17	21:19	22:04	21:56	20:57	19:38	18:18	16:07	15:35
15	08:39	07:43	06:33	06:10	05:01	04:23	04:43	05:40	06:42	07:43	07:50	08:41
	16:07	17:13	18:14	20:19	21:21	22:05	21:55	20:55	19:35	18:15	16:06	15:35
16	08:38	07:41	06:30	06:08	04:59	04:23	04:45	05:42	06:44	07:45	07:52	08:42
	16:09	17:16	18:17	20:21	21:22	22:05	21:53	20:53	19:32	18:13	16:04	15:35
17	08:37	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:54	08:43
	16:11	17:18	18:19	20:23	21:24	22:06	21:52	20:50	19:30	18:10	16:02	15:35
18	08:35	07:36	06:25	06:03	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:44
	16:13	17:20	18:21	20:25	21:26	22:06	21:50	20:48	19:27	18:08	16:00	15:36
19	08:34	07:34	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:52	07:58	08:44
	16:15	17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:54	08:00	08:45
	16:17	17:25	18:25	20:29	21:30	22:07	21:47	20:43	19:22	18:03	15:57	15:36
21	08:31	07:29	06:17	05:55	04:50	04:23	04:53	05:52	06:54	07:56	08:02	08:46
	16:19	17:27	18:27	20:32	21:32	22:07	21:46	20:40	19:19	18:00	15:56	15:36
22	08:30	07:26	06:14	05:52	04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29	20:34	21:34	22:08	21:44	20:38	19:16	17:58	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:23	17:31	18:31	20:36	21:35	22:08	21:43	20:35	19:13	17:55	15:53	15:37
24	08:27	07:22	06:08	05:48	04:45	04:24	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:11	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:48
	16:27	17:36	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:24	07:17	06:03	05:43	04:42	04:24	05:02	06:02	07:04	07:07	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:49	15:39
27	08:22	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	07:09	08:14	08:48
	16:31	17:40	18:40	20:44	21:42	22:08	21:36	20:25	19:03	16:46	15:47	15:40
28	08:20	07:12	05:58	05:38	04:39	04:25	05:05	06:06	07:08	07:11	08:16	08:48
	16:33	17:42	18:42	20:46	21:44	22:08	21:34	20:23	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:38	04:26	05:07	06:08	07:10	07:13	08:18	08:48
	16:36		18:44	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:42
30	08:17		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:46	20:50	21:47	22:07	21:30	20:18	18:55	16:39	15:44	15:43
31	08:15		06:50		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Shadow receptor: BR - Liepsala

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Flicker curtailment applied to this receptor

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Reference year for calendar

2025

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:13 16:42	09:05 (22) 17:44	06:47 19:50	05:31 20:52	04:34 21:49
2	08:48 15:46	08:11 16:44	09:06 (22) 17:46	06:44 19:52	05:28 20:54	04:32 21:51
3	08:48 15:48	08:09 16:46	09:05 (22) 17:49	06:42 19:54	05:26 20:56	04:31 21:52
4	08:47 15:49	08:07 16:49	09:07 (22) 17:51	06:39 19:56	05:24 20:58	04:30 21:54
5	08:47 15:50	08:05 16:51	09:08 (22) 17:53	06:36 19:58	05:21 21:00	04:29 21:55
6	08:46 15:52	08:03 16:53	09:10 (22) 17:55	06:34 20:00	05:19 21:02	04:29 21:56
7	08:46 15:53	08:01 16:55	09:11 (22) 17:57	06:31 20:02	05:17 21:04	04:28 21:57
8	08:45 15:55	07:58 16:58	09:12 (22) 17:59	06:28 20:04	05:15 21:06	04:27 21:58
9	08:44 15:56	07:56 17:00	09:13 (22) 18:02	06:26 20:06	05:13 21:09	04:26 21:59
10	08:44 15:58	07:54 17:02	09:14 (22) 18:04	06:23 20:08	05:11 21:11	04:26 22:00
11	08:43 16:00	07:52 17:04	09:15 (22) 18:06	06:20 20:11	05:09 21:12	04:25 22:01
12	08:42 16:01	07:50 17:07	09:16 (22) 18:08	06:18 20:13	05:06 21:14	04:24 22:02
13	08:41 16:03	07:47 17:09	09:17 (22) 18:10	06:15 20:15	05:04 21:16	04:24 22:03
14	08:40 16:05	07:45 17:11	09:18 (22) 18:12	06:13 20:17	05:02 21:18	04:24 22:04
15	08:39 16:07	07:43 17:13	09:19 (22) 18:14	06:10 20:19	05:01 21:20	04:23 22:04
16	08:38 16:09	07:41 17:16	09:20 (22) 18:16	06:07 20:21	04:59 21:22	04:23 22:05
17	08:36 16:11	09:14 (22) 17:18	09:21 (22) 18:18	06:05 20:23	04:57 21:24	04:23 22:06
18	08:35 16:12	09:12 (22) 17:20	09:22 (22) 18:21	06:02 20:25	04:55 21:26	04:23 22:06
19	08:34 16:14	09:11 (22) 17:22	09:23 (22) 18:23	06:00 20:27	04:53 21:28	04:23 22:07
20	08:32 16:16	09:09 (22) 17:24	09:24 (22) 18:25	05:57 20:29	04:51 21:30	04:23 22:07
21	08:31 16:18	09:07 (22) 17:27	09:25 (22) 18:27	05:55 20:31	04:50 21:32	04:23 22:07
22	08:30 16:21	09:06 (22) 17:29	09:26 (22) 18:29	05:52 20:33	04:48 21:33	04:23 22:07
23	08:28 16:23	09:04 (22) 17:31	09:27 (22) 18:31	05:50 20:36	04:46 21:35	04:23 22:08
24	08:27 16:25	09:03 (22) 17:33	09:28 (22) 18:33	05:47 20:38	04:45 21:37	04:23 22:08
25	08:25 16:27	09:02 (22) 17:36	09:29 (22) 18:35	05:45 20:40	04:43 21:39	04:24 22:08
26	08:23 16:29	09:01 (22) 17:38	09:30 (22) 18:37	05:42 20:42	04:42 21:40	04:24 22:08
27	08:22 16:31	09:00 (22) 17:40	09:31 (22) 18:39	05:40 20:44	04:40 21:42	04:25 22:08
28	08:20 16:33	09:00 (22) 17:42	09:32 (22) 18:41	05:38 20:46	04:39 21:43	04:25 22:07
29	08:18 16:35	09:00 (22) 17:44	09:33 (22) 18:44	05:35 20:48	04:37 21:45	04:26 22:07
30	08:16 16:38	09:00 (22) 17:46	09:34 (22) 18:46	05:33 20:50	04:36 21:47	04:27 22:07
31	08:14 16:40	09:00 (22) 17:48	09:35 (22) 18:48	05:30 20:52	04:35 21:48	04:27 22:07
Potential sun hours	235	265	365	425	507	528
Total, worst case	293	133	406			
Sun reduction	0,15	0,24	0,39			
Oper. time red.	0,94	0,94	0,94			
Wind dir. red.	0,58	0,58	0,63			
Total reduction	0,08	0,13	0,23			
Total, real	25	17	93			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: BR - Liepsala

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:13	06:14	07:14	07:46 (24)	07:19
	22:06	21:26	20:12	18:52	24 08:10 (24)	16:34
2	04:28	05:15	06:16	07:16	07:47 (24)	07:21
	22:06	21:24	20:09	18:49	22 08:09 (24)	16:32
3	04:29	05:16	06:18	07:18	07:49 (24)	07:24
	22:05	21:22	20:07	18:46	18 08:07 (24)	16:30
4	04:30	05:18	06:20	07:20	07:51 (24)	07:26
	22:05	21:20	20:04	18:44	13 08:04 (24)	16:27
5	04:31	05:20	06:22	07:22	07:54 (24)	07:28
	22:04	21:17	20:02	18:41	6 08:00 (24)	16:25
6	04:32	05:22	06:24	07:24	07:30	13 08:54 (22)
	22:03	21:15	19:59	18:38	16:23	17 08:56 (22)
7	04:33	05:24	06:26	07:26	07:32	17 08:56 (22)
	22:03	21:13	19:56	18:36	16:21	19 08:56 (22)
8	04:34	05:26	06:28	07:28	07:34	19 08:56 (22)
	22:02	21:11	19:54	18:33	16:19	21 08:58 (22)
9	04:35	05:28	06:30	07:30	07:37	21 08:58 (22)
	22:01	21:09	19:51	18:31	16:17	22 08:58 (22)
10	04:37	05:30	06:32	07:33	07:39	22 08:58 (22)
	22:00	21:06	19:48	18:28	16:15	24 09:00 (22)
11	04:38	05:32	06:34	07:35	07:41	24 09:00 (22)
	21:59	21:04	19:46	18:25	16:13	25 09:00 (22)
12	04:39	05:34	06:36	07:37	07:43	25 09:00 (22)
	21:58	21:02	19:43	18:23	16:11	25 09:00 (22)
13	04:40	05:36	06:38	07:39	07:45	25 09:00 (22)
	21:57	21:00	19:40	18:20	16:09	26 09:01 (22)
14	04:42	05:38	06:40	07:41	07:47	26 09:01 (22)
	21:56	20:57	19:38	18:18	16:07	25 09:00 (22)
15	04:43	05:40	06:42	07:43	07:50	25 09:00 (22)
	21:54	20:55	19:35	18:15	16:06	25 09:01 (22)
16	04:45	05:42	06:44	07:45	07:52	25 09:01 (22)
	21:53	20:52	19:32	18:13	16:04	25 09:01 (22)
17	04:46	05:44	06:46	07:47	07:54	25 09:01 (22)
	21:52	20:50	19:29	18:10	16:02	24 09:00 (22)
18	04:48	05:46	06:48	07:56 (24)	07:56	24 09:00 (22)
	21:50	20:48	19:27	18:07	16:00	24 09:01 (22)
19	04:50	05:48	06:50	07:53 (24)	07:58	24 09:01 (22)
	21:49	20:45	19:24	18:05	15:59	22 09:00 (22)
20	04:51	05:50	06:52	07:51 (24)	08:00	22 09:00 (22)
	21:47	20:43	19:21	18:02	15:57	21 09:00 (22)
21	04:53	05:52	06:54	07:50 (24)	08:02	21 09:00 (22)
	21:46	20:40	19:19	18:00	15:55	18 09:00 (22)
22	04:54	05:54	06:56	07:49 (24)	08:04	18 09:00 (22)
	21:44	20:38	19:16	17:58	15:54	15 08:59 (22)
23	04:56	05:56	06:58	07:48 (24)	08:06	15 08:59 (22)
	21:42	20:35	19:13	17:55	15:53	13 08:59 (22)
24	04:58	05:58	07:00	07:47 (24)	08:08	13 08:59 (22)
	21:41	20:33	19:11	17:53	15:51	10 08:58 (22)
25	05:00	06:00	07:02	07:46 (24)	08:10	10 08:58 (22)
	21:39	20:30	19:08	17:50	15:50	6 08:57 (22)
26	05:01	06:02	07:04	07:46 (24)	08:12	6 08:57 (22)
	21:37	20:28	19:05	17:48	15:48	3 08:56 (22)
27	05:03	06:04	07:06	07:46 (24)	08:14	3 08:56 (22)
	21:35	20:25	19:02	17:46	15:47	15:40
28	05:05	06:06	07:08	07:45 (24)	08:16	15:40
	21:34	20:22	19:00	17:43	15:46	15:41
29	05:07	06:08	07:10	07:46 (24)	08:17	15:41
	21:32	20:20	18:57	17:41	15:45	15:42
30	05:09	06:10	07:12	07:46 (24)	08:19	15:42
	21:30	20:17	18:54	17:39	15:44	15:43
31	05:11	06:12		07:17		15:43
	21:28	20:15		16:36		15:44
Potential sun hours	529	470	385	324	248	216
Total, worst case						
Sun reduction			0,43	0,27	0,09	
Oper. time red.			0,94	0,94	0,94	
Wind dir. red.			0,63	0,63	0,58	
Total reduction			0,25	0,16	0,05	
Total, real			84	13	22	

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BS - Me ž vidi

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	07:21 (23)	05:31	04:34	04:27	05:13	06:14	07:14	08:21
	15:45	16:42	17:44	19:50	07:41 (23)	20:52	21:50	22:06	21:26	20:12	18:52	16:34
2	08:48	08:11	07:06	06:44	07:22 (23)	05:28	04:33	04:28	05:15	06:16	07:16	08:23
	15:47	16:44	17:47	19:52	07:41 (23)	20:54	21:51	22:06	21:24	20:10	18:49	16:32
3	08:48	08:09	07:04	06:42	07:22 (23)	05:26	04:32	04:29	05:17	06:18	07:18	08:24
	15:48	16:47	17:49	19:54	07:40 (23)	20:56	21:52	22:05	21:22	20:07	18:46	16:30
4	08:47	08:07	07:01	06:39	07:22 (23)	05:24	04:31	04:30	05:18	06:20	07:20	08:26
	15:49	16:49	17:51	19:56	07:38 (23)	20:58	21:54	22:05	21:20	20:04	18:44	16:28
5	08:47	08:05	06:59	06:36	07:24 (23)	05:22	04:30	04:31	05:20	06:22	07:22	08:28
	15:50	16:51	17:53	19:58	07:36 (23)	21:00	21:55	22:04	21:17	20:02	18:41	16:25
6	08:46	08:03	06:56	06:34	07:27 (23)	05:19	04:29	04:32	05:22	06:24	07:24	08:30
	15:52	16:53	17:55	20:00	07:32 (23)	21:02	21:56	22:04	21:15	19:59	18:39	16:23
7	08:46	08:01	06:53	06:31	05:17	04:28	04:33	05:24	06:26	07:22 (23)	07:26	07:32
	15:53	16:55	17:57	20:02	21:05	21:57	22:03	21:13	19:56	8	07:30 (23)	18:36
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:19 (23)	07:28	07:35
	15:55	16:58	17:59	20:04	21:07	21:58	22:02	21:11	19:54	13	07:32 (23)	18:33
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:17 (23)	07:31	07:37
	15:57	17:00	18:02	20:06	21:09	21:59	22:01	21:09	19:51	16	07:33 (23)	18:31
10	08:44	07:54	06:46	06:23	05:11	04:26	04:37	05:30	06:32	07:15 (23)	07:33	07:39
	15:58	17:02	18:04	20:09	21:11	22:00	22:00	21:06	19:48	18	07:33 (23)	18:28
11	08:43	07:52	06:43	06:21	05:09	04:25	04:38	05:32	06:34	07:14 (23)	07:35	07:41
	16:00	17:04	18:06	20:11	21:13	22:01	21:59	21:04	19:46	20	07:34 (23)	18:25
12	08:42	07:50	06:40	06:18	05:07	04:25	04:39	05:34	06:36	07:13 (23)	07:37	07:43
	16:02	17:07	18:08	20:13	21:15	22:02	21:58	21:02	19:43	21	07:34 (23)	18:23
13	08:41	07:48	06:38	06:15	05:05	04:24	04:41	05:36	06:38	07:12 (23)	07:39	07:45
	16:03	17:09	18:10	20:15	21:16	22:03	21:57	21:00	19:40	22	07:34 (23)	18:20
14	08:40	07:45	06:35	06:13	05:03	04:24	04:42	05:38	06:40	07:12 (23)	07:41	07:47
	16:05	17:11	18:12	20:17	21:18	22:04	21:56	20:57	19:38	21	07:33 (23)	18:18
15	08:39	07:43	06:32	06:10	05:01	04:23	04:43	05:40	06:42	07:13 (23)	07:43	07:50
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	20	07:33 (23)	18:15
16	08:38	07:41	06:30	06:08	04:59	04:23	04:45	05:42	06:44	07:15 (23)	07:45	07:52
	16:09	17:16	18:16	20:21	21:22	22:05	21:53	20:52	19:32	17	07:32 (23)	18:13
17	08:36	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:17 (23)	07:47	07:54
	16:11	17:18	18:19	20:23	21:24	22:06	21:52	20:50	19:29	14	07:31 (23)	18:10
18	08:35	07:36	06:24	06:02	04:55	04:23	04:48	05:46	06:48	07:19 (23)	07:49	07:56
	16:13	17:20	18:21	20:25	21:26	22:06	21:50	20:48	19:27	11	07:30 (23)	18:08
19	08:34	07:34	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:21 (23)	07:51	07:58
	16:15	17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	7	07:28 (23)	18:05
20	08:32	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:23 (23)	07:54	08:00
	16:17	17:25	18:25	20:29	21:30	22:07	21:47	20:43	19:21	1	07:24 (23)	18:03
21	08:31	07:29	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:26	08:02	08:08
	16:19	17:27	18:27	20:31	21:32	22:07	21:46	20:40	19:19	18:00	15:56	15:36
22	08:30	07:26	06:14	05:52	04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:58	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:23	17:31	18:31	20:36	21:35	22:08	21:42	20:35	19:13	17:55	15:53	15:37
24	08:27	07:21	06:08	05:47	04:45	04:24	04:58	05:58	07:00	18:02	08:08	08:47
	16:25	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:11	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	18:04	08:10	08:48
	16:27	17:36	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:43	04:42	04:24	05:02	06:02	07:04	18:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:49	15:39
27	08:22	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	17:09	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:08	21:35	20:25	19:03	16:46	15:47	15:40
28	08:20	07:11	05:58	05:38	04:39	04:25	05:05	06:06	07:08	17:11	08:16	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:34	20:23	19:00	16:43	15:46	15:41
29	08:18	05:55	06:22 (23)	05:35	04:37	04:26	05:07	06:08	07:10	17:13	08:17	08:48
	16:35	18:44	21	06:43 (23)	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:42
30	08:16	06:52	07:22 (23)	05:33	04:36	04:27	05:09	06:10	07:12	17:15	08:19	08:48
	16:38	19:46	21	07:43 (23)	21:47	22:07	21:30	20:17	18:54	16:39	15:44	15:43
31	08:14	06:50	07:21 (23)	05:31	04:35		05:11	06:12		17:17		08:48
	16:40	19:48	21	07:42 (23)	21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	217
Total, worst case			117	90					209			
Sun reduction			0,39	0,48					0,43			
Oper. time red.			0,94	0,94					0,94			
Wind dir. red.			0,66	0,66					0,66			
Total reduction			0,24	0,30					0,26			
Total, real			28	27					55			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: BT - Me ž a Mui ž a

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	08:13	07:09	06:47	05:31	06:01 (1) 04:34
	15:45	16:42	17:44	19:50	20:52	17 06:18 (1) 21:50
2	08:48	08:11	07:06	06:44	05:28	05:59 (1) 04:33
	15:46	16:44	17:47	19:52	20:54	21 06:20 (1) 21:51
3	08:48	08:09	07:04	06:42	05:26	06:03 (1) 04:31
	15:48	16:46	17:49	19:54	20:56	17 06:20 (1) 21:52
4	08:47	08:07	07:01	06:39	05:24	06:06 (1) 04:30
	15:49	16:49	17:51	19:56	20:58	14 06:20 (1) 21:54
5	08:47	08:05	06:59	06:36	05:22	06:08 (1) 04:29
	15:50	16:51	17:53	19:58	21:01	12 06:20 (1) 21:55
6	08:46	08:03	06:56	06:34	05:19	06:10 (1) 04:29
	15:52	16:53	17:55	20:00	21:03	11 06:21 (1) 21:56
7	08:46	08:01	06:53	06:31	05:17	06:11 (1) 04:28
	15:53	16:55	17:57	20:02	21:05	10 06:21 (1) 21:57
8	08:45	07:59	06:51	06:28	05:15	06:11 (1) 04:27
	15:55	16:58	17:59	20:04	21:07	10 06:21 (1) 21:58
9	08:44	07:56	06:48	06:26	05:13	06:12 (1) 04:26
	15:56	17:00	18:02	20:06	21:09	9 06:21 (1) 21:59
10	08:44	07:54	06:46	06:23	05:11	06:12 (1) 04:26
	15:58	17:02	18:04	20:09	21:11	9 06:21 (1) 22:00
11	08:43	07:52	06:43	06:21	05:09	06:14 (1) 04:25
	16:00	17:04	18:06	20:11	21:13	7 06:21 (1) 22:01
12	08:42	07:50	06:40	06:18	05:07	06:14 (1) 04:24
	16:01	17:07	18:08	20:13	21:15	7 06:21 (1) 22:02
13	08:41	07:48	06:38	06:15	05:05	06:14 (1) 04:24
	16:03	17:09	18:10	20:15	21:17	6 06:20 (1) 22:03
14	08:40	07:45	06:35	06:13	05:03	06:14 (1) 04:24
	16:05	17:11	18:12	20:17	21:19	6 06:20 (1) 22:04
15	08:39	07:43	06:32	06:10	05:01	06:14 (1) 04:23
	16:07	17:13	18:14	20:19	21:20	5 06:19 (1) 22:05
16	08:38	07:41	06:30	06:08	04:59	06:14 (1) 04:23
	16:09	17:16	18:16	20:21	21:22	5 06:19 (1) 22:05
17	08:37	07:38	06:27	06:05	04:57	06:14 (1) 04:23
	16:11	17:18	18:19	20:23	21:24	4 06:18 (1) 22:06
18	08:35	07:36	06:24	06:02	04:55	06:13 (1) 04:23
	16:13	17:20	18:21	20:25	21:26	4 06:17 (1) 22:06
19	08:34	07:34	06:22	06:00	04:53	06:14 (1) 04:23
	16:15	17:22	18:23	20:27	21:28	2 06:16 (1) 22:07
20	08:33	07:31	06:19	05:57	04:51	06:13 (1) 04:23
	16:17	17:25	18:25	20:29	21:30	2 06:15 (1) 22:07
21	08:31	07:29	06:16	05:55	04:50	04:23
	16:19	17:27	18:27	20:31	21:32	22:07
22	08:30	07:26	06:14	05:52	04:48	04:23
	16:21	17:29	18:29	20:34	21:33	22:08
23	08:28	07:24	06:11	05:50	04:46	04:23
	16:23	17:31	18:31	20:36	21:35	22:08
24	08:27	07:21	06:08	05:47	04:45	04:23
	16:25	17:33	18:33	20:38	21:37	22:08
25	08:25	07:19	06:06	05:45	04:43	04:24
	16:27	17:36	18:35	20:40	21:39	22:08
26	08:23	07:17	06:03	05:43	04:42	04:24
	16:29	17:38	18:37	20:42	21:40	22:08
27	08:22	07:14	06:00	05:40	04:40	04:25
	16:31	17:40	18:39	20:44	21:42	22:08
28	08:20	07:11	05:58	05:38	06:07 (1) 04:39	04:25
	16:33	17:42	18:42	20:46	06:12 (1) 21:44	22:08
29	08:18		05:55	05:35	06:05 (1) 04:37	04:26
	16:35		18:44	20:48	06:15 (1) 21:45	22:07
30	08:16		06:52	05:33	06:03 (1) 04:36	04:27
	16:38		19:46	20:50	06:17 (1) 21:47	22:07
31	08:15		06:50		04:35	
	16:40		19:48		21:48	
Potential sun hours	235	265	365	425	507	528
Total, worst case				29	178	
Sun reduction				0,48	0,53	
Oper. time red.				0,94	0,94	
Wind dir. red.				0,67	0,67	
Total reduction				0,30	0,34	
Total, real				9	60	

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: BT - Me ž a Mui ž a

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	July	August	September	October	November	December
1	04:27	05:13	06:24 (1)	06:14	07:14	07:19
	22:07	21:26	7 06:31 (1)	20:12	18:52	16:34
2	04:28	05:15	06:24 (1)	06:16	07:16	07:22
	22:06	21:24	8 06:32 (1)	20:10	18:49	16:32
3	04:29	05:17	06:23 (1)	06:18	07:18	07:24
	22:06	21:22	8 06:31 (1)	20:07	18:47	16:30
4	04:30	05:18	06:22 (1)	06:20	07:20	07:26
	22:05	21:20	9 06:31 (1)	20:04	18:44	16:28
5	04:31	05:20	06:22 (1)	06:22	07:22	07:28
	22:04	21:18	9 06:31 (1)	20:02	18:41	16:25
6	04:32	05:22	06:21 (1)	06:24	07:24	07:30
	22:04	21:15	10 06:31 (1)	19:59	18:39	16:23
7	04:33	05:24	06:20 (1)	06:26	07:26	07:32
	22:03	21:13	11 06:31 (1)	19:56	18:36	16:21
8	04:34	05:26	06:18 (1)	06:28	07:28	07:35
	22:02	21:11	12 06:30 (1)	19:54	18:33	16:19
9	04:35	05:28	06:16 (1)	06:30	07:31	07:37
	22:01	21:09	14 06:30 (1)	19:51	18:31	16:17
10	04:37	05:30	06:14 (1)	06:32	07:33	07:39
	22:00	21:07	15 06:29 (1)	19:48	18:28	16:15
11	04:38	05:32	06:07 (1)	06:34	07:35	07:41
	21:59	21:04	21 06:28 (1)	19:46	18:25	16:13
12	04:39	05:34	06:09 (1)	06:36	07:37	07:43
	21:58	21:02	18 06:27 (1)	19:43	18:23	16:11
13	04:41	05:36	06:11 (1)	06:38	07:39	07:45
	21:57	21:00	15 06:26 (1)	19:40	18:20	16:09
14	04:42	05:38	06:12 (1)	06:40	07:41	07:48
	21:56	20:57	11 06:23 (1)	19:38	18:18	16:07
15	04:43	05:40	06:14 (1)	06:42	07:43	07:50
	21:54	20:55	7 06:21 (1)	19:35	18:15	16:06
16	04:45	05:42		06:44	07:45	07:52
	21:53	20:53		19:32	18:13	16:04
17	04:46	05:44		06:46	07:47	07:54
	21:52	20:50		19:30	18:10	16:02
18	04:48	05:46		06:48	07:49	07:56
	21:50	20:48		19:27	18:08	16:00
19	04:50	05:48		06:50	07:51	07:58
	21:49	20:45		19:24	18:05	15:59
20	04:51	05:50		06:52	07:54	08:00
	21:47	20:43		19:21	18:03	15:57
21	04:53	05:52		06:54	07:56	08:02
	21:46	20:40		19:19	18:00	15:56
22	04:55	05:54		06:56	07:58	08:04
	21:44	20:38		19:16	17:58	15:54
23	04:56	05:56		06:58	08:00	08:06
	21:43	20:35		19:13	17:55	15:53
24	04:58	06:23 (1)	05:58	07:00	08:02	08:08
	21:41	2 06:25 (1)	20:33	19:11	17:53	15:51
25	05:00	06:24 (1)	06:00	07:02	08:04	08:10
	21:39	2 06:26 (1)	20:30	19:08	17:50	15:50
26	05:02	06:25 (1)	06:02	07:04	07:06	08:12
	21:37	3 06:28 (1)	20:28	19:05	16:48	15:49
27	05:03	06:24 (1)	06:04	07:06	07:09	08:14
	21:36	4 06:28 (1)	20:25	19:03	16:46	15:47
28	05:05	06:25 (1)	06:06	07:08	07:11	08:16
	21:34	4 06:29 (1)	20:23	19:00	16:43	15:46
29	05:07	06:25 (1)	06:08	07:10	07:13	08:18
	21:32	5 06:30 (1)	20:20	18:57	16:41	15:45
30	05:09	06:24 (1)	06:10	07:12	07:15	08:19
	21:30	6 06:30 (1)	20:17	18:55	16:39	15:44
31	05:11	06:24 (1)	06:12		07:17	08:48
	21:28	7 06:31 (1)	20:15		16:36	15:44
Potential sun hours	529	470		385	324	248
Total, worst case	33	175				
Sun reduction	0,51	0,51				
Oper. time red.	0,94	0,94				
Wind dir. red.	0,67	0,67				
Total reduction	0,32	0,32				
Total, real	11	57				

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: BU - Vilni š i

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	08:13	07:09	06:47	05:31	06:01 (1) 04:34
	15:45	16:42	17:44	19:50	20:52	22 06:23 (1) 21:50
2	08:48	08:11	07:06	06:44	05:28	05:59 (1) 04:33
	15:46	16:44	17:47	19:52	20:54	24 06:23 (1) 21:51
3	08:48	08:09	07:04	06:42	05:26	06:03 (1) 04:31
	15:48	16:46	17:49	19:54	20:56	21 06:24 (1) 21:52
4	08:47	08:07	07:01	06:39	05:24	06:06 (1) 04:30
	15:49	16:49	17:51	19:56	20:58	18 06:24 (1) 21:54
5	08:47	08:05	06:59	06:36	05:22	06:08 (1) 04:29
	15:50	16:51	17:53	19:58	21:01	16 06:24 (1) 21:55
6	08:46	08:03	06:56	06:34	05:19	06:10 (1) 04:29
	15:52	16:53	17:55	20:00	21:03	14 06:24 (1) 21:56
7	08:46	08:01	06:53	06:31	05:17	06:11 (1) 04:28
	15:53	16:55	17:57	20:02	21:05	13 06:24 (1) 21:57
8	08:45	07:59	06:51	06:28	05:15	06:11 (1) 04:27
	15:55	16:58	17:59	20:04	21:07	13 06:24 (1) 21:58
9	08:44	07:56	06:48	06:26	05:13	06:12 (1) 04:26
	15:56	17:00	18:02	20:06	21:09	12 06:24 (1) 21:59
10	08:44	07:54	06:46	06:23	05:11	06:12 (1) 04:26
	15:58	17:02	18:04	20:09	21:11	11 06:23 (1) 22:00
11	08:43	07:52	06:43	06:21	05:09	06:14 (1) 04:25
	16:00	17:04	18:06	20:11	21:13	10 06:24 (1) 22:01
12	08:42	07:50	06:40	06:18	05:07	06:14 (1) 04:24
	16:01	17:07	18:08	20:13	21:15	10 06:24 (1) 22:02
13	08:41	07:48	06:38	06:15	05:05	06:14 (1) 04:24
	16:03	17:09	18:10	20:15	21:17	9 06:23 (1) 22:03
14	08:40	07:45	06:35	06:13	05:03	06:14 (1) 04:24
	16:05	17:11	18:12	20:17	21:19	8 06:22 (1) 22:04
15	08:39	07:43	06:32	06:10	05:01	06:14 (1) 04:23
	16:07	17:13	18:14	20:19	21:20	7 06:21 (1) 22:05
16	08:38	07:41	06:30	06:08	04:59	06:14 (1) 04:23
	16:09	17:16	18:16	20:21	21:22	7 06:21 (1) 22:05
17	08:37	07:38	06:27	06:05	04:57	06:14 (1) 04:23
	16:11	17:18	18:19	20:23	21:24	6 06:20 (1) 22:06
18	08:35	07:36	06:24	06:02	04:55	06:13 (1) 04:23
	16:13	17:20	18:21	20:25	21:26	5 06:18 (1) 22:06
19	08:34	07:34	06:22	06:00	04:53	06:14 (1) 04:23
	16:15	17:22	18:23	20:27	21:28	4 06:18 (1) 22:07
20	08:33	07:31	06:19	05:57	04:51	06:13 (1) 04:23
	16:17	17:25	18:25	20:29	21:30	3 06:16 (1) 22:07
21	08:31	07:29	06:16	05:55	04:50	04:23
	16:19	17:27	18:27	20:31	21:32	22:07
22	08:30	07:26	06:14	05:52	04:48	04:23
	16:21	17:29	18:29	20:34	21:33	22:08
23	08:28	07:24	06:11	05:50	04:46	04:23
	16:23	17:31	18:31	20:36	21:35	22:08
24	08:27	07:21	06:08	05:47	04:45	04:23
	16:25	17:33	18:33	20:38	21:37	22:08
25	08:25	07:19	06:06	05:45	04:43	04:24
	16:27	17:36	18:35	20:40	21:39	22:08
26	08:23	07:16	06:03	05:43	04:42	04:24
	16:29	17:38	18:37	20:42	21:40	22:08
27	08:22	07:14	06:00	05:40	06:10 (1) 04:40	04:25
	16:31	17:40	18:39	20:44	6 06:16 (1) 21:42	22:08
28	08:20	07:11	05:58	05:38	06:07 (1) 04:39	04:25
	16:33	17:42	18:42	20:46	11 06:18 (1) 21:44	22:08
29	08:18		05:55	05:35	06:05 (1) 04:37	04:26
	16:35		18:44	20:48	15 06:20 (1) 21:45	22:07
30	08:16		06:52	05:33	06:03 (1) 04:36	04:27
	16:38		19:46	20:50	19 06:22 (1) 21:47	22:07
31	08:15		06:50		04:35	
	16:40		19:48		21:48	
Potential sun hours	235	265	365	425	507	528
Total, worst case				51		233
Sun reduction				0,48		0,53
Oper. time red.				0,94		0,94
Wind dir. red.				0,67		0,67
Total reduction				0,30		0,33
Total, real				15		78

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: BU - Vilni š i

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	July	August	September	October	November	December
1	04:27	05:13	06:24 (1)	06:14	07:14	07:19
	22:07	21:26	10 06:34 (1)	20:12	18:52	16:34
2	04:28	05:15	06:24 (1)	06:16	07:16	07:22
	22:06	21:24	10 06:34 (1)	20:10	18:49	16:32
3	04:29	05:17	06:23 (1)	06:18	07:18	07:24
	22:06	21:22	11 06:34 (1)	20:07	18:47	16:30
4	04:30	05:18	06:22 (1)	06:20	07:20	07:26
	22:05	21:20	12 06:34 (1)	20:04	18:44	16:28
5	04:31	05:20	06:22 (1)	06:22	07:22	07:28
	22:04	21:18	12 06:34 (1)	20:02	18:41	16:25
6	04:32	05:22	06:21 (1)	06:24	07:24	07:30
	22:04	21:15	13 06:34 (1)	19:59	18:39	16:23
7	04:33	05:24	06:20 (1)	06:26	07:26	07:32
	22:03	21:13	14 06:34 (1)	19:56	18:36	16:21
8	04:34	05:26	06:18 (1)	06:28	07:28	07:35
	22:02	21:11	15 06:33 (1)	19:54	18:33	16:19
9	04:35	05:28	06:16 (1)	06:30	07:31	07:37
	22:01	21:09	17 06:33 (1)	19:51	18:31	16:17
10	04:37	05:30	06:14 (1)	06:32	07:33	07:39
	22:00	21:07	19 06:33 (1)	19:48	18:28	16:15
11	04:38	05:32	06:07 (1)	06:34	07:35	07:41
	21:59	21:04	25 06:32 (1)	19:46	18:25	16:13
12	04:39	05:34	06:09 (1)	06:36	07:37	07:43
	21:58	21:02	22 06:31 (1)	19:43	18:23	16:11
13	04:41	05:36	06:11 (1)	06:38	07:39	07:45
	21:57	21:00	19 06:30 (1)	19:40	18:20	16:09
14	04:42	05:38	06:12 (1)	06:40	07:41	07:48
	21:56	20:57	16 06:28 (1)	19:38	18:18	16:07
15	04:43	05:40	06:14 (1)	06:42	07:43	07:50
	21:54	20:55	13 06:27 (1)	19:35	18:15	16:06
16	04:45	05:42	06:16 (1)	06:44	07:45	07:52
	21:53	20:53	8 06:24 (1)	19:32	18:13	16:04
17	04:46	05:44		06:46	07:47	07:54
	21:52	20:50		19:30	18:10	16:02
18	04:48	05:46		06:48	07:49	07:56
	21:50	20:48		19:27	18:08	16:00
19	04:50	05:48		06:50	07:51	07:58
	21:49	20:45		19:24	18:05	15:59
20	04:51	05:50		06:52	07:54	08:00
	21:47	20:43		19:21	18:03	15:57
21	04:53	05:52		06:54	07:56	08:02
	21:46	20:40		19:19	18:00	15:56
22	04:55	05:54		06:56	07:58	08:04
	21:44	20:38		19:16	17:58	15:54
23	04:56	05:56		06:58	08:00	08:06
	21:43	20:35		19:13	17:55	15:53
24	04:58	06:23 (1)	05:58	07:00	08:02	08:08
	21:41	3 06:26 (1)	20:33	19:11	17:53	15:51
25	05:00	06:24 (1)	06:00	07:02	08:04	08:10
	21:39	4 06:28 (1)	20:30	19:08	17:50	15:50
26	05:02	06:25 (1)	06:02	07:04	07:06	08:12
	21:37	5 06:30 (1)	20:28	19:05	16:48	15:49
27	05:03	06:24 (1)	06:04	07:06	07:09	08:14
	21:36	6 06:30 (1)	20:25	19:03	16:46	15:47
28	05:05	06:25 (1)	06:06	07:08	07:11	08:16
	21:34	6 06:31 (1)	20:23	19:00	16:43	15:46
29	05:07	06:25 (1)	06:08	07:10	07:13	08:18
	21:32	7 06:32 (1)	20:20	18:57	16:41	15:45
30	05:09	06:24 (1)	06:10	07:12	07:15	08:19
	21:30	8 06:32 (1)	20:17	18:55	16:39	15:44
31	05:11	06:24 (1)	06:12		07:17	08:48
	21:28	9 06:33 (1)	20:15		16:36	15:44
Potential sun hours	529	470		385	324	248
Total, worst case	48	236				
Sun reduction	0,51	0,51				
Oper. time red.	0,94	0,94				
Wind dir. red.	0,67	0,67				
Total reduction	0,32	0,32				
Total, real	15	76				

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Shadow receptor: BV - Raceni

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	08:13	07:09	06:47	05:31	06:01 (1) 04:34
	15:45	16:42	17:44	19:50	20:52	22 06:23 (1) 21:50
2	08:48	08:11	07:06	06:44	05:28	06:00 (1) 04:33
	15:46	16:44	17:47	19:52	20:54	24 06:24 (1) 21:51
3	08:48	08:09	07:04	06:42	05:26	06:03 (1) 04:31
	15:48	16:46	17:49	19:54	20:56	21 06:24 (1) 21:52
4	08:47	08:07	07:01	06:39	05:24	06:06 (1) 04:30
	15:49	16:49	17:51	19:56	20:58	19 06:25 (1) 21:54
5	08:47	08:05	06:59	06:36	05:22	06:08 (1) 04:29
	15:50	16:51	17:53	19:58	21:01	17 06:25 (1) 21:55
6	08:46	08:03	06:56	06:34	05:19	06:10 (1) 04:29
	15:52	16:53	17:55	20:00	21:03	15 06:25 (1) 21:56
7	08:46	08:01	06:53	06:31	05:17	06:11 (1) 04:28
	15:53	16:55	17:57	20:02	21:05	14 06:25 (1) 21:57
8	08:45	07:59	06:51	06:28	05:15	06:11 (1) 04:27
	15:55	16:58	17:59	20:04	21:07	15 06:26 (1) 21:58
9	08:44	07:56	06:48	06:26	05:13	06:12 (1) 04:26
	15:56	17:00	18:02	20:06	21:09	13 06:25 (1) 21:59
10	08:44	07:54	06:46	06:23	05:11	06:12 (1) 04:26
	15:58	17:02	18:04	20:09	21:11	13 06:25 (1) 22:00
11	08:43	07:52	06:43	06:21	05:09	06:14 (1) 04:25
	16:00	17:04	18:06	20:11	21:13	12 06:26 (1) 22:01
12	08:42	07:50	06:40	06:18	05:07	06:14 (1) 04:24
	16:01	17:07	18:08	20:13	21:15	12 06:26 (1) 22:02
13	08:41	07:48	06:38	06:15	05:05	06:14 (1) 04:24
	16:03	17:09	18:10	20:15	21:17	11 06:25 (1) 22:03
14	08:40	07:45	06:35	06:13	05:03	06:14 (1) 04:24
	16:05	17:11	18:12	20:17	21:19	10 06:24 (1) 22:04
15	08:39	07:43	06:32	06:10	05:01	06:14 (1) 04:23
	16:07	17:13	18:14	20:19	21:20	10 06:24 (1) 22:05
16	08:38	07:41	06:30	06:08	04:59	06:14 (1) 04:23
	16:09	17:16	18:16	20:21	21:22	10 06:24 (1) 22:05
17	08:37	07:38	06:27	06:05	04:57	06:14 (1) 04:23
	16:11	17:18	18:19	20:23	21:24	9 06:23 (1) 22:06
18	08:35	07:36	06:24	06:02	04:55	06:13 (1) 04:23
	16:13	17:20	18:21	20:25	21:26	9 06:22 (1) 22:06
19	08:34	07:34	06:22	06:00	04:53	06:14 (1) 04:23
	16:15	17:22	18:23	20:27	21:28	8 06:22 (1) 22:07
20	08:33	07:31	06:19	05:57	04:51	06:13 (1) 04:23
	16:17	17:25	18:25	20:29	21:30	7 06:20 (1) 22:07
21	08:31	07:29	06:16	05:55	04:50	06:14 (1) 04:23
	16:19	17:27	18:27	20:31	21:32	5 06:19 (1) 22:07
22	08:30	07:26	06:14	05:52	04:48	06:13 (1) 04:23
	16:21	17:29	18:29	20:34	21:33	5 06:18 (1) 22:08
23	08:28	07:24	06:11	05:50	04:46	06:13 (1) 04:23
	16:23	17:31	18:31	20:36	21:35	3 06:16 (1) 22:08
24	08:27	07:21	06:08	05:47	04:45	04:23
	16:25	17:33	18:33	20:38	21:37	22:08
25	08:25	07:19	06:06	05:45	04:43	04:24
	16:27	17:36	18:35	20:40	21:39	22:08
26	08:23	07:16	06:03	05:43	04:42	04:24
	16:29	17:38	18:37	20:42	21:40	22:08
27	08:22	07:14	06:00	05:40	06:11 (1) 04:40	04:25
	16:31	17:40	18:39	20:44	3 06:14 (1) 21:42	22:08
28	08:20	07:11	05:58	05:38	06:07 (1) 04:39	04:25
	16:33	17:42	18:42	20:46	11 06:18 (1) 21:44	22:08
29	08:18		05:55	05:35	06:05 (1) 04:37	04:26
	16:35		18:44	20:48	15 06:20 (1) 21:45	22:07
30	08:16		06:52	05:33	06:03 (1) 04:36	04:27
	16:38		19:46	20:50	19 06:22 (1) 21:47	22:07
31	08:15		06:50		04:35	
	16:40		19:48		21:48	
Potential sun hours	235	265	365	425	507	528
Total, worst case				48		284
Sun reduction				0,48		0,53
Oper. time red.				0,94		0,94
Wind dir. red.				0,67		0,67
Total reduction				0,30		0,33
Total, real				15		95

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: BV - Raceni

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	July	August	September	October	November	December
1	04:27	05:13	06:24 (1)	06:14	07:14	07:19
	22:07	21:26	12 06:36 (1)	20:12	18:52	16:34
2	04:28	05:15	06:24 (1)	06:16	07:16	07:22
	22:06	21:24	12 06:36 (1)	20:10	18:49	16:32
3	04:29	05:17	06:23 (1)	06:18	07:18	07:24
	22:06	21:22	13 06:36 (1)	20:07	18:47	16:30
4	04:30	05:18	06:22 (1)	06:20	07:20	07:26
	22:05	21:20	14 06:36 (1)	20:04	18:44	16:28
5	04:31	05:20	06:22 (1)	06:22	07:22	07:28
	22:04	21:18	14 06:36 (1)	20:02	18:41	16:25
6	04:32	05:22	06:21 (1)	06:24	07:24	07:30
	22:04	21:15	15 06:36 (1)	19:59	18:39	16:23
7	04:33	05:24	06:20 (1)	06:26	07:26	07:32
	22:03	21:13	16 06:36 (1)	19:56	18:36	16:21
8	04:34	05:26	06:18 (1)	06:28	07:28	07:35
	22:02	21:11	17 06:35 (1)	19:54	18:33	16:19
9	04:35	05:28	06:16 (1)	06:30	07:31	07:37
	22:01	21:09	18 06:34 (1)	19:51	18:31	16:17
10	04:37	05:30	06:14 (1)	06:32	07:33	07:39
	22:00	21:07	20 06:34 (1)	19:48	18:28	16:15
11	04:38	05:32	06:08 (1)	06:34	07:35	07:41
	21:59	21:04	25 06:33 (1)	19:46	18:25	16:13
12	04:39	05:34	06:09 (1)	06:36	07:37	07:43
	21:58	21:02	23 06:32 (1)	19:43	18:23	16:11
13	04:41	05:36	06:10 (1)	06:38	07:39	07:45
	21:57	21:00	20 06:30 (1)	19:40	18:20	16:09
14	04:42	05:38	06:12 (1)	06:40	07:41	07:48
	21:56	20:57	17 06:29 (1)	19:38	18:18	16:07
15	04:43	05:40	06:14 (1)	06:42	07:43	07:50
	21:54	20:55	13 06:27 (1)	19:35	18:15	16:06
16	04:45	05:42	06:16 (1)	06:44	07:45	07:52
	21:53	20:53	7 06:23 (1)	19:32	18:13	16:04
17	04:46	05:44		06:46	07:47	07:54
	21:52	20:50		19:30	18:10	16:02
18	04:48	05:46		06:48	07:49	07:56
	21:50	20:48		19:27	18:08	16:00
19	04:50	05:48		06:50	07:51	07:58
	21:49	20:45		19:24	18:05	15:59
20	04:51	05:50		06:52	07:54	08:00
	21:47	20:43		19:21	18:03	15:57
21	04:53	06:23 (1)	05:52	06:54	07:56	08:02
	21:46	3 06:26 (1)	20:40	19:19	18:00	15:56
22	04:55	06:23 (1)	05:54	06:56	07:58	08:04
	21:44	5 06:28 (1)	20:38	19:16	17:58	15:54
23	04:56	06:24 (1)	05:56	06:58	08:00	08:06
	21:43	6 06:30 (1)	20:35	19:13	17:55	15:53
24	04:58	06:23 (1)	05:58	07:00	08:02	08:08
	21:41	7 06:30 (1)	20:33	19:11	17:53	15:51
25	05:00	06:24 (1)	06:00	07:02	08:04	08:10
	21:39	8 06:32 (1)	20:30	19:08	17:50	15:50
26	05:02	06:25 (1)	06:02	07:04	07:06	08:12
	21:37	8 06:33 (1)	20:28	19:05	16:48	15:49
27	05:03	06:24 (1)	06:04	07:06	07:09	08:14
	21:36	9 06:33 (1)	20:25	19:03	16:46	15:47
28	05:05	06:25 (1)	06:06	07:08	07:11	08:16
	21:34	9 06:34 (1)	20:23	19:00	16:43	15:46
29	05:07	06:25 (1)	06:08	07:10	07:13	08:18
	21:32	10 06:35 (1)	20:20	18:57	16:41	15:45
30	05:09	06:24 (1)	06:10	07:12	07:15	08:19
	21:30	11 06:35 (1)	20:17	18:55	16:39	15:44
31	05:11	06:24 (1)	06:12		07:17	08:48
	21:28	11 06:35 (1)	20:15		16:36	15:44
Potential sun hours	529	470		385	324	248
Total, worst case			256			
Sun reduction	0,51		0,51			
Oper. time red.	0,94		0,94			
Wind dir. red.	0,67		0,67			
Total reduction	0,32		0,32			
Total, real	28		83			

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BW - Vipes skola

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:56	04:32 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:31 21:54	04:30 22:05	05:19 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:51	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:30 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:58	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:44 15:57	07:56 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:26	07:41 16:13	08:36 15:36
12	08:42 16:02	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:17	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:25 18:21	06:03 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:36
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:48 20:38	04:45 21:37	04:24 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:39
26	08:23 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:40	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:36		05:55 18:44	05:35 20:48	04:38 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15		07:17 16:36		08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BX - Vipes skola

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:22	08:23
	15:47	16:44	17:47	19:52	20:54	21:51	22:06	21:24	20:10	18:49	16:32	15:42
3	08:48	08:09	07:04	06:42	05:26	04:32	04:29	05:17	06:18	07:18	07:24	08:25
	15:48	16:47	17:49	19:54	20:56	21:52	22:06	21:22	20:07	18:47	16:30	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:30	05:19	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:59	21:54	22:05	21:20	20:04	18:44	16:28	15:40
5	08:47	08:05	06:59	06:36	05:22	04:30	04:31	05:20	06:22	07:22	07:28	08:28
	15:51	16:51	17:53	19:58	21:01	21:55	22:04	21:18	20:02	18:41	16:25	15:39
6	08:46	08:03	06:56	06:34	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:03	21:56	22:04	21:15	19:59	18:39	16:23	15:39
7	08:46	08:01	06:54	06:31	05:17	04:28	04:33	05:24	06:26	07:26	07:33	08:31
	15:53	16:55	17:57	20:02	21:05	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:59	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:29	07:35	08:32
	15:55	16:58	18:00	20:04	21:07	21:58	22:02	21:11	19:54	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:31	07:37	08:34
	15:57	17:00	18:02	20:07	21:09	22:00	22:01	21:09	19:51	18:31	16:17	15:37
10	08:44	07:54	06:46	06:23	05:11	04:26	04:37	05:30	06:32	07:33	07:39	08:35
	15:58	17:02	18:04	20:09	21:11	22:01	22:00	21:07	19:48	18:28	16:15	15:36
11	08:43	07:52	06:43	06:21	05:09	04:25	04:38	05:32	06:34	07:35	07:41	08:36
	16:00	17:04	18:06	20:11	21:13	22:01	21:59	21:04	19:46	18:26	16:13	15:36
12	08:42	07:50	06:40	06:18	05:07	04:25	04:39	05:34	06:36	07:37	07:43	08:38
	16:02	17:07	18:08	20:13	21:15	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:48	06:38	06:15	05:05	04:24	04:41	05:36	06:38	07:39	07:45	08:39
	16:03	17:09	18:10	20:15	21:17	22:03	21:57	21:00	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:42	05:38	06:40	07:41	07:48	08:40
	16:05	17:11	18:12	20:17	21:19	22:04	21:56	20:57	19:38	18:18	16:07	15:35
15	08:39	07:43	06:32	06:10	05:01	04:23	04:43	05:40	06:42	07:43	07:50	08:41
	16:07	17:13	18:14	20:19	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:35
16	08:38	07:41	06:30	06:08	04:59	04:23	04:45	05:42	06:44	07:45	07:52	08:42
	16:09	17:16	18:17	20:21	21:22	22:05	21:53	20:53	19:32	18:13	16:04	15:35
17	08:37	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:54	08:43
	16:11	17:18	18:19	20:23	21:24	22:06	21:52	20:50	19:30	18:10	16:02	15:35
18	08:35	07:36	06:24	06:03	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:44
	16:13	17:20	18:21	20:25	21:26	22:06	21:50	20:48	19:27	18:08	16:00	15:36
19	08:34	07:34	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:52	07:58	08:44
	16:15	17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:54	08:00	08:45
	16:17	17:25	18:25	20:29	21:30	22:07	21:47	20:43	19:21	18:03	15:57	15:36
21	08:31	07:29	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:56	08:02	08:46
	16:19	17:27	18:27	20:32	21:32	22:07	21:46	20:40	19:19	18:00	15:56	15:36
22	08:30	07:26	06:14	05:52	04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29	20:34	21:34	22:08	21:44	20:38	19:16	17:58	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:23	17:31	18:31	20:36	21:35	22:08	21:43	20:35	19:13	17:55	15:53	15:37
24	08:27	07:22	06:08	05:48	04:45	04:24	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:11	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:48
	16:27	17:36	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:17	06:03	05:43	04:42	04:24	05:02	06:02	07:04	07:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:49	15:39
27	08:22	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	07:09	08:14	08:48
	16:31	17:40	18:40	20:44	21:42	22:08	21:36	20:25	19:03	16:46	15:47	15:40
28	08:20	07:12	05:58	05:38	04:39	04:25	05:05	06:06	07:08	07:11	08:16	08:48
	16:33	17:42	18:42	20:46	21:44	22:08	21:34	20:23	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:38	04:26	05:07	06:08	07:10	07:13	08:18	08:48
	16:36		18:44	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:46	20:50	21:47	22:07	21:30	20:17	18:55	16:39	15:44	15:43
31	08:15		06:50		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BY - Vipes skola

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:22	08:23
	15:47	16:44	17:47	19:52	20:54	21:51	22:06	21:24	20:10	18:49	16:32	15:42
3	08:48	08:09	07:04	06:42	05:26	04:32	04:29	05:17	06:18	07:18	07:24	08:25
	15:48	16:47	17:49	19:54	20:56	21:52	22:06	21:22	20:07	18:47	16:30	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:30	05:19	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:59	21:54	22:05	21:20	20:04	18:44	16:28	15:40
5	08:47	08:05	06:59	06:36	05:22	04:30	04:31	05:20	06:22	07:22	07:28	08:28
	15:51	16:51	17:53	19:58	21:01	21:55	22:04	21:18	20:02	18:41	16:25	15:39
6	08:46	08:03	06:56	06:34	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:03	21:56	22:04	21:15	19:59	18:39	16:23	15:39
7	08:46	08:01	06:54	06:31	05:17	04:28	04:33	05:24	06:26	07:26	07:33	08:31
	15:53	16:55	17:57	20:02	21:05	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:59	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:29	07:35	08:32
	15:55	16:58	18:00	20:04	21:07	21:59	22:02	21:11	19:54	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:31	07:37	08:34
	15:57	17:00	18:02	20:07	21:09	22:00	22:01	21:09	19:51	18:31	16:17	15:37
10	08:44	07:54	06:46	06:23	05:11	04:26	04:37	05:30	06:32	07:33	07:39	08:35
	15:58	17:02	18:04	20:09	21:11	22:01	22:00	21:07	19:48	18:28	16:15	15:36
11	08:43	07:52	06:43	06:21	05:09	04:25	04:38	05:32	06:34	07:35	07:41	08:36
	16:00	17:04	18:06	20:11	21:13	22:01	21:59	21:04	19:46	18:26	16:13	15:36
12	08:42	07:50	06:40	06:18	05:07	04:25	04:39	05:34	06:36	07:37	07:43	08:38
	16:02	17:07	18:08	20:13	21:15	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:48	06:38	06:15	05:05	04:24	04:41	05:36	06:38	07:39	07:45	08:39
	16:03	17:09	18:10	20:15	21:17	22:03	21:57	21:00	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:42	05:38	06:40	07:41	07:48	08:40
	16:05	17:11	18:12	20:17	21:19	22:04	21:56	20:57	19:38	18:18	16:07	15:35
15	08:39	07:43	06:32	06:10	05:01	04:23	04:43	05:40	06:42	07:43	07:50	08:41
	16:07	17:13	18:14	20:19	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:35
16	08:38	07:41	06:30	06:08	04:59	04:23	04:45	05:42	06:44	07:45	07:52	08:42
	16:09	17:16	18:17	20:21	21:22	22:05	21:53	20:53	19:32	18:13	16:04	15:35
17	08:37	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:54	08:43
	16:11	17:18	18:19	20:23	21:24	22:06	21:52	20:50	19:30	18:10	16:02	15:35
18	08:35	07:36	06:25	06:03	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:44
	16:13	17:20	18:21	20:25	21:26	22:06	21:50	20:48	19:27	18:08	16:00	15:36
19	08:34	07:34	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:52	07:58	08:44
	16:15	17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:54	08:00	08:45
	16:17	17:25	18:25	20:29	21:30	22:07	21:47	20:43	19:21	18:03	15:57	15:36
21	08:31	07:29	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:56	08:02	08:46
	16:19	17:27	18:27	20:32	21:32	22:07	21:46	20:40	19:19	18:00	15:56	15:36
22	08:30	07:26	06:14	05:52	04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29	20:34	21:34	22:08	21:44	20:38	19:16	17:58	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:23	17:31	18:31	20:36	21:35	22:08	21:43	20:35	19:13	17:55	15:53	15:37
24	08:27	07:22	06:08	05:48	04:45	04:24	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:11	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:48
	16:27	17:36	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:17	06:03	05:43	04:42	04:24	05:02	06:02	07:04	07:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:49	15:39
27	08:22	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	07:09	08:14	08:48
	16:31	17:40	18:40	20:44	21:42	22:08	21:36	20:25	19:03	16:46	15:47	15:40
28	08:20	07:12	05:58	05:38	04:39	04:25	05:05	06:06	07:08	07:11	08:16	08:48
	16:33	17:42	18:42	20:46	21:44	22:08	21:34	20:23	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:38	04:26	05:07	06:08	07:10	07:13	08:18	08:48
	16:36		18:44	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:46	20:50	21:47	22:07	21:30	20:17	18:55	16:39	15:44	15:43
31	08:15		06:50		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: BZ - Vipes skola 1

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:56	04:32 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:47	07:24 16:30	08:25 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:59	04:31 21:54	04:30 22:05	05:19 21:20	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:01	04:30 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:54 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:33 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 18:00	06:28 20:04	05:15 21:07	04:27 21:59	04:34 22:02	05:26 21:11	06:28 19:54	07:29 18:33	07:35 16:19	08:32 15:37
9	08:44 15:57	07:56 17:00	06:48 18:02	06:26 20:07	05:13 21:09	04:26 22:00	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:21 20:11	05:09 21:13	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:26	07:41 16:13	08:36 15:36
12	08:42 16:02	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:38 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:19	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:48 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:21	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:17	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:37 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:30	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:24 18:21	06:03 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:36
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:52 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:32	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:34	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:22 17:33	06:08 18:33	05:47 20:38	04:45 21:37	04:24 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:39
26	08:23 16:29	07:17 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:40	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:36	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:12 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:08	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:36		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:55	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15	07:17 16:36			08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CA - Slipie 1

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:50	04:27 22:07	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:46	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	08:48 15:48	08:09 16:46	07:04 17:49	06:42 19:54	05:26 20:56	04:31 21:52	04:29 22:06	05:17 21:22	06:18 20:07	07:18 18:46	07:24 16:30	08:24 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:30 21:54	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:00	04:29 21:55	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:03	04:29 21:56	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:38
8	08:45 15:55	07:59 16:58	06:51 17:59	06:28 20:04	05:15 21:07	04:27 21:58	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:02	06:26 20:06	05:13 21:09	04:26 21:59	04:35 22:01	05:28 21:09	06:30 19:51	07:31 18:31	07:37 16:17	08:34 15:37
10	08:44 15:58	07:54 17:02	06:46 18:04	06:23 20:09	05:11 21:11	04:26 22:00	04:37 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:20 20:11	05:09 21:13	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:15	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:37 15:36
13	08:41 16:03	07:48 17:09	06:38 18:10	06:15 20:15	05:05 21:17	04:24 22:03	04:41 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:18	04:24 22:04	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:47 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:20	04:23 22:05	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:06	08:41 15:35
16	08:38 16:09	07:41 17:16	06:30 18:16	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:53	06:44 19:32	07:45 18:13	07:52 16:04	08:42 15:35
17	08:36 16:11	07:38 17:18	06:27 18:19	06:05 20:23	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:13	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:44 15:35
19	08:34 16:15	07:34 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:07	04:50 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	08:33 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:54 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:31	04:50 21:32	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:46 15:36
22	08:30 16:21	07:26 17:29	06:14 18:29	05:52 20:34	04:48 21:33	04:23 22:08	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:27 16:25	07:21 17:33	06:08 18:33	05:47 20:38	04:45 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:39	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:39
26	08:23 16:29	07:16 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:25 22:08	05:03 21:35	06:04 20:25	07:06 19:03	07:09 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:58 18:42	05:38 20:46	04:39 21:44	04:25 22:07	05:05 21:34	06:06 20:23	07:08 19:00	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:35		05:55 18:44	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 15:42
30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:47	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:54	07:15 16:39	08:19 15:44	08:48 15:43
31	08:15 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15		07:17 16:36		08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CB - Upmali

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	[January	[February	[March		[April		[May	[June	[July	[August	[September		[October	[November	[December
1	08:48	08:13	07:09		06:47	22	07:16 (2)	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44		19:50		07:38 (2)	20:52	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06		06:44		07:16 (2)	05:28	04:33	04:28	05:15	06:16	07:16	07:22	08:23
	15:46	16:44	17:47		19:52	22	07:38 (2)	20:54	21:51	22:06	21:24	20:10	18:49	16:32	15:42
3	08:48	08:09	07:04		06:42		07:16 (2)	05:26	04:31	04:29	05:17	06:18	07:18	07:24	08:24
	15:48	16:46	17:49		19:54	21	07:37 (2)	20:56	21:52	22:06	21:22	20:07	18:46	16:30	15:41
4	08:47	08:07	07:01		06:39		07:15 (2)	05:24	04:30	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:49	17:51		19:56	21	07:36 (2)	20:58	21:54	22:05	21:20	20:04	7 07:19 (2)	07:20	07:26
5	08:47	08:05	06:59		06:36		07:16 (2)	05:22	04:29	04:31	05:20	06:22	07:22	07:28	08:28
	15:50	16:51	17:53		19:58	20	07:36 (2)	21:00	21:55	22:04	21:18	20:02	13 07:29 (2)	07:22	07:28
6	08:46	08:03	06:56		06:34		07:17 (2)	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55		20:00	17	07:34 (2)	21:03	21:56	22:04	21:15	19:59	16 07:30 (2)	07:24	07:30
7	08:46	08:01	06:53		06:31		07:18 (2)	05:17	04:28	04:33	05:24	06:26	07:26	07:32	08:31
	15:53	16:55	17:57		20:02	15	07:33 (2)	21:05	21:57	22:03	21:13	19:56	19 07:31 (2)	07:26	07:32
8	08:45	07:59	06:51		06:28		07:19 (2)	05:15	04:27	04:34	05:26	06:28	07:28	07:35	08:32
	15:55	16:58	17:59		20:04	12	07:31 (2)	21:07	21:58	22:02	21:11	19:54	20 07:31 (2)	07:28	07:35
9	08:44	07:56	06:48		06:26		07:24 (2)	05:13	04:26	04:35	05:28	06:30	07:30	07:37	08:34
	15:56	17:00	18:02		20:06	1	07:25 (2)	21:09	21:59	22:01	21:09	19:51	22 07:31 (2)	07:28	07:35
10	08:44	07:54	06:46		06:23			05:11	04:26	04:37	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:04		20:09			21:11	22:00	22:00	21:07	19:48	22 07:31 (2)	07:28	07:35
11	08:43	07:52	06:43		06:20			05:09	04:25	04:38	05:32	06:34	07:34	07:41	08:36
	16:00	17:04	18:06		20:11			21:13	22:01	21:59	21:04	19:46	23 07:31 (2)	07:28	07:35
12	08:42	07:50	06:40		06:18			05:07	04:24	04:39	05:34	06:36	07:36	07:43	08:37
	16:01	17:07	18:08		20:13			21:15	22:02	21:58	21:02	19:43	22 07:30 (2)	07:28	07:35
13	08:41	07:48	06:38		06:15			05:05	04:24	04:41	05:36	06:38	07:38	07:45	08:39
	16:03	17:09	18:10		20:15			21:17	22:03	21:57	21:00	19:40	21 07:30 (2)	07:28	07:35
14	08:40	07:45	06:35		06:13			05:03	04:24	04:42	05:38	06:40	07:40	07:47	08:40
	16:05	17:11	18:12		20:17			21:18	22:04	21:56	20:57	19:38	18 07:29 (2)	07:28	07:35
15	08:39	07:43	06:32		06:10			05:01	04:23	04:43	05:40	06:42	07:42	07:50	08:41
	16:07	17:13	18:14		20:19			21:20	22:05	21:54	20:55	19:35	14 07:27 (2)	07:28	07:35
16	08:38	07:41	06:30		06:08			04:59	04:23	04:45	05:42	06:44	07:44	07:52	08:42
	16:09	17:16	18:16		20:21			21:22	22:05	21:53	20:52	19:32	11 07:26 (2)	07:28	07:35
17	08:36	07:38	06:27		06:05			04:57	04:23	04:46	05:44	06:46	07:46	07:54	08:43
	16:11	17:18	18:19		20:23			21:24	22:06	21:52	20:50	19:29	7 07:24 (2)	07:28	07:35
18	08:35	07:36	06:24		06:02			04:55	04:23	04:48	05:46	06:48	07:48	07:56	08:44
	16:13	17:20	18:21		20:25			21:26	22:06	21:50	20:48	19:27	07:50	07:58	08:46
19	08:34	07:34	06:22		06:00			04:53	04:23	04:50	05:48	06:50	07:51	07:59	08:44
	16:15	17:22	18:23		20:27			21:28	22:07	21:49	20:45	19:24	18 07:29 (2)	07:28	07:35
20	08:33	07:31	06:19		05:57			04:51	04:23	04:51	05:50	06:52	07:54	08:00	08:45
	16:16	17:25	18:25		20:29			21:30	22:07	21:47	20:43	19:21	18 07:29 (2)	07:28	07:35
21	08:31	07:29	06:16		05:55			04:50	04:23	04:53	05:52	06:54	07:56	08:02	08:46
	16:19	17:27	18:27		20:31			21:32	22:07	21:46	20:40	19:19	18 07:29 (2)	07:28	07:35
22	08:30	07:26	06:14		05:52			04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29		20:34			21:33	22:08	21:44	20:38	19:16	17 07:28	07:28	07:35
23	08:28	07:24	06:11		05:50			04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:23	17:31	18:31		20:36			21:35	22:08	21:42	20:35	19:13	17 07:28	07:28	07:35
24	08:27	07:21	06:08		05:47			04:45	04:23	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33		20:38			21:37	22:08	21:41	20:33	19:11	17 07:28	07:28	07:35
25	08:25	07:19	06:06		05:45			04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:48
	16:27	17:36	18:35		20:40			21:39	22:08	21:39	20:30	19:08	17 07:28	07:28	07:35
26	08:23	07:16	06:03	2 06:30 (2)	05:43			04:42	04:24	05:02	06:02	07:04	08:06	08:12	08:48
	16:29	17:38	18:37		20:42			21:40	22:08	21:37	20:28	19:05	16 07:27	07:28	07:35
27	08:22	07:14	06:00	8 06:36 (2)	05:40			04:40	04:25	05:03	06:04	07:06	08:08	08:14	08:48
	16:31	17:40	18:39		20:44			21:42	22:08	21:35	20:25	19:03	16 07:27	07:28	07:35
28	08:20	07:11	05:58	12 06:37 (2)	05:38			04:39	04:25	05:05	06:06	07:08	08:10	08:16	08:48
	16:33	17:42	18:41		20:46			21:44	22:07	21:34	20:23	19:00	16 07:27	07:28	07:35
29	08:18	05:55	06:22 (2)	15 06:37 (2)	05:35			04:37	04:26	05:07	06:08	07:10	08:12	08:18	08:48
	16:35	18:44	06:52	07:20 (2)	05:33			21:45	22:07	21:32	20:20	18:57	16 07:27	07:28	07:35
30	08:16	06:52	07:20 (2)	18 07:38 (2)	05:30			04:36	04:27	05:09	06:10	07:12	08:14	08:19	08:48
	16:38	19:46	07:17 (2)	21 07:38 (2)	05:28			21:47	22:07	21:30	20:17	18:54	16 07:27	07:28	07:35
31	08:15	06:50	07:17 (2)	21 07:38 (2)	05:28			04:35	04:25	05:11	06:12	07:14	08:16	08:21	08:48
	16:40	19:48	07:38 (2)	21 07:38 (2)	05:28			21:48	04:28	05:11	06:12	07:14	08:16	08:21	08:48
Potential sun hours	235	265	365		425			507	528	529	470	385	324	248	216
Total, worst case				76	151							235			
Sun reduction				0.39	0.48							0.43			
Oper. time red.				0.94	0.94							0.94			
Wind dir. red.				0.66	0.66							0.66			
Total reduction				0.24	0.30							0.27			
Total, real				18	45							62			

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: CC - Ziemelnieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:21	08:23
	15:47	16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:32	15:42
3	08:47	08:09	07:04	06:42	05:26	04:32	04:29	05:17	06:18	07:18	07:24	08:24
	15:48	16:47	17:49	19:54	20:56	21:52	22:05	21:22	20:07	18:46	16:30	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:58	21:53	22:05	21:20	20:04	18:44	16:28	15:40
5	08:47	08:05	06:59	06:36	05:22	04:30	04:31	05:20	06:22	07:22	07:28	08:27
	15:51	16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:02	18:41	16:25	15:39
6	08:46	08:03	06:56	06:34	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:39	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:33	05:24	06:26	07:26	07:32	08:31
	15:53	16:55	17:57	20:02	21:04	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:58	17:59	20:04	21:06	21:58	22:02	21:11	19:54	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:30	07:37	08:33
	15:57	17:00	18:02	20:06	21:08	21:59	22:01	21:09	19:51	18:31	16:17	15:37
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	15:58	17:02	18:04	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:38	05:32	06:34	07:35	07:41	08:36
	16:00	17:04	18:06	20:11	21:12	22:01	21:59	21:04	19:46	18:25	16:13	15:36
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	16:02	17:07	18:08	20:13	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:36
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18	08:35	07:36	06:24	06:02	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:43
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	16:31	17:40	18:39	20:44	21:42	22:07	21:35	20:25	19:02	16:46	15:47	15:40
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	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	19:00	16:43	15:46	15:41
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	16:35		18:44	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:42
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	16:38		19:46	20:50	21:46	22:07	21:30	20:17	18:54	16:39	15:44	15:43
31	08:14		06:50		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CD - Ezermuiža

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:49	04:27 22:06	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:47	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:23 15:42
3	08:47 15:48	08:09 16:47	07:04 17:49	06:42 19:54	05:26 20:56	04:32 21:52	04:29 22:05	05:17 21:22	06:18 20:07	07:18 18:46	07:24 16:30	08:24 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:31 21:53	04:30 22:05	05:19 21:19	06:20 20:04	07:20 18:44	07:26 16:28	08:26 15:40
5	08:47 15:51	08:05 16:51	06:59 17:53	06:36 19:58	05:22 21:00	04:30 21:55	04:31 22:04	05:20 21:17	06:22 20:02	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:02	04:29 21:56	04:32 22:03	05:22 21:15	06:24 19:59	07:24 18:39	07:30 16:23	08:29 15:39
7	08:46 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:30 15:38
8	08:45 15:55	07:58 16:58	06:51 17:59	06:28 20:04	05:15 21:06	04:27 21:58	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:34 16:19	08:32 15:37
9	08:44 15:57	07:56 17:00	06:48 18:02	06:26 20:06	05:13 21:08	04:26 21:59	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:31	07:37 16:17	08:33 15:37
10	08:43 15:58	07:54 17:02	06:46 18:04	06:23 20:08	05:11 21:10	04:26 22:00	04:37 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:37
11	08:43 16:00	07:52 17:04	06:43 18:06	06:20 20:11	05:09 21:12	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:02	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:14	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:37 15:36
13	08:41 16:03	07:47 17:09	06:38 18:10	06:15 20:15	05:05 21:16	04:24 22:03	04:41 21:57	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:38 15:36
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:18	04:24 22:04	04:42 21:55	05:38 20:57	06:40 19:38	07:41 18:18	07:47 16:07	08:39 15:36
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16	08:37 16:09	07:41 17:16	06:30 18:16	06:08 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:13	07:52 16:04	08:41 15:35
17	08:36 16:11	07:38 17:18	06:27 18:18	06:05 20:23	04:57 21:24	04:23 22:05	04:47 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:42 15:35
18	08:35 16:13	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:08	07:56 16:00	08:43 15:36
19	08:34 16:15	07:33 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:06	04:50 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	08:32 16:17	07:31 17:25	06:19 18:25	05:57 20:29	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:03	08:00 15:57	08:45 15:36
21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:31	04:50 21:31	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:56	08:45 15:36
22	08:29 16:21	07:26 17:29	06:14 18:29	05:52 20:33	04:48 21:33	04:23 22:07	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:07	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	08:26 16:25	07:21 17:33	06:08 18:33	05:47 20:38	04:45 21:37	04:24 22:08	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:38	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:47 15:39
26	08:23 16:29	07:16 17:38	06:03 18:37	05:43 20:42	04:42 21:40	04:24 22:08	05:02 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 15:49	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:25 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:46	08:14 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:58 18:41	05:38 20:46	04:39 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 19:00	07:11 16:43	08:15 15:46	08:48 15:41
29	08:18 16:36		05:55 18:44	05:35 20:48	04:38 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:17 15:45	08:48 15:42
30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:46	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:54	07:15 16:39	08:19 15:44	08:48 15:43
31	08:14 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15		07:17 16:36		08:48 15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CE - Ezermali

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:31	04:34	04:28	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:21	08:23
	15:47	16:44	17:47	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:32	15:42
3	08:47	08:09	07:04	06:42	05:26	04:32	04:29	05:17	06:18	07:18	07:24	08:24
	15:48	16:47	17:49	19:54	20:56	21:52	22:05	21:22	20:07	18:47	16:30	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:30	05:19	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:58	21:53	22:05	21:20	20:04	18:44	16:28	15:40
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18	08:35	07:36	06:24	06:03	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:43
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	16:21	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:58	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:23	17:31	18:31	20:36	21:35	22:08	21:42	20:35	19:13	17:55	15:53	15:37
24	08:26	07:21	06:08	05:48	04:45	04:24	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:11	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:47
	16:27	17:36	18:35	20:40	21:38	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:43	04:42	04:24	05:02	06:02	07:04	07:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:49	15:39
27	08:22	07:14	06:00	05:40	04:40	04:25	05:04	06:04	07:06	07:08	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:07	21:35	20:25	19:03	16:46	15:47	15:40
28	08:20	07:11	05:58	05:38	04:39	04:26	05:05	06:06	07:08	07:11	08:16	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:38	04:26	05:07	06:08	07:10	07:13	08:17	08:48
	16:36		18:44	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:46	20:50	21:46	22:07	21:30	20:17	18:55	16:39	15:44	15:43
31	08:14		06:50		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CF - Ozolmuiža

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:12	07:09	06:47	05:31	04:34	04:28	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:21	08:23
	15:47	16:44	17:47	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:32	15:42
3	08:47	08:09	07:04	06:42	05:26	04:32	04:29	05:17	06:18	07:18	07:24	08:24
	15:48	16:47	17:49	19:54	20:56	21:52	22:05	21:22	20:07	18:46	16:30	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:30	05:19	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:58	21:53	22:05	21:19	20:04	18:44	16:28	15:40
5	08:47	08:05	06:59	06:36	05:22	04:30	04:31	05:21	06:22	07:22	07:28	08:27
	15:51	16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:02	18:41	16:25	15:39
6	08:46	08:03	06:56	06:34	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:39	16:23	15:39
7	08:45	08:00	06:53	06:31	05:17	04:28	04:33	05:24	06:26	07:26	07:32	08:30
	15:54	16:56	17:57	20:02	21:04	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:58	17:59	20:04	21:06	21:58	22:02	21:11	19:54	18:33	16:19	15:38
9	08:44	07:56	06:48	06:26	05:13	04:26	04:36	05:28	06:30	07:30	07:37	08:33
	15:57	17:00	18:02	20:06	21:08	21:59	22:01	21:09	19:51	18:31	16:17	15:37
10	08:43	07:54	06:46	06:23	05:11	04:26	04:37	05:30	06:32	07:33	07:39	08:35
	15:58	17:02	18:04	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:21	05:09	04:25	04:38	05:32	06:34	07:35	07:41	08:36
	16:00	17:04	18:06	20:11	21:12	22:01	21:59	21:04	19:46	18:25	16:13	15:36
12	08:42	07:50	06:40	06:18	05:07	04:25	04:39	05:34	06:36	07:37	07:43	08:37
	16:02	17:07	18:08	20:13	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:38	06:15	05:05	04:24	04:41	05:36	06:38	07:39	07:45	08:38
	16:03	17:09	18:10	20:15	21:16	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:42	05:38	06:40	07:41	07:47	08:39
	16:05	17:11	18:12	20:17	21:18	22:04	21:55	20:57	19:38	18:18	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:40	06:42	07:43	07:49	08:40
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:06	15:35
16	08:37	07:41	06:30	06:08	04:59	04:23	04:45	05:42	06:44	07:45	07:52	08:41
	16:09	17:16	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:13	16:04	15:35
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:44	06:46	07:47	07:54	08:42
	16:11	17:18	18:19	20:23	21:24	22:05	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:03	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:43
	16:13	17:20	18:21	20:25	21:26	22:06	21:50	20:48	19:27	18:08	16:01	15:36
19	08:34	07:33	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:51	07:58	08:44
	16:15	17:22	18:23	20:27	21:28	22:06	21:49	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:52	04:23	04:51	05:50	06:52	07:53	08:00	08:45
	16:17	17:25	18:25	20:29	21:30	22:07	21:47	20:43	19:21	18:03	15:57	15:36
21	08:31	07:29	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:56	08:02	08:45
	16:19	17:27	18:27	20:31	21:31	22:07	21:46	20:40	19:19	18:00	15:56	15:37
22	08:29	07:26	06:14	05:52	04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:58	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:23	17:31	18:31	20:35	21:35	22:07	21:42	20:35	19:13	17:55	15:53	15:37
24	08:26	07:21	06:08	05:48	04:45	04:24	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:11	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:47
	16:27	17:36	18:35	20:40	21:38	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:43	04:42	04:24	05:02	06:02	07:04	07:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:49	15:39
27	08:22	07:14	06:00	05:40	04:40	04:25	05:04	06:04	07:06	07:08	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:07	21:35	20:25	19:03	16:46	15:47	15:40
28	08:20	07:11	05:58	05:38	04:39	04:26	05:05	06:06	07:08	07:11	08:15	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:38	04:26	05:07	06:08	07:10	07:13	08:17	08:48
	16:36		18:44	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:46	20:50	21:46	22:07	21:30	20:17	18:54	16:39	15:44	15:43
31	08:14		06:50		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CG - Vasarnieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:08 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:10 16:44	07:06 17:46	06:44 19:51	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:47 15:47	08:08 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:40
4	08:47 15:51	08:06 16:57	07:01 17:59	06:38 19:56	05:23 20:58	04:30 21:53	04:29 22:05	05:18 21:19	06:20 20:04	07:20 18:43	07:26 16:27	08:26 15:39
5	08:47 15:50	08:04 16:50	06:58 17:52	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:51	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:30 20:02	05:16 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:35	07:32 16:21	08:30 15:37
8	08:45 15:54	07:58 16:57	06:50 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:18	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:25 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:16	08:33 15:36
10	08:43 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
11	08:42 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:12	08:36 15:35
12	08:42 16:01	07:49 17:06	06:40 18:07	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:14	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:16	05:02 21:18	04:23 22:04	04:41 21:55	05:38 20:57	06:40 19:37	07:40 18:17	07:47 16:07	08:39 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:34	07:43 18:15	07:49 16:05	08:41 15:35
16	08:37 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:03	08:41 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:04 20:23	04:56 21:24	04:22 22:06	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:42 15:35
18	08:35 16:12	07:36 17:19	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:06	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:04	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07	04:50 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:56	08:45 15:35
21	08:31 16:18	07:28 17:26	06:16 18:26	05:54 20:31	04:49 21:31	04:22 22:07	04:52 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:23 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:08	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:32	07:00 19:10	08:02 17:52	08:08 15:50	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:39	04:42 21:38	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:07	08:04 17:50	08:10 15:49	08:47 15:38
26	08:23 16:28	07:16 17:37	06:02 18:37	05:42 20:42	04:41 21:40	04:23 22:08	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:47	08:12 15:48	08:48 15:38
27	08:21 16:30	07:14 17:39	06:00 18:39	05:40 20:44	04:39 21:42	04:24 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 18:59	07:10 16:43	08:15 15:45	08:48 15:40
29	08:18 16:35		05:54 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:31	06:08 20:20	07:10 18:57	07:12 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:46	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CH - Ata ša

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:09 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:10 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:47 15:47	08:08 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:40
4	08:47 15:51	08:06 16:57	07:01 17:59	06:38 19:56	05:23 20:58	04:30 21:53	04:29 22:05	05:18 21:19	06:20 20:04	07:20 18:43	07:26 16:27	08:26 15:39
5	08:47 15:50	08:04 16:50	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:51	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:35	07:32 16:21	08:30 15:37
8	08:45 15:54	07:58 16:57	06:50 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:18	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:26 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:16	08:33 15:36
10	08:43 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:12	08:36 15:35
12	08:42 16:01	07:49 17:06	06:40 18:08	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:14	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:16	05:02 21:18	04:23 22:04	04:41 21:55	05:38 20:57	06:40 19:37	07:40 18:17	07:47 16:07	08:39 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:34	07:43 18:15	07:49 16:05	08:41 15:35
16	08:37 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:03	08:42 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:04 20:23	04:56 21:24	04:22 22:06	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:42 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:06	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:56	08:45 15:35
21	08:31 16:18	07:28 17:26	06:16 18:26	05:54 20:31	04:49 21:31	04:22 22:07	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:08	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:32	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:39	04:42 21:38	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:07	08:04 17:50	08:10 15:49	08:47 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:47	08:12 15:48	08:48 15:39
27	08:21 16:31	07:14 17:39	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 18:59	07:10 16:43	08:15 15:45	08:48 15:40
29	08:18 16:35		05:54 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:31	06:08 20:20	07:10 18:57	07:13 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:46	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: CI - Mui Ž nieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	08:12	07:09	16:43 (13)	06:47	18:34 (9)
	15:45	16:42	17:44	23	17:06 (13)	19:49
2	08:48	08:10	07:06	16:44 (13)	06:44	18:35 (9)
	15:46	16:44	17:46	22	17:06 (13)	19:52
3	08:47	08:09	07:03	16:44 (13)	06:41	18:39 (9)
	15:47	16:46	17:48	21	17:05 (13)	19:54
4	08:47	08:07	07:01	16:44 (13)	06:39	18:49 (9)
	15:48	16:48	17:50	19	17:03 (13)	19:56
5	08:47	08:05	06:58	16:46 (13)	06:36	18:49 (9)
	15:50	16:50	17:53	16	17:02 (13)	19:58
6	08:46	08:02	06:56	16:48 (13)	06:33	18:49 (9)
	15:51	16:53	17:55	12	17:00 (13)	20:00
7	08:46	08:00	06:53	16:48 (13)	06:31	18:49 (9)
	15:53	16:55	17:57		20:02	20:58
8	08:45	07:58	06:51	16:46 (13)	06:28	18:49 (9)
	15:54	16:57	17:59		20:04	20:58
9	08:44	07:56	06:48	16:46 (13)	06:25	18:49 (9)
	15:56	16:59	18:01		20:06	20:58
10	08:43	07:54	06:45	16:46 (13)	06:23	18:49 (9)
	15:58	17:02	18:03		20:08	20:58
11	08:43	07:52	06:43	16:46 (13)	06:20	18:49 (9)
	15:59	17:04	18:05		20:10	20:58
12	08:42	07:50	06:40	16:46 (13)	06:17	18:49 (9)
	16:01	17:06	18:08		20:12	20:58
13	08:41	07:47	06:37	16:46 (13)	06:15	18:49 (9)
	16:03	17:08	18:10		20:14	20:58
14	08:40	07:45	06:35	16:46 (13)	06:12	18:49 (9)
	16:04	17:11	18:12		20:17	20:58
15	08:39	07:43	06:32	16:46 (13)	06:10	18:49 (9)
	16:06	17:13	18:14		20:19	20:58
16	08:37	07:40	06:29	16:46 (13)	06:07	18:49 (9)
	16:08	17:15	18:16		20:21	20:58
17	08:36	07:38	06:27	16:46 (13)	06:05	18:49 (9)
	16:10	17:17	18:18	8	17:52 (9)	20:23
18	08:35	07:36	06:24	16:46 (13)	06:02	18:49 (9)
	16:12	17:20	18:20	14	17:55 (9)	20:25
19	08:34	07:33	06:21	16:46 (13)	05:59	18:49 (9)
	16:14	17:22	18:22	19	17:57 (9)	20:27
20	08:32	07:31	06:19	16:46 (13)	05:57	18:49 (9)
	16:16	17:24	18:24	22	17:58 (9)	20:29
21	08:31	07:28	06:16	16:46 (13)	05:54	18:49 (9)
	16:18	17:26	18:27	24	18:00 (9)	20:31
22	08:29	07:26	06:13	16:46 (13)	05:52	18:49 (9)
	16:20	17:29	18:29	26	18:00 (9)	20:33
23	08:28	07:24	06:11	16:46 (13)	05:49	18:49 (9)
	16:22	17:31	18:31	27	18:00 (9)	20:35
24	08:26	07:21	06:08	16:46 (13)	05:47	18:49 (9)
	16:24	17:33	18:33	28	18:00 (9)	20:37
25	08:25	07:19	06:05	16:46 (13)	05:45	18:49 (9)
	16:26	17:35	18:35	29	18:01 (9)	20:40
26	08:23	07:16	06:03	16:46 (13)	05:42	18:49 (9)
	16:28	17:37	18:37	28	18:00 (9)	20:42
27	08:21	07:14	06:00	16:46 (13)	05:40	18:49 (9)
	16:31	17:40	18:39	28	17:59 (9)	20:44
28	08:20	07:11	05:57	16:46 (13)	05:37	18:49 (9)
	16:33	17:42	18:41	27	17:59 (9)	20:46
29	08:18		05:55	16:46 (13)	05:35	18:49 (9)
	16:35		18:43	26	17:58 (9)	20:48
30	08:16		06:52	16:46 (13)	05:33	18:49 (9)
	16:37		19:45	25	18:57 (9)	20:50
31	08:14		06:49	16:46 (13)	05:30	18:49 (9)
	16:39		19:47	23	18:56 (9)	20:52
Potential sun hours	235	265	365	425	507	529
Total, worst case		163	467	46		
Sun reduction		0,24	0,39	0,48		
Oper. time red.		0,94	0,94	0,94		
Wind dir. red.		0,67	0,67	0,66		
Total reduction		0,15	0,24	0,30		
Total, real		25	113	14		

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: CI - Muižnieki

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	07:19	08:21
	22:06	21:26	20:12	18:51	16:34	15:42
2	04:28	05:14	06:16	07:16	07:21	08:23
	22:06	21:24	20:09	18:49	16:31	15:41
3	04:28	05:16	06:18	07:18	07:23	08:24
	22:05	21:22	20:07	18:46	16:29	15:40
4	04:29	05:18	06:20	07:20	07:26	08:26
	22:05	21:19	20:04	18:43	16:27	15:40
5	04:30	05:20	06:22	07:22	07:28	08:27
	22:04	21:17	20:01	18:41	16:25	15:39
6	04:31	05:22	06:24	07:24	07:30	08:29
	22:03	21:15	19:59	18:38	16:23	15:38
7	04:32	05:24	06:26	07:26	07:32	08:31
	22:03	21:13	19:56	18:36	16:21	15:37
8	04:34	05:26	06:28	07:28	17:23 (13)	07:34
	22:02	21:11	19:53	18:33	17:35 (13)	16:19
9	04:35	05:28	06:30	18:37 (9)	17:21 (13)	07:37
	22:01	21:09	19:51	18:38 (9)	17:36 (13)	16:17
10	04:36	05:30	06:32	18:31 (9)	17:20 (13)	07:39
	22:00	21:06	19:48	18:43 (9)	17:38 (13)	16:15
11	04:37	05:32	06:34	18:28 (9)	17:18 (13)	07:41
	21:59	21:04	19:45	18:45 (9)	17:39 (13)	16:13
12	04:39	05:34	06:36	18:26 (9)	17:17 (13)	07:43
	21:58	21:02	19:43	18:47 (9)	17:39 (13)	16:11
13	04:40	05:36	06:38	18:24 (9)	17:16 (13)	07:45
	21:57	20:59	19:40	18:48 (9)	17:39 (13)	16:09
14	04:41	05:38	06:40	18:23 (9)	17:15 (13)	07:47
	21:55	20:57	19:37	18:48 (9)	17:39 (13)	16:07
15	04:43	05:40	06:42	18:22 (9)	17:16 (13)	07:49
	21:54	20:55	19:35	18:49 (9)	17:40 (13)	16:05
16	04:44	05:42	06:44	18:21 (9)	17:15 (13)	07:52
	21:53	20:52	19:32	18:49 (9)	17:39 (13)	16:03
17	04:46	05:44	06:46	18:21 (9)	17:15 (13)	07:54
	21:52	20:50	19:29	18:49 (9)	17:39 (13)	16:02
18	04:47	05:46	06:48	18:20 (9)	17:15 (13)	07:56
	21:50	20:47	19:26	18:48 (9)	17:37 (13)	16:00
19	04:49	05:48	06:50	18:20 (9)	17:17 (13)	07:58
	21:49	20:45	19:24	18:48 (9)	17:35 (13)	15:58
20	04:51	05:50	06:52	18:20 (9)	17:17 (13)	08:00
	21:47	20:42	19:21	18:48 (9)	17:32 (13)	15:57
21	04:52	05:52	06:54	18:19 (9)	17:18 (13)	08:02
	21:46	20:40	19:18	18:46 (9)	17:30 (13)	15:55
22	04:54	05:54	06:56	18:19 (9)	17:20 (13)	08:04
	21:44	20:38	19:16	18:45 (9)	17:27 (13)	15:54
23	04:56	05:56	06:58	18:19 (9)	17:24 (13)	08:06
	21:42	20:35	19:13	18:44 (9)	17:25 (13)	15:52
24	04:57	05:58	07:00	18:20 (9)	08:08	08:47
	21:41	20:32	19:10	18:42 (9)	15:51	15:37
25	04:59	06:00	07:02	18:21 (9)	08:10	08:47
	21:39	20:30	19:08	18:39 (9)	15:49	15:38
26	05:01	06:02	07:04	18:23 (9)	08:12	08:48
	21:37	20:27	19:05	18:36 (9)	15:48	15:39
27	05:03	06:04	07:06	18:26 (9)	08:14	08:48
	21:35	20:25	19:02	18:34 (9)	15:47	15:39
28	05:05	06:06	07:08	07:10	08:15	08:48
	21:33	20:22	18:59	16:43	15:46	15:40
29	05:07	06:08	07:10	07:13	08:17	08:48
	21:32	20:20	18:57	16:40	15:44	15:41
30	05:08	06:10	07:12	07:15	08:19	08:48
	21:30	20:17	18:54	16:38	15:43	15:42
31	05:10	06:12	07:14	07:17	08:21	08:48
	21:28	20:14	18:52	16:36	15:41	15:43
Potential sun hours	530	470	385	324	248	216
Total, worst case			406	282		
Sun reduction			0,43	0,27		
Oper. time red.			0,94	0,94		
Wind dir. red.			0,66	0,67		
Total reduction			0,27	0,17		
Total, real			108	48		

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Shadow receptor: CJ - Rijasvecumi

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Flicker curtailment applied to this receptor

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Reference year for calendar

2025

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

January			February			March			April			May			June		
1	08:48		14:29 (11)	08:12		14:31 (11)	07:09		16:23 (10)	06:47		05:30			04:33		
	15:45	13	14:42 (11)	16:42	17	14:48 (11)	17:44	5	16:28 (10)	19:50		20:52			21:49		
2	08:48		14:30 (11)	08:11		14:29 (11)	07:06		16:22 (10)	06:44		05:28			04:32		
	15:46	13	14:43 (11)	16:44	17	14:46 (11)	17:46	5	16:27 (10)	19:52		20:54			21:51		
3	08:48		14:30 (11)	08:09		14:28 (11)	07:04		16:20 (10)	06:41		05:26			04:31		
	15:47	13	14:43 (11)	16:46	15	14:43 (11)	17:48	5	16:25 (10)	19:54		20:56			21:52		
4	08:47		14:31 (11)	08:07		14:33 (11)	07:01		16:18 (10)	06:39		05:23			04:30		
	15:48	14	14:45 (11)	16:48	6	14:39 (11)	17:50	4	16:22 (10)	19:56		20:58			21:54		
5	08:47		14:32 (11)	08:05			06:58		16:16 (10)	06:36		05:21			04:29		
	15:50	13	14:45 (11)	16:50			17:53	3	16:19 (10)	19:58		21:00			21:55		
6	08:46		14:32 (11)	08:03			06:56			06:33		05:19			04:28		
	15:51	13	14:45 (11)	16:53			17:55			20:00		21:02			21:56		
7	08:46		14:32 (11)	08:00			06:53			06:31		05:17			04:27		
	15:53	14	14:46 (11)	16:55			17:57			20:02		21:04			21:57		
8	08:45		14:33 (11)	07:58		16:18 (10)	06:51			06:28		05:14			04:26		
	15:54	13	14:46 (11)	16:57	2	16:20 (10)	17:59			20:04		21:06			21:58		
9	08:44		14:33 (11)	07:56		16:20 (10)	06:48			06:25		05:12			04:26		
	15:56	14	14:47 (11)	16:59	4	16:24 (10)	18:01			20:06		21:08			21:59		
10	08:43		14:34 (11)	07:54		16:21 (10)	06:45			06:23		05:10			04:25		
	15:57	14	14:48 (11)	17:02	4	16:25 (10)	18:03			20:08		21:10			22:00		
11	08:43		14:35 (11)	07:52		16:23 (10)	06:43			06:20		05:08			04:24		
	15:59	13	14:48 (11)	17:04	4	16:27 (10)	18:05			20:10		21:12			22:01		
12	08:42		14:35 (11)	07:50		16:24 (10)	06:40			06:17		05:06			04:24		
	16:01	14	14:49 (11)	17:06	5	16:29 (10)	18:08			20:12		21:14			22:02		
13	08:41		14:36 (11)	07:47		16:25 (10)	06:37			06:15		05:04			04:23		
	16:03	14	14:50 (11)	17:08	5	16:30 (10)	18:10			20:15		21:16			22:03		
14	08:40		14:36 (11)	07:45		16:26 (10)	06:35			06:12		05:02			04:23		
	16:04	14	14:50 (11)	17:11	5	16:31 (10)	18:12			20:17		21:18			22:04		
15	08:39		14:36 (11)	07:43		16:26 (10)	06:32			06:10		05:00			04:23		
	16:06	15	14:51 (11)	17:13	6	16:32 (10)	18:14			20:19		21:20			22:04		
16	08:38		14:36 (11)	07:40		16:27 (10)	06:29			06:07		04:58			04:22		
	16:08	14	14:50 (11)	17:15	6	16:33 (10)	18:16			20:21		21:22			22:05		
17	08:36		14:37 (11)	07:38		16:27 (10)	06:27			06:05		04:56			04:22		
	16:10	14	14:51 (11)	17:17	6	16:33 (10)	18:18			20:23		21:24			22:06		
18	08:35		14:37 (11)	07:36		16:28 (10)	06:24			06:02		04:54			04:22		
	16:12	14	14:51 (11)	17:20	6	16:34 (10)	18:20			20:25		21:26			22:06		
19	08:34		14:38 (11)	07:33		16:28 (10)	06:21			05:59		04:53			04:22		
	16:14	14	14:52 (11)	17:22	5	16:33 (10)	18:22			20:27		21:28			22:07		
20	08:32		14:37 (11)	07:31		16:28 (10)	06:19			05:57		04:51			04:22		
	16:16	15	14:52 (11)	17:24	6	16:34 (10)	18:24			20:29		21:30			22:07		
21	08:31		14:37 (11)	07:29		16:28 (10)	06:16			05:54		04:49			04:22		
	16:18	15	14:52 (11)	17:26	6	16:34 (10)	18:27			20:31		21:32			22:07		
22	08:30		14:38 (11)	07:26		16:28 (10)	06:13			05:52		04:47			04:22		
	16:20	15	14:53 (11)	17:29	6	16:34 (10)	18:29			20:33		21:33			22:08		
23	08:28		14:38 (11)	07:24		16:28 (10)	06:11			05:49		04:46			04:23		
	16:22	14	14:52 (11)	17:31	5	16:33 (10)	18:31			20:35		21:35			22:08		
24	08:26		14:37 (11)	07:21		16:27 (10)	06:08			05:47		04:44			04:23		
	16:24	15	14:52 (11)	17:33	6	16:33 (10)	18:33			20:37		21:37			22:08		
25	08:25		14:37 (11)	07:19		16:27 (10)	06:05			05:44		04:43			04:23		
	16:26	15	14:52 (11)	17:35	6	16:33 (10)	18:35			20:40		21:39			22:08		
26	08:23		14:36 (11)	07:16		16:26 (10)	06:03			05:42		04:41			04:24		
	16:28	16	14:52 (11)	17:37	6	16:32 (10)	18:37			20:42		21:40			22:08		
27	08:22		14:36 (11)	07:14		16:26 (10)	06:00			05:40		04:40			04:24		
	16:31	15	14:51 (11)	17:40	5	16:31 (10)	18:39			20:44		21:42			22:08		
28	08:20		14:35 (11)	07:11		16:24 (10)	05:57			05:37		04:38			04:25		
	16:33	16	14:51 (11)	17:42	6	16:30 (10)	18:41			20:46		21:43			22:07		
29	08:18		14:35 (11)				05:55			05:35		04:37			04:25		
	16:35	15	14:50 (11)				18:43			20:48		21:45			22:07		
30	08:16		14:34 (11)				06:52			05:32		04:36			04:26		
	16:37	16	14:50 (11)				19:45			20:50		21:47			22:07		
31	08:14		14:33 (11)				06:49					04:34					
	16:39	16	14:49 (11)				19:47					21:48					
Potential sun hours	235			265			365			425		507			529		
Total, worst case		443			165			22									
Sun reduction		0,15			0,24			0,39									
Oper. time red.		0,94			0,94			0,94									
Wind dir. red.		0,67			0,67			0,68									
Total reduction		0,10			0,15			0,25									
Total, real		43			25			5									

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Shadow receptor: CJ - Rijasvecumi

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Flicker curtailment applied to this receptor

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Reference year for calendar

2025

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	07:19	15:52 (10)
	22:06	21:26	20:12	18:51	16:34	4 15:56 (10)
2	04:27	05:14	06:16	07:16	07:21	15:50 (10)
	22:06	21:24	20:09	18:49	16:31	3 15:53 (10)
3	04:28	05:16	06:18	07:18	07:24	15:48 (10)
	22:05	21:22	20:07	18:46	16:29	3 15:51 (10)
4	04:29	05:18	06:20	07:20	07:26	15:40
	22:05	21:19	20:04	18:43	16:27	15:39
5	04:30	05:20	06:22	07:22	07:28	15:39
	22:04	21:17	20:01	18:41	16:25	15:39
6	04:31	05:22	06:24	07:24	07:30	15:39
	22:04	21:15	19:59	18:38	16:23	15:38
7	04:32	05:24	06:26	07:26	07:32	15:38
	22:03	21:13	19:56	18:36	16:21	15:37
8	04:34	05:26	06:28	07:28	07:34	15:37
	22:02	21:11	19:53	18:33	16:19	11 14:12 (11)
9	04:35	05:28	06:30	07:30	07:37	13:58 (11)
	22:01	21:09	19:51	18:30	16:50 (10)	17 14:15 (11)
10	04:36	05:30	06:32	07:32	07:39	14:01 (11)
	22:00	21:06	19:48	18:28	16:57 (10)	17 14:18 (11)
11	04:37	05:32	06:34	07:34	07:41	14:03 (11)
	21:59	21:04	19:45	18:25	16:59 (10)	16 14:19 (11)
12	04:39	05:34	06:36	07:36	07:43	14:04 (11)
	21:58	21:02	19:43	18:22	17:01 (10)	16 14:20 (11)
13	04:40	05:36	06:38	07:39	07:45	14:06 (11)
	21:57	20:59	19:40	18:20	17:02 (10)	16 14:22 (11)
14	04:41	05:38	06:40	07:41	07:47	14:07 (11)
	21:56	20:57	19:37	18:17	17:02 (10)	16 14:23 (11)
15	04:43	05:40	06:42	07:43	07:49	14:09 (11)
	21:54	20:55	19:35	18:15	17:04 (10)	16 14:24 (11)
16	04:44	05:42	06:44	07:45	07:52	14:09 (11)
	21:53	20:52	19:32	18:12	17:04 (10)	16 14:24 (11)
17	04:46	05:44	06:46	07:47	07:54	14:10 (11)
	21:52	20:50	19:29	18:10	17:04 (10)	16 14:25 (11)
18	04:47	05:46	06:48	07:49	07:56	14:11 (11)
	21:50	20:47	19:26	18:07	17:04 (10)	16 14:26 (11)
19	04:49	05:48	06:50	07:51	07:58	14:11 (11)
	21:49	20:45	19:24	18:05	17:05 (10)	16 14:26 (11)
20	04:51	05:50	06:52	07:53	08:00	14:12 (11)
	21:47	20:43	19:21	18:02	17:05 (10)	16 14:27 (11)
21	04:52	05:52	06:54	07:55	08:02	14:13 (11)
	21:46	20:40	19:18	18:00	17:04 (10)	16 14:28 (11)
22	04:54	05:54	06:56	07:58	08:04	14:13 (11)
	21:44	20:38	19:16	17:57	17:04 (10)	16 14:28 (11)
23	04:56	05:56	06:58	08:00	08:06	14:14 (11)
	21:42	20:35	19:13	17:55	17:04 (10)	16 14:28 (11)
24	04:57	05:58	07:00	08:02	08:08	14:14 (11)
	21:41	20:33	19:10	17:52	17:03 (10)	16 14:28 (11)
25	04:59	06:00	07:02	08:04	08:10	14:15 (11)
	21:39	20:30	19:08	17:50	17:03 (10)	16 14:29 (11)
26	05:01	06:02	07:04	08:06	08:12	14:15 (11)
	21:37	20:27	19:05	16:48	16:03 (10)	16 14:30 (11)
27	05:03	06:04	07:06	08:08	08:14	14:16 (11)
	21:35	20:25	19:02	16:45	16:02 (10)	16 14:30 (11)
28	05:05	06:06	07:08	08:10	08:16	14:16 (11)
	21:33	20:22	18:59	16:43	16:00 (10)	16 14:30 (11)
29	05:06	06:08	07:10	08:13	08:17	14:16 (11)
	21:32	20:20	18:57	16:40	16:00 (10)	16 14:30 (11)
30	05:08	06:10	07:12	08:15	08:19	14:16 (11)
	21:30	20:17	18:54	16:38	15:59 (10)	16 14:30 (11)
31	05:10	06:12	07:14	08:17	08:21	14:16 (11)
	21:28	20:15	18:51	16:36	15:58 (10)	16 14:42 (11)
Potential sun hours	530	470	385	324	248	216
Total, worst case				126	352	401
Sun reduction				0,27	0,09	0,09
Oper. time red.				0,94	0,94	0,94
Wind dir. red.				0,68	0,67	0,67
Total reduction				0,17	0,06	0,05
Total, real				22	20	22

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: CK - Kalvani

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:12 16:42	15:17 (9) 17:44	07:09 17:44	06:47 19:50	05:30 20:52
2	08:48 15:46	08:11 16:44	15:18 (9) 17:46	07:06 19:52	06:44 20:54	21:50 21:51
3	08:48 15:47	08:09 16:46	15:19 (9) 17:48	07:04 19:54	06:41 20:56	04:31 21:52
4	08:47 15:48	08:07 16:48	15:20 (9) 17:50	07:01 19:56	06:39 20:58	04:30 21:54
5	08:47 15:50	08:05 16:50	15:23 (9) 17:53	06:58 19:58	06:36 21:00	04:29 21:55
6	08:46 15:51	08:03 16:53	15:28 (9) 17:55	06:56 20:00	06:33 21:02	04:28 21:56
7	08:46 15:53	08:00 16:55	15:30 (9) 17:57	06:53 20:02	06:31 21:04	04:27 21:57
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:14 21:06	04:26 21:58
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:26 21:59
10	08:44 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00
11	08:43 15:59	15:17 (9) 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01
12	08:42 16:01	15:16 (9) 17:06	06:40 18:08	06:17 20:12	05:06 21:14	04:24 22:02
13	08:41 16:03	15:23 (9) 17:08	06:37 18:10	06:15 20:15	05:04 21:16	04:23 22:03
14	08:40 16:04	15:25 (9) 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04
15	08:39 16:06	15:26 (9) 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04
16	08:38 16:08	15:14 (9) 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05
17	08:36 16:10	15:23 (9) 17:17	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06
18	08:35 16:12	15:13 (9) 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06
19	08:34 16:14	15:22 (9) 17:22	06:21 18:22	05:59 20:27	04:53 21:28	04:22 22:07
20	08:32 16:16	15:13 (9) 17:31	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07
21	08:31 16:18	15:12 (9) 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:07
22	08:30 16:20	15:21 (9) 17:26	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:08
23	08:28 16:22	15:22 (9) 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:23 22:08
24	08:26 16:24	15:13 (9) 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08
25	08:25 16:26	15:21 (9) 17:35	06:05 18:35	05:45 20:40	04:43 21:39	04:23 22:08
26	08:23 16:28	15:13 (9) 17:16	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08
27	08:22 16:31	15:21 (9) 17:37	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08
28	08:20 16:33	15:13 (9) 17:40	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07
29	08:18 16:35	15:21 (9) 17:42	05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07
30	08:16 16:37	15:22 (9) 17:45	06:52 19:45	05:33 20:50	04:36 21:47	04:26 22:07
31	08:14 16:39	15:16 (9) 15:23 (9)	06:49 19:47	20:50 21:48	04:34 21:48	22:07
Potential sun hours	235	265	365	425	507	529
Total, worst case	177	33				
Sun reduction	0,15	0,24				
Oper. time red.	0,94	0,94				
Wind dir. red.	0,66	0,66				
Total reduction	0,10	0,15				
Total, real	17	5				

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: CK - Kalvani

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14	07:19	08:21 14:58 (9)
	22:06	21:26	20:12	18:51	16:34	15:42 6 15:04 (9)
2	04:27	05:14	06:16	07:16	07:21	08:23 15:00 (9)
	22:06	21:24	20:09	18:49	16:31	15:41 3 15:03 (9)
3	04:28	05:16	06:18	07:18	07:24	08:24
	22:05	21:22	20:07	18:46	16:29	15:40
4	04:29	05:18	06:20	07:20	07:26	08:26
	22:05	21:20	20:04	18:43	16:27	15:39
5	04:30	05:20	06:22	07:22	07:28	08:28
	22:04	21:17	20:01	18:41	16:25	15:39
6	04:31	05:22	06:24	07:24	07:30	14:54 (9) 08:29
	22:04	21:15	19:59	18:38	16:23	5 14:59 (9) 15:38
7	04:32	05:24	06:26	07:26	07:32	14:51 (9) 08:31
	22:03	21:13	19:56	18:36	16:21	6 14:57 (9) 15:37
8	04:34	05:26	06:28	07:28	07:34	14:50 (9) 08:32
	22:02	21:11	19:53	18:33	16:19	6 14:56 (9) 15:37
9	04:35	05:28	06:30	07:30	07:37	14:49 (9) 08:33
	22:01	21:09	19:51	18:30	16:17	6 14:55 (9) 15:36
10	04:36	05:30	06:32	07:32	07:39	14:48 (9) 08:35
	22:00	21:06	19:48	18:28	16:15	7 14:55 (9) 15:36
11	04:37	05:32	06:34	07:34	07:41	14:47 (9) 08:36
	21:59	21:04	19:45	18:25	16:13	7 14:54 (9) 15:35
12	04:39	05:34	06:36	07:36	07:43	14:46 (9) 08:37
	21:58	21:02	19:43	18:22	16:11	8 14:54 (9) 15:35
13	04:40	05:36	06:38	07:39	07:45	14:47 (9) 08:38
	21:57	20:59	19:40	18:20	16:09	7 14:54 (9) 15:35
14	04:41	05:38	06:40	07:41	07:47	14:46 (9) 08:40
	21:56	20:57	19:37	18:17	16:07	8 14:54 (9) 15:35
15	04:43	05:40	06:42	07:43	07:49	14:47 (9) 08:41
	21:54	20:55	19:35	18:15	16:05	7 14:54 (9) 15:35
16	04:44	05:42	06:44	07:45	07:52	14:46 (9) 08:42
	21:53	20:52	19:32	18:12	16:03	8 14:54 (9) 15:35
17	04:46	05:44	06:46	07:47	07:54	14:46 (9) 08:43
	21:52	20:50	19:29	18:10	16:02	8 14:54 (9) 15:35
18	04:47	05:46	06:48	07:49	07:56	14:47 (9) 08:43
	21:50	20:47	19:26	18:07	16:00	8 14:55 (9) 15:35
19	04:49	05:48	06:50	07:51	07:58	14:47 (9) 08:44
	21:49	20:45	19:24	18:05	15:58	8 14:55 (9) 15:35
20	04:51	05:50	06:52	07:53	08:00	14:47 (9) 08:45
	21:47	20:43	19:21	18:02	15:57	9 14:56 (9) 15:35
21	04:52	05:52	06:54	07:55	08:02	14:48 (9) 08:46
	21:46	20:40	19:18	18:00	15:55	9 14:57 (9) 15:36
22	04:54	05:54	06:56	07:58	08:04	14:49 (9) 08:46
	21:44	20:38	19:16	17:57	15:53	8 14:57 (9) 15:36
23	04:56	05:56	06:58	08:00	08:06	14:49 (9) 08:47
	21:42	20:35	19:13	17:55	15:52	9 14:58 (9) 15:37
24	04:57	05:58	07:00	08:02	08:08	14:50 (9) 08:47
	21:41	20:33	19:10	17:52	15:51	9 14:59 (9) 15:37
25	04:59	06:00	07:02	08:04	08:10	14:51 (9) 08:48
	21:39	20:30	19:08	17:50	15:49	10 15:01 (9) 15:38
26	05:01	06:02	07:04	07:06	08:12	14:52 (9) 08:48
	21:37	20:27	19:05	16:48	15:48	10 15:02 (9) 15:39
27	05:03	06:04	07:06	07:08	08:14	14:53 (9) 08:48
	21:35	20:25	19:02	16:45	15:47	10 15:03 (9) 15:39
28	05:05	06:06	07:08	07:10	08:16	14:54 (9) 08:48
	21:33	20:22	18:59	16:43	15:45	11 15:05 (9) 15:40
29	05:06	06:08	07:10	07:13	08:17	14:55 (9) 08:48
	21:32	20:20	18:57	16:40	15:44	12 15:07 (9) 15:41
30	05:08	06:10	07:12	07:15	08:19	14:56 (9) 08:48
	21:30	20:17	18:54	16:38	15:43	9 15:05 (9) 15:42
31	05:10	06:12		07:17		08:48
	21:28	20:15		16:36		15:43
Potential sun hours	530	470	385	324	248	216
Total, worst case					205	9
Sun reduction					0,09	0,09
Oper. time red.					0,94	0,94
Wind dir. red.					0,66	0,66
Total reduction					0,06	0,05
Total, real					12	0

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: CL - Uzkalnini

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Reference year for calendar

2025

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:12	07:09	06:46	18:49 (11)	05:30	04:33	04:27	05:12	06:14	07:14	08:21
	15:45	16:41	17:44	19:49	19:14 (11)	20:52	21:49	22:06	21:26	20:12	18:51	16:34
2	08:48	08:10	07:06	06:44	18:49 (11)	05:28	04:32	04:27	05:14	06:16	07:16	08:23
	15:46	16:44	17:46	19:52	19:13 (11)	20:54	21:51	22:06	21:24	20:09	18:49	16:31
3	08:47	08:08	07:03	06:41	18:50 (11)	05:26	04:31	04:28	05:16	06:18	07:18	08:24
	15:47	16:46	17:48	19:54	19:13 (11)	20:56	21:52	22:05	21:21	20:07	18:46	16:29
4	08:47	08:06	07:01	06:38	18:50 (11)	05:23	04:30	04:29	05:18	06:20	07:20	08:26
	15:48	16:48	17:50	19:56	19:11 (11)	20:58	21:53	22:05	21:19	20:04	18:43	16:27
5	08:47	08:04	06:58	06:36	18:50 (11)	05:21	04:29	04:30	05:20	06:22	18:53 (11)	07:22
	15:50	16:50	17:53	19:58	19:10 (11)	21:00	21:55	22:04	21:17	20:01	19:00 (11)	16:25
6	08:46	08:02	06:56	06:33	18:52 (11)	05:19	04:28	04:31	05:22	06:24	18:49 (11)	07:24
	15:51	16:53	17:55	20:00	19:08 (11)	21:02	21:56	22:03	21:15	19:59	19:03 (11)	16:23
7	08:46	08:00	06:53	06:31	18:54 (11)	05:17	04:27	04:32	05:24	06:26	18:47 (11)	07:26
	15:53	16:55	17:57	20:02	19:05 (11)	21:04	21:57	22:03	21:13	19:56	19:04 (11)	16:21
8	08:45	07:58	06:50	06:28	18:54 (11)	05:14	04:26	04:33	05:26	06:28	18:45 (11)	07:28
	15:54	16:57	17:59	20:04	19:05 (11)	21:06	21:58	22:02	21:11	19:53	19:05 (11)	16:19
9	08:44	07:56	06:48	06:25	18:54 (11)	05:12	04:26	04:35	05:28	06:30	18:44 (11)	07:30
	15:56	16:59	18:01	20:06	19:06 (11)	21:08	21:59	22:01	21:08	19:51	19:06 (11)	16:16
10	08:43	07:54	06:45	06:23	18:54 (11)	05:10	04:25	04:36	05:30	06:32	18:43 (11)	07:32
	15:57	17:02	18:03	20:08	19:07 (11)	21:10	22:00	22:00	21:06	19:48	19:06 (11)	16:14
11	08:43	07:52	06:43	06:20	18:54 (11)	05:08	04:24	04:37	05:32	06:34	18:42 (11)	07:34
	15:59	17:04	18:05	20:10	19:08 (11)	21:12	22:01	21:59	21:04	19:45	19:07 (11)	16:13
12	08:42	07:49	06:40	06:17	18:54 (11)	05:06	04:24	04:39	05:34	06:36	18:41 (11)	07:36
	16:01	17:06	18:08	20:12	19:09 (11)	21:14	22:02	21:58	21:02	19:43	19:07 (11)	16:11
13	08:41	07:47	06:37	06:15	18:54 (11)	05:04	04:23	04:40	05:36	06:38	18:41 (11)	07:38
	16:03	17:08	18:10	20:14	19:10 (11)	21:16	22:03	21:57	20:59	19:40	19:06 (11)	16:09
14	08:40	07:45	06:35	06:12	18:54 (11)	05:02	04:23	04:41	05:38	06:40	18:41 (11)	07:41
	16:04	17:11	18:12	20:17	19:11 (11)	21:18	22:04	21:55	20:57	19:37	19:06 (11)	16:07
15	08:39	07:43	06:32	06:10	18:54 (11)	05:00	04:23	04:43	05:40	06:42	18:41 (11)	07:43
	16:06	17:13	18:14	20:19	19:12 (11)	21:20	22:04	21:54	20:55	19:34	19:05 (11)	16:05
16	08:37	07:40	06:29	06:07	18:54 (11)	04:58	04:22	04:44	05:42	06:44	18:41 (11)	07:45
	16:08	17:15	18:16	20:21	19:13 (11)	21:22	22:05	21:53	20:52	19:32	19:04 (11)	16:03
17	08:36	07:38	06:27	06:04	18:54 (11)	04:56	04:22	04:46	05:44	06:46	18:41 (11)	07:47
	16:10	17:17	18:18	20:23	19:14 (11)	21:24	22:06	21:51	20:50	19:29	19:02 (11)	16:01
18	08:35	07:36	06:24	06:02	18:54 (11)	04:54	04:22	04:47	05:46	06:48	18:42 (11)	07:49
	16:12	17:20	18:20	20:25	19:15 (11)	21:26	22:06	21:50	20:47	19:26	18:59 (11)	16:00
19	08:34	07:33	06:21	05:59	18:54 (11)	04:53	04:22	04:49	05:48	06:50	18:42 (11)	07:51
	16:14	17:22	18:22	20:27	19:16 (11)	21:28	22:06	21:49	20:45	19:24	18:55 (11)	15:58
20	08:32	07:31	06:19	05:57	18:54 (11)	04:51	04:22	04:51	05:50	06:52	18:44 (11)	07:53
	16:16	17:24	18:24	20:29	19:17 (11)	21:30	22:07	21:47	20:42	19:21	18:53 (11)	15:57
21	08:31	07:28	06:16	05:54	18:54 (11)	04:49	04:22	04:52	05:52	06:54	18:47 (11)	07:55
	16:18	17:26	18:26	20:31	19:18 (11)	21:31	22:07	21:46	20:40	19:18	18:50 (11)	15:55
22	08:29	07:26	06:13	05:52	18:54 (11)	04:47	04:22	04:54	05:54	06:56	18:47 (11)	07:57
	16:20	17:28	18:29	20:33	19:19 (11)	21:33	22:07	21:44	20:37	19:16	18:51 (11)	15:53
23	08:28	07:24	06:11	05:49	18:54 (11)	04:46	04:23	04:56	05:56	06:58	18:47 (11)	07:59
	16:22	17:31	18:31	20:35	19:20 (11)	21:35	22:08	21:42	20:35	19:13	18:52 (11)	15:52
24	08:26	07:21	06:08	05:47	18:54 (11)	04:44	04:23	04:57	05:58	07:00	18:47 (11)	07:59
	16:24	17:33	18:33	20:37	19:21 (11)	21:37	22:08	21:41	20:32	19:10	18:53 (11)	15:51
25	08:25	07:19	06:05	05:44	18:54 (11)	04:43	04:23	04:59	06:00	07:02	18:47 (11)	07:59
	16:26	17:35	18:35	20:39	19:22 (11)	21:38	22:08	21:39	20:30	19:08	18:54 (11)	15:49
26	08:23	07:16	06:03	05:42	18:54 (11)	04:41	04:24	05:01	06:02	07:04	18:47 (11)	07:59
	16:28	17:37	18:37	20:42	19:23 (11)	21:40	22:08	21:37	20:27	19:05	18:54 (11)	15:48
27	08:21	07:14	06:00	05:40	18:54 (11)	04:40	04:24	05:03	06:04	07:06	18:47 (11)	07:59
	16:31	17:39	18:39	20:44	19:24 (11)	21:42	22:07	21:35	20:25	19:02	18:54 (11)	15:47
28	08:20	07:11	05:57	05:37	18:54 (11)	04:38	04:25	05:05	06:06	07:08	18:47 (11)	07:59
	16:33	17:42	18:41	20:46	19:25 (11)	21:43	22:07	21:33	20:22	18:59	18:54 (11)	15:45
29	08:18	07:05	05:55	05:35	18:54 (11)	04:37	04:25	05:06	06:08	07:10	18:47 (11)	07:59
	16:35	17:44	18:43	20:48	19:26 (11)	21:45	22:07	21:31	20:20	18:57	18:54 (11)	15:44
30	08:16	07:02	05:52	05:32	18:54 (11)	04:36	04:26	05:08	06:10	07:12	18:47 (11)	07:59
	16:37	17:46	18:45	20:50	19:27 (11)	21:46	22:07	21:30	20:17	18:54	18:54 (11)	15:43
31	08:14	06:59	05:49	05:30	18:54 (11)	04:34	04:24	05:10	06:12	07:14	18:47 (11)	07:59
	16:39	17:47	18:46	20:51	19:28 (11)	21:48	22:08	21:28	20:14	18:54	18:54 (11)	15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	314	324	216
Total, worst case			167	140						314		
Sun reduction			0,39	0,48						0,43		
Oper. time red.			0,94	0,94						0,94		
Wind dir. red.			0,66	0,66						0,66		
Total reduction			0,24	0,30						0,27		
Total, real			40	42						83		

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CM - Cakstes

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:12	07:08	06:46	05:30	04:33	04:27	05:12	06:14	07:14	07:19	08:21
	15:45	16:41	17:44	19:49	20:52	21:49	22:06	21:26	20:12	18:51	16:34	15:42
2	08:48	08:10	07:06	06:44	05:28	04:32	04:27	05:14	06:16	07:16	07:21	08:22
	15:46	16:44	17:46	19:51	20:54	21:51	22:06	21:23	20:09	18:49	16:31	15:41
3	08:47	08:08	07:03	06:41	05:25	04:31	04:28	05:16	06:18	07:18	07:23	08:24
	15:47	16:46	17:48	19:54	20:56	21:52	22:05	21:21	20:06	18:46	16:29	15:40
4	08:47	08:06	07:01	06:38	05:23	04:30	04:29	05:18	06:20	07:20	07:26	08:26
	15:48	16:48	17:50	19:56	20:58	21:53	22:05	21:19	20:04	18:43	16:27	15:39
5	08:47	08:04	06:58	06:36	05:21	04:29	04:30	05:20	06:22	07:22	07:28	08:27
	15:50	16:50	17:52	19:58	21:00	21:55	22:04	21:17	20:01	18:41	16:25	15:39
6	08:46	08:02	06:56	06:33	05:19	04:28	04:31	05:22	06:24	07:24	07:30	08:29
	15:51	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:38	16:23	15:38
7	08:45	08:00	06:53	06:30	05:17	04:27	04:32	05:24	06:26	07:26	07:32	08:30
	15:53	16:55	17:57	20:02	21:04	21:57	22:03	21:13	19:56	18:35	16:21	15:37
8	08:45	07:58	06:50	06:28	05:14	04:26	04:33	05:26	06:28	07:28	07:34	08:32
	15:54	16:57	17:59	20:04	21:06	21:58	22:02	21:11	19:53	18:33	16:18	15:37
9	08:44	07:56	06:48	06:25	05:12	04:26	04:35	05:28	06:30	07:30	07:36	08:33
	15:56	16:59	18:01	20:06	21:08	21:59	22:01	21:08	19:51	18:30	16:16	15:36
10	08:43	07:54	06:45	06:23	05:10	04:25	04:36	05:30	06:32	07:32	07:39	08:35
	15:57	17:02	18:03	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:14	15:36
11	08:42	07:52	06:43	06:20	05:08	04:24	04:37	05:32	06:34	07:34	07:41	08:36
	15:59	17:04	18:05	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:12	15:35
12	08:42	07:49	06:40	06:17	05:06	04:24	04:38	05:34	06:36	07:36	07:43	08:37
	16:01	17:06	18:07	20:12	21:14	22:02	21:58	21:02	19:43	18:22	16:11	15:35
13	08:41	07:47	06:37	06:15	05:04	04:23	04:40	05:36	06:38	07:38	07:45	08:38
	16:03	17:08	18:10	20:14	21:16	22:03	21:57	20:59	19:40	18:20	16:09	15:35
14	08:40	07:45	06:35	06:12	05:02	04:23	04:41	05:38	06:40	07:40	07:47	08:39
	16:04	17:11	18:12	20:16	21:18	22:04	21:55	20:57	19:37	18:17	16:07	15:35
15	08:38	07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:49	08:40
	16:06	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:34	18:15	16:05	15:35
16	08:37	07:40	06:29	06:07	04:58	04:22	04:44	05:42	06:44	07:45	07:51	08:41
	16:08	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:03	15:35
17	08:36	07:38	06:27	06:04	04:56	04:22	04:46	05:44	06:46	07:47	07:53	08:42
	16:10	17:17	18:18	20:23	21:24	22:05	21:51	20:50	19:29	18:10	16:01	15:35
18	08:35	07:36	06:24	06:02	04:54	04:22	04:47	05:46	06:48	07:49	07:56	08:43
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:47	19:26	18:07	16:00	15:35
19	08:34	07:33	06:21	05:59	04:52	04:22	04:49	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:22	20:27	21:28	22:06	21:49	20:45	19:24	18:05	15:58	15:35
20	08:32	07:31	06:19	05:57	04:51	04:22	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:24	20:29	21:29	22:07	21:47	20:42	19:21	18:02	15:56	15:35
21	08:31	07:28	06:16	05:54	04:49	04:22	04:52	05:52	06:54	07:55	08:02	08:45
	16:18	17:26	18:26	20:31	21:31	22:07	21:45	20:40	19:18	18:00	15:55	15:36
22	08:29	07:26	06:13	05:52	04:47	04:22	04:54	05:54	06:56	07:57	08:04	08:46
	16:20	17:28	18:29	20:33	21:33	22:07	21:44	20:37	19:16	17:57	15:53	15:36
23	08:28	07:23	06:11	05:49	04:46	04:22	04:56	05:56	06:58	08:00	08:06	08:46
	16:22	17:31	18:31	20:35	21:35	22:07	21:42	20:35	19:13	17:55	15:52	15:37
24	08:26	07:21	06:08	05:47	04:44	04:23	04:57	05:58	07:00	08:02	08:08	08:47
	16:24	17:33	18:33	20:37	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:37
25	08:25	07:19	06:05	05:44	04:42	04:23	04:59	06:00	07:02	08:04	08:10	08:47
	16:26	17:35	18:35	20:39	21:38	22:08	21:39	20:30	19:07	17:50	15:49	15:38
26	08:23	07:16	06:03	05:42	04:41	04:24	05:01	06:02	07:04	07:06	08:12	08:48
	16:28	17:37	18:37	20:41	21:40	22:08	21:37	20:27	19:05	16:47	15:48	15:39
27	08:21	07:14	06:00	05:40	04:40	04:24	05:03	06:04	07:06	07:08	08:14	08:48
	16:30	17:39	18:39	20:44	21:42	22:07	21:35	20:25	19:02	16:45	15:47	15:39
28	08:20	07:11	05:57	05:37	04:38	04:25	05:05	06:06	07:08	07:10	08:15	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	18:59	16:43	15:45	15:40
29	08:18		05:54	05:35	04:37	04:25	05:06	06:08	07:10	07:12	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:31	20:20	18:57	16:40	15:44	15:41
30	08:16		06:52	05:32	04:35	04:26	05:08	06:10	07:12	07:15	08:19	08:48
	16:37		19:45	20:50	21:46	22:07	21:29	20:17	18:54	16:38	15:43	15:42
31	08:14		06:49		04:34		05:10	06:12		07:17		08:48
	16:39		19:47		21:48		21:28	20:14		16:36		15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: CN - Jaunie Vu š karnieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48	08:12	07:09	06:47	19:17 (12)	05:30
	15:45	16:42	17:44	19:49	5	19:22 (12)
2	08:48	08:10	07:06	06:44	19:17 (12)	05:28
	15:46	16:44	17:46	19:52	6	19:23 (12)
3	08:47	08:08	07:03	06:41	19:18 (12)	05:26
	15:47	16:46	17:48	19:54	7	19:25 (12)
4	08:47	08:06	07:01	06:39	19:18 (12)	05:23
	15:49	16:48	17:50	19:56	7	19:25 (12)
5	08:47	08:04	06:58	06:36	19:17 (12)	05:21
	15:50	16:50	17:53	19:58	8	19:25 (12)
6	08:46	08:02	06:56	06:33	19:17 (12)	05:19
	15:51	16:53	17:55	20:00	9	19:26 (12)
7	08:45	08:00	06:53	06:31	19:16 (12)	05:17
	15:53	16:55	17:57	20:02	9	19:25 (12)
8	08:45	07:58	06:50	06:28	19:16 (12)	05:14
	15:54	16:57	17:59	20:04	10	19:26 (12)
9	08:44	07:56	06:48	06:25	19:15 (12)	05:12
	15:56	16:59	18:01	20:06	10	19:25 (12)
10	08:43	07:54	06:45	06:23	19:15 (12)	05:10
	15:58	17:02	18:03	20:08	10	19:25 (12)
11	08:43	07:52	06:43	06:20	19:13 (12)	05:08
	15:59	17:04	18:05	20:10	11	19:24 (12)
12	08:42	07:49	06:40	06:17	19:12 (12)	05:06
	16:01	17:06	18:08	20:12	11	19:23 (12)
13	08:41	07:47	06:37	06:15	19:11 (12)	05:04
	16:03	17:08	18:10	20:14	12	19:23 (12)
14	08:40	07:45	06:35	06:12	19:08 (12)	05:02
	16:05	17:11	18:12	20:17	14	19:22 (12)
15	08:39	07:43	06:32	06:10	19:06 (12)	05:00
	16:06	17:13	18:14	20:19	15	19:21 (12)
16	08:37	07:40	06:29	06:07	19:02 (12)	04:58
	16:08	17:15	18:16	20:21	17	19:19 (12)
17	08:36	07:38	06:27	06:05	18:57 (12)	04:56
	16:10	17:17	18:18	20:23	21	19:18 (12)
18	08:35	07:36	06:24	06:02	18:58 (12)	04:54
	16:12	17:20	18:20	20:25	17	19:15 (12)
19	08:34	07:33	06:21	05:59	19:01 (12)	04:53
	16:14	17:22	18:22	20:27	12	19:13 (12)
20	08:32	07:31	06:19	05:57		04:51
	16:16	17:24	18:24	20:29		21:30
21	08:31	07:28	06:16	05:54		04:49
	16:18	17:26	18:27	20:31		21:31
22	08:29	07:26	06:13	05:52		04:47
	16:20	17:29	18:29	20:33		21:33
23	08:28	07:24	06:11	05:49		04:46
	16:22	17:31	18:31	20:35		21:35
24	08:26	07:21	06:08	05:47		04:44
	16:24	17:33	18:33	20:37		21:37
25	08:25	07:19	06:05	05:45		04:43
	16:26	17:35	18:35	20:39		21:38
26	08:23	07:16	06:03	05:42		04:41
	16:28	17:37	18:37	20:42		21:40
27	08:21	07:14	06:00	05:40		04:40
	16:31	17:40	18:39	20:44		21:42
28	08:20	07:11	05:57	05:37		04:38
	16:33	17:42	18:41	20:46		21:43
29	08:18		05:55	05:35		04:37
	16:35		18:43	20:48		21:45
30	08:16		06:52	19:16 (12)	05:33	04:36
	16:37		19:45	19:17 (12)	20:50	21:46
31	08:14		06:49	19:17 (12)		04:34
	16:39		19:47	19:21 (12)		21:48
Potential sun hours	235	265	365	425	507	529
Total, worst case			5		211	
Sun reduction			0,39		0,48	
Oper. time red.			0,94		0,94	
Wind dir. red.			0,65		0,65	
Total reduction			0,24		0,29	
Total, real			1		62	

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: CN - Jaunie Vu š karnieki

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	19:12 (12)	07:14	07:19
	22:06	21:26	20:12	19:23 (12)	18:51	16:34
2	04:28	05:14	06:16	19:13 (12)	07:16	07:21
	22:06	21:24	20:09	19:23 (12)	18:49	16:31
3	04:28	05:16	06:18	19:13 (12)	07:18	07:23
	22:05	21:21	20:07	19:23 (12)	18:46	16:29
4	04:29	05:18	06:20	19:13 (12)	07:20	07:26
	22:05	21:19	20:04	19:23 (12)	18:43	16:27
5	04:30	05:20	06:22	19:13 (12)	07:22	07:28
	22:04	21:17	20:01	19:22 (12)	18:41	16:25
6	04:31	05:22	06:24	19:13 (12)	07:24	07:30
	22:03	21:15	19:59	19:21 (12)	18:38	16:23
7	04:32	05:24	06:26	19:12 (12)	07:26	07:32
	22:03	21:13	19:56	19:21 (12)	18:36	16:21
8	04:34	05:26	06:28	19:12 (12)	07:28	07:34
	22:02	21:11	19:53	19:20 (12)	18:33	16:19
9	04:35	05:28	06:30	19:12 (12)	07:30	07:36
	22:01	21:08	19:51	19:19 (12)	18:30	16:17
10	04:36	05:30	06:32	19:11 (12)	07:32	07:39
	22:00	21:06	19:48	19:17 (12)	18:28	16:15
11	04:37	05:32	06:34	19:10 (12)	07:34	07:41
	21:59	21:04	19:45	19:16 (12)	18:25	16:13
12	04:39	05:34	06:36	19:09 (12)	07:36	07:43
	21:58	21:02	19:43	19:14 (12)	18:22	16:11
13	04:40	05:36	06:38	19:08 (12)	07:38	07:45
	21:57	20:59	19:40	19:11 (12)	18:20	16:09
14	04:41	05:38	06:40		07:41	07:47
	21:55	20:57	19:37		18:17	16:07
15	04:43	05:40	06:42		07:43	07:49
	21:54	20:55	19:35		18:15	16:05
16	04:44	05:42	06:44		07:45	07:51
	21:53	20:52	19:32		18:12	16:03
17	04:46	05:44	06:46		07:47	07:54
	21:51	20:50	19:29		18:10	16:02
18	04:47	05:46	06:48		07:49	07:56
	21:50	20:47	19:26		18:07	16:00
19	04:49	05:48	06:50		07:51	07:58
	21:49	20:45	19:24		18:05	15:58
20	04:51	05:50	06:52		07:53	08:00
	21:47	20:42	19:21		18:02	15:57
21	04:52	05:52	06:54		07:55	08:02
	21:45	20:40	19:18		18:00	15:55
22	04:54	05:54	06:56		07:57	08:04
	21:44	20:37	19:16		17:57	15:54
23	04:56	05:56	06:58		08:00	08:06
	21:42	20:35	19:13		17:55	15:52
24	04:57	05:58	19:07 (12)	07:00	08:02	08:08
	21:41	20:32	19:15 (12)	19:10	17:52	15:51
25	04:59	06:00	19:03 (12)	07:02	08:04	08:10
	21:39	20:30	19:18 (12)	19:08	17:50	15:49
26	05:01	06:02	19:00 (12)	07:04	07:06	08:12
	21:37	20:27	19:19 (12)	19:05	16:48	15:48
27	05:03	06:04	18:58 (12)	07:06	07:08	08:14
	21:35	20:25	19:20 (12)	19:02	16:45	15:47
28	05:05	06:06	19:06 (12)	07:08	07:10	08:15
	21:33	20:22	19:21 (12)	18:59	16:43	15:46
29	05:07	06:08	19:08 (12)	07:10	07:13	08:17
	21:31	20:20	19:22 (12)	18:57	16:40	15:44
30	05:08	06:10	19:10 (12)	07:12	07:15	08:19
	21:30	20:17	19:23 (12)	18:54	16:38	15:43
31	05:10	06:12	19:11 (12)		07:17	08:48
	21:28	20:14	19:23 (12)		16:36	15:43
Potential sun hours	530	470	385	324	248	216
Total, worst case		118	102			
Sun reduction		0,51	0,43			
Oper. time red.		0,94	0,94			
Wind dir. red.		0,65	0,65			
Total reduction		0,31	0,26			
Total, real		37	27			

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: CO - Upmalnieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:48 15:45	08:12 16:42	07:09 17:44	12 17:17 (14)	17:05 (14) 19:50	06:47 20:52	05:30 21:49	04:33 22:06	04:27 21:26	05:12 20:12	06:14 18:51	07:14 16:34	07:19 15:42	
2	08:48 15:46	08:10 16:44	07:06 17:46	16 17:20 (14)	17:04 (14) 19:52	06:44 20:54	05:28 21:51	04:32 22:06	04:28 21:24	05:14 20:09	06:16 18:49	07:16 16:31	08:23 15:41	
3	08:47 15:47	08:09 16:46	07:03 17:48	19 17:22 (14)	17:03 (14) 19:54	06:41 20:56	05:26 21:52	04:31 22:05	04:28 21:22	05:16 20:07	06:18 18:46	07:18 17:56 (14)	07:23 16:29	
4	08:47 15:49	08:07 16:48	07:01 17:50	22 17:24 (14)	17:02 (14) 19:56	06:39 20:58	05:23 21:53	04:30 22:05	04:29 21:19	05:18 20:04	06:20 18:43	07:20 17:42 (14)	07:26 16:27	
5	08:47 15:50	08:05 16:51	06:58 17:53	21 17:24 (14)	17:03 (14) 19:58	06:36 21:00	05:21 21:55	04:29 22:04	04:30 21:17	05:20 20:01	06:22 18:41	07:22 17:41 (14)	07:28 16:25	
6	08:46 15:51	08:02 16:53	06:56 17:55	22 17:24 (14)	17:02 (14) 20:00	06:33 21:02	05:19 21:56	04:28 22:03	04:31 21:15	05:22 19:59	06:24 18:38	07:24 17:59 (14)	07:30 16:23	
7	08:46 15:53	08:00 16:55	06:53 17:57	21 17:23 (14)	17:02 (14) 20:02	06:31 21:04	05:17 21:57	04:27 22:03	04:32 21:13	05:24 19:56	06:26 18:36	07:26 17:38 (14)	07:32 16:21	
8	08:45 15:54	07:58 16:57	06:51 17:59	20 17:23 (14)	17:03 (14) 20:04	06:28 21:06	05:14 21:58	04:26 22:02	04:34 21:11	05:26 19:53	06:28 18:33	07:28 17:37 (14)	07:34 16:19	
9	08:44 15:56	07:56 16:59	06:48 18:01	18 17:21 (14)	17:03 (14) 20:06	06:25 21:08	05:12 21:59	04:26 22:01	04:35 21:09	05:28 19:51	06:30 18:30	07:30 17:38 (14)	07:36 16:17	
10	08:43 15:58	07:54 17:02	06:45 18:03	15 17:19 (14)	17:04 (14) 20:08	06:23 21:10	05:10 22:00	04:25 22:00	04:36 21:06	05:30 19:48	06:32 18:28	07:32 17:59 (14)	07:39 16:15	
11	08:43 15:59	07:52 17:04	06:43 18:05	11 17:18 (14)	17:07 (14) 20:10	06:20 21:12	05:08 22:01	04:24 21:59	04:37 21:04	05:32 21:04	06:34 18:25	07:34 17:56 (14)	07:41 16:13	
12	08:42 16:01	07:50 17:06	06:40 18:08		20:10 21:14	06:17 21:14	05:06 22:02	04:24 21:58	04:39 21:58	05:34 19:43	06:36 18:22	07:36 17:38 (14)	07:43 16:11	
13	08:41 16:03	07:47 17:08	06:37 18:10		20:12 21:16	06:15 21:16	05:04 22:03	04:23 21:57	04:40 20:59	05:36 19:40	06:38 18:20	07:38 17:51 (14)	07:45 16:09	
14	08:40 16:05	07:45 17:11	06:35 18:12		20:14 21:18	06:12 20:17	05:02 21:28	04:23 22:04	04:41 21:55	05:38 20:57	06:40 19:37	07:41 17:48 (14)	07:47 16:07	
15	08:39 16:06	07:43 17:13	06:32 18:14		20:16 21:20	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	
16	08:37 16:08	07:40 17:15	06:29 18:16		20:18 21:22	06:07 20:21	04:58 21:22	04:23 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:03	
17	08:36 16:10	07:38 17:17	06:27 18:18		20:20 21:24	06:05 21:24	04:56 22:06	04:22 21:51	04:46 20:50	05:44 19:29	06:46 18:10	07:47 17:59 (14)	07:54 16:02	
18	08:35 16:12	07:36 17:20	06:24 18:20		20:22 20:25	06:02 21:26	04:54 22:06	04:22 21:50	04:47 20:47	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	
19	08:34 16:14	07:33 17:22	06:21 18:21		20:24 20:28	05:59 21:28	04:53 22:06	04:22 21:49	04:49 21:58	05:48 18:05	06:50 17:52	07:51 17:38 (14)	07:58 16:00	
20	08:32 16:16	07:31 17:24	06:19 18:24		20:26 20:29	05:57 21:30	04:51 22:07	04:22 21:47	04:51 20:42	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:57	
21	08:31 16:18	07:28 17:26	06:16 18:27		20:28 20:31	05:54 21:31	04:49 22:07	04:22 21:46	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	
22	08:29 16:20	07:26 17:29	06:13 18:29		20:30 20:33	05:52 21:33	04:47 22:07	04:22 21:44	04:54 20:38	05:54 19:16	06:56 17:57	07:58 17:57	08:04 15:54	
23	08:28 16:22	07:24 17:31	06:11 18:31		20:32 20:35	05:49 21:35	04:46 22:08	04:23 21:42	04:56 20:35	05:56 19:13	06:58 17:55	08:00 17:55	08:06 15:52	
24	08:26 16:24	07:21 17:33	06:08 18:33		20:34 20:37	05:47 21:37	04:44 22:08	04:23 21:41	04:58 20:32	05:58 19:10	07:00 17:52	08:02 17:52	08:08 15:51	
25	08:25 16:26	07:19 17:35	06:05 18:35		20:36 20:40	05:45 21:38	04:43 22:08	04:23 21:39	04:59 20:30	06:00 19:08	07:02 17:50	08:04 17:50	08:10 15:49	
26	08:23 16:29	07:16 17:37	06:03 18:37		20:42 20:46	05:42 21:40	04:41 22:08	04:24 21:37	05:01 20:27	06:02 19:05	07:04 17:48	08:06 17:48	08:12 15:48	
27	08:21 16:31	07:14 17:40	17:09 (14) 18:39		06:00 20:44	05:40 21:42	04:40 22:08	04:24 21:35	05:03 20:25	06:04 19:02	07:06 17:45	08:08 17:45	08:14 15:47	
28	08:20 16:33	07:11 17:42	17:07 (14) 18:41		05:57 20:46	04:38 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 18:59	08:10 17:43	08:15 17:43	08:15 15:46	
29	08:18 16:35		05:55 18:43		05:35 20:48	04:37 21:45	04:25 22:07	05:07 21:32	06:08 20:20	07:10 18:57	08:13 17:41	08:17 17:41	08:17 15:44	
30	08:16 16:37		06:52 19:45		05:33 20:50	04:36 21:46	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	08:15 17:38	08:19 17:38	08:19 15:42	
31	08:14 16:39		06:49 19:47			04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:19 15:43	
Potential sun hours	235	265	365			425	507	529	530	470	385	324	248	216
Total, worst case														
Sun reduction		12	197								209			
Oper. time red.		0,24	0,39								0,27			
Wind dir. red.		0,94	0,94								0,94			
Total reduction		0,66	0,66								0,66			
Total, real		2	48								35			

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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CP - Gruguli

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:08 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:10 16:44	07:06 17:46	06:44 19:51	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:47 15:47	08:08 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:40
4	08:47 15:51	08:06 16:57	07:01 17:59	06:38 19:56	05:23 20:58	04:30 21:53	04:29 22:05	05:18 21:19	06:20 20:04	07:20 18:43	07:26 16:27	08:26 15:39
5	08:47 15:50	08:04 16:50	06:58 17:52	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:51	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:30 20:02	05:16 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:35	07:32 16:21	08:30 15:37
8	08:45 15:54	07:58 16:57	06:50 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:18	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:25 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:16	08:33 15:36
10	08:43 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:12	08:36 15:35
12	08:42 16:01	07:49 17:06	06:40 18:07	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:14	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:35
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31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CQ - Aramsala

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:08 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
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31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CR - Alksni š i

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

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Idle start wind speed 3,0m/s

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18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:06	04:49 21:48	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:29	04:22 22:07	04:51 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	07:28 17:26	06:16 18:26	05:54 20:31	04:49 21:31	04:22 22:07	04:52 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:23 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:07	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:46 15:37
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:40	05:58 20:32	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:39	04:43 21:38	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:07	08:04 17:50	08:10 15:49	08:47 15:38
26	08:23 16:28	07:16 17:37	06:02 18:37	05:42 20:41	04:41 21:40	04:24 22:07	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:47	08:12 15:48	08:48 15:39
27	08:21 16:31	07:14 17:39	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:13 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 18:59	07:10 16:43	08:15 15:45	08:48 15:40
29	08:18 16:35		05:54 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:31	06:08 20:20	07:10 18:57	07:12 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:46	04:26 22:07	05:08 21:29	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:27	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CS - Lejsalie š i

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:08 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:33	08:21 15:42
2	08:48 15:46	08:10 16:44	07:06 17:46	06:44 19:51	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:47 15:47	08:08 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:40
4	08:47 15:51	08:06 16:57	07:01 17:59	06:38 19:56	05:23 20:58	04:30 21:53	04:29 22:05	05:18 21:19	06:20 20:04	07:20 18:43	07:26 16:27	08:26 15:39
5	08:47 15:50	08:04 16:50	06:58 17:52	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:51	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:30 20:02	05:16 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:35	07:32 16:20	08:30 15:37
8	08:45 15:54	07:58 16:57	06:50 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:18	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:25 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:16	08:33 15:36
10	08:43 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:12	08:36 15:35
12	08:42 16:01	07:49 17:06	06:40 18:07	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:10	08:37 15:35
13	08:41 16:02	07:47 17:08	06:37 18:10	06:15 20:14	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:16	05:02 21:18	04:23 22:04	04:41 21:55	05:38 20:57	06:40 19:37	07:40 18:17	07:47 16:07	08:39 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:34	07:43 18:15	07:49 16:05	08:41 15:35
16	08:37 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:03	08:42 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:04 20:23	04:56 21:24	04:22 22:06	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:42 15:35
18	08:35 16:12	07:36 17:19	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:06	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:04	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07	04:50 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:56	08:45 15:35
21	08:31 16:18	07:28 17:26	06:16 18:26	05:54 20:31	04:49 21:31	04:22 22:07	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:23 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:08	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:32	07:00 19:10	08:02 17:52	08:08 15:50	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:39	04:42 21:38	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:07	08:04 17:50	08:10 15:49	08:47 15:38
26	08:23 16:28	07:16 17:37	06:02 18:37	05:42 20:42	04:41 21:40	04:23 22:08	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:47	08:12 15:48	08:48 15:38
27	08:21 16:30	07:14 17:39	06:00 18:39	05:39 20:44	04:39 21:42	04:24 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:24 22:07	05:04 21:33	06:06 20:22	07:08 18:59	07:10 16:43	08:15 15:45	08:48 15:40
29	08:18 16:35		05:54 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:31	06:08 20:20	07:10 18:57	07:13 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:46	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment Shadow receptor: CT - Araj

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:10 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:47 15:47	08:08 16:46	07:03 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:28 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:40
4	08:47 15:49	08:07 16:48	07:01 17:50	06:39 19:56	05:23 20:58	04:30 21:53	04:29 22:05	05:18 21:19	06:20 20:04	07:20 18:43	07:26 16:27	08:26 15:40
5	08:47 15:50	08:04 16:50	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:21	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:51	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:03	05:22 21:15	06:24 20:25	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 20:28	07:26 18:36	07:32 16:21	08:30 15:37
8	08:45 15:54	07:58 16:57	06:50 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:34 22:02	05:26 21:11	06:28 20:33	07:28 18:33	07:34 16:19	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:26 21:59	04:35 22:01	05:28 21:08	06:30 20:35	07:30 18:30	07:36 16:17	08:33 15:36
10	08:43 15:58	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 20:36	07:32 18:28	07:39 16:15	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 20:33	07:34 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:49 17:06	06:40 18:08	06:17 20:12	05:06 21:14	04:24 22:02	04:39 21:58	05:34 21:02	06:36 20:38	07:36 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:14	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 20:40	07:38 18:20	07:45 16:09	08:38 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04	04:41 21:55	05:38 20:57	06:40 20:37	07:41 18:17	07:47 16:07	08:39 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 20:35	07:43 18:15	07:49 16:05	08:41 15:35
16	08:37 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:23 22:05	04:44 21:53	05:42 20:52	06:44 20:32	07:45 18:12	07:51 16:03	08:42 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:51	05:44 20:50	06:46 20:29	07:47 18:10	07:54 16:02	08:42 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 20:26	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:53 21:28	04:22 22:06	04:49 21:49	05:48 20:45	06:50 20:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:42	06:52 20:21	07:53 18:02	08:00 15:57	08:45 15:35
21	08:31 16:18	07:28 17:26	06:16 18:27	05:54 20:31	04:49 21:31	04:22 22:07	04:52 21:46	05:52 20:40	06:54 20:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:07	04:54 21:44	05:54 20:37	06:56 20:16	07:57 17:57	08:04 15:54	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:23 22:08	04:56 21:42	05:56 20:35	06:58 20:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:32	07:00 20:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:45 20:39	04:43 21:38	04:23 22:08	04:59 21:39	06:00 20:30	07:02 20:08	08:04 17:50	08:10 15:49	08:47 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:27	07:04 20:05	08:06 17:48	08:12 15:48	08:48 15:39
27	08:21 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:07	05:03 21:35	06:04 20:25	07:06 20:02	08:08 17:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 20:00	08:10 17:43	08:15 15:46	08:48 15:40
29	08:18 16:35		05:55 18:55	05:35 20:48	04:37 21:45	04:25 22:07	05:07 21:31	06:08 20:20	07:10 20:00	08:13 17:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:33 20:50	04:36 21:46	04:26 22:07	05:08 21:30	06:10 20:17	07:12 20:00	08:15 17:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14	07:17 20:00	08:17 17:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case					34							
Sun reduction					0,53			36				
Oper. time red.					0,94			0,51				
Wind dir. red.					0,62			0,94				
Total reduction					0,31			0,62				
Total, real					11			11				

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CU - Plavinas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:08 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:10 16:44	07:06 17:46	06:44 19:51	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:47 15:47	08:08 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:40
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Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CV - Zališi

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:08 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:33	08:21 15:42
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31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CW - Grugules

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:08 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
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23	08:28 16:22	07:24 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:08	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:32	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:39	04:42 21:38	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:07	08:04 17:50	08:10 15:49	08:47 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:47	08:12 15:48	08:48 15:39
27	08:21 16:30	07:14 17:39	06:00 18:39	05:40 20:44	04:39 21:42	04:24 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 18:59	07:10 16:43	08:15 15:45	08:48 15:40
29	08:18 16:35		05:54 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:31	06:08 20:20	07:10 18:57	07:13 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:46	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CX - Madaras

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:08 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:10 16:44	07:06 17:46	06:44 19:51	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:47 15:47	08:08 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:40
4	08:47 15:51	08:06 16:57	07:01 17:59	06:38 20:04	05:23 21:06	04:30 21:58	04:29 22:02	05:18 21:11	06:20 19:53	07:20 18:33	07:26 16:18	08:26 15:37
5	08:47 15:50	08:04 16:50	06:58 17:52	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:51	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:30 20:02	05:16 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:35	07:32 16:21	08:30 15:37
8	08:45 15:54	07:58 16:57	06:50 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:18	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:25 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:16	08:33 15:36
10	08:43 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:12	08:36 15:35
12	08:42 16:01	07:49 17:06	06:40 18:07	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:14	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:16	05:02 21:18	04:23 22:04	04:41 21:55	05:38 20:57	06:40 19:37	07:40 18:17	07:47 16:07	08:39 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:34	07:43 18:15	07:49 16:05	08:41 15:35
16	08:37 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:03	08:41 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:04 20:23	04:56 21:24	04:22 22:06	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:42 15:35
18	08:35 16:12	07:36 17:19	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:06	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:04	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07	04:50 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:56	08:45 15:35
21	08:31 16:18	07:28 17:26	06:16 18:26	05:54 20:31	04:49 21:31	04:22 22:07	04:52 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:23 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:08	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:32	07:00 19:10	08:02 17:52	08:08 15:50	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:39	04:42 21:38	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:07	08:04 17:50	08:10 15:49	08:47 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:23 22:08	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:47	08:12 15:48	08:48 15:38
27	08:21 16:30	07:14 17:39	06:00 18:39	05:40 20:44	04:39 21:42	04:24 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 18:59	07:10 16:43	08:15 15:45	08:48 15:40
29	08:18 16:35		05:54 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:31	06:08 20:20	07:10 18:57	07:13 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:46	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this receptor

Reference year for calendar

2025

Shadow receptor: CY - Vu š karnieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June
1	08:48	08:12	07:09	06:47	05:30	19:44 (11) 04:33
	15:45	16:42	17:44	19:49	20:52	29 20:13 (11) 21:49
2	08:48	08:10	07:06	06:44	05:28	19:44 (11) 04:32
	15:46	16:44	17:46	19:52	20:54	29 20:13 (11) 21:51
3	08:47	08:08	07:03	06:41	05:26	19:44 (11) 04:31
	15:47	16:46	17:48	19:54	20:56	29 20:13 (11) 21:52
4	08:47	08:06	07:01	06:39	05:23	19:44 (11) 04:30
	15:48	16:48	17:50	19:56	20:58	29 20:13 (11) 21:53
5	08:47	08:04	06:58	06:36	05:21	19:45 (11) 04:29
	15:50	16:50	17:53	19:58	21:00	27 20:12 (11) 21:55
6	08:46	08:02	06:56	06:33	05:19	19:45 (11) 04:28
	15:51	16:53	17:55	20:00	21:02	27 20:12 (11) 21:56
7	08:45	08:00	06:53	06:31	05:17	19:46 (11) 04:27
	15:53	16:55	17:57	20:02	21:04	25 20:11 (11) 21:57
8	08:45	07:58	06:50	06:28	05:14	19:46 (11) 04:26
	15:54	16:57	17:59	20:04	21:06	25 20:11 (11) 21:58
9	08:44	07:56	06:48	06:25	05:12	19:47 (11) 04:26
	15:56	16:59	18:01	20:06	21:08	23 20:10 (11) 21:59
10	08:43	07:54	06:45	06:23	05:10	19:48 (11) 04:25
	15:58	17:02	18:03	20:08	21:10	21 20:09 (11) 22:00
11	08:43	07:52	06:43	06:20	05:08	19:49 (11) 04:24
	15:59	17:04	18:05	20:10	21:12	18 20:07 (11) 22:01
12	08:42	07:49	06:40	06:17	05:06	19:50 (11) 04:24
	16:01	17:06	18:08	20:12	21:14	16 20:06 (11) 22:02
13	08:41	07:47	06:37	06:15	05:04	19:52 (11) 04:23
	16:03	17:08	18:10	20:14	21:16	12 20:04 (11) 22:03
14	08:40	07:45	06:35	06:12	05:02	19:55 (11) 04:23
	16:04	17:11	18:12	20:17	21:18	7 20:02 (11) 22:04
15	08:39	07:43	06:32	06:10	05:00	04:23
	16:06	17:13	18:14	20:19	21:20	22:04
16	08:37	07:40	06:29	06:07	04:58	04:22
	16:08	17:15	18:16	20:21	21:22	22:05
17	08:36	07:38	06:27	06:05	04:56	04:22
	16:10	17:17	18:18	20:23	21:24	22:06
18	08:35	07:36	06:24	06:02	04:54	04:22
	16:12	17:20	18:20	20:25	21:26	22:06
19	08:34	07:33	06:21	05:59	04:53	04:22
	16:14	17:22	18:22	20:27	21:28	22:06
20	08:32	07:31	06:19	05:57	04:51	04:22
	16:16	17:24	18:24	20:29	21:30	22:07
21	08:31	07:28	06:16	05:54	19:58 (11) 04:49	04:22
	16:18	17:26	18:27	20:31	20:03 (11) 21:31	22:07
22	08:29	07:26	06:13	05:52	19:54 (11) 04:47	04:22
	16:20	17:28	18:29	20:33	20:05 (11) 21:33	22:07
23	08:28	07:24	06:11	05:49	19:51 (11) 04:46	04:23
	16:22	17:31	18:31	20:35	20:07 (11) 21:35	22:08
24	08:26	07:21	06:08	05:47	19:50 (11) 04:44	04:23
	16:24	17:33	18:33	20:37	20:09 (11) 21:37	22:08
25	08:25	07:19	06:05	05:44	19:49 (11) 04:43	04:23
	16:26	17:35	18:35	20:39	20:11 (11) 21:38	22:08
26	08:23	07:16	06:03	05:42	19:47 (11) 04:41	04:24
	16:28	17:37	18:37	20:42	20:12 (11) 21:40	22:08
27	08:21	07:14	06:00	05:40	19:46 (11) 04:40	04:24
	16:31	17:40	18:39	20:44	20:12 (11) 21:42	22:07
28	08:20	07:11	05:57	05:37	19:46 (11) 04:38	04:25
	16:33	17:42	18:41	20:46	20:13 (11) 21:43	22:07
29	08:18		05:55	05:35	19:45 (11) 04:37	04:25
	16:35		18:43	20:48	20:13 (11) 21:45	22:07
30	08:16		06:52	05:32	19:44 (11) 04:36	04:26
	16:37		19:45	20:50	20:13 (11) 21:46	22:07
31	08:14		06:49		04:34	
	16:39		19:47		21:48	
Potential sun hours	235	265	365	425	507	529
Total, worst case				208		
Sun reduction				0,48		317
Oper. time red.				0,94		0,53
Wind dir. red.				0,62		0,94
Total reduction				0,28		0,62
Total, real				58		0,31

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Shadow receptor: CY - Vu š karnieki

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Flicker curtailment applied to this receptor

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Reference year for calendar

2025

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	20:00 (11)	06:14	07:14	07:19
	22:06	21:26	16	20:16 (11)	20:12	18:51
2	04:28	05:14	19:59 (11)	06:16	07:16	16:34
	22:06	21:24	19	20:18 (11)	20:09	18:49
3	04:28	05:16	19:58 (11)	06:18	07:18	16:31
	22:05	21:21	21	20:19 (11)	20:07	18:46
4	04:29	05:18	19:57 (11)	06:20	07:20	16:29
	22:05	21:19	23	20:20 (11)	20:04	18:43
5	04:30	05:20	19:56 (11)	06:22	07:22	16:27
	22:04	21:17	24	20:20 (11)	20:01	18:41
6	04:31	05:22	19:55 (11)	06:24	07:24	16:25
	22:03	21:15	26	20:21 (11)	19:59	18:38
7	04:32	05:24	19:55 (11)	06:26	07:26	16:23
	22:03	21:13	26	20:21 (11)	19:56	18:35
8	04:34	05:26	19:54 (11)	06:28	07:28	16:21
	22:02	21:11	28	20:22 (11)	19:53	18:33
9	04:35	05:28	19:54 (11)	06:30	07:30	16:19
	22:01	21:08	28	20:22 (11)	19:51	18:30
10	04:36	05:30	19:53 (11)	06:32	07:32	16:17
	22:00	21:06	28	20:21 (11)	19:48	18:28
11	04:37	05:32	19:53 (11)	06:34	07:34	16:15
	21:59	21:04	29	20:22 (11)	19:45	18:25
12	04:39	05:34	19:53 (11)	06:36	07:36	16:13
	21:58	21:02	29	20:22 (11)	19:43	18:22
13	04:40	05:36	19:53 (11)	06:38	07:38	16:11
	21:57	20:59	28	20:21 (11)	19:40	18:20
14	04:41	05:38	19:53 (11)	06:40	07:41	16:09
	21:55	20:57	28	20:21 (11)	19:37	18:17
15	04:43	05:40	19:53 (11)	06:42	07:43	16:07
	21:54	20:55	28	20:21 (11)	19:35	18:15
16	04:44	05:42	19:54 (11)	06:44	07:45	16:05
	21:53	20:52	26	20:20 (11)	19:32	18:12
17	04:46	05:44	19:53 (11)	06:46	07:47	16:03
	21:51	20:50	26	20:19 (11)	19:29	18:10
18	04:47	05:46	19:54 (11)	06:48	07:49	16:02
	21:50	20:47	24	20:18 (11)	19:26	18:07
19	04:49	05:48	19:55 (11)	06:50	07:51	16:00
	21:49	20:45	20	20:15 (11)	19:24	18:05
20	04:51	05:50	19:56 (11)	06:52	07:53	15:58
	21:47	20:42	17	20:13 (11)	19:21	18:02
21	04:52	05:52	19:58 (11)	06:54	07:55	15:57
	21:46	20:40	13	20:11 (11)	19:18	18:00
22	04:54	05:54	20:01 (11)	06:56	07:57	15:55
	21:44	20:37	8	20:09 (11)	19:16	18:00
23	04:56	05:56		06:58	08:00	15:54
	21:42	20:35		19:13	17:55	15:52
24	04:57	05:58		07:00	08:02	15:52
	21:41	20:32		19:10	17:52	15:51
25	04:59	06:00		07:02	08:04	15:51
	21:39	20:30		19:08	17:50	15:49
26	05:01	06:02		07:04	07:06	15:49
	21:37	20:27		19:05	16:47	15:48
27	05:03	06:04		07:06	07:08	15:48
	21:35	20:25		19:02	16:45	15:47
28	05:05	06:06		07:08	07:10	15:47
	21:33	20:22		18:59	16:43	15:45
29	05:06	06:08		07:10	07:13	15:45
	21:31	20:20		18:57	16:40	15:44
30	05:08	20:06 (11)	06:10	07:12	07:15	15:44
	21:30	5 20:11 (11)	20:17	18:54	16:38	15:43
31	05:10	20:03 (11)	06:12		07:17	15:43
	21:28	12 20:15 (11)	20:14		16:36	15:43
Potential sun hours	530	470	385	324	248	216
Total, worst case		515				
Sun reduction	17	0,51				
Oper. time red.	0,51	0,94				
Wind dir. red.	0,94	0,62				
Total reduction	0,62	0,30				
Total, real	5	154				

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: CZ - Vecares

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:08 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:10 16:44	07:06 17:46	06:44 19:51	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:47 15:47	08:08 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:40
4	08:47 15:51	08:06 16:57	07:01 17:59	06:38 19:56	05:23 20:58	04:30 21:53	04:29 22:05	05:18 21:19	06:20 20:04	07:20 18:43	07:26 16:27	08:26 15:39
5	08:47 15:50	08:04 16:50	06:58 17:52	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:51	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:30 20:02	05:16 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:35	07:32 16:21	08:30 15:37
8	08:45 15:54	07:58 16:57	06:50 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:18	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:25 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:16	08:33 15:36
10	08:43 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:12	08:36 15:35
12	08:42 16:01	07:49 17:06	06:40 18:07	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:14	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:16	05:02 21:18	04:23 22:04	04:41 21:55	05:38 20:57	06:40 19:37	07:40 18:17	07:47 16:07	08:39 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:34	07:43 18:15	07:49 16:05	08:41 15:35
16	08:37 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:03	08:41 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:04 20:23	04:56 21:24	04:22 22:06	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:42 15:35
18	08:35 16:12	07:36 17:19	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:06	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:04	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07	04:50 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:56	08:45 15:35
21	08:31 16:18	07:28 17:26	06:16 18:26	05:54 20:31	04:49 21:31	04:22 22:07	04:52 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:23 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:08	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:32	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:39	04:42 21:38	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:07	08:04 17:50	08:10 15:49	08:47 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:23 22:08	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:47	08:12 15:48	08:48 15:39
27	08:21 16:30	07:14 17:39	06:00 18:39	05:40 20:44	04:39 21:42	04:24 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 18:59	07:10 16:43	08:15 15:45	08:48 15:40
29	08:18 16:35		05:54 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:31	06:08 20:20	07:10 18:57	07:12 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:46	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DA - Strautmali

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:09 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:10 16:44	07:06 17:46	06:44 19:51	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:47 15:47	08:08 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:40
4	08:47 15:51	08:06 16:57	07:01 17:59	06:38 19:56	05:23 20:58	04:30 21:53	04:29 22:05	05:18 21:19	06:20 20:04	07:20 18:43	07:26 16:27	08:26 15:39
5	08:47 15:50	08:04 16:50	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:51	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:35	07:32 16:21	08:30 15:37
8	08:45 15:54	07:58 16:57	06:50 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:18	08:32 15:37
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10	08:43 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
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12	08:42 16:01	07:49 17:06	06:40 18:07	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:14	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:16	05:02 21:18	04:23 22:04	04:41 21:55	05:38 20:57	06:40 19:37	07:40 18:17	07:47 16:07	08:39 15:35
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16	08:37 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:03	08:42 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:04 20:23	04:56 21:24	04:22 22:06	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:42 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:06	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:56	08:45 15:35
21	08:31 16:18	07:28 17:26	06:16 18:26	05:54 20:31	04:49 21:31	04:22 22:07	04:52 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:24 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:08	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:32	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:39	04:42 21:38	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:07	08:04 17:50	08:10 15:49	08:47 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:47	08:12 15:48	08:48 15:39
27	08:21 16:30	07:14 17:39	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 18:59	07:10 16:43	08:15 15:45	08:48 15:40
29	08:18 16:35		05:54 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:31	06:08 20:20	07:10 18:57	07:13 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:46	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DB - Jaunari

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:41	07:08 17:44	06:46 19:49	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:51	07:19 16:34	08:21 15:42
2	08:48 15:46	08:10 16:44	07:06 17:46	06:44 19:51	05:28 20:54	04:32 21:51	04:27 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	08:47 15:47	08:08 16:46	07:03 17:48	06:41 19:54	05:25 20:56	04:31 21:52	04:28 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:40
4	08:47 15:51	08:06 16:57	07:01 17:59	06:38 19:56	05:23 20:58	04:30 21:53	04:29 22:05	05:18 21:19	06:20 20:04	07:20 18:43	07:26 16:27	08:26 15:39
5	08:47 15:50	08:04 16:50	06:58 17:52	06:36 19:58	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:51	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:31 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:30 20:02	05:16 21:04	04:27 21:57	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:35	07:32 16:21	08:30 15:37
8	08:45 15:54	07:58 16:57	06:50 17:59	06:28 20:04	05:14 21:06	04:26 21:58	04:33 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:18	08:32 15:37
9	08:44 15:56	07:56 16:59	06:48 18:01	06:25 20:06	05:12 21:08	04:26 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:16	08:33 15:36
10	08:43 15:57	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:14	08:35 15:36
11	08:43 15:59	07:52 17:04	06:43 18:05	06:20 20:10	05:08 21:12	04:24 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:12	08:36 15:35
12	08:42 16:01	07:49 17:06	06:40 18:07	06:17 20:12	05:06 21:14	04:24 22:02	04:38 21:58	05:34 21:02	06:36 19:43	07:36 18:22	07:43 16:11	08:37 15:35
13	08:41 16:03	07:47 17:08	06:37 18:10	06:15 20:14	05:04 21:16	04:23 22:03	04:40 21:57	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:35
14	08:40 16:04	07:45 17:11	06:35 18:12	06:12 20:16	05:02 21:18	04:23 22:04	04:41 21:55	05:38 20:57	06:40 19:37	07:40 18:17	07:47 16:07	08:39 15:35
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:34	07:43 18:15	07:49 16:05	08:41 15:35
16	08:37 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:03	08:41 15:35
17	08:36 16:10	07:38 17:17	06:27 18:18	06:04 20:23	04:56 21:24	04:22 22:06	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:01	08:42 15:35
18	08:35 16:12	07:36 17:19	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06	04:47 21:50	05:46 20:47	06:48 19:26	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	05:59 20:27	04:52 21:28	04:22 22:06	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:04	07:58 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:24	05:57 20:29	04:51 21:30	04:22 22:07	04:50 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:56	08:45 15:35
21	08:31 16:18	07:28 17:26	06:16 18:26	05:54 20:31	04:49 21:31	04:22 22:07	04:52 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:28	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:53	08:46 15:36
23	08:28 16:22	07:23 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:22 22:08	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08	04:57 21:41	05:58 20:32	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	08:25 16:26	07:19 17:35	06:05 18:35	05:44 20:39	04:42 21:38	04:23 22:08	04:59 21:39	06:00 20:30	07:02 19:07	08:04 17:50	08:10 15:49	08:47 15:38
26	08:23 16:28	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:47	08:12 15:48	08:48 15:39
27	08:21 16:30	07:14 17:39	06:00 18:39	05:40 20:44	04:39 21:42	04:24 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 15:47	08:48 15:39
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 18:59	07:10 16:43	08:15 15:45	08:48 15:40
29	08:18 16:35		05:54 18:43	05:35 20:48	04:37 21:45	04:25 22:07	05:06 21:31	06:08 20:20	07:10 18:57	07:12 16:40	08:17 15:44	08:48 15:41
30	08:16 16:37		06:52 19:45	05:32 20:50	04:35 21:46	04:26 22:07	05:08 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:43	08:48 15:42
31	08:14 16:39		06:49 19:47		04:34 21:48		05:10 21:28	06:12 20:14		07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DC - Vidsala

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:12	07:08	06:46	05:30	04:33	04:27	05:12	06:14	07:14	07:19	08:21
	15:45	16:41	17:44	19:49	20:52	21:49	22:06	21:25	20:12	18:51	16:34	15:42
2	08:48	08:10	07:06	06:44	05:28	04:32	04:28	05:14	06:16	07:16	07:21	08:22
	15:46	16:44	17:46	19:51	20:54	21:51	22:06	21:23	20:09	18:49	16:31	15:41
3	08:47	08:08	07:03	06:41	05:25	04:31	04:28	05:16	06:18	07:18	07:23	08:24
	15:47	16:46	17:48	19:54	20:56	21:52	22:05	21:21	20:06	18:46	16:29	15:40
4	08:47	08:06	07:01	06:38	05:23	04:30	04:29	05:18	06:20	07:20	07:25	08:26
	15:48	16:48	17:50	19:56	20:58	21:53	22:05	21:19	20:04	18:43	16:27	15:39
5	08:46	08:04	06:58	06:36	05:21	04:29	04:30	05:20	06:22	07:22	07:28	08:27
	15:50	16:50	17:52	19:58	21:00	21:55	22:04	21:17	20:01	18:41	16:25	15:39
6	08:46	08:02	06:56	06:33	05:19	04:28	04:31	05:22	06:24	07:24	07:30	08:29
	15:51	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:38	16:23	15:38
7	08:45	08:00	06:53	06:30	05:17	04:27	04:32	05:24	06:26	07:26	07:32	08:30
	15:53	16:55	17:57	20:02	21:04	21:57	22:02	21:13	19:56	18:35	16:21	15:37
8	08:45	07:58	06:50	06:28	05:14	04:26	04:34	05:26	06:28	07:28	07:34	08:32
	15:54	16:57	17:59	20:04	21:06	21:58	22:02	21:11	19:53	18:33	16:19	15:37
9	08:44	07:56	06:48	06:25	05:12	04:26	04:35	05:28	06:30	07:30	07:36	08:33
	15:56	16:59	18:01	20:06	21:08	21:59	22:01	21:08	19:51	18:30	16:16	15:36
10	08:43	07:54	06:45	06:23	05:10	04:25	04:36	05:30	06:32	07:32	07:38	08:35
	15:57	17:02	18:03	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:14	15:36
11	08:42	07:52	06:43	06:20	05:08	04:24	04:37	05:32	06:34	07:34	07:41	08:36
	15:59	17:04	18:05	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:35
12	08:41	07:49	06:40	06:17	05:06	04:24	04:39	05:34	06:36	07:36	07:43	08:37
	16:01	17:06	18:07	20:12	21:14	22:02	21:58	21:02	19:42	18:22	16:11	15:35
13	08:41	07:47	06:37	06:15	05:04	04:23	04:40	05:36	06:38	07:38	07:45	08:38
	16:03	17:08	18:10	20:14	21:16	22:03	21:56	20:59	19:40	18:20	16:09	15:35
14	08:39	07:45	06:35	06:12	05:02	04:23	04:41	05:38	06:40	07:40	07:47	08:39
	16:04	17:11	18:12	20:16	21:18	22:03	21:55	20:57	19:37	18:17	16:07	15:35
15	08:38	07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:49	08:40
	16:06	17:13	18:14	20:18	21:20	22:04	21:54	20:54	19:34	18:15	16:05	15:35
16	08:37	07:40	06:29	06:07	04:58	04:22	04:44	05:42	06:44	07:45	07:51	08:41
	16:08	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:03	15:35
17	08:36	07:38	06:27	06:04	04:56	04:22	04:46	05:44	06:46	07:47	07:53	08:42
	16:10	17:17	18:18	20:23	21:24	22:05	21:51	20:50	19:29	18:10	16:01	15:35
18	08:35	07:36	06:24	06:02	04:54	04:22	04:47	05:46	06:48	07:49	07:56	08:43
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19	08:34	07:33	06:21	05:59	04:53	04:22	04:49	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:22	20:27	21:28	22:06	21:48	20:45	19:24	18:05	15:58	15:35
20	08:32	07:31	06:19	05:57	04:51	04:22	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:24	20:29	21:29	22:07	21:47	20:42	19:21	18:02	15:57	15:35
21	08:31	07:28	06:16	05:54	04:49	04:22	04:52	05:52	06:54	07:55	08:02	08:45
	16:18	17:26	18:26	20:31	21:31	22:07	21:45	20:40	19:18	18:00	15:55	15:36
22	08:29	07:26	06:13	05:52	04:47	04:22	04:54	05:54	06:56	07:57	08:04	08:46
	16:20	17:28	18:29	20:33	21:33	22:07	21:44	20:37	19:16	17:57	15:53	15:36
23	08:28	07:23	06:11	05:49	04:46	04:23	04:56	05:56	06:58	07:59	08:06	08:46
	16:22	17:31	18:31	20:35	21:35	22:07	21:42	20:35	19:13	17:55	15:52	15:37
24	08:26	07:21	06:08	05:47	04:44	04:23	04:57	05:58	07:00	08:02	08:08	08:47
	16:24	17:33	18:33	20:37	21:37	22:07	21:40	20:32	19:10	17:52	15:51	15:37
25	08:25	07:19	06:05	05:44	04:43	04:23	04:59	06:00	07:02	08:04	08:10	08:47
	16:26	17:35	18:35	20:39	21:38	22:07	21:39	20:30	19:07	17:50	15:49	15:38
26	08:23	07:16	06:03	05:42	04:41	04:24	05:01	06:02	07:04	07:06	08:12	08:48
	16:28	17:37	18:37	20:41	21:40	22:07	21:37	20:27	19:05	16:47	15:48	15:39
27	08:21	07:14	06:00	05:40	04:40	04:24	05:03	06:04	07:06	07:08	08:13	08:48
	16:31	17:39	18:39	20:44	21:42	22:07	21:35	20:25	19:02	16:45	15:47	15:39
28	08:20	07:11	05:57	05:37	04:38	04:25	05:05	06:06	07:08	07:10	08:15	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	18:59	16:43	15:45	15:40
29	08:18		05:54	05:35	04:37	04:25	05:06	06:08	07:10	07:12	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:31	20:20	18:57	16:40	15:44	15:41
30	08:16		06:52	05:32	04:36	04:26	05:08	06:10	07:12	07:15	08:19	08:48
	16:37		19:45	20:50	21:46	22:07	21:29	20:17	18:54	16:38	15:43	15:42
31	08:14		06:49		04:34		05:10	06:12		07:17		08:48
	16:39		19:47		21:48		21:27	20:14		16:36		15:43
Potential sun hours	235	265	365	425	507	529	529	470	385	324	248	216
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DD - Jaunie Robe ž nieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:49	04:27 22:06	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:48 15:47	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:23 15:42
3	08:47 15:48	08:09 16:46	07:04 17:49	06:42 19:54	05:26 20:56	04:32 21:52	04:29 22:05	05:17 21:22	06:18 20:07	07:18 18:46	07:24 16:30	08:24 15:41
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:31 21:53	04:30 22:05	05:18 21:19	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	06:58 17:53	06:36 19:58	05:22 21:00	04:30 21:55	04:31 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	05:19 21:02	04:29 21:56	04:32 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:39
7	08:45 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:30 15:38
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11	08:42 16:00	07:52 17:04	06:43 18:06	06:20 20:10	05:09 21:12	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:07	06:40 18:08	06:18 20:13	05:07 21:14	04:25 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:37 15:36
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15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:06	08:40 15:35
16	08:37 16:09	07:40 17:16	06:30 18:16	06:07 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:13	07:51 16:04	08:41 15:35
17	08:36 16:11	07:38 17:18	06:27 18:18	06:05 20:23	04:57 21:24	04:23 22:05	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:42 15:35
18	08:35 16:13	07:36 17:20	06:24 18:21	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:36
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21	08:31 16:19	07:29 17:27	06:16 18:27	05:55 20:31	04:50 21:31	04:23 22:07	04:53 21:45	05:52 20:40	06:54 19:19	07:55 18:00	08:02 15:56	08:45 15:36
22	08:29 16:21	07:26 17:29	06:14 18:29	05:52 20:33	04:48 21:33	04:23 22:07	04:55 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:07	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:46 15:37
24	08:26 16:25	07:21 17:33	06:08 18:33	05:47 20:37	04:45 21:37	04:24 22:08	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:36	06:06 18:35	05:45 20:40	04:43 21:38	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:47 15:39
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29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:31	06:08 20:20	07:10 18:57	07:13 16:41	08:17 15:45	08:48 15:42
30	08:16 16:38		06:52 19:46	05:33 20:50	04:36 21:46	04:27 22:07	05:09 21:30	06:10 20:17	07:12 18:54	07:15 16:39	08:19 15:44	08:48 15:43
31	08:14 16:40		06:50 19:48		04:35 21:48		05:11 21:28	06:12 20:15		07:17 16:36		08:48 15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUHKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DE - Smelceja

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:34 21:49	04:27 22:06	05:13 21:25	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:47 15:46	08:10 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:23	06:16 20:09	07:16 18:49	07:21 16:32	08:22 15:42
3	08:47 15:48	08:08 16:46	07:03 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:29 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:41
4	08:47 15:49	08:06 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:30 21:53	04:30 22:05	05:18 21:19	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:46 15:50	08:04 16:51	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:54	04:31 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:52	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:32 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:28 21:57	04:33 22:02	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:30 15:38
8	08:45 15:55	07:58 16:57	06:51 17:59	06:28 20:04	05:15 21:06	04:27 21:58	04:34 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:01	06:26 20:06	05:13 21:08	04:26 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:17	08:33 15:37
10	08:43 15:58	07:54 17:02	06:45 18:03	06:23 20:08	05:11 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:34 15:36
11	08:42 16:00	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:12	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	08:41 16:01	07:49 17:06	06:40 18:08	06:18 20:12	05:06 21:14	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:36 18:23	07:43 16:11	08:37 15:36
13	08:40 16:03	07:47 17:09	06:37 18:10	06:15 20:14	05:04 21:16	04:24 22:03	04:40 21:56	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:35
14	08:39 16:05	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:24 22:03	04:42 21:55	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:39 15:35
15	08:38 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:40 15:35
16	08:37 16:09	07:40 17:15	06:29 18:16	06:07 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:04	08:41 15:35
17	08:36 16:10	07:38 17:18	06:27 18:18	06:05 20:23	04:57 21:24	04:23 22:05	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:53 16:02	08:42 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:21 18:22	06:00 20:27	04:53 21:28	04:23 22:06	04:49 21:48	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	08:32 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:29	04:23 22:07	04:51 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	08:31 16:18	07:28 17:27	06:16 18:27	05:55 20:31	04:49 21:31	04:23 22:07	04:53 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:48 21:33	04:23 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:54	08:46 15:37
23	08:28 16:22	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:07	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:46 15:37
24	08:26 16:25	07:21 17:33	06:08 18:33	05:47 20:37	04:45 21:36	04:23 22:07	04:58 21:40	05:58 20:32	07:00 19:10	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:35	06:05 18:35	05:45 20:39	04:43 21:38	04:24 22:07	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:47 15:38
26	08:23 16:29	07:16 17:38	06:03 18:37	05:42 20:42	04:42 21:40	04:24 22:07	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:48	08:12 15:48	08:47 15:39
27	08:21 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:41	04:25 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:13 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:57 18:41	05:38 20:46	04:39 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 19:00	07:10 16:43	08:15 15:46	08:48 15:41
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:31	06:08 20:20	07:10 18:57	07:13 16:41	08:17 15:45	08:48 15:42
30	08:16 16:37		06:52 19:45	05:33 20:50	04:36 21:46	04:27 22:06	05:09 21:29	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:44	08:48 15:43
31	08:14 16:40		06:49 19:47		04:35 21:48		05:11 21:27	06:12 20:14		07:17 16:36		08:48 15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DF - Kukas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:12	07:09	06:47	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:26	20:12	18:52	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:21	08:22
	15:47	16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:32	15:42
3	08:47	08:09	07:04	06:42	05:26	04:32	04:29	05:17	06:18	07:18	07:23	08:24
	15:48	16:46	17:49	19:54	20:56	21:52	22:05	21:21	20:07	18:46	16:30	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:58	21:53	22:05	21:19	20:04	18:44	16:27	15:40
5	08:46	08:05	06:58	06:36	05:22	04:30	04:31	05:20	06:22	07:22	07:28	08:27
	15:51	16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:01	18:41	16:25	15:39
6	08:46	08:02	06:56	06:34	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:45	08:00	06:53	06:31	05:17	04:28	04:33	05:24	06:26	07:26	07:32	08:30
	15:53	16:55	17:57	20:02	21:04	21:57	22:02	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:58	17:59	20:04	21:06	21:58	22:02	21:11	19:53	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:08	21:59	22:01	21:09	19:51	18:31	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:04	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:37
11	08:42	07:52	06:43	06:20	05:09	04:25	04:38	05:32	06:34	07:34	07:41	08:36
	16:00	17:04	18:06	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:50	06:40	06:18	05:07	04:25	04:39	05:34	06:36	07:37	07:43	08:37
	16:02	17:07	18:08	20:12	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:38	06:15	05:05	04:24	04:41	05:36	06:38	07:39	07:45	08:38
	16:03	17:09	18:10	20:15	21:16	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:42	05:38	06:40	07:41	07:47	08:39
	16:05	17:11	18:12	20:17	21:18	22:03	21:55	20:57	19:37	18:18	16:07	15:35
15	08:38	07:43	06:32	06:10	05:01	04:23	04:43	05:40	06:42	07:43	07:49	08:40
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:06	15:35
16	08:37	07:40	06:30	06:08	04:59	04:23	04:45	05:42	06:44	07:45	07:51	08:41
	16:09	17:16	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:13	16:04	15:35
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:44	06:46	07:47	07:54	08:42
	16:11	17:18	18:18	20:23	21:24	22:05	21:51	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:43
	16:13	17:20	18:21	20:25	21:26	22:06	21:50	20:47	19:27	18:07	16:00	15:36
19	08:34	07:33	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:51	07:58	08:44
	16:15	17:22	18:23	20:27	21:28	22:06	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:53	08:00	08:45
	16:17	17:24	18:25	20:29	21:29	22:07	21:47	20:43	19:21	18:03	15:57	15:36
21	08:31	07:29	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:55	08:02	08:45
	16:19	17:27	18:27	20:31	21:31	22:07	21:45	20:40	19:19	18:00	15:56	15:36
22	08:29	07:26	06:14	05:52	04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:58	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:46
	16:23	17:31	18:31	20:35	21:35	22:07	21:42	20:35	19:13	17:55	15:53	15:37
24	08:26	07:21	06:08	05:47	04:45	04:24	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:37	21:37	22:07	21:40	20:33	19:10	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:47
	16:27	17:36	18:35	20:40	21:38	22:07	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:43	04:42	04:24	05:02	06:02	07:04	07:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:07	21:37	20:27	19:05	16:48	15:49	15:39
27	08:21	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	07:08	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:07	21:35	20:25	19:02	16:46	15:47	15:40
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	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:38	04:26	05:07	06:08	07:10	07:13	08:17	08:48
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	16:38		19:46	20:50	21:46	22:07	21:30	20:17	18:54	16:39	15:44	15:43
31	08:14		06:50		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DG - Ošini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:12	07:09	06:47	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:26	20:12	18:52	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:21	08:22
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:47	08:08	07:04	06:41	05:26	04:31	04:29	05:16	06:18	07:18	07:23	08:24
	15:48	16:46	17:49	19:54	20:56	21:52	22:05	21:21	20:07	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:30	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:58	21:53	22:05	21:19	20:04	18:44	16:27	15:40
5	08:46	08:04	06:58	06:36	05:21	04:29	04:31	05:20	06:22	07:22	07:28	08:27
	15:50	16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:01	18:41	16:25	15:39
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	15:52	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:38	16:23	15:39
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11	08:42	07:52	06:43	06:20	05:09	04:25	04:38	05:32	06:34	07:34	07:41	08:36
	16:00	17:04	18:06	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:41	07:49	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:36	07:43	08:37
	16:01	17:07	18:08	20:12	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:36	06:38	07:39	07:45	08:38
	16:03	17:09	18:10	20:15	21:16	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:02	04:24	04:42	05:38	06:40	07:41	07:47	08:39
	16:05	17:11	18:12	20:17	21:18	22:03	21:55	20:57	19:37	18:18	16:07	15:35
15	08:38	07:43	06:32	06:10	05:01	04:23	04:43	05:40	06:42	07:43	07:49	08:40
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:05	15:35
16	08:37	07:40	06:30	06:07	04:59	04:23	04:45	05:42	06:44	07:45	07:51	08:41
	16:09	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:04	15:35
17	08:36	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:53	08:42
	16:11	17:18	18:18	20:23	21:24	22:05	21:51	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:43
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:47	19:27	18:07	16:00	15:35
19	08:34	07:33	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:23	20:27	21:28	22:06	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:25	20:29	21:29	22:07	21:47	20:42	19:21	18:02	15:57	15:36
21	08:31	07:29	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:55	08:02	08:45
	16:18	17:27	18:27	20:31	21:31	22:07	21:45	20:40	19:18	18:00	15:55	15:36
22	08:29	07:26	06:14	05:52	04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:46
	16:23	17:31	18:31	20:35	21:35	22:07	21:42	20:35	19:13	17:55	15:53	15:37
24	08:26	07:21	06:08	05:47	04:45	04:23	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:37	21:37	22:07	21:40	20:32	19:10	17:53	15:51	15:38
25	08:25	07:19	06:05	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:47
	16:27	17:35	18:35	20:39	21:38	22:07	21:39	20:30	19:08	17:50	15:50	15:38
26	08:23	07:16	06:03	05:42	04:42	04:24	05:02	06:02	07:04	07:06	08:12	08:47
	16:29	17:38	18:37	20:42	21:40	22:07	21:37	20:27	19:05	16:48	15:48	15:39
27	08:21	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	07:08	08:13	08:48
	16:31	17:40	18:39	20:44	21:42	22:07	21:35	20:25	19:02	16:45	15:47	15:40
28	08:20	07:11	05:57	05:38	04:39	04:25	05:05	06:06	07:08	07:10	08:15	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:37	04:26	05:07	06:08	07:10	07:13	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:31	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:45	20:50	21:46	22:07	21:29	20:17	18:54	16:39	15:44	15:43
31	08:14		06:49		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:27	20:15		16:36		15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DH - Ošini

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:12	07:09	06:47	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:26	20:12	18:52	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:21	08:22
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:47	08:08	07:04	06:41	05:26	04:31	04:29	05:16	06:18	07:18	07:23	08:24
	15:48	16:46	17:49	19:54	20:56	21:52	22:05	21:21	20:07	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:30	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:58	21:53	22:05	21:19	20:04	18:44	16:27	15:40
5	08:46	08:04	06:58	06:36	05:21	04:29	04:31	05:20	06:22	07:22	07:28	08:27
	15:50	16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:01	18:41	16:25	15:39
6	08:46	08:02	06:56	06:33	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:45	08:00	06:53	06:31	05:17	04:28	04:33	05:24	06:26	07:26	07:32	08:30
	15:53	16:55	17:57	20:02	21:04	21:57	22:02	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:58	17:59	20:04	21:06	21:58	22:02	21:11	19:53	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:30	07:36	08:33
	15:56	17:00	18:01	20:06	21:08	21:59	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:04	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:36
11	08:42	07:52	06:43	06:20	05:09	04:25	04:38	05:32	06:34	07:34	07:41	08:36
	16:00	17:04	18:06	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:41	07:49	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:36	07:43	08:37
	16:01	17:07	18:08	20:12	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:36	06:38	07:39	07:45	08:38
	16:03	17:09	18:10	20:15	21:16	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:02	04:24	04:42	05:38	06:40	07:41	07:47	08:39
	16:05	17:11	18:12	20:17	21:18	22:03	21:55	20:57	19:37	18:18	16:07	15:35
15	08:38	07:43	06:32	06:10	05:01	04:23	04:43	05:40	06:42	07:43	07:49	08:40
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:05	15:35
16	08:37	07:40	06:30	06:07	04:59	04:23	04:45	05:42	06:44	07:45	07:51	08:41
	16:09	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:04	15:35
17	08:36	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:53	08:42
	16:11	17:18	18:18	20:23	21:24	22:05	21:51	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:43
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:47	19:27	18:07	16:00	15:35
19	08:34	07:33	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:23	20:27	21:28	22:06	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:25	20:29	21:29	22:07	21:47	20:42	19:21	18:02	15:57	15:36
21	08:31	07:29	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:55	08:02	08:45
	16:18	17:27	18:27	20:31	21:31	22:07	21:45	20:40	19:18	18:00	15:55	15:36
22	08:29	07:26	06:14	05:52	04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:46
	16:23	17:31	18:31	20:35	21:35	22:07	21:42	20:35	19:13	17:55	15:53	15:37
24	08:26	07:21	06:08	05:47	04:45	04:23	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:37	21:37	22:07	21:40	20:32	19:10	17:53	15:51	15:38
25	08:25	07:19	06:05	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:47
	16:27	17:35	18:35	20:39	21:38	22:07	21:39	20:30	19:08	17:50	15:50	15:38
26	08:23	07:16	06:03	05:42	04:42	04:24	05:02	06:02	07:04	07:06	08:12	08:47
	16:29	17:38	18:37	20:42	21:40	22:07	21:37	20:27	19:05	16:48	15:48	15:39
27	08:21	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	07:08	08:13	08:48
	16:31	17:40	18:39	20:44	21:42	22:07	21:35	20:25	19:02	16:45	15:47	15:40
28	08:20	07:11	05:57	05:38	04:39	04:25	05:05	06:06	07:08	07:10	08:15	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:37	04:26	05:07	06:08	07:10	07:13	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:31	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:45	20:50	21:46	22:07	21:29	20:17	18:54	16:39	15:44	15:43
31	08:14		06:49		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:27	20:15		16:36		15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DI - Robe ž nieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:12	07:09	06:47	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:26	20:12	18:52	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:21	08:22
	15:47	16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:32	15:42
3	08:47	08:09	07:04	06:42	05:26	04:32	04:29	05:17	06:18	07:18	07:23	08:24
	15:48	16:46	17:49	19:54	20:56	21:52	22:05	21:21	20:07	18:46	16:30	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:58	21:53	22:05	21:19	20:04	18:44	16:27	15:40
5	08:46	08:04	06:58	06:36	05:22	04:30	04:31	05:20	06:22	07:22	07:28	08:27
	15:51	16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:01	18:41	16:25	15:39
6	08:46	08:02	06:56	06:34	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:45	08:00	06:53	06:31	05:17	04:28	04:33	05:24	06:26	07:26	07:32	08:30
	15:53	16:55	17:57	20:02	21:04	21:57	22:02	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:58	17:59	20:04	21:06	21:58	22:02	21:11	19:53	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:08	21:59	22:01	21:08	19:51	18:31	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:04	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:37
11	08:42	07:52	06:43	06:20	05:09	04:25	04:38	05:32	06:34	07:34	07:41	08:36
	16:00	17:04	18:06	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:50	06:40	06:18	05:07	04:25	04:39	05:34	06:36	07:37	07:43	08:37
	16:02	17:07	18:08	20:12	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:38	06:15	05:05	04:24	04:41	05:36	06:38	07:39	07:45	08:38
	16:03	17:09	18:10	20:15	21:16	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:42	05:38	06:40	07:41	07:47	08:39
	16:05	17:11	18:12	20:17	21:18	22:03	21:55	20:57	19:37	18:18	16:07	15:35
15	08:38	07:43	06:32	06:10	05:01	04:23	04:44	05:40	06:42	07:43	07:49	08:40
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:06	15:35
16	08:37	07:40	06:30	06:08	04:59	04:23	04:45	05:42	06:44	07:45	07:51	08:41
	16:09	17:16	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:13	16:04	15:35
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:44	06:46	07:47	07:54	08:42
	16:11	17:18	18:18	20:23	21:24	22:05	21:51	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:43
	16:13	17:20	18:20	20:25	21:26	22:06	21:50	20:47	19:27	18:07	16:00	15:36
19	08:34	07:33	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:51	07:58	08:44
	16:15	17:22	18:23	20:27	21:28	22:06	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:53	08:00	08:45
	16:17	17:24	18:25	20:29	21:29	22:07	21:47	20:43	19:21	18:03	15:57	15:36
21	08:31	07:29	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:55	08:02	08:45
	16:19	17:27	18:27	20:31	21:31	22:07	21:45	20:40	19:19	18:00	15:56	15:36
22	08:29	07:26	06:14	05:52	04:48	04:23	04:55	05:54	06:56	07:58	08:04	08:46
	16:21	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:58	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:46
	16:23	17:31	18:31	20:35	21:35	22:07	21:42	20:35	19:13	17:55	15:53	15:37
24	08:26	07:21	06:08	05:47	04:45	04:24	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:37	21:37	22:07	21:40	20:33	19:10	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:47
	16:27	17:36	18:35	20:40	21:38	22:07	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:43	04:42	04:24	05:02	06:02	07:04	07:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:07	21:37	20:27	19:05	16:48	15:49	15:39
27	08:21	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	07:08	08:13	08:48
	16:31	17:40	18:39	20:44	21:42	22:07	21:35	20:25	19:02	16:46	15:47	15:40
28	08:20	07:11	05:58	05:38	04:39	04:25	05:05	06:06	07:08	07:10	08:15	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:38	04:26	05:07	06:08	07:10	07:13	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:31	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:46	20:50	21:46	22:07	21:29	20:17	18:54	16:39	15:44	15:43
31	08:14		06:50		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

SKEPAST & PUHKIM

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DJ - Pumpuri

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

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2	08:47 15:46	08:10 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:14 21:23	06:16 20:09	07:16 18:49	07:21 16:32	08:22 15:42
3	08:47 15:48	08:08 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:29 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:30	08:24 15:41
4	08:47 15:49	08:06 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:30 21:53	04:30 22:04	05:18 21:19	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:46 15:50	08:04 16:51	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:54	04:31 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:52	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:29 21:56	04:32 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:39
7	08:45 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:28 21:57	04:33 22:02	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:30 15:38
8	08:45 15:55	07:58 16:58	06:51 17:59	06:28 20:04	05:15 21:06	04:27 21:58	04:34 22:01	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:01	06:26 20:06	05:13 21:08	04:26 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:17	08:33 15:37
10	08:43 15:58	07:54 17:02	06:45 18:03	06:23 20:08	05:11 21:10	04:26 22:00	04:37 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:34 15:36
11	08:42 16:00	07:52 17:04	06:43 18:06	06:20 20:10	05:09 21:12	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	08:41 16:01	07:49 17:06	06:40 18:08	06:18 20:12	05:06 21:14	04:24 22:02	04:39 21:57	05:34 21:02	06:36 19:43	07:36 18:23	07:43 16:11	08:37 15:36
13	08:40 16:03	07:47 17:09	06:37 18:10	06:15 20:14	05:04 21:16	04:24 22:03	04:40 21:56	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:38 15:35
14	08:39 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:02 21:18	04:24 22:03	04:42 21:55	05:38 20:57	06:40 19:37	07:41 18:18	07:47 16:07	08:39 15:35
15	08:38 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:40 15:35
16	08:37 16:09	07:40 17:15	06:29 18:16	06:07 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:04	08:41 15:35
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19	08:33 16:14	07:33 17:22	06:21 18:22	06:00 20:27	04:53 21:28	04:23 22:06	04:50 21:48	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	08:32 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:29	04:23 22:07	04:51 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	08:31 16:18	07:28 17:27	06:16 18:27	05:55 20:31	04:50 21:31	04:23 22:07	04:53 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:48 21:33	04:23 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:07	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:46 15:37
24	08:26 16:25	07:21 17:33	06:08 18:33	05:47 20:37	04:45 21:36	04:23 22:07	04:58 21:40	05:58 20:32	07:00 19:10	08:02 17:53	08:08 15:51	08:47 15:38
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26	08:23 16:29	07:16 17:38	06:03 18:37	05:42 20:42	04:42 21:40	04:24 22:07	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:48	08:12 15:48	08:47 15:39
27	08:21 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:41	04:25 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:13 15:47	08:48 15:40
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30	08:16 16:38		06:52 19:45	05:33 20:50	04:36 21:46	04:27 22:06	05:09 21:29	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:44	08:48 15:43
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Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DK - Pumpuri

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

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

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DL - Berzkalnes

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

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Idle start wind speed 3,0m/s

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2	08:48 15:47	08:10 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:22 15:42
3	08:47 15:48	08:09 16:46	07:04 17:49	06:42 19:54	05:26 20:56	04:32 21:52	04:29 22:05	05:17 21:21	06:18 20:07	07:18 18:46	07:23 16:30	08:24 15:41
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Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DM - Arsmenieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:49	04:27 22:06	05:13 21:25	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
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31	08:14 16:40		06:49 19:47		04:35 21:48		05:11 21:27	06:12 20:14		07:17 16:36		08:48 15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DN - Smelceju majas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:49	04:27 22:06	05:13 21:25	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
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23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:07	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:46 15:37
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25	08:25 16:27	07:19 17:35	06:05 18:35	05:45 20:39	04:43 21:38	04:24 22:07	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:47 15:39
26	08:23 16:29	07:16 17:38	06:03 18:37	05:42 20:42	04:42 21:40	04:24 22:07	05:02 21:37	06:02 20:27	07:04 19:05	07:06 16:48	08:12 15:48	08:47 15:39
27	08:21 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:41	04:25 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:13 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:57 18:41	05:38 20:46	04:39 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 19:00	07:10 16:43	08:15 15:46	08:48 15:41
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:31	06:08 20:20	07:10 18:57	07:13 16:41	08:17 15:45	08:48 15:42
30	08:16 16:38		06:52 19:45	05:33 20:50	04:36 21:46	04:27 22:06	05:09 21:29	06:10 20:17	07:12 18:54	07:15 16:39	08:19 15:44	08:48 15:43
31	08:14 16:40		06:49 19:47		04:35 21:48		05:11 21:27	06:12 20:14		07:17 16:36		08:48 15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
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Total reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DO - Zemites

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

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1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:34 21:49	04:27 22:06	05:13 21:25	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:47 15:46	08:10 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:23	06:16 20:09	07:16 18:49	07:21 16:32	08:22 15:42
3	08:47 15:48	08:08 16:46	07:03 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:29 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:29	08:24 15:41
4	08:47 15:49	08:06 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:30 21:53	04:30 22:04	05:18 21:19	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:46 15:50	08:04 16:51	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:54	04:31 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:52	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:32 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	08:45 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:28 21:57	04:33 22:02	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:30 15:38
8	08:45 15:55	07:58 16:57	06:51 17:59	06:28 20:04	05:15 21:06	04:27 21:58	04:34 22:01	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:01	06:26 20:06	05:13 21:08	04:26 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:17	08:33 15:37
10	08:43 15:58	07:54 17:02	06:45 18:03	06:23 20:08	05:11 21:10	04:26 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:34 15:36
11	08:42 16:00	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:12	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	08:41 16:01	07:49 17:06	06:40 18:08	06:18 20:12	05:06 21:14	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:36 18:23	07:43 16:11	08:37 15:36
13	08:40 16:03	07:47 17:09	06:37 18:10	06:15 20:14	05:04 21:16	04:24 22:03	04:40 21:56	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:35
14	08:39 16:05	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:24 22:03	04:42 21:55	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:39 15:35
15	08:38 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:40 15:35
16	08:37 16:09	07:40 17:15	06:29 18:16	06:07 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:04	08:41 15:35
17	08:36 16:10	07:38 17:18	06:27 18:18	06:05 20:23	04:57 21:24	04:23 22:05	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:53 16:02	08:42 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:35
19	08:33 16:14	07:33 17:22	06:21 18:22	06:00 20:27	04:53 21:28	04:23 22:06	04:49 21:48	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	08:32 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:29	04:23 22:07	04:51 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	08:31 16:18	07:28 17:27	06:16 18:27	05:55 20:31	04:50 21:31	04:23 22:07	04:53 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:48 21:33	04:23 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:54	08:46 15:37
23	08:28 16:22	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:07	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:46 15:37
24	08:26 16:25	07:21 17:33	06:08 18:33	05:47 20:37	04:45 21:36	04:23 22:07	04:58 21:40	05:58 20:32	07:00 19:10	08:02 17:53	08:08 15:51	08:47 15:38
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27	08:21 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:41	04:25 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:13 15:47	08:48 15:40
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29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:31	06:08 20:20	07:10 18:57	07:13 16:41	08:17 15:45	08:48 15:42
30	08:16 16:37		06:52 19:45	05:33 20:50	04:36 21:46	04:27 22:06	05:09 21:29	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:44	08:48 15:43
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Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DP - Arsmenieki

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

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

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DQ - Upi š i

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Operational time

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Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
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	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:25	20:12	18:52	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:28	05:15	06:16	07:16	07:21	08:22
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:47	08:08	07:04	06:41	05:26	04:31	04:29	05:16	06:18	07:18	07:23	08:24
	15:48	16:46	17:49	19:54	20:56	21:52	22:05	21:21	20:07	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:30	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:58	21:53	22:05	21:19	20:04	18:44	16:27	15:40
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	15:52	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:38	16:23	15:39
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	15:53	16:55	17:57	20:02	21:04	21:57	22:02	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:58	17:59	20:04	21:06	21:58	22:02	21:11	19:53	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:30	07:36	08:33
	15:56	17:00	18:01	20:06	21:08	21:59	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:04	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:36
11	08:42	07:52	06:43	06:20	05:09	04:25	04:38	05:32	06:34	07:34	07:41	08:36
	16:00	17:04	18:06	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:41	07:49	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:36	07:43	08:37
	16:01	17:07	18:08	20:12	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:36	06:38	07:39	07:45	08:38
	16:03	17:09	18:10	20:14	21:16	22:03	21:56	20:59	19:40	18:20	16:09	15:35
14	08:40	07:45	06:35	06:13	05:02	04:24	04:42	05:38	06:40	07:41	07:47	08:39
	16:05	17:11	18:12	20:17	21:18	22:03	21:55	20:57	19:37	18:18	16:07	15:35
15	08:38	07:43	06:32	06:10	05:01	04:23	04:43	05:40	06:42	07:43	07:49	08:40
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:05	15:35
16	08:37	07:40	06:30	06:07	04:59	04:23	04:45	05:42	06:44	07:45	07:51	08:41
	16:09	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:04	15:35
17	08:36	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:53	08:42
	16:11	17:18	18:18	20:23	21:24	22:05	21:51	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:43
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:47	19:27	18:07	16:00	15:35
19	08:34	07:33	06:22	06:00	04:53	04:23	04:50	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:23	20:27	21:28	22:06	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:25	20:29	21:29	22:07	21:47	20:42	19:21	18:02	15:57	15:36
21	08:31	07:29	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:55	08:02	08:45
	16:18	17:27	18:27	20:31	21:31	22:07	21:45	20:40	19:18	18:00	15:55	15:36
22	08:29	07:26	06:14	05:52	04:48	04:23	04:54	05:54	06:56	07:58	08:04	08:46
	16:20	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:46
	16:23	17:31	18:31	20:35	21:35	22:07	21:42	20:35	19:13	17:55	15:53	15:37
24	08:26	07:21	06:08	05:47	04:45	04:23	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:37	21:37	22:07	21:40	20:32	19:10	17:53	15:51	15:38
25	08:25	07:19	06:05	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:47
	16:27	17:35	18:35	20:39	21:38	22:07	21:39	20:30	19:08	17:50	15:50	15:38
26	08:23	07:16	06:03	05:42	04:42	04:24	05:02	06:02	07:04	07:06	08:12	08:47
	16:29	17:38	18:37	20:42	21:40	22:07	21:37	20:27	19:05	16:48	15:48	15:39
27	08:21	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	07:08	08:13	08:48
	16:31	17:40	18:39	20:44	21:42	22:07	21:35	20:25	19:02	16:45	15:47	15:40
28	08:20	07:11	05:57	05:38	04:39	04:25	05:05	06:06	07:08	07:10	08:15	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:37	04:26	05:07	06:08	07:10	07:13	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:31	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:45	20:50	21:46	22:07	21:29	20:17	18:54	16:39	15:44	15:43
31	08:14		06:49		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:27	20:15		16:36		15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DR - Aizveji

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:12	07:09	06:47	05:31	04:34	04:27	05:13	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:25	20:12	18:52	16:34	15:43
2	08:47	08:10	07:06	06:44	05:28	04:33	04:28	05:14	06:16	07:16	07:21	08:22
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:47	08:08	07:04	06:41	05:26	04:31	04:29	05:16	06:18	07:18	07:23	08:24
	15:48	16:46	17:48	19:54	20:56	21:52	22:05	21:21	20:07	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:30	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:58	21:53	22:04	21:19	20:04	18:44	16:27	15:40
5	08:46	08:04	06:58	06:36	05:21	04:29	04:31	05:20	06:22	07:22	07:28	08:27
	15:50	16:51	17:53	19:58	21:00	21:54	22:04	21:17	20:01	18:41	16:25	15:39
6	08:46	08:02	06:56	06:33	05:19	04:29	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:45	08:00	06:53	06:31	05:17	04:28	04:33	05:24	06:26	07:26	07:32	08:30
	15:53	16:55	17:57	20:02	21:04	21:57	22:02	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:58	17:59	20:04	21:06	21:58	22:01	21:11	19:53	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:30	07:36	08:33
	15:56	17:00	18:01	20:06	21:08	21:59	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:30	06:32	07:32	07:39	08:34
	15:58	17:02	18:03	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:36
11	08:42	07:52	06:43	06:20	05:08	04:25	04:38	05:32	06:34	07:34	07:41	08:36
	16:00	17:04	18:06	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:41	07:49	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:36	07:43	08:37
	16:01	17:06	18:08	20:12	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:40	07:47	06:37	06:15	05:04	04:24	04:40	05:36	06:38	07:39	07:45	08:38
	16:03	17:09	18:10	20:14	21:16	22:03	21:56	20:59	19:40	18:20	16:09	15:35
14	08:39	07:45	06:35	06:13	05:02	04:24	04:42	05:38	06:40	07:41	07:47	08:39
	16:05	17:11	18:12	20:17	21:18	22:03	21:55	20:57	19:37	18:18	16:07	15:35
15	08:38	07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:49	08:40
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:05	15:35
16	08:37	07:40	06:29	06:07	04:59	04:23	04:45	05:42	06:44	07:45	07:51	08:41
	16:09	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:04	15:35
17	08:36	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:53	08:42
	16:11	17:18	18:18	20:23	21:24	22:05	21:51	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:43
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:47	19:27	18:07	16:00	15:35
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:22	20:27	21:28	22:06	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:25	20:29	21:29	22:07	21:47	20:42	19:21	18:02	15:57	15:36
21	08:31	07:28	06:16	05:55	04:50	04:23	04:53	05:52	06:54	07:55	08:02	08:45
	16:18	17:27	18:27	20:31	21:31	22:07	21:45	20:40	19:18	18:00	15:55	15:36
22	08:29	07:26	06:13	05:52	04:48	04:23	04:54	05:54	06:56	07:57	08:04	08:46
	16:20	17:29	18:29	20:33	21:33	22:07	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:46
	16:23	17:31	18:31	20:35	21:35	22:07	21:42	20:35	19:13	17:55	15:52	15:37
24	08:26	07:21	06:08	05:47	04:45	04:23	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:37	21:36	22:07	21:40	20:32	19:10	17:53	15:51	15:38
25	08:25	07:19	06:05	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:47
	16:27	17:35	18:35	20:39	21:38	22:07	21:39	20:30	19:08	17:50	15:50	15:38
26	08:23	07:16	06:03	05:42	04:42	04:24	05:01	06:02	07:04	07:06	08:12	08:47
	16:29	17:38	18:37	20:42	21:40	22:07	21:37	20:27	19:05	16:48	15:48	15:39
27	08:21	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	07:08	08:13	08:48
	16:31	17:40	18:39	20:44	21:41	22:07	21:35	20:25	19:02	16:45	15:47	15:40
28	08:20	07:11	05:57	05:38	04:39	04:25	05:05	06:06	07:08	07:10	08:15	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:33	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:37	04:26	05:07	06:08	07:10	07:13	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:31	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:27	05:09	06:10	07:12	07:15	08:19	08:48
	16:38		19:45	20:50	21:46	22:06	21:29	20:17	18:54	16:38	15:44	15:43
31	08:14		06:49		04:35		05:11	06:12		07:17		08:48
	16:40		19:47		21:48		21:27	20:14		16:36		15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DS - Dzervites

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:49	04:27 22:06	05:13 21:25	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:47 15:46	08:10 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:33 21:50	04:28 22:06	05:15 21:23	06:16 20:09	07:16 18:49	07:21 16:32	08:22 15:42
3	08:47 15:48	08:08 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:29 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:30	08:24 15:41
4	08:47 15:49	08:06 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:30 21:53	04:30 22:04	05:18 21:19	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:46 15:50	08:04 16:51	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:54	04:31 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:52	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:29 21:56	04:32 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:39
7	08:45 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:28 21:57	04:33 22:02	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:30 15:38
8	08:45 15:55	07:58 16:58	06:51 17:59	06:28 20:04	05:15 21:06	04:27 21:58	04:34 22:01	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:01	06:26 20:06	05:13 21:08	04:26 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:17	08:33 15:37
10	08:43 15:58	07:54 17:02	06:45 18:04	06:23 20:08	05:11 21:10	04:26 22:00	04:37 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:34 15:36
11	08:42 16:00	07:52 17:04	06:43 18:06	06:20 20:10	05:09 21:12	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	08:41 16:01	07:49 17:07	06:40 18:08	06:18 20:12	05:06 21:14	04:25 22:02	04:39 21:57	05:34 21:02	06:36 19:43	07:36 18:23	07:43 16:11	08:37 15:36
13	08:40 16:03	07:47 17:09	06:37 18:10	06:15 20:14	05:04 21:16	04:24 22:03	04:41 21:56	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:38 15:36
14	08:39 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:02 21:18	04:24 22:03	04:42 21:55	05:38 20:57	06:40 19:37	07:41 18:18	07:47 16:07	08:39 15:35
15	08:38 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:40 15:35
16	08:37 16:09	07:40 17:15	06:29 18:16	06:07 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:04	08:41 15:35
17	08:36 16:11	07:38 17:18	06:27 18:18	06:05 20:23	04:57 21:24	04:23 22:05	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:53 16:02	08:42 15:35
18	08:35 16:13	07:36 17:20	06:24 18:20	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:35
19	08:33 16:14	07:33 17:22	06:22 18:22	06:00 20:27	04:53 21:28	04:23 22:06	04:50 21:48	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	08:32 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:29	04:23 22:07	04:51 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	08:31 16:18	07:28 17:27	06:16 18:27	05:55 20:31	04:50 21:31	04:23 22:07	04:53 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:21	07:26 17:29	06:13 18:29	05:52 20:33	04:48 21:33	04:23 22:07	04:55 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:07	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:46 15:37
24	08:26 16:25	07:21 17:33	06:08 18:33	05:47 20:37	04:45 21:36	04:24 22:07	04:58 21:40	05:58 20:32	07:00 19:10	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:35	06:05 18:35	05:45 20:39	04:43 21:38	04:24 22:07	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:47 15:39
26	08:23 16:29	07:16 17:38	06:03 18:37	05:42 20:42	04:42 21:40	04:24 22:07	05:02 21:37	06:02 20:27	07:04 19:05	07:06 16:48	08:11 15:48	08:47 15:39
27	08:21 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:41	04:25 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:13 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:57 18:41	05:38 20:46	04:39 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 19:00	07:10 16:43	08:15 15:46	08:48 15:41
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:31	06:08 20:20	07:10 18:57	07:13 16:41	08:17 15:45	08:48 15:42
30	08:16 16:38		06:52 19:45	05:33 20:50	04:36 21:46	04:27 22:06	05:09 21:29	06:10 20:17	07:12 18:54	07:15 16:39	08:19 15:44	08:48 15:43
31	08:14 16:40		06:49 19:47		04:35 21:48		05:11 21:27	06:12 20:14		07:17 16:36		08:48 15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DT - Jaunmasani

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:49	04:27 22:06	05:13 21:25	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:47 15:47	08:10 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:33 21:51	04:28 22:06	05:15 21:23	06:16 20:09	07:16 18:49	07:21 16:32	08:22 15:42
3	08:47 15:48	08:08 16:46	07:04 17:49	06:41 19:54	05:26 20:56	04:32 21:52	04:29 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:30	08:24 15:41
4	08:47 15:49	08:06 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:30 21:53	04:30 22:04	05:18 21:19	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:46 15:50	08:04 16:51	06:58 17:53	06:36 19:58	05:21 21:00	04:30 21:54	04:31 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:52	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:29 21:56	04:32 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:39
7	08:45 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:28 21:57	04:33 22:02	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:30 15:38
8	08:45 15:55	07:58 16:58	06:51 17:59	06:28 20:04	05:15 21:06	04:27 21:58	04:34 22:01	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:01	06:26 20:06	05:13 21:08	04:26 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:17	08:33 15:37
10	08:43 15:58	07:54 17:02	06:45 18:04	06:23 20:08	05:11 21:10	04:26 22:00	04:37 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:34 15:36
11	08:42 16:00	07:52 17:04	06:43 18:06	06:20 20:10	05:09 21:12	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	08:41 16:01	07:49 17:07	06:40 18:08	06:18 20:12	05:07 21:14	04:25 22:02	04:39 21:57	05:34 21:02	06:36 19:43	07:36 18:23	07:43 16:11	08:37 15:36
13	08:40 16:03	07:47 17:09	06:37 18:10	06:15 20:14	05:04 21:16	04:24 22:03	04:41 21:56	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:38 15:36
14	08:39 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:03 21:18	04:24 22:03	04:42 21:55	05:38 20:57	06:40 19:37	07:41 18:18	07:47 16:07	08:39 15:35
15	08:38 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:06	08:40 15:35
16	08:37 16:09	07:40 17:15	06:30 18:16	06:07 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:04	08:41 15:35
17	08:36 16:11	07:38 17:18	06:27 18:18	06:05 20:23	04:57 21:24	04:23 22:05	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:53 16:02	08:42 15:35
18	08:35 16:13	07:36 17:20	06:24 18:20	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:36
19	08:33 16:14	07:33 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:23 22:06	04:50 21:48	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	08:32 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:29	04:23 22:07	04:51 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	08:31 16:18	07:28 17:27	06:16 18:27	05:55 20:31	04:50 21:31	04:23 22:07	04:53 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:56	08:45 15:36
22	08:29 16:21	07:26 17:29	06:14 18:29	05:52 20:33	04:48 21:33	04:23 22:07	04:55 21:44	05:54 20:37	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:07	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:46 15:37
24	08:26 16:25	07:21 17:33	06:08 18:33	05:47 20:37	04:45 21:36	04:24 22:07	04:58 21:40	05:58 20:32	07:00 19:10	08:02 17:53	08:08 15:51	08:47 15:38
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27	08:21 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:41	04:25 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:13 15:47	08:48 15:40
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29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:31	06:08 20:20	07:10 18:57	07:13 16:41	08:17 15:45	08:48 15:42
30	08:16 16:38		06:52 19:45	05:33 20:50	04:36 21:46	04:27 22:06	05:09 21:29	06:10 20:17	07:12 18:54	07:15 16:39	08:19 15:44	08:48 15:43
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Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
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Total reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DU - Airites

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

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

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Reference year for calendar

2025

Shadow receptor: DV - Upmalas

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

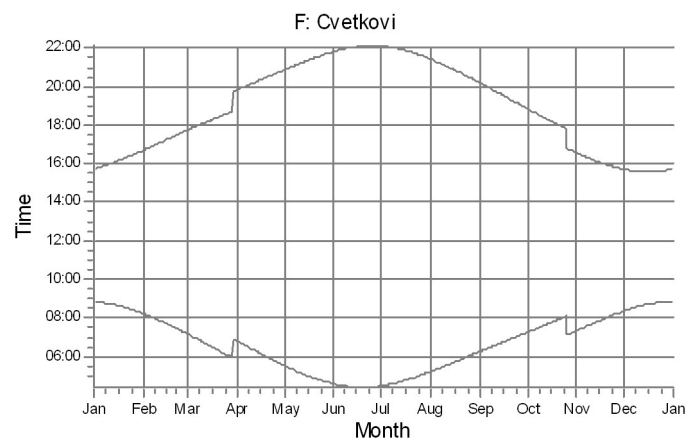
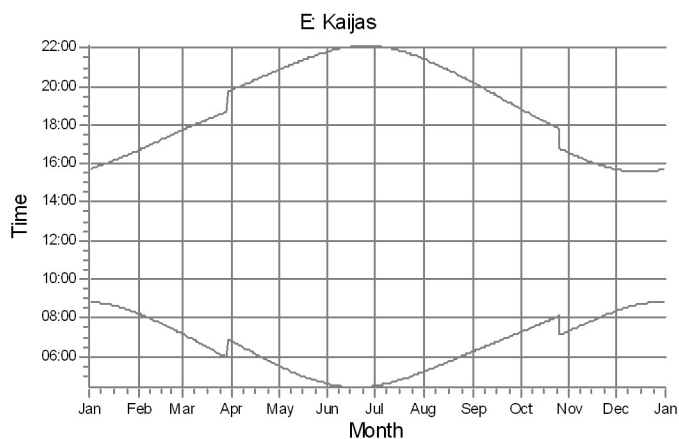
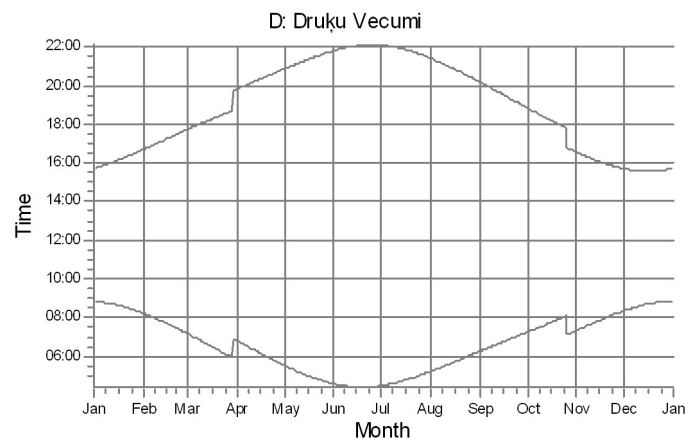
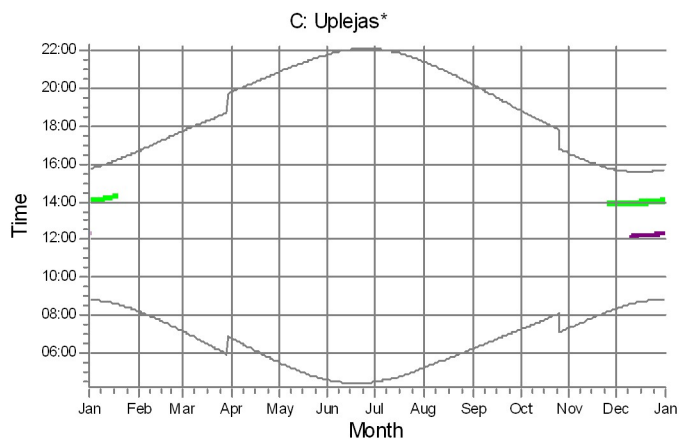
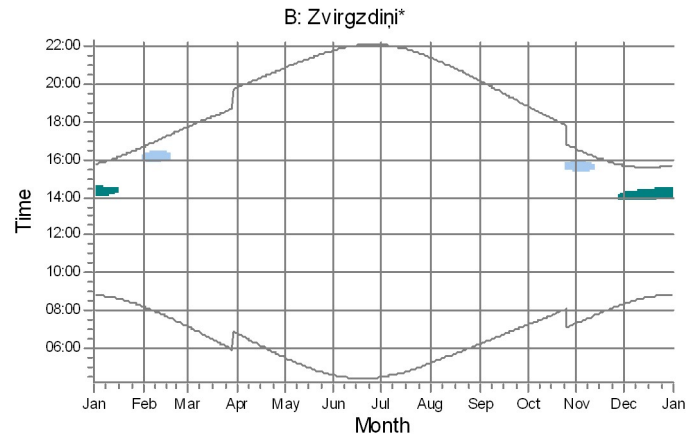
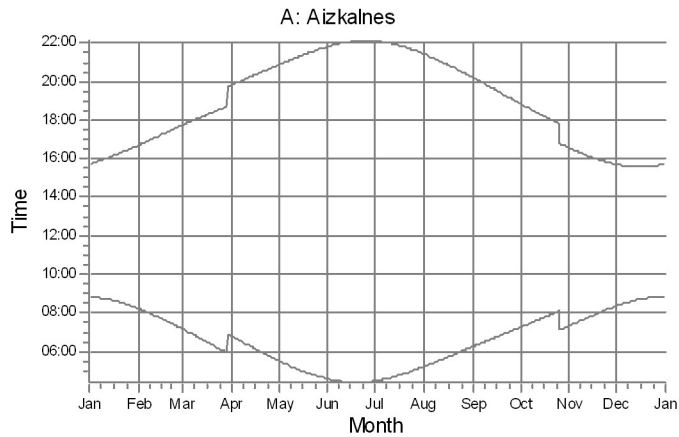
	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:49	04:27 22:06	05:13 21:25	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	08:47 15:46	08:10 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:33 21:50	04:28 22:06	05:15 21:23	06:16 20:09	07:16 18:49	07:21 16:32	08:22 15:42
3	08:47 15:48	08:08 16:46	07:03 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:29 22:05	05:16 21:21	06:18 20:07	07:18 18:46	07:23 16:30	08:24 15:41
4	08:47 15:49	08:06 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:30 21:53	04:30 22:04	05:18 21:19	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:46 15:50	08:04 16:51	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:54	04:31 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	08:46 15:52	08:02 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:29 21:56	04:32 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:39
7	08:45 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:28 21:57	04:33 22:02	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:30 15:38
8	08:45 15:55	07:58 16:58	06:51 17:59	06:28 20:04	05:15 21:06	04:27 21:58	04:34 22:01	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:01	06:26 20:06	05:13 21:08	04:26 21:59	04:35 22:01	05:28 21:08	06:30 19:51	07:30 18:30	07:36 16:17	08:33 15:37
10	08:43 15:58	07:54 17:02	06:45 18:03	06:23 20:08	05:11 21:10	04:26 22:00	04:37 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:34 15:36
11	08:42 16:00	07:52 17:04	06:43 18:06	06:20 20:10	05:09 21:12	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	08:41 16:01	07:49 17:06	06:40 18:08	06:18 20:12	05:06 21:14	04:24 22:02	04:39 21:57	05:34 21:02	06:36 19:43	07:36 18:23	07:43 16:11	08:37 15:36
13	08:40 16:03	07:47 17:09	06:37 18:10	06:15 20:14	05:04 21:16	04:24 22:03	04:41 21:56	05:36 20:59	06:38 19:40	07:38 18:20	07:45 16:09	08:38 15:36
14	08:39 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:02 21:18	04:24 22:03	04:42 21:55	05:38 20:57	06:40 19:37	07:41 18:18	07:47 16:07	08:39 15:35
15	08:38 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:01 21:20	04:23 22:04	04:43 21:54	05:40 20:54	06:42 19:35	07:43 18:15	07:49 16:05	08:40 15:35
16	08:37 16:09	07:40 17:15	06:29 18:16	06:07 20:21	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:51 16:04	08:41 15:35
17	08:36 16:11	07:38 17:18	06:27 18:18	06:05 20:23	04:57 21:24	04:23 22:05	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:53 16:02	08:42 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:55 16:00	08:43 15:35
19	08:33 16:14	07:33 17:22	06:21 18:22	06:00 20:27	04:53 21:28	04:23 22:06	04:50 21:48	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	08:32 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:29	04:23 22:06	04:51 21:47	05:50 20:42	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	08:31 16:18	07:28 17:27	06:16 18:27	05:55 20:31	04:50 21:31	04:23 22:07	04:53 21:45	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:45 15:36
22	08:29 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:48 21:33	04:23 22:07	04:54 21:44	05:54 20:37	06:56 19:16	07:57 17:57	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:07	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:46 15:37
24	08:26 16:25	07:21 17:33	06:08 18:33	05:47 20:37	04:45 21:36	04:23 22:07	04:58 21:40	05:58 20:32	07:00 19:10	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:35	06:05 18:35	05:45 20:39	04:43 21:38	04:24 22:07	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:47 15:38
26	08:23 16:29	07:16 17:38	06:03 18:37	05:42 20:41	04:42 21:40	04:24 22:07	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:48	08:11 15:48	08:47 15:39
27	08:21 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:41	04:25 22:07	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:13 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:57 18:41	05:38 20:46	04:39 21:43	04:25 22:07	05:05 21:33	06:06 20:22	07:08 19:00	07:10 16:43	08:15 15:46	08:48 15:41
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30	08:16 16:38		06:52 19:45	05:33 20:50	04:36 21:46	04:27 22:06	05:09 21:29	06:10 20:17	07:12 18:54	07:15 16:38	08:19 15:44	08:48 15:43
31	08:14 16:40		06:49 19:47		04:35 21:48		05:11 21:27	06:12 20:14		07:17 16:36		08:48 15:44
Potential sun hours	235	266	365	425	507	528	529	470	385	324	248	217
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



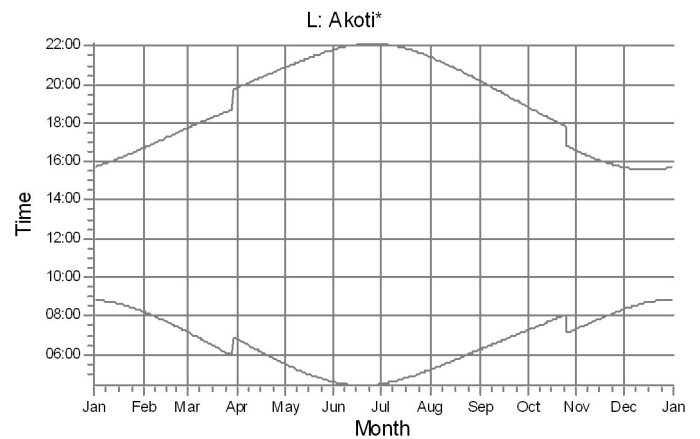
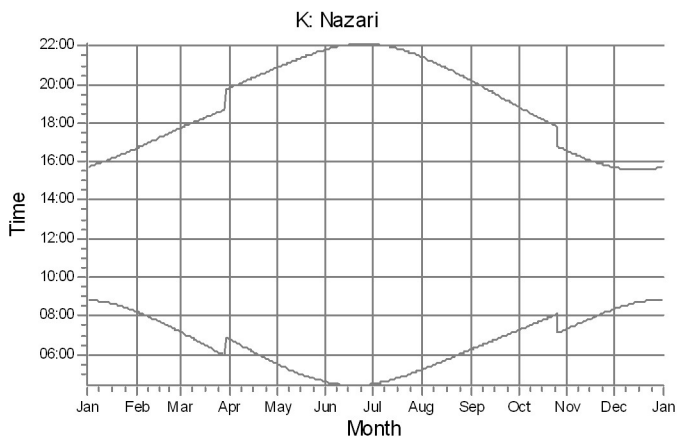
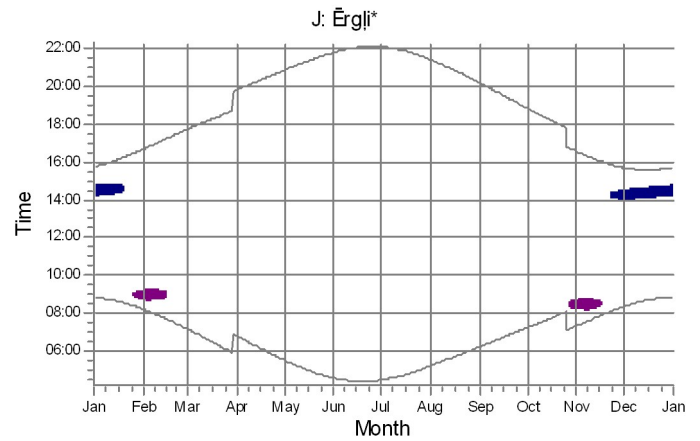
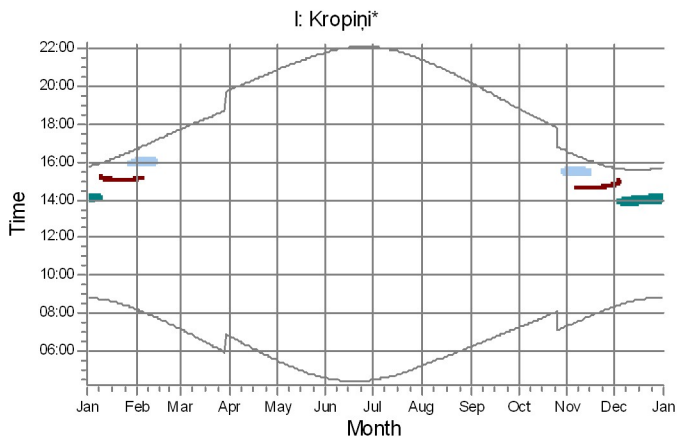
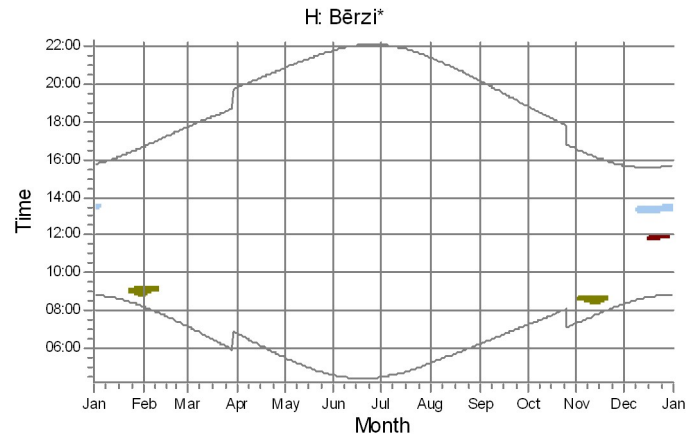
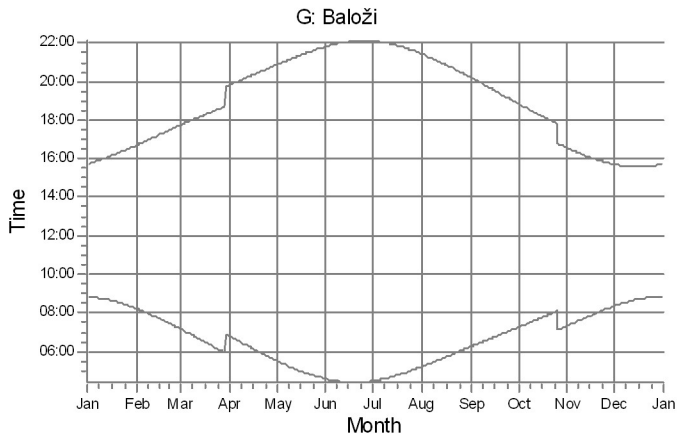
WTGs

	6: 18		9: 24		11: 22-A
	8: 17		10: 21-A		15: 13-A

* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



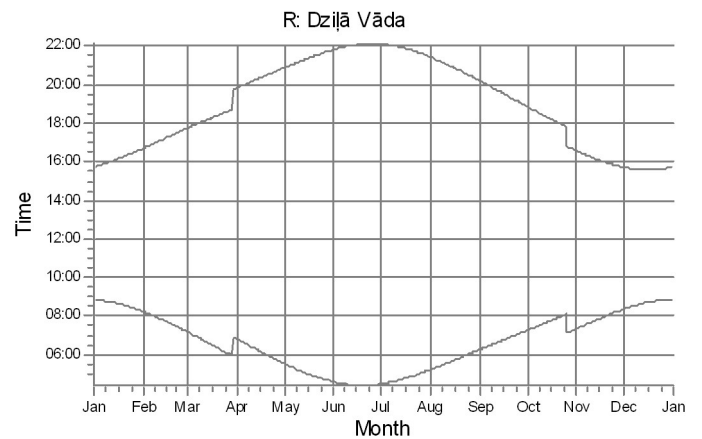
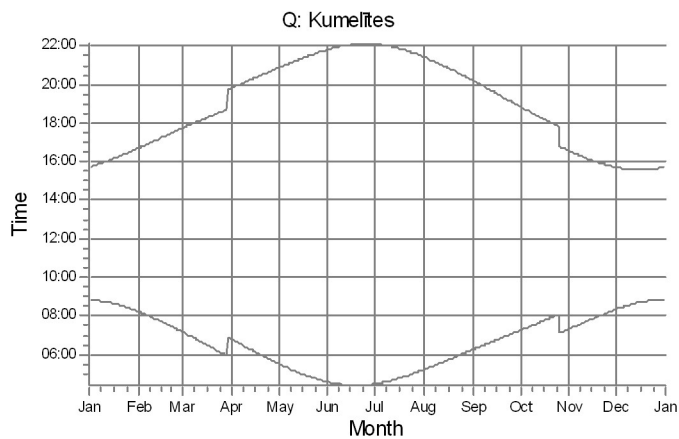
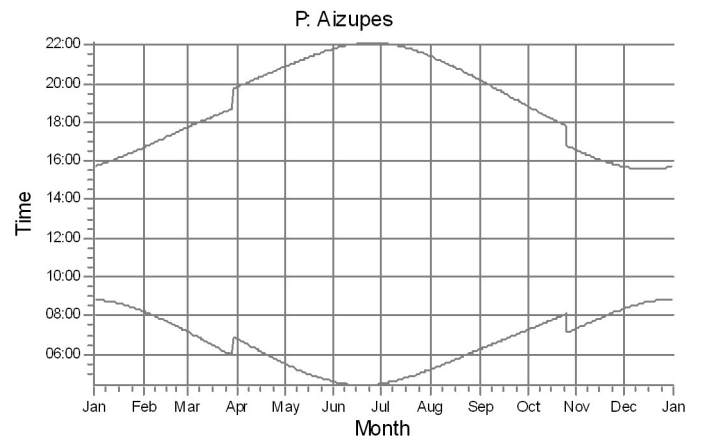
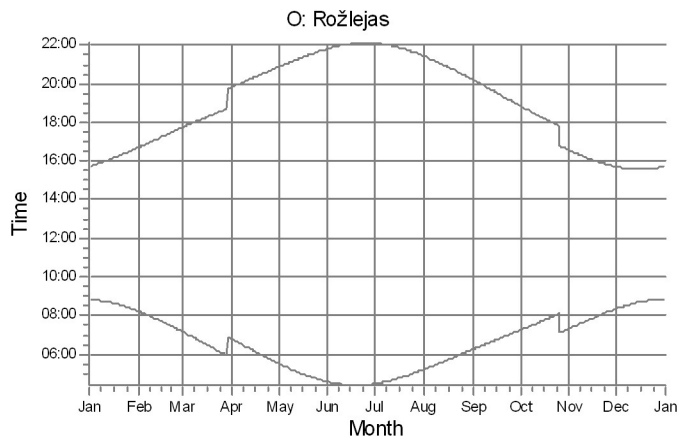
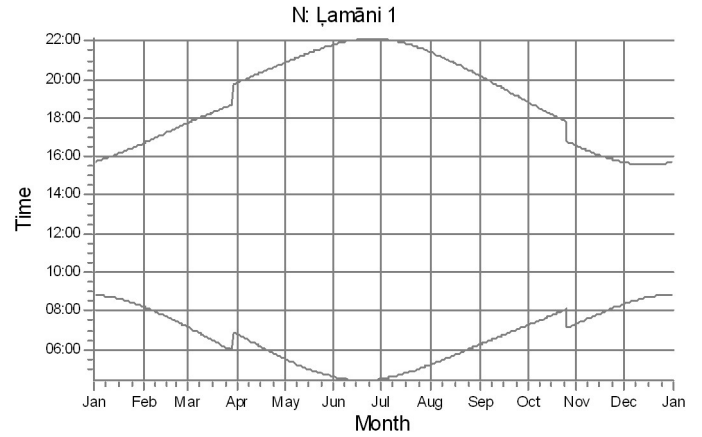
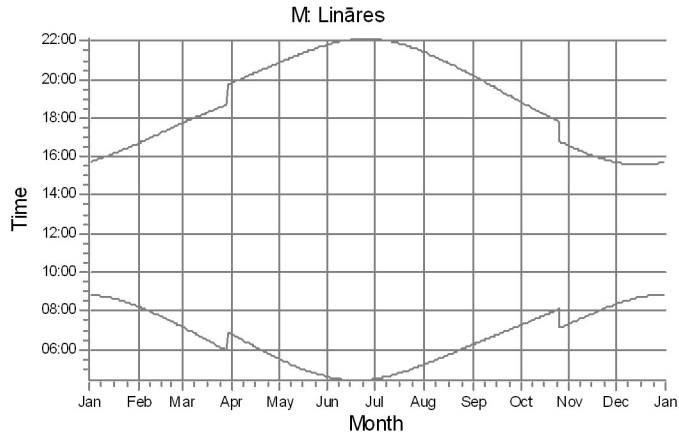
WTGs



* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

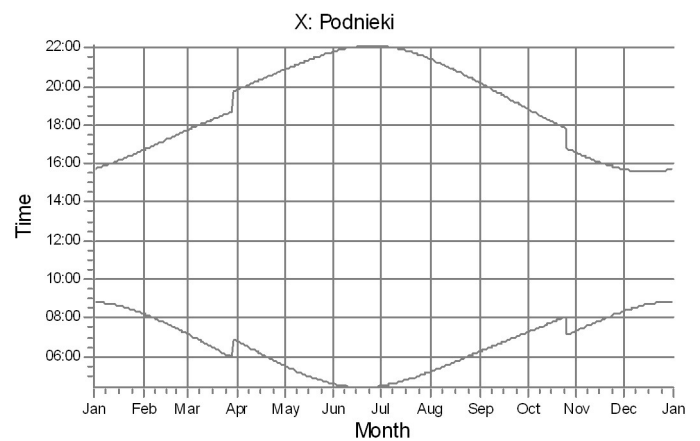
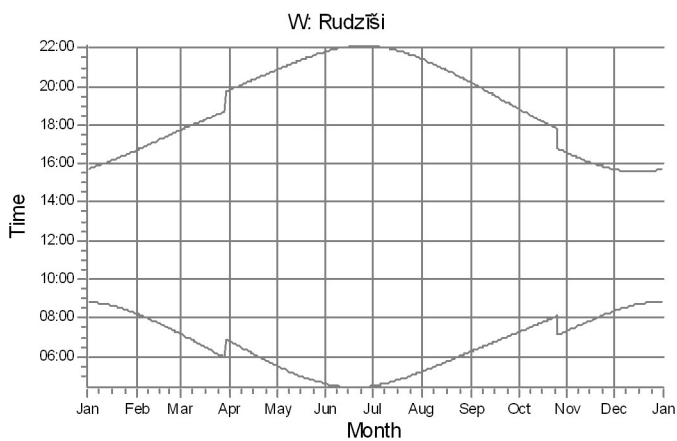
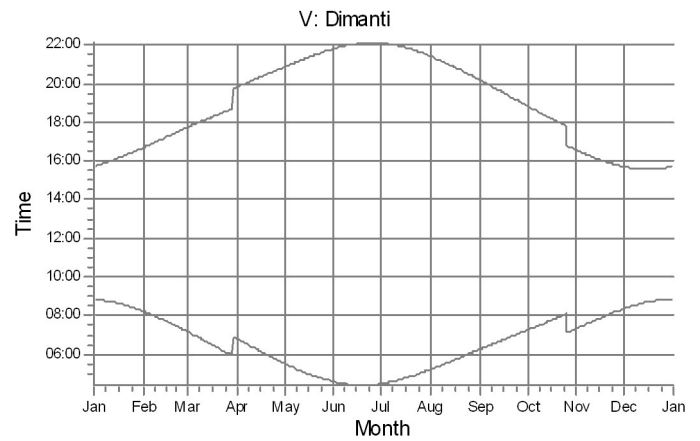
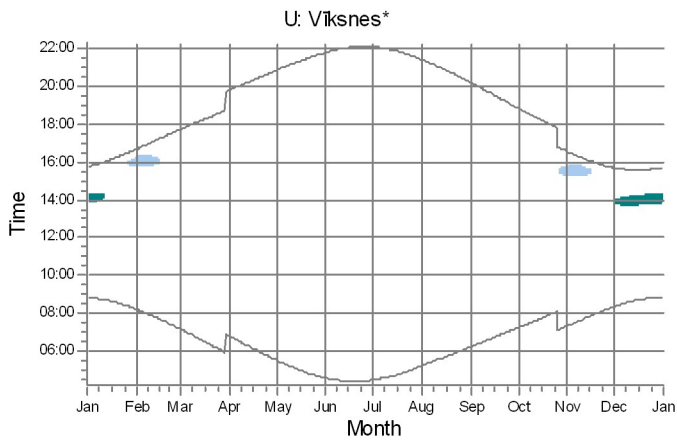
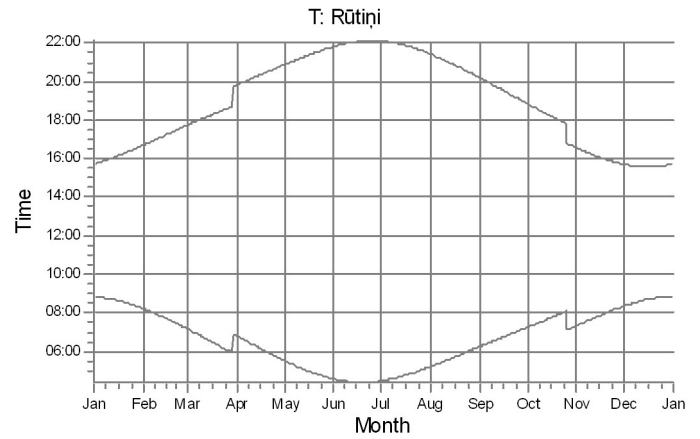
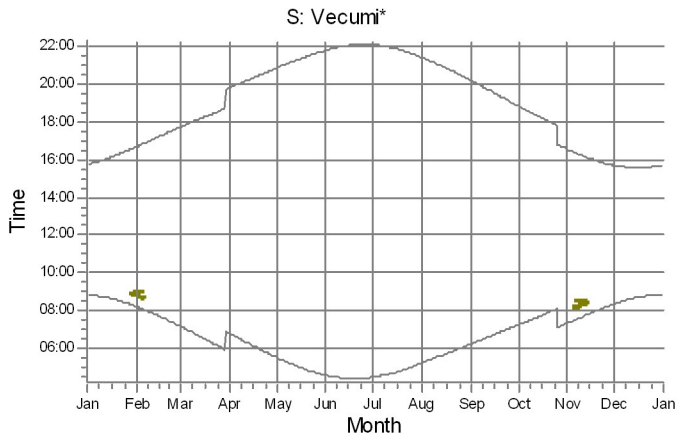
Calculation: Alternative - Real Case Curtailment



WTGs

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



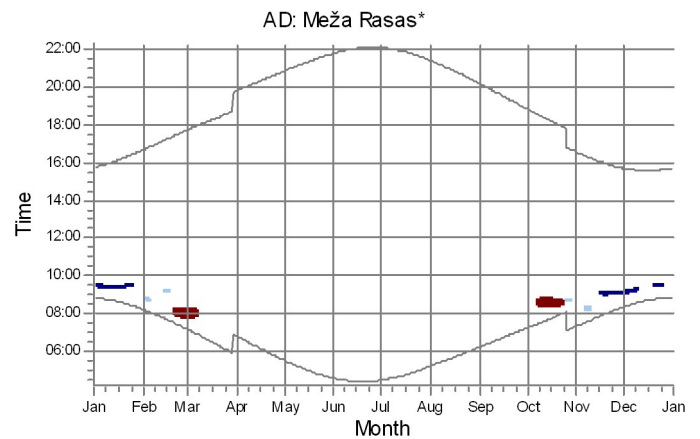
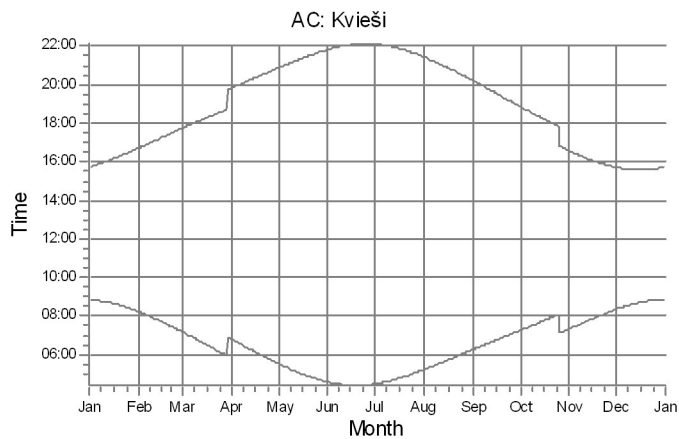
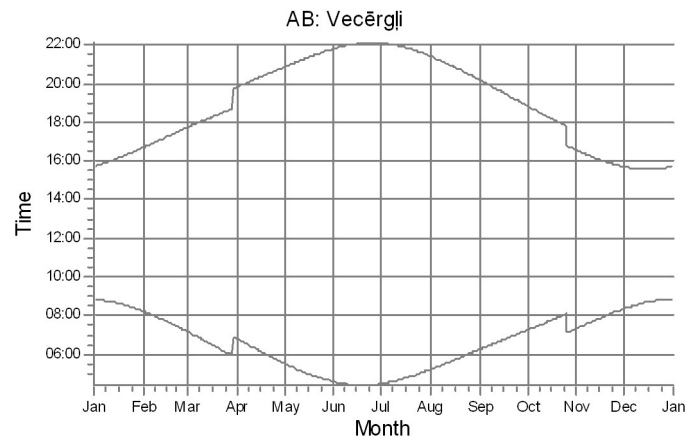
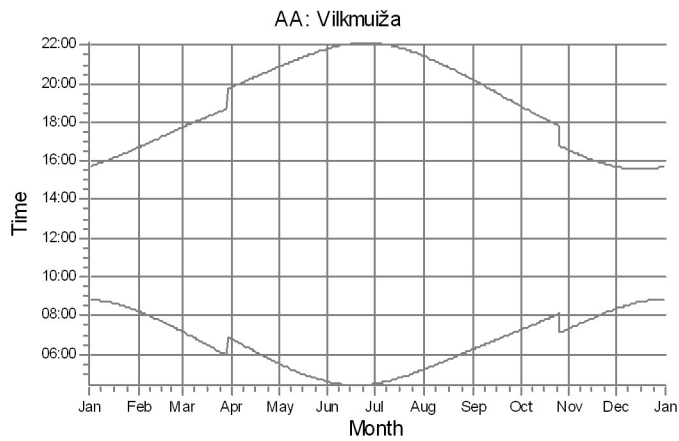
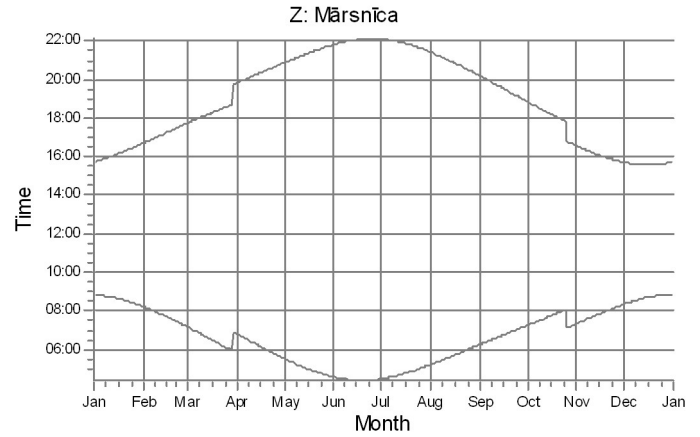
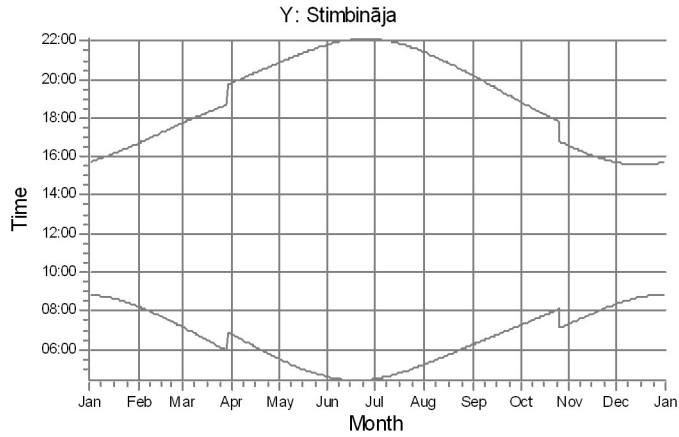
WTGs



* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



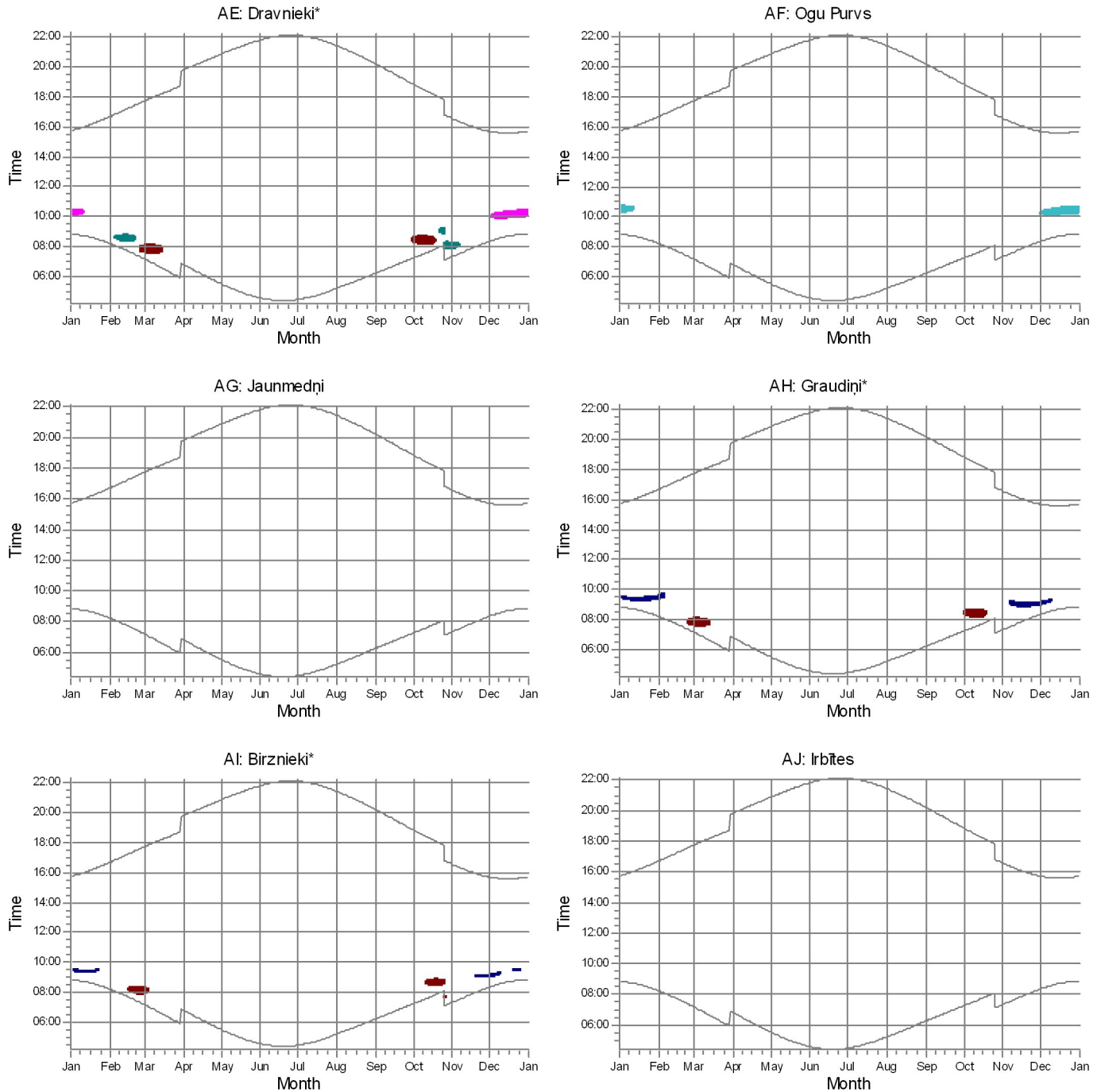
WTGs



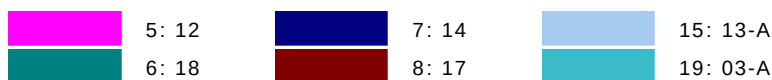
* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



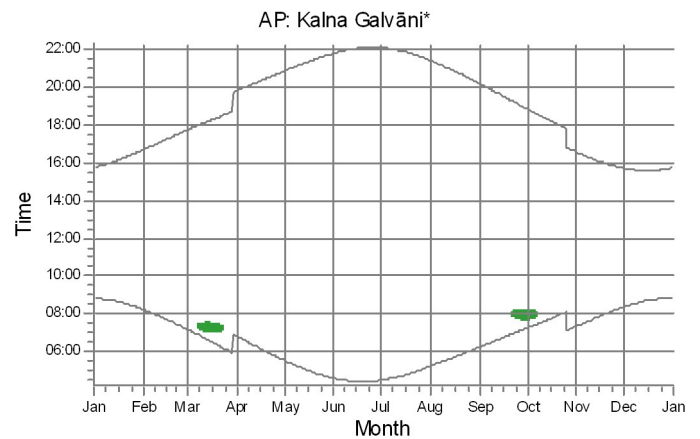
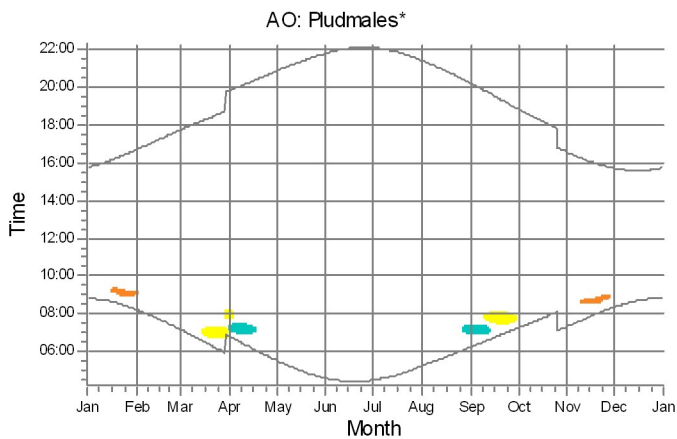
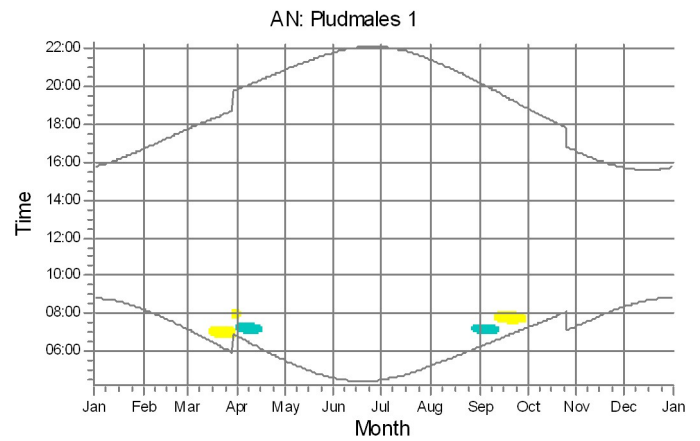
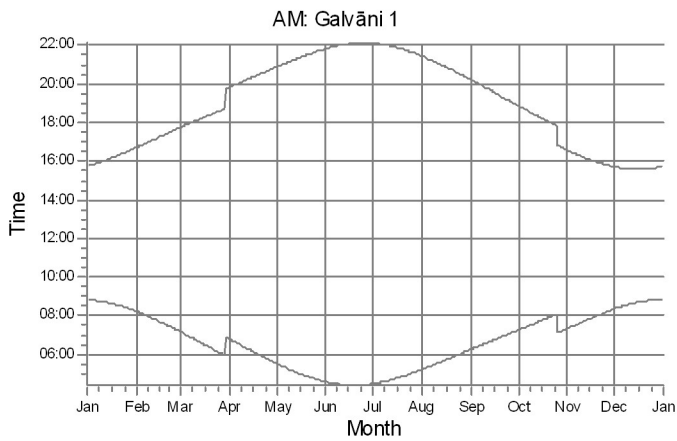
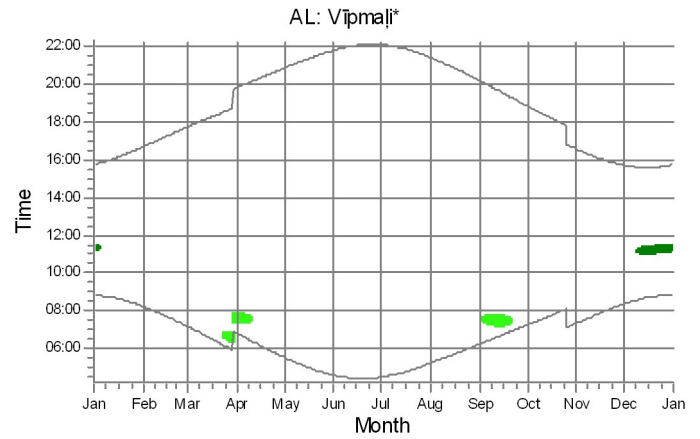
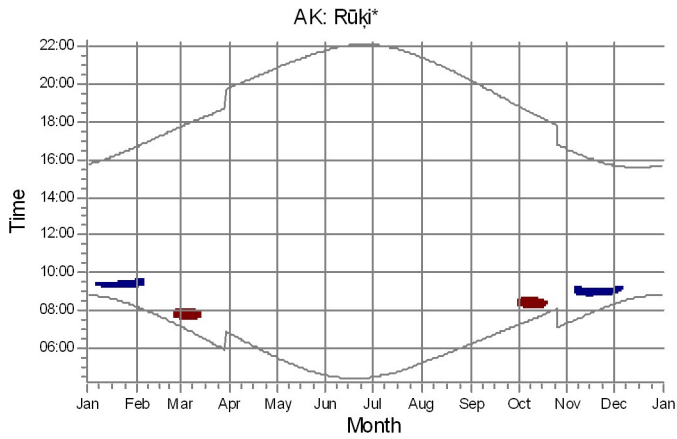
WTGs



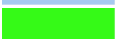
* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



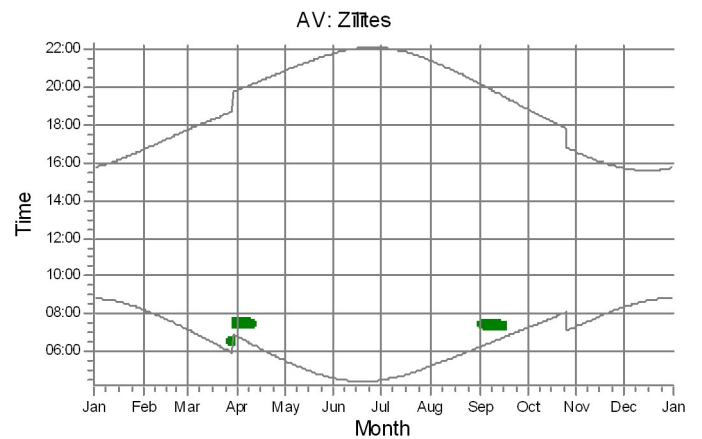
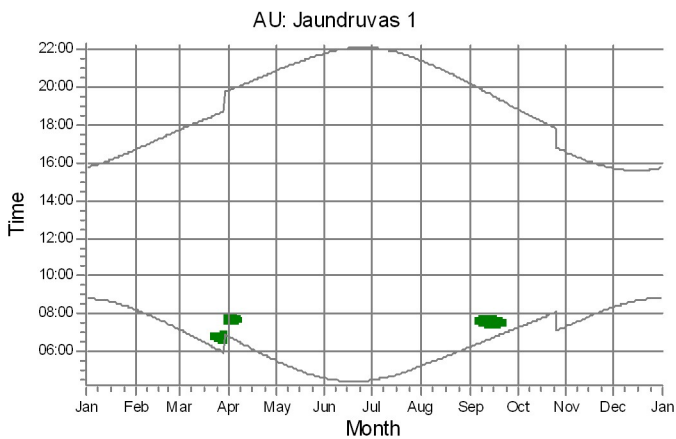
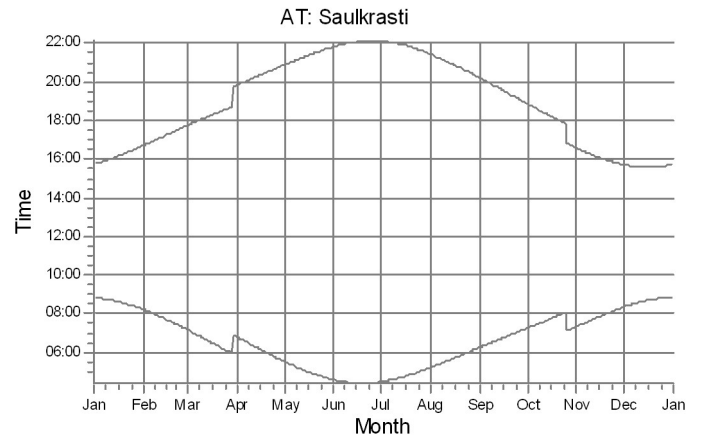
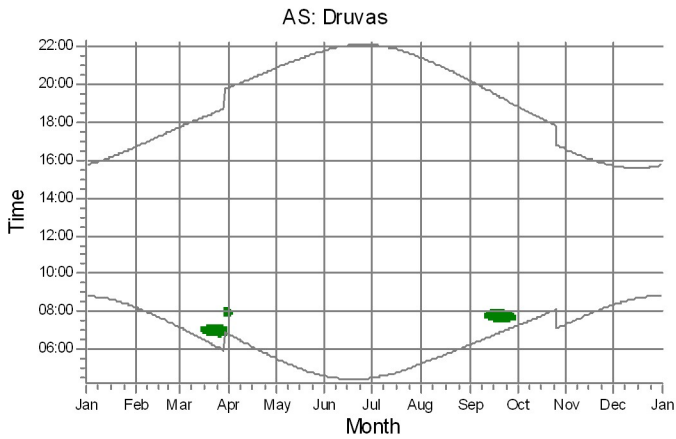
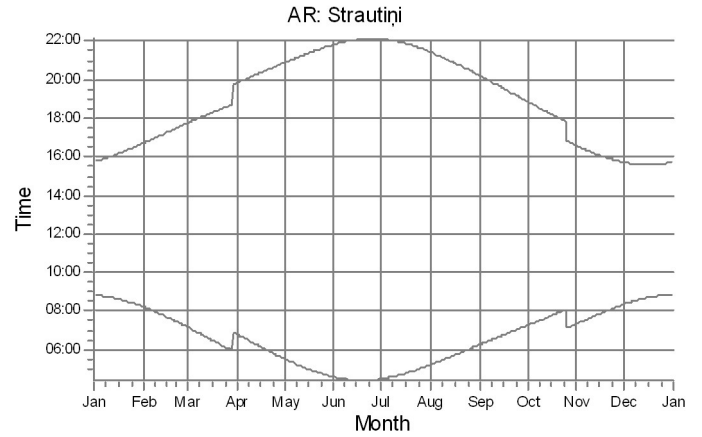
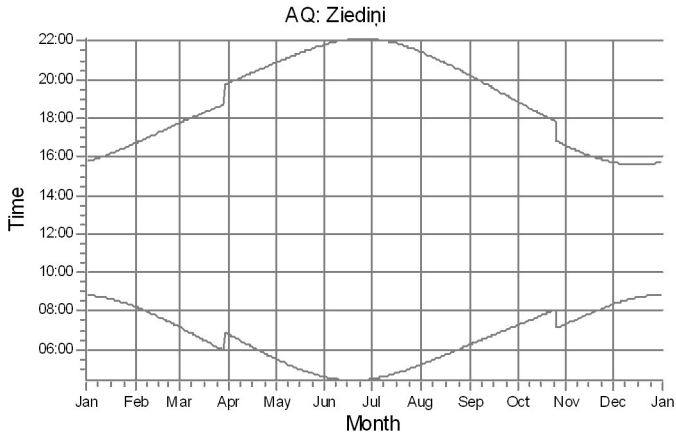
WTGs

	1: 1		7: 14		15: 13-A		19: 03-A		21: 06-A
	2: 2		8: 17		18: 08-A		20: 04-A		23: 32-C

* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment

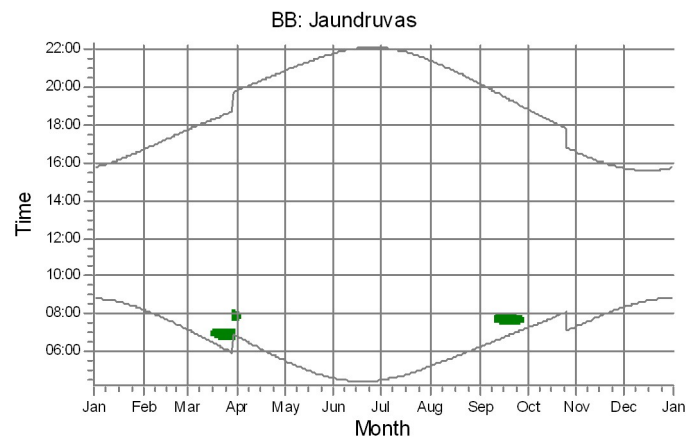
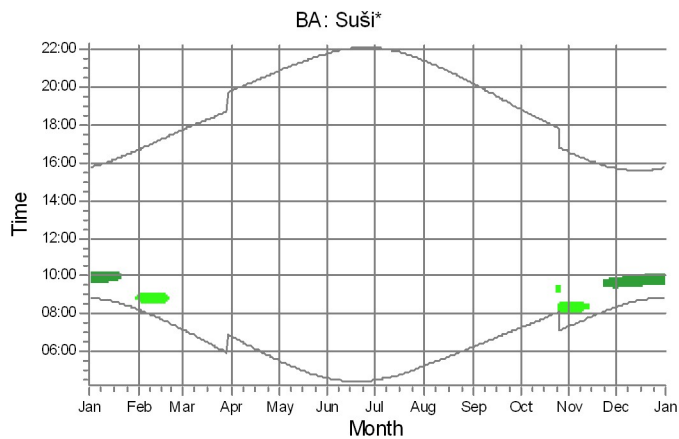
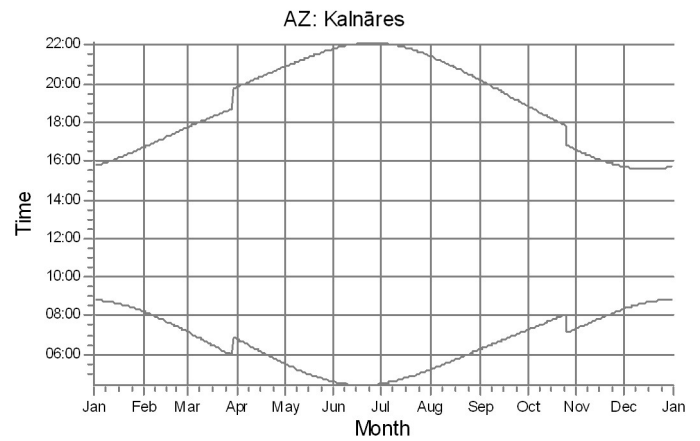
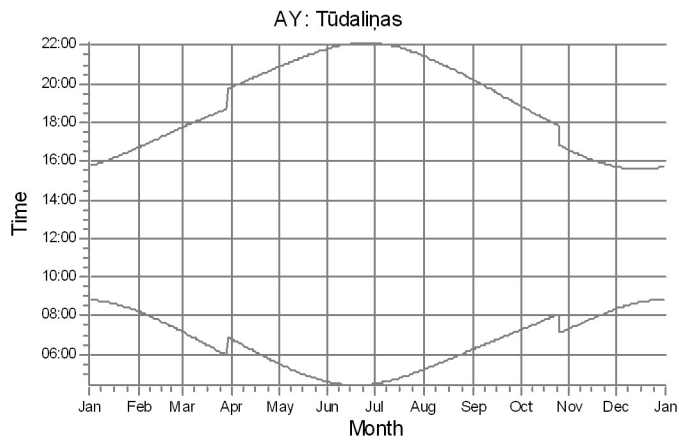
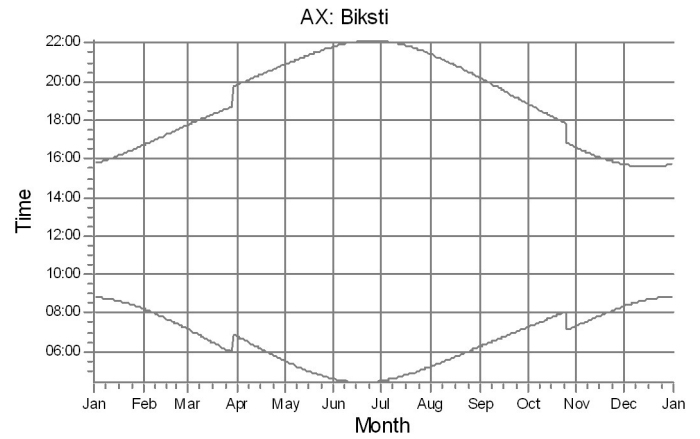
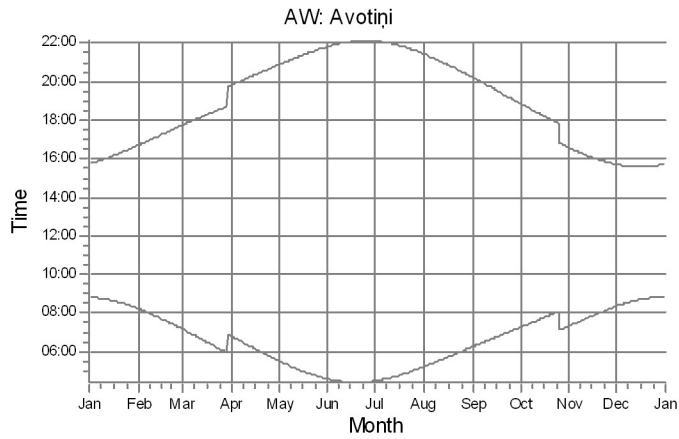


WTGs

1: 1

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



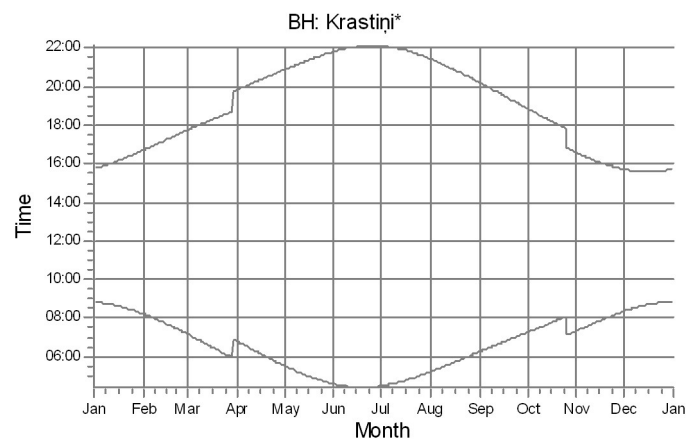
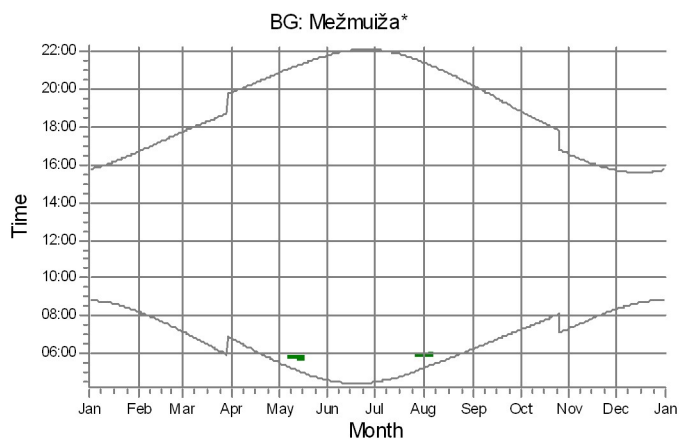
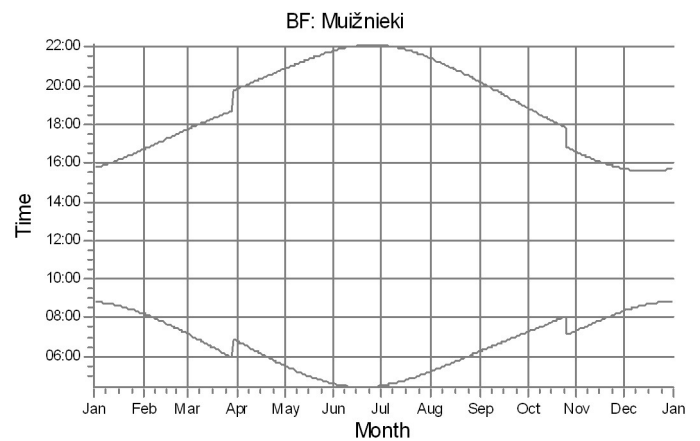
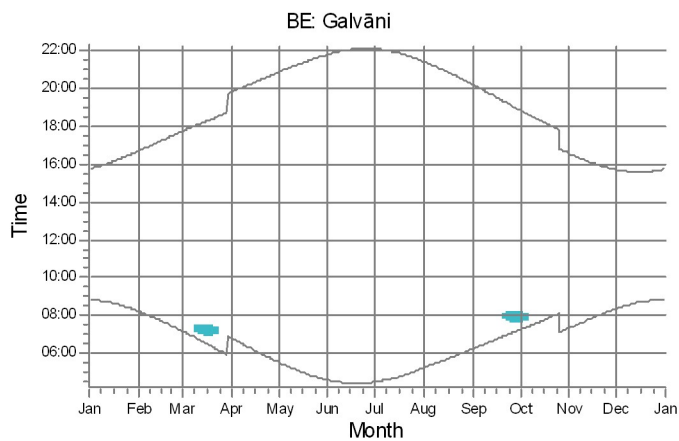
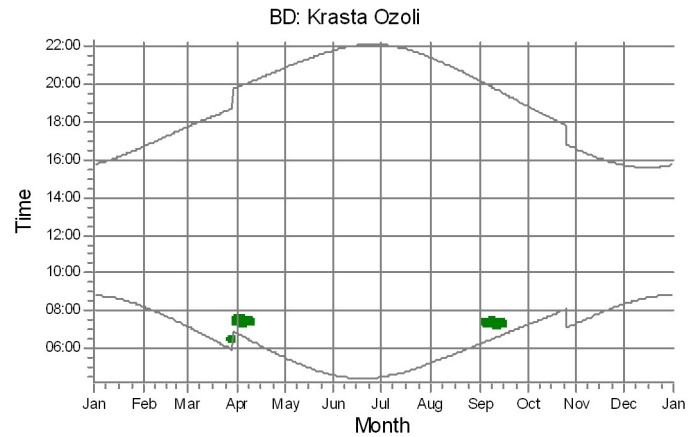
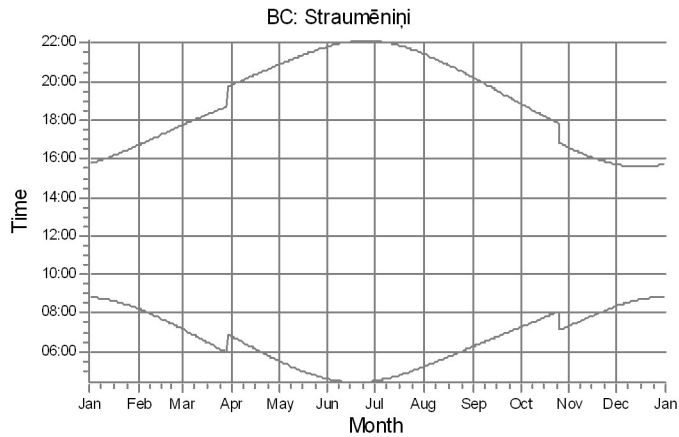
WTGs



* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



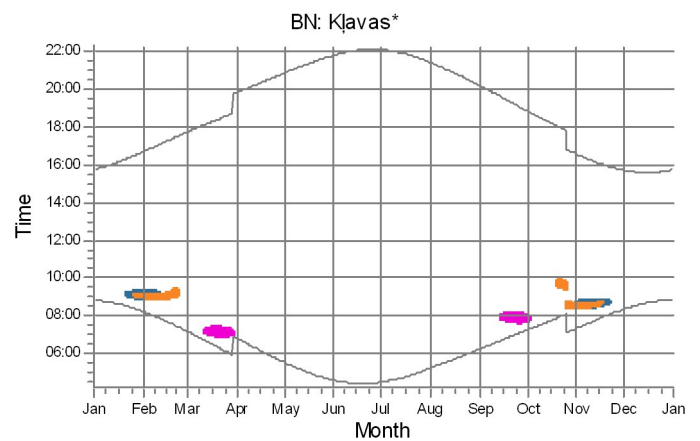
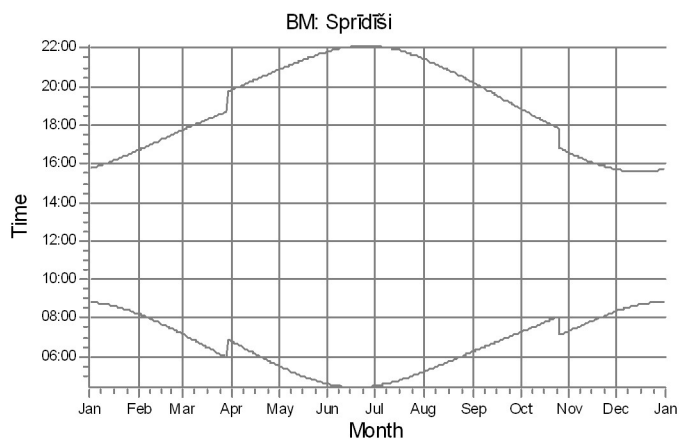
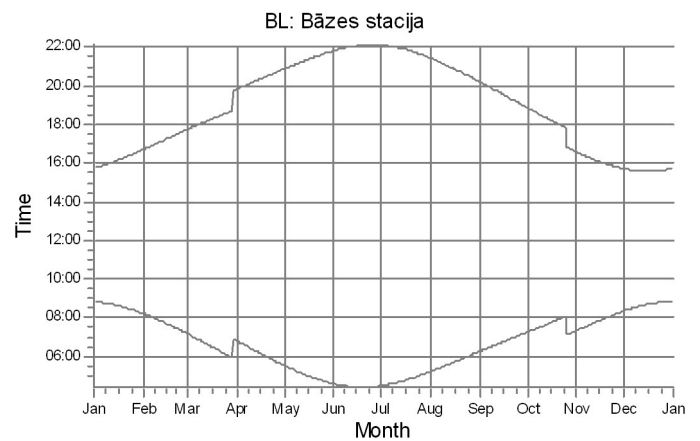
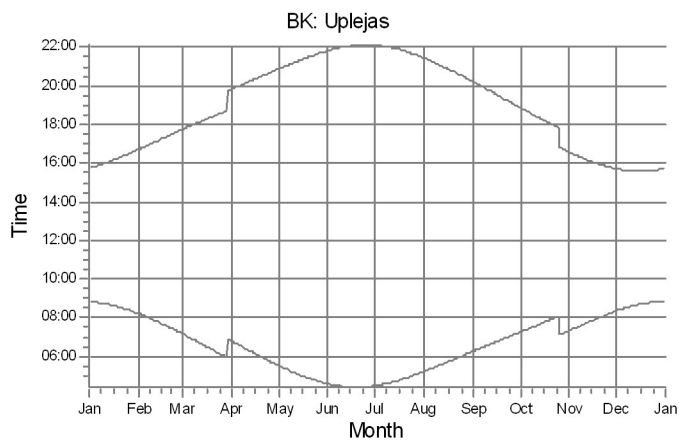
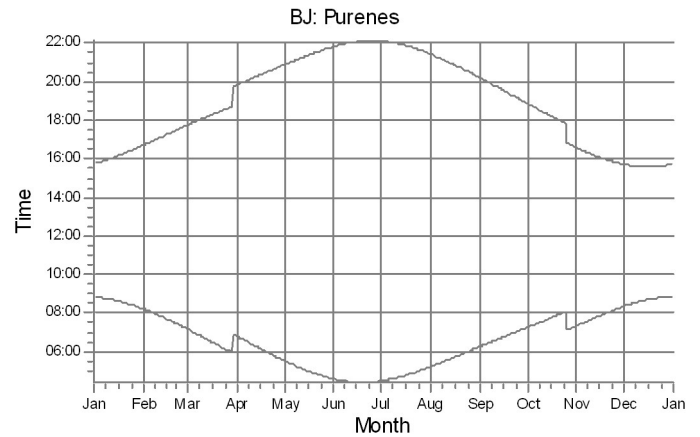
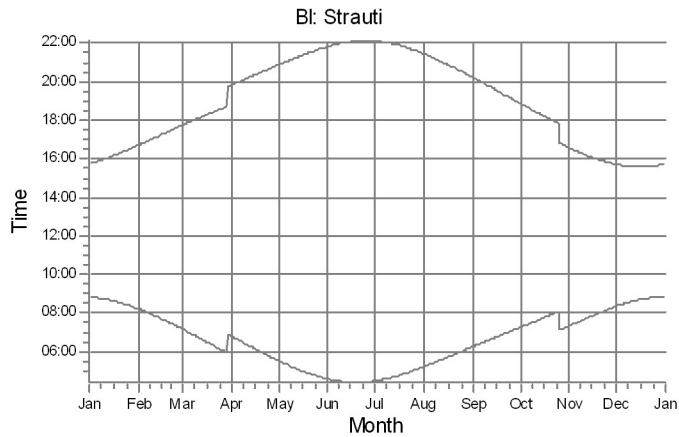
WTGs

1: 1 19: 03-A

* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



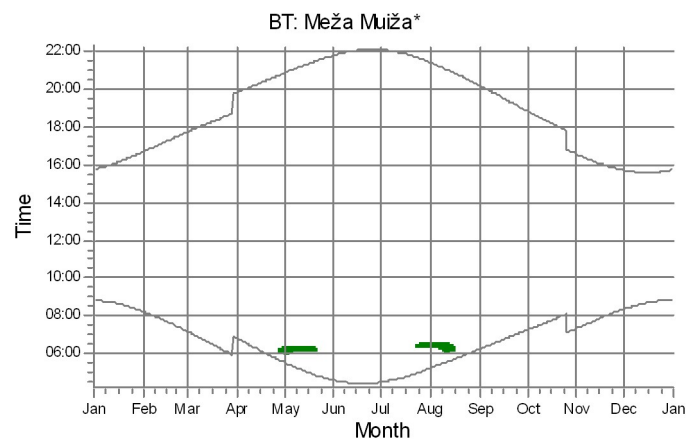
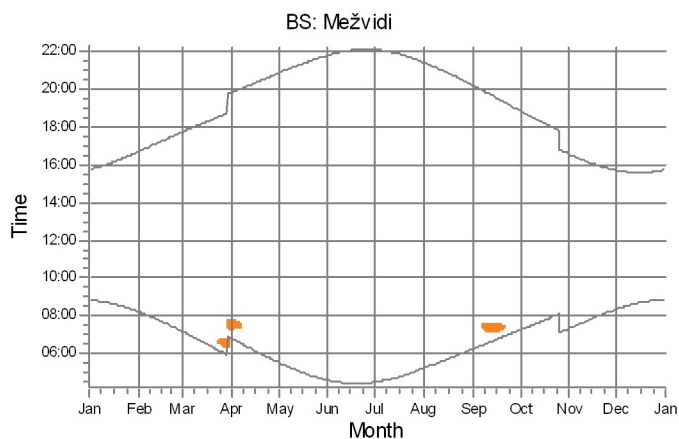
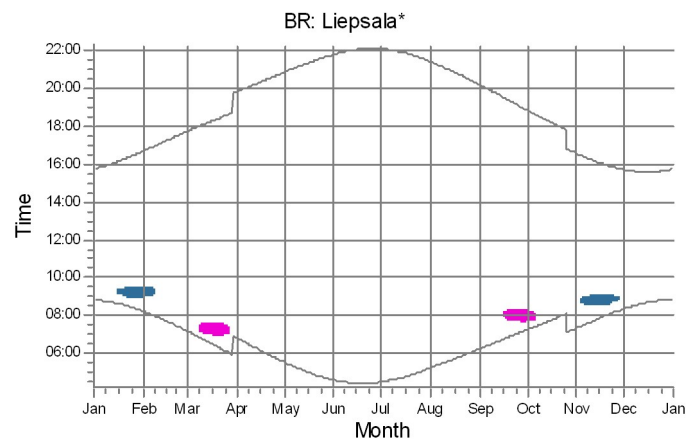
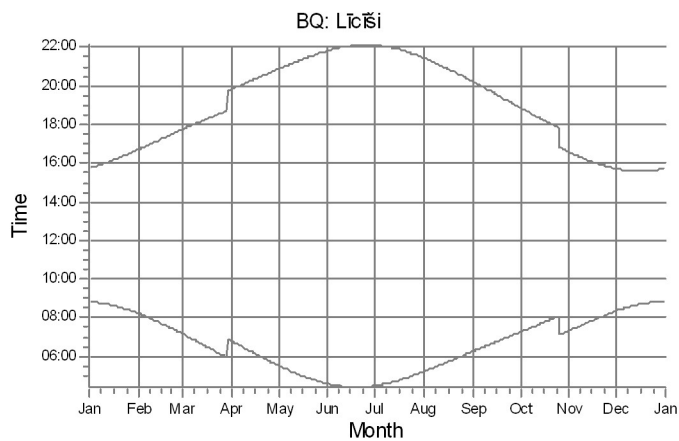
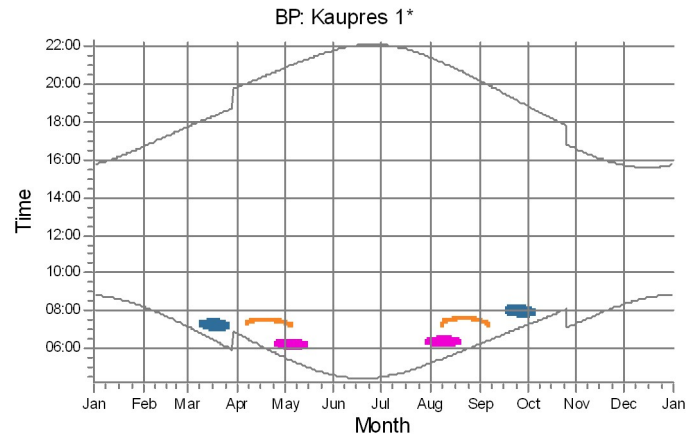
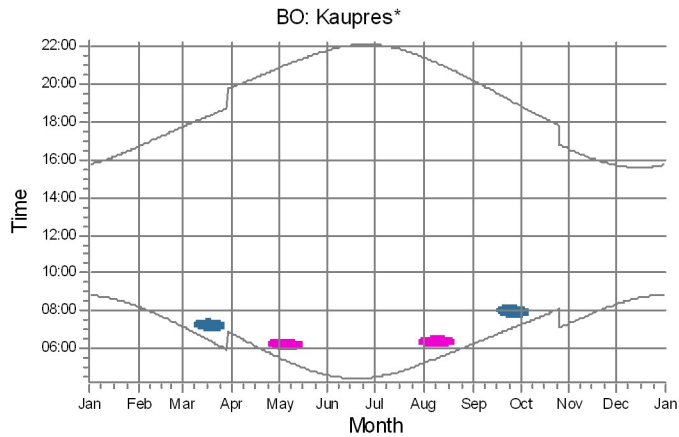
WTGs



* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



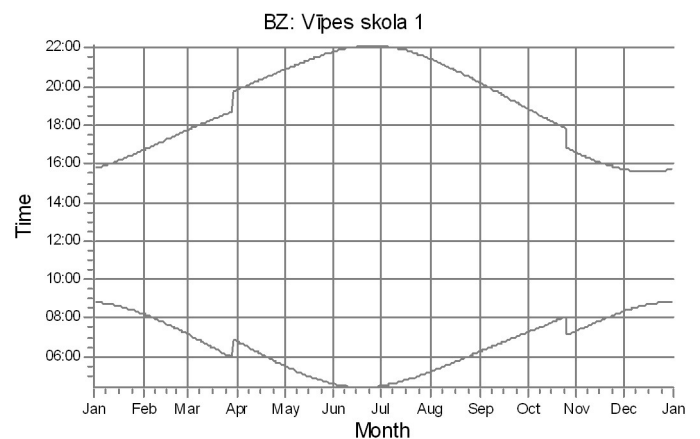
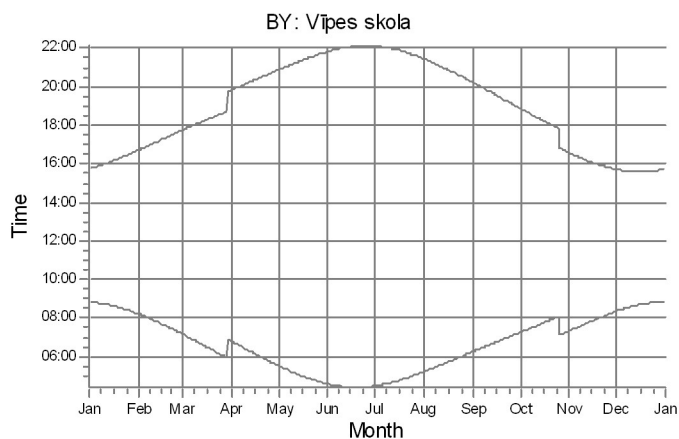
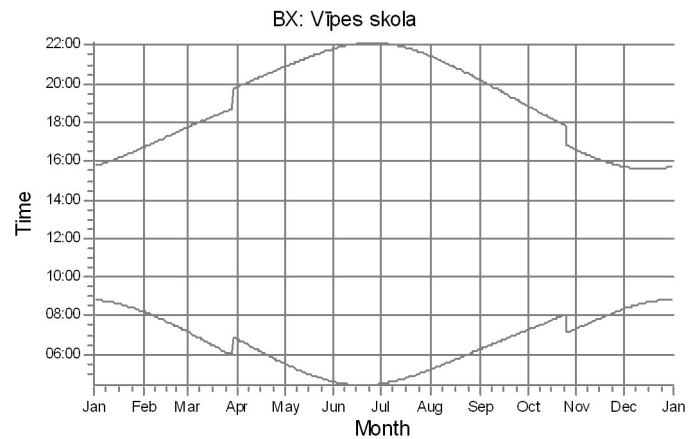
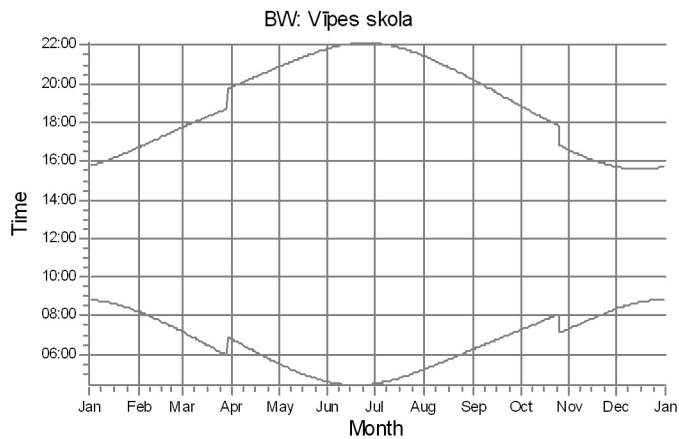
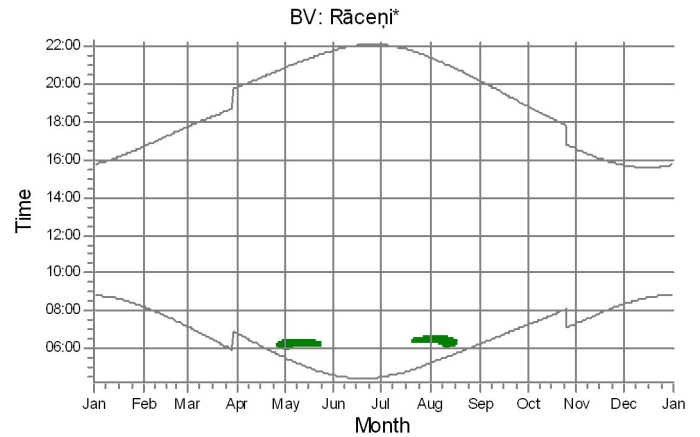
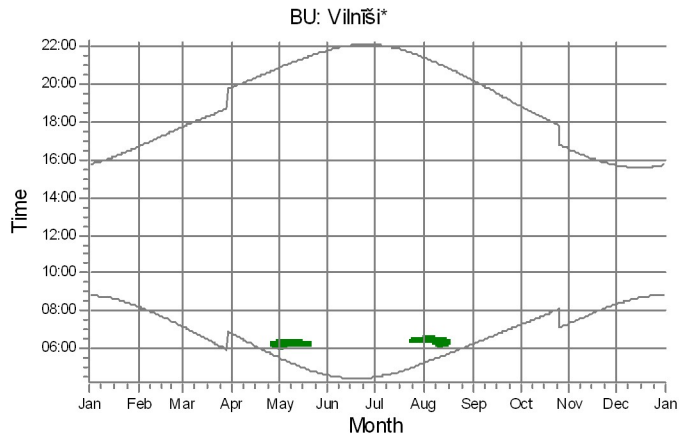
WTGs

	1: 1		21: 06-A		23: 32-C
	2: 2		22: 31-C		24: 33-C

* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



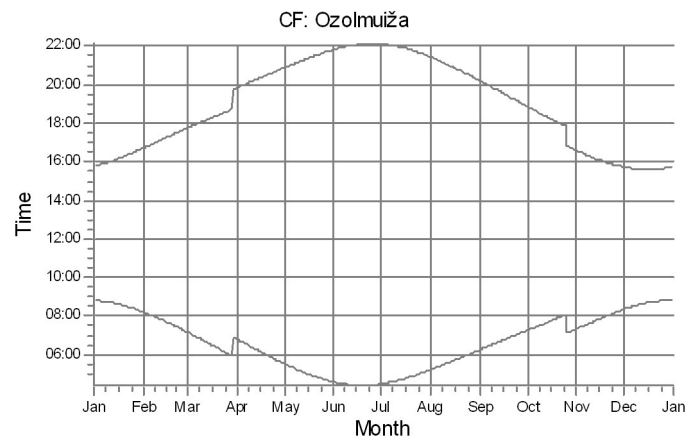
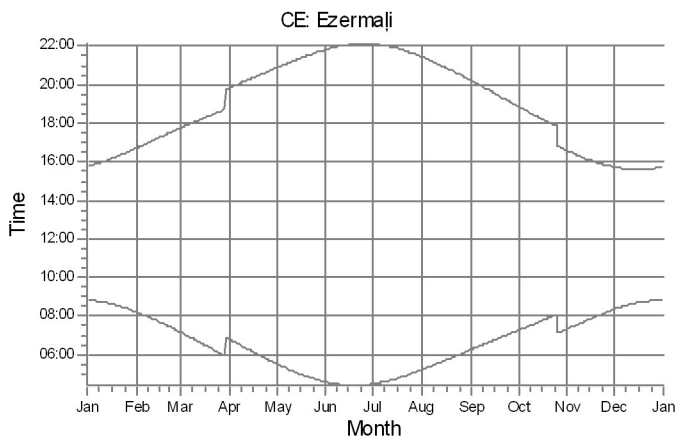
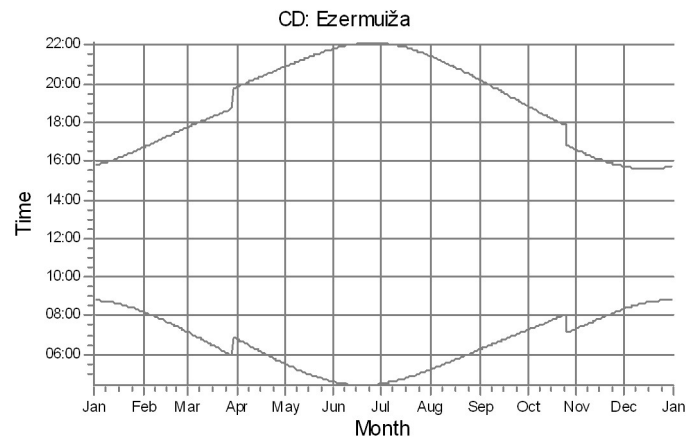
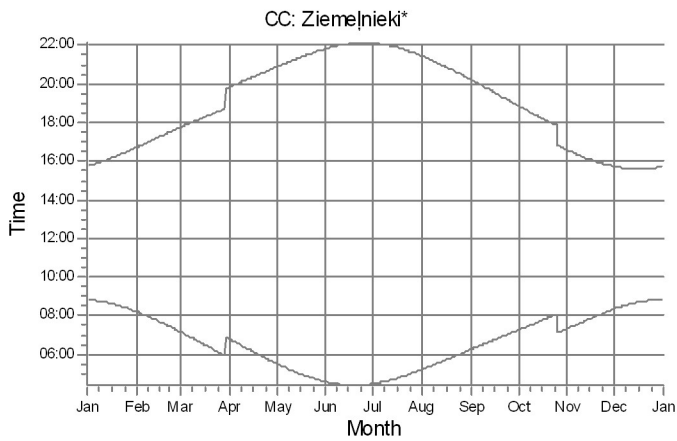
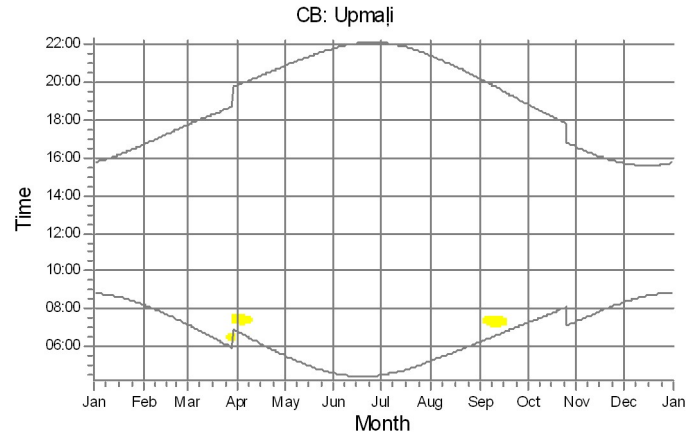
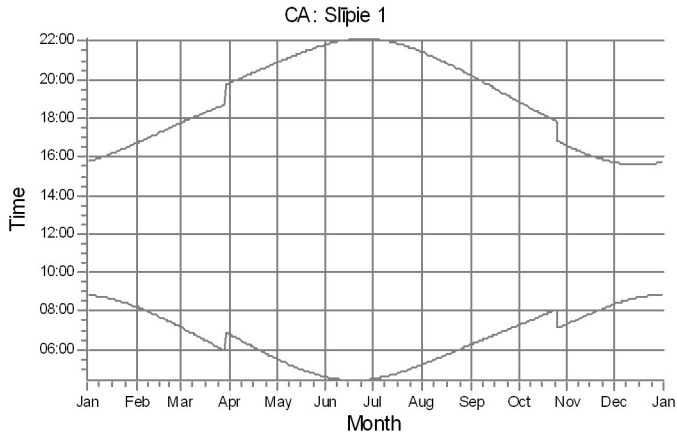
WTGs

1: 1

* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



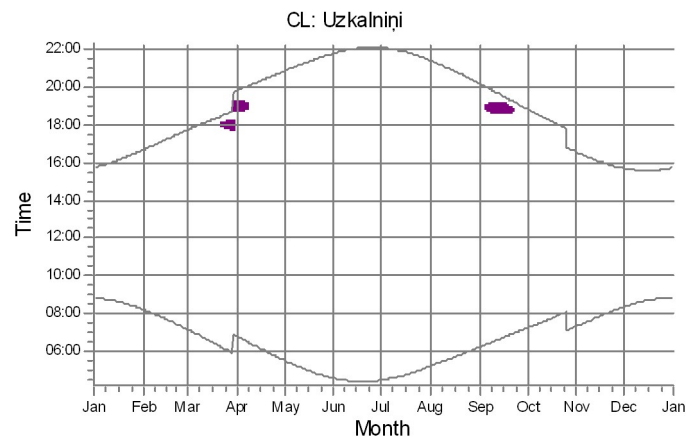
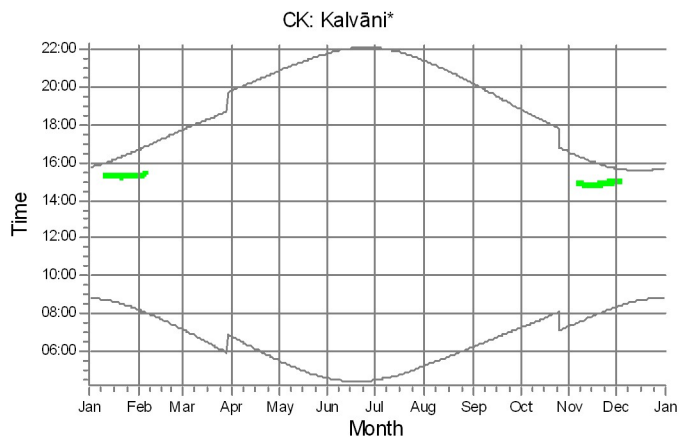
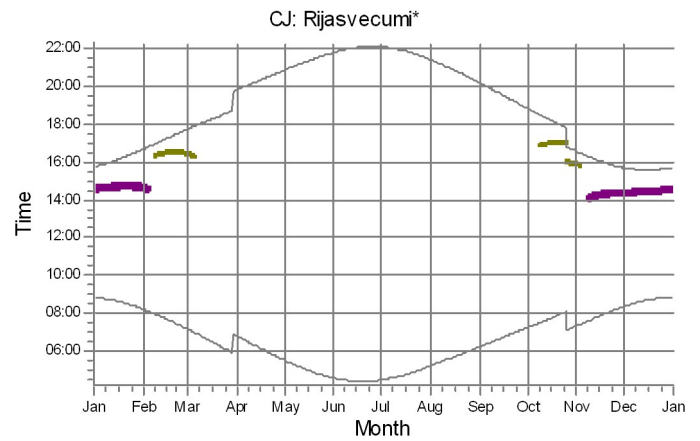
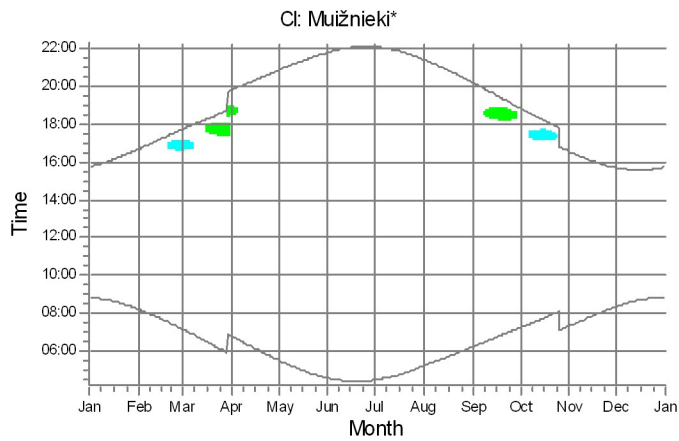
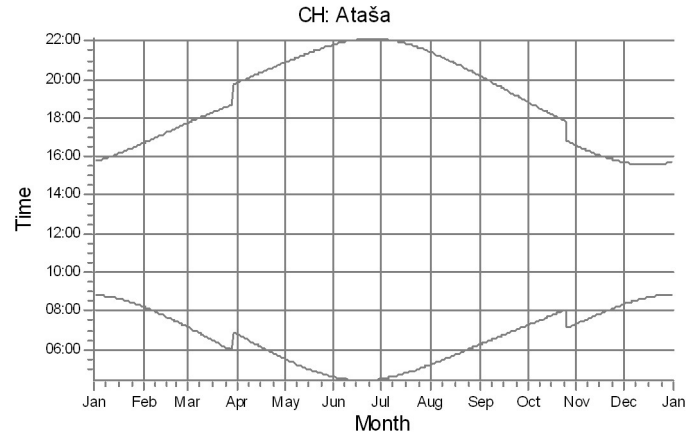
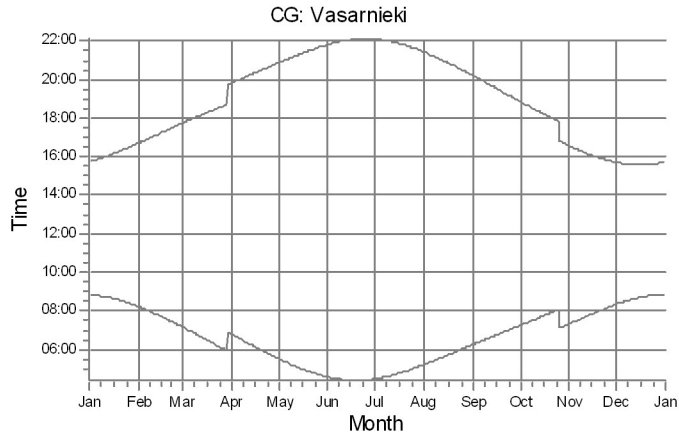
WTGs

2: 2 22: 31-C

* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



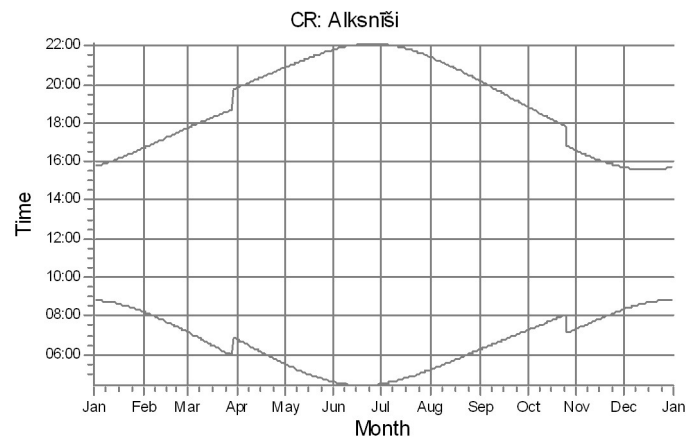
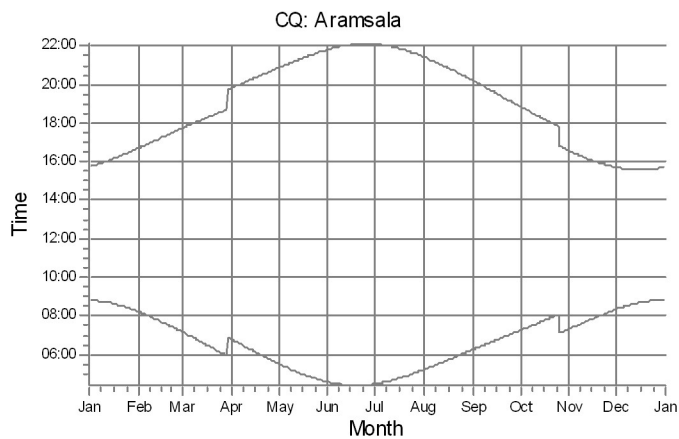
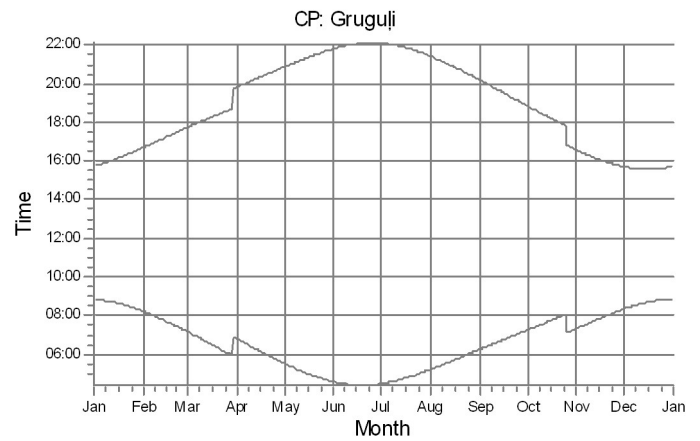
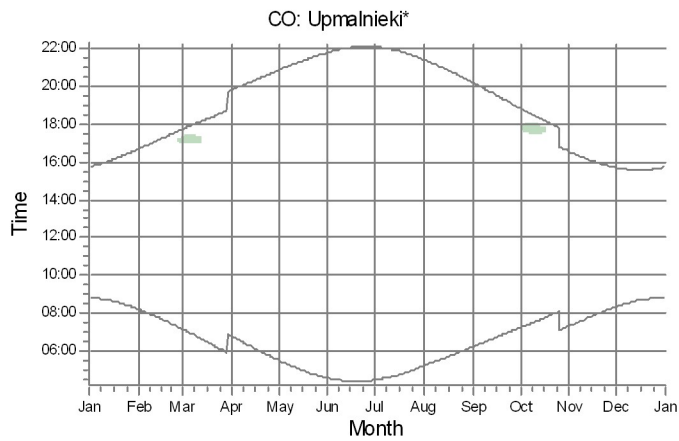
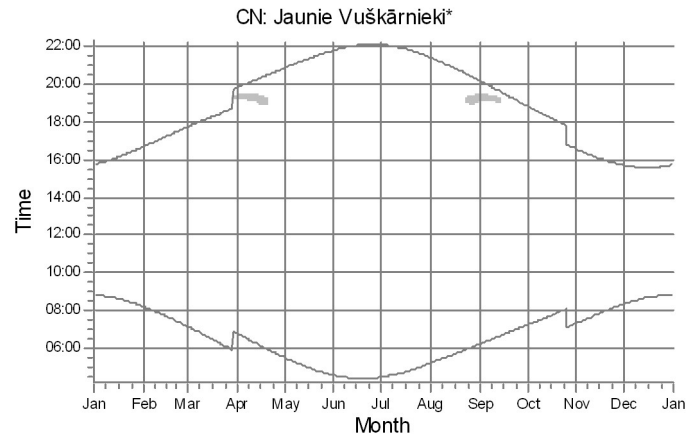
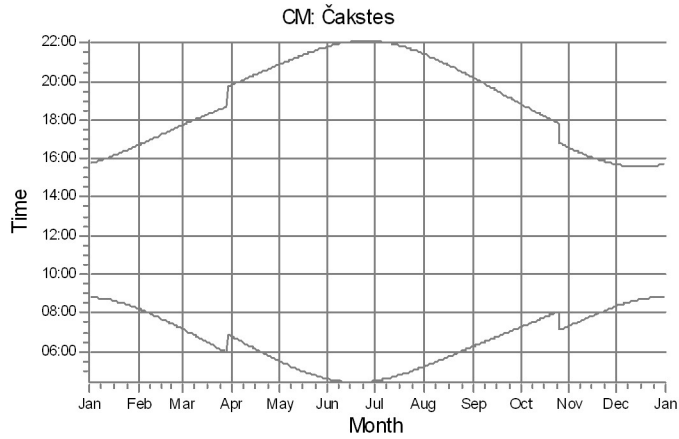
WTGs



* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



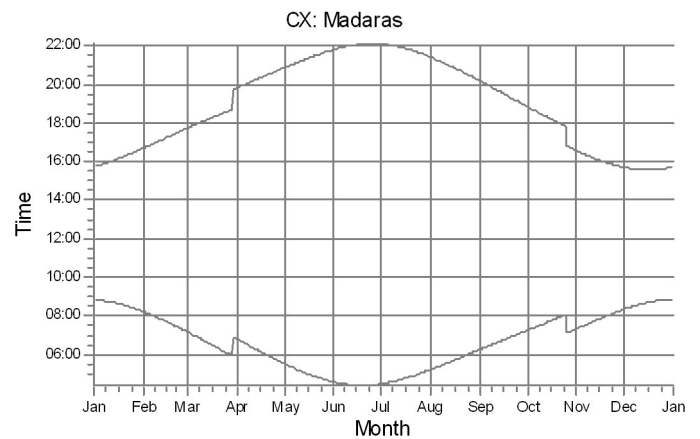
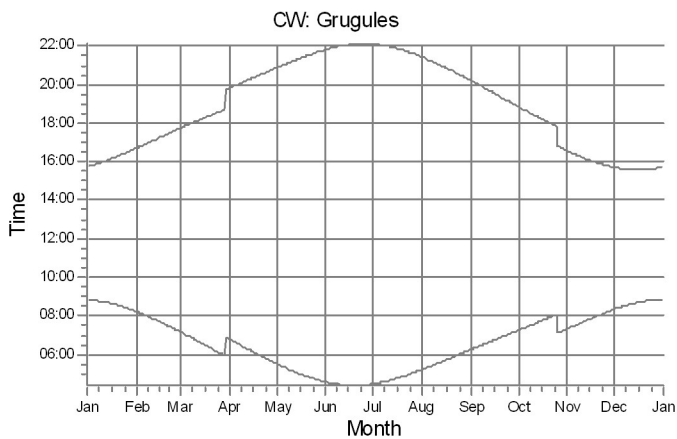
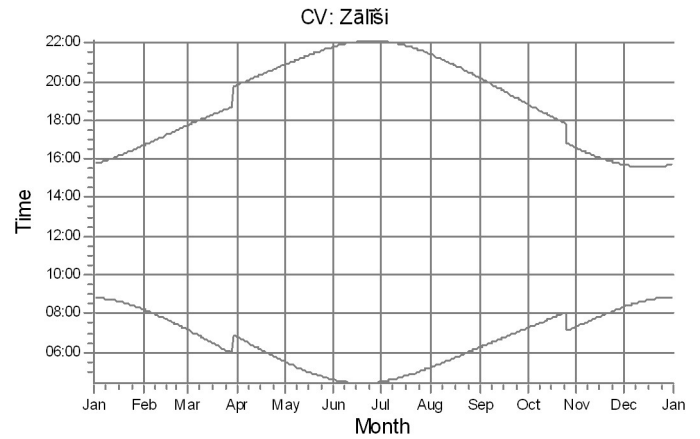
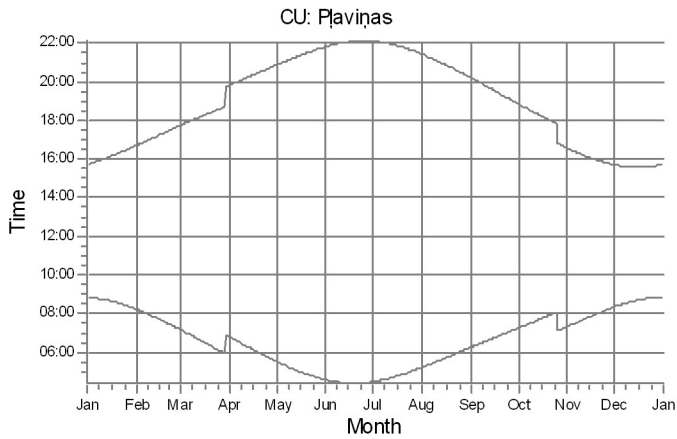
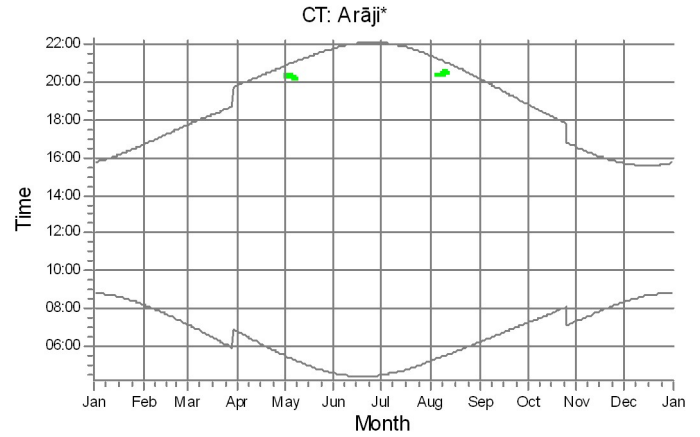
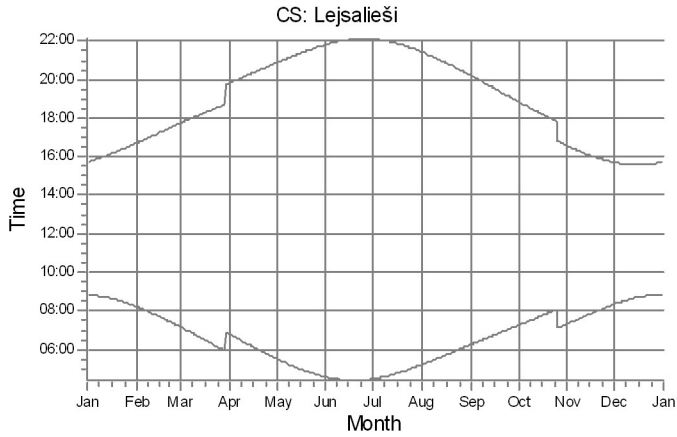
WTGs



* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



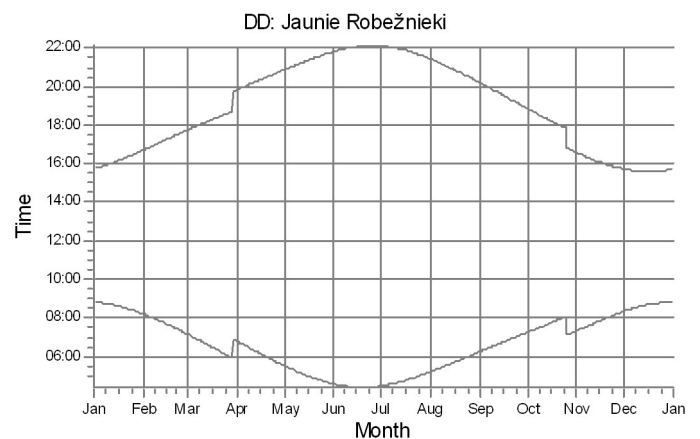
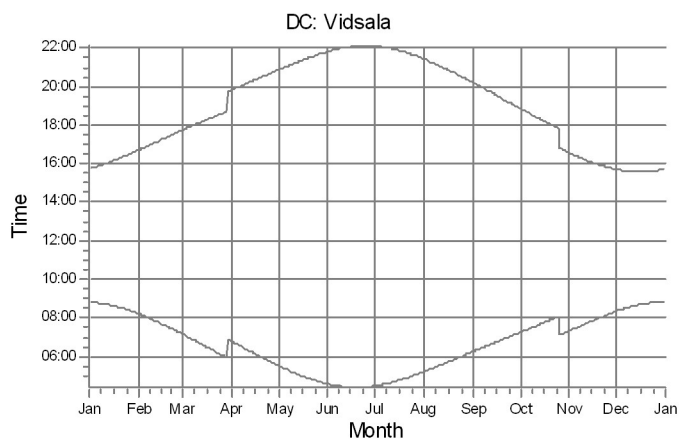
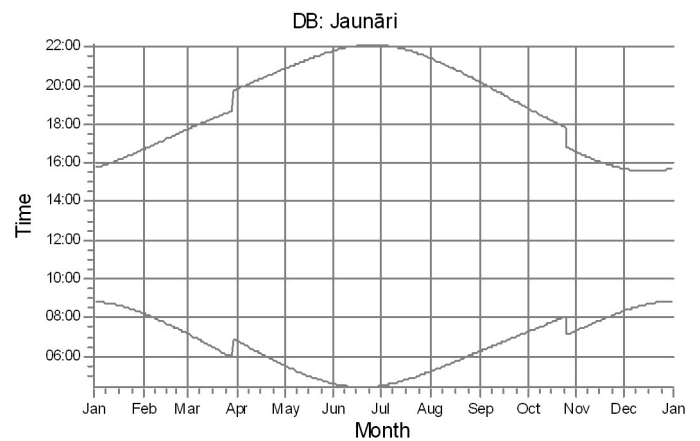
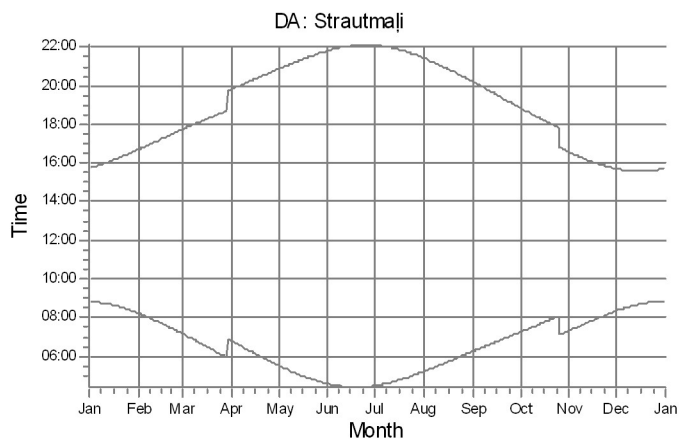
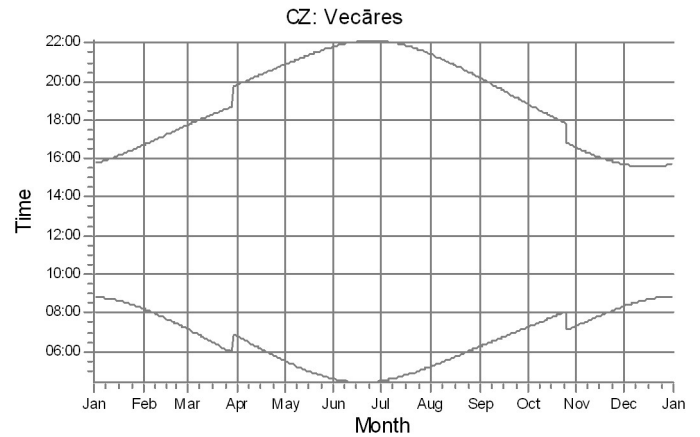
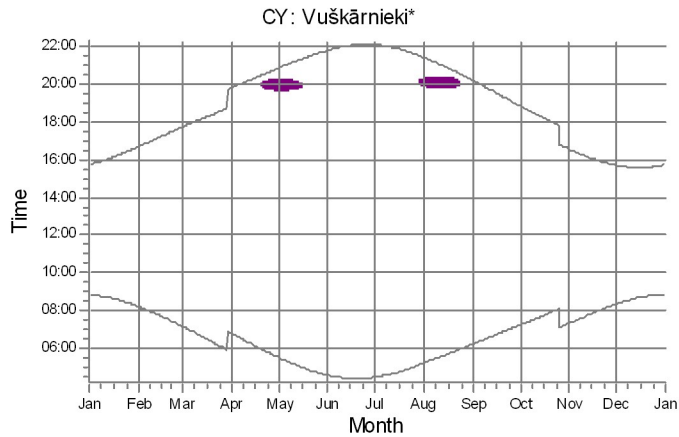
WTGs



* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



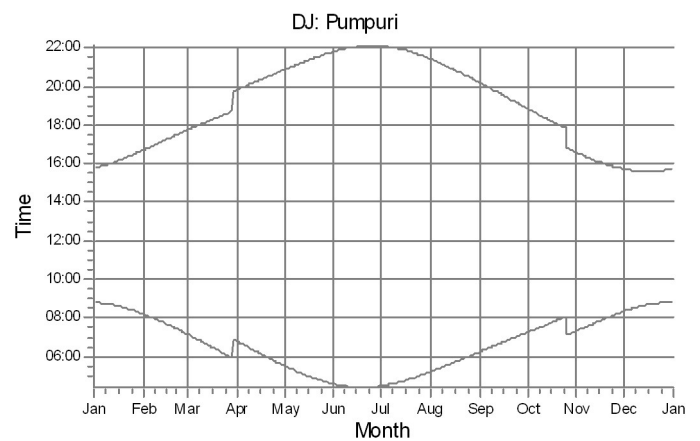
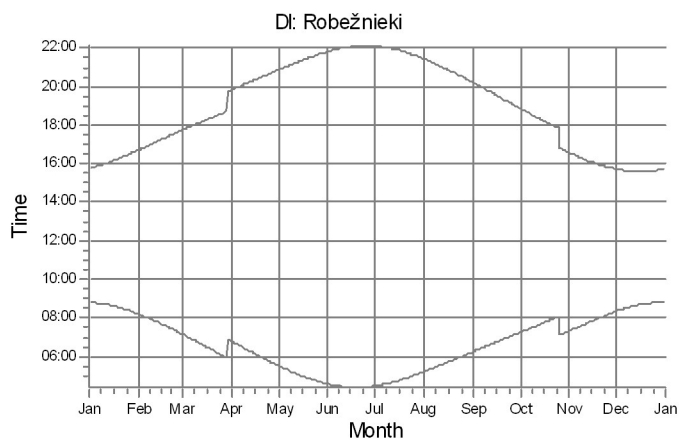
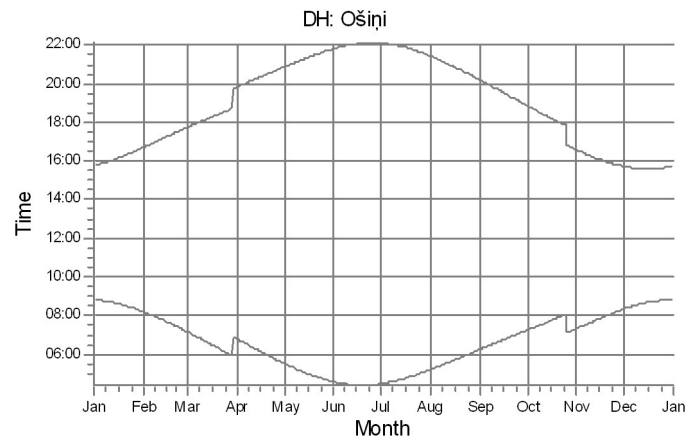
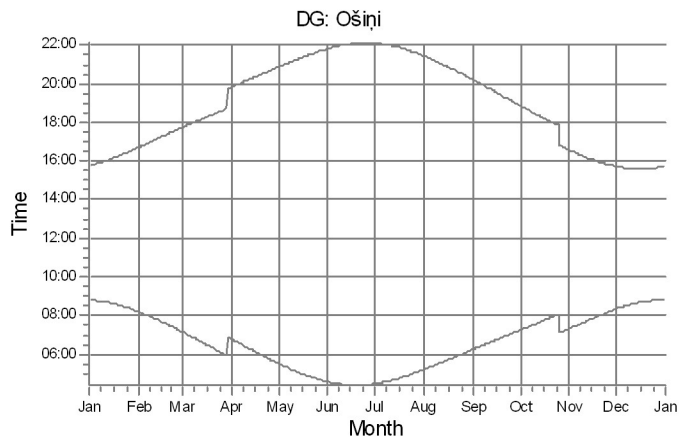
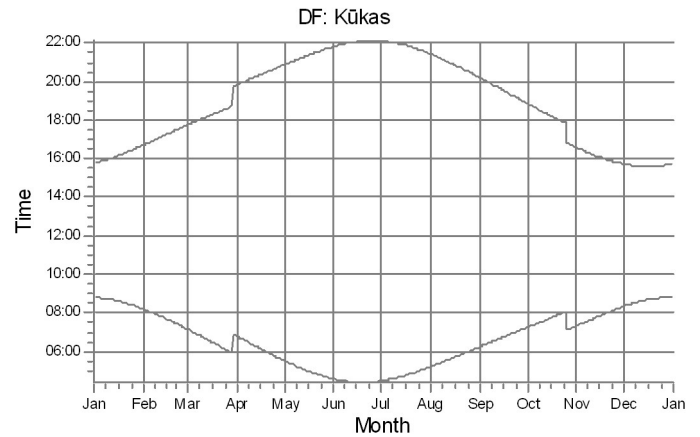
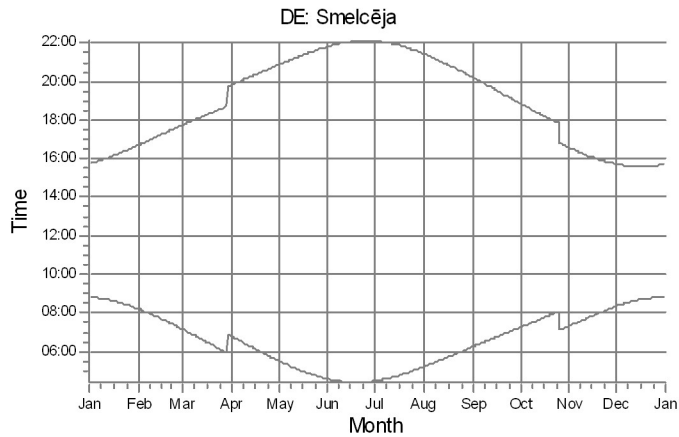
WTGs



* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

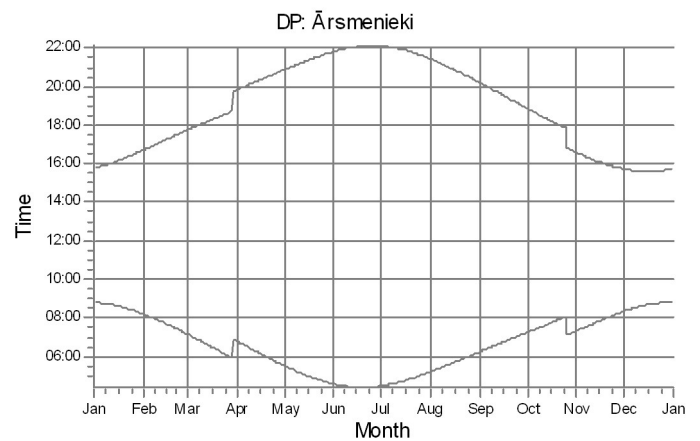
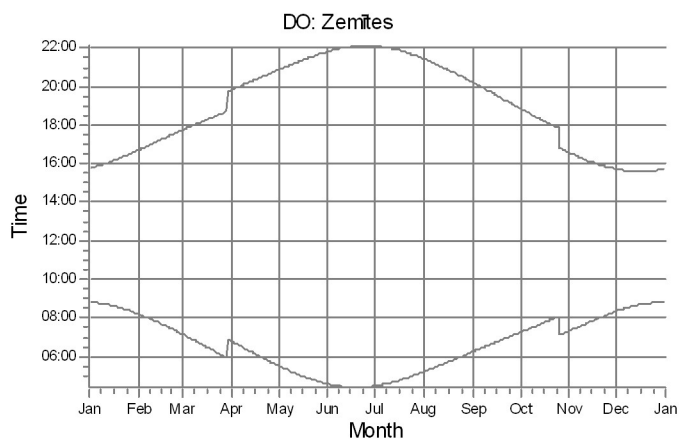
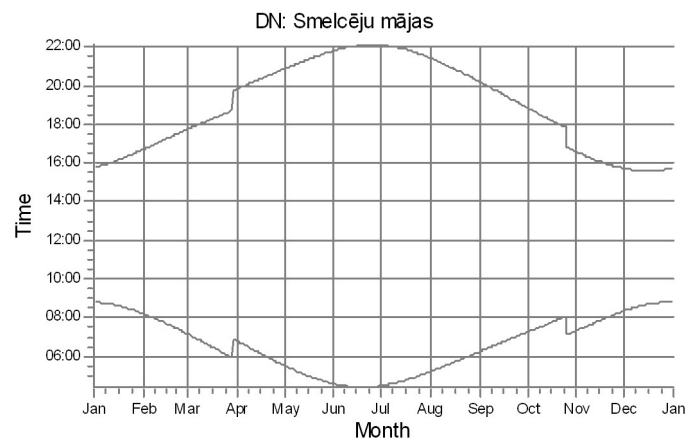
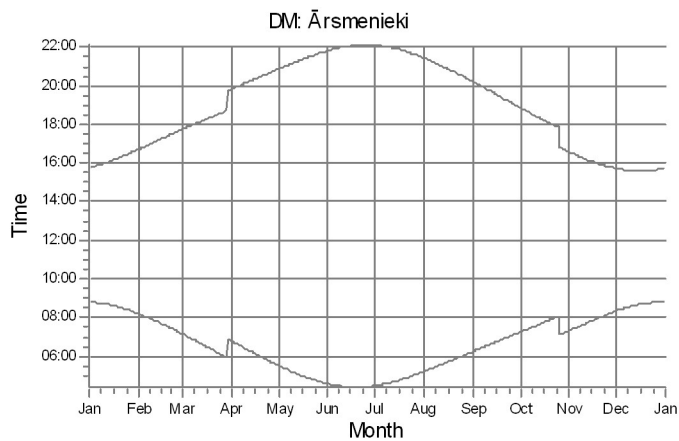
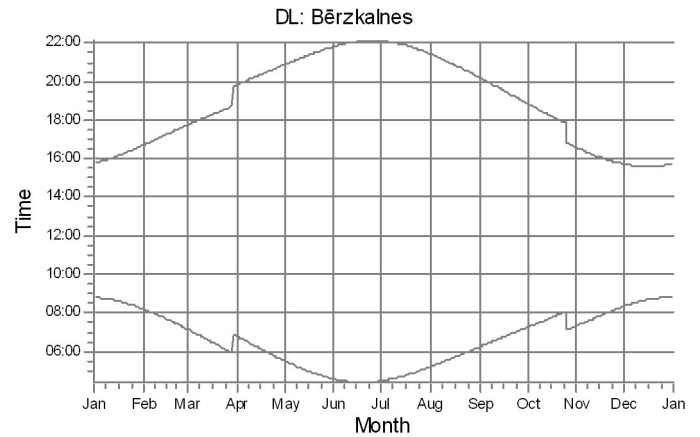
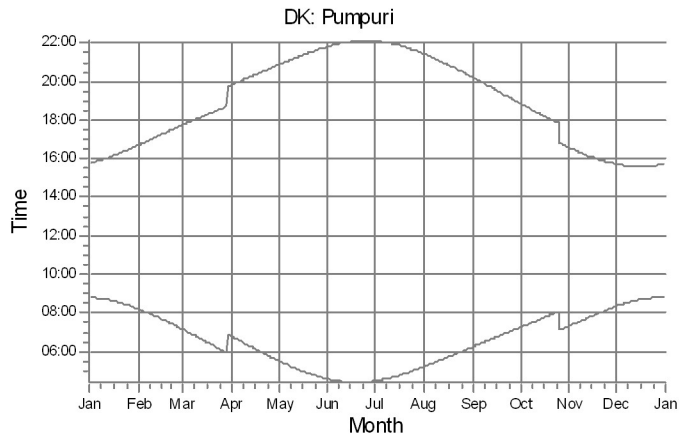
Calculation: Alternative - Real Case Curtailment



WTGs

SHADOW - Calendar, graphical

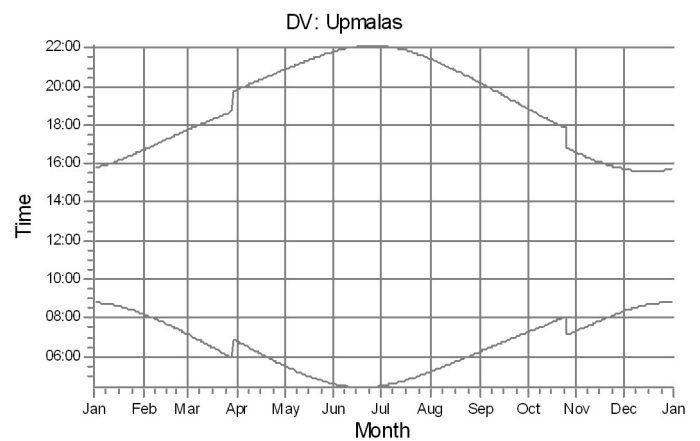
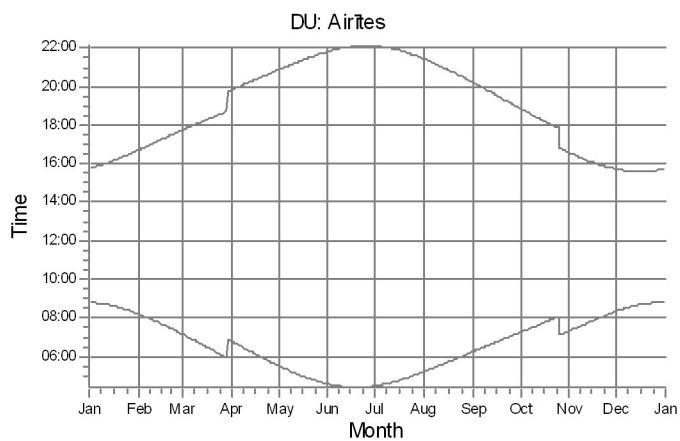
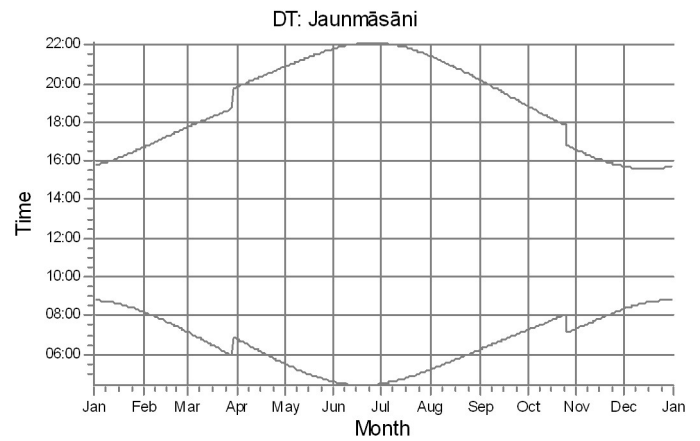
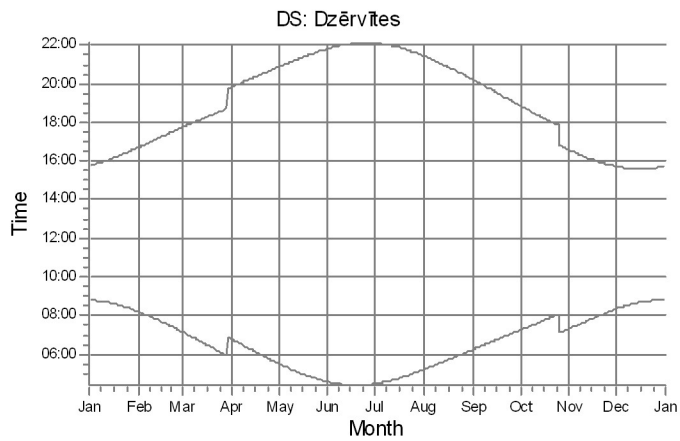
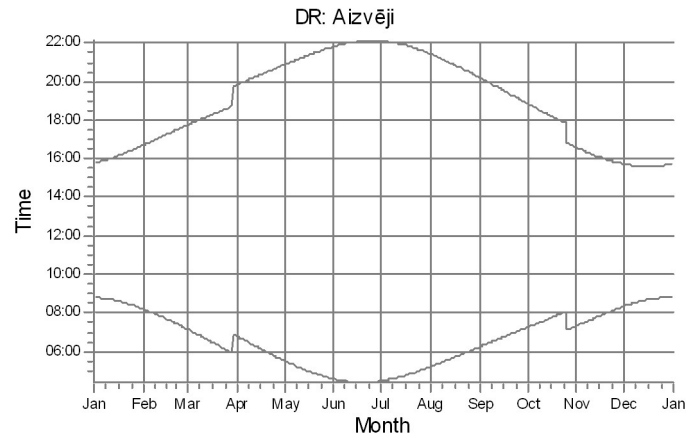
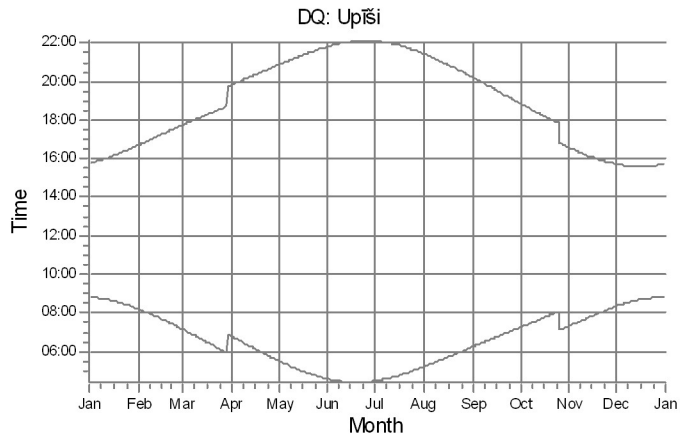
Calculation: Alternative - Real Case Curtailment



WTGs

SHADOW - Calendar, graphical

Calculation: Alternative - Real Case Curtailment



WTGs

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 1 - 1

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June
1	08:48 11:14-11:27/13 15:45	08:13 16:42 08:11 17:44	07:09 17:46 07:06 17:46	06:47 07:16-08:02/46 19:50	05:31 06:01-06:23/22 20:52	04:34 21:50
2	08:48 11:16-11:27/11 15:46	08:11 16:44 08:09 17:46	07:06 17:46 07:04 17:49	06:44 07:16-07:58/42 19:52	05:28 05:59-06:24/25 20:54	04:32 21:51
3	08:48 11:17-11:25/8 15:48	08:09 16:46 08:07 17:49	07:04 17:49 07:01 17:51	06:42 07:15-07:55/40 19:54	05:26 06:03-06:24/21 20:56	04:31 21:52
4	08:47 11:21-11:23/2 15:49	08:07 16:49 08:05 17:51	07:01 17:51 06:59 17:53	06:39 07:16-07:55/39 19:56	05:24 06:06-06:25/19 20:58	04:30 21:54
5	08:47 15:50 08:46 15:53	08:05 16:51 08:03 17:53	06:59 17:53 06:56 17:55	06:36 07:15-07:53/38 19:58	05:21 06:08-06:25/17 21:00	04:29 21:55
6	08:46 15:52 08:46 15:53	08:03 16:53 08:01 17:55	06:56 17:55 06:53 17:57	06:34 07:15-07:51/36 20:00	05:19 06:10-06:25/15 21:03	04:28 21:56
7	08:46 15:53 08:45 15:55	08:01 16:55 07:58 17:59	06:53 17:57 06:51 17:59	06:31 07:16-07:49/33 20:02	05:17 06:11-06:25/14 21:05	04:28 21:57
8	08:45 15:55 08:44 15:56	07:58 16:58 07:56 16:48	06:51 17:59 06:48 18:02	06:28 07:17-07:45/28 20:04	05:15 06:11-06:26/15 21:07	04:27 21:58
9	08:44 15:56 08:44 15:58	07:56 17:00 07:54 18:02	06:48 18:02 06:46 18:04	06:26 07:18-07:40/22 20:06	05:13 06:12-06:25/13 21:09	04:26 21:59
10	08:44 15:58 08:43 16:00	07:54 17:02 07:52 18:04	06:46 18:04 06:43 18:06	06:23 07:19-07:38/19 20:08	05:11 06:12-06:25/13 21:11	04:25 22:00
11	08:43 16:00 08:42 16:01	07:52 17:04 07:50 18:06	06:43 18:06 06:40 18:08	06:20 07:20-07:36/16 20:11	05:08 06:14-06:26/12 21:13	04:25 22:01
12	08:42 16:01 08:41 16:03	07:50 17:07 07:48 18:08	06:40 18:08 06:38 18:10	06:18 07:23-07:33/10 20:13	05:06 06:14-06:26/12 21:15	04:24 22:02
13	08:41 16:03 08:40 16:05	07:48 17:09 07:45 18:12	06:38 18:10 06:35 18:12	06:15 20:15 06:13 20:17	05:04 06:14-06:25/11 21:17	04:24 22:03
14	08:40 16:05 08:39 16:07	07:45 17:11 07:43 18:14	06:35 18:12 06:32 18:14	06:13 20:17 06:10 20:19	05:02 06:14-06:24/10 21:18	04:23 22:04
15	08:39 16:07 08:38 16:09	07:43 17:13 07:41 18:16	06:32 18:14 06:30 18:16	06:10 20:19 06:07 20:21	05:00 06:14-06:24/10 21:20	04:23 22:05
16	08:38 16:09 08:36 16:11	07:41 17:16 07:38 18:18	06:30 18:16 06:27 18:18	06:07 20:21 06:05 20:23	04:59 06:14-06:24/10 21:22	04:23 22:06
17	08:36 16:11 08:35 16:12	07:38 17:18 07:36 18:21	06:27 18:18 06:24 18:21	06:05 20:23 06:02 20:25	04:57 06:14-06:23/9 21:24	04:23 22:06
18	08:35 16:12 08:34 16:14	07:36 17:20 07:34 18:23	06:24 18:21 06:22 18:23	06:02 20:25 06:00 20:27	04:55 06:13-06:22/9 21:26	04:23 22:07
19	08:34 16:14 08:33 16:16	07:34 17:22 07:31 18:25	06:22 18:23 06:19 18:25	06:00 20:27 05:57 20:29	04:53 06:14-06:22/8 21:28	04:23 22:07
20	08:33 16:16 08:31 16:18	07:31 17:24 07:29 18:27	06:19 18:25 06:16 18:27	05:57 20:29 05:55 20:31	04:51 06:13-06:20/7 21:30	04:23 22:07
21	08:31 16:18 08:30 16:20	07:29 17:27 07:26 18:29	06:16 18:27 06:14 18:29	05:55 20:31 05:52 20:33	04:50 06:14-06:19/5 21:32	04:23 22:07
22	08:30 16:20 08:28 16:23	07:26 17:29 07:24 18:31	06:14 18:29 06:11 18:31	05:52 20:33 05:50 20:36	04:48 06:13-06:18/5 21:33	04:23 22:08
23	08:28 16:23 08:27 16:25	07:24 17:31 07:21 18:33	06:11 18:31 06:08 18:33	05:50 20:36 05:47 20:38	04:46 06:13-06:16/3 21:35	04:23 22:08
24	08:27 16:25 08:25 16:27	07:21 17:33 07:19 18:35	06:08 18:33 06:06 18:35	05:47 20:38 05:45 20:40	04:45 21:37 04:43 21:39	04:23 22:08
25	08:25 16:27 08:23 16:29	07:19 17:35 07:16 18:37	06:06 18:35 06:03 18:37	05:45 20:40 05:42 20:42	04:43 21:40 04:42 21:40	04:24 22:08
26	08:23 16:29 08:22 16:31	07:16 17:38 07:14 18:41	06:03 18:37 06:00 18:41	05:42 20:42 05:40 20:44	04:42 21:40 04:40 21:42	04:24 22:08
27	08:22 16:31 08:20 16:33	07:14 17:40 07:11 18:41	06:00 18:39 06:25-07:10/45	05:40 20:44 05:38 20:46	04:40 21:42 04:39 21:44	04:25 22:08
28	08:20 16:33 08:18 16:35	07:11 17:42 07:09 18:44	05:58 18:41 06:22-07:08/46	05:38 20:46 05:35 20:48	06:07-06:18/11 04:37	04:25 22:07
29	08:18 16:35 08:16 16:38	07:09 18:44 07:07 19:46	06:22-07:08/46 07:20-08:07/47	05:35 20:48 05:33 20:50	06:05-06:20/15 04:37	04:26 22:07
30	08:16 16:38 08:15 16:40	07:07 19:46 07:06 19:48	07:20-08:07/47 07:17-08:05/48	05:33 20:50 05:31 20:52	06:03-06:22/19 04:36	04:26 22:07
31	08:15 16:40	07:06 19:48	07:17-08:05/48	05:31 20:52	04:35 21:48	04:26 22:07
Potential sun hours	235	265	365	425	507	528
Sum of minutes with flicker	34	0	524	420	290	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: Alternative - Real Case Curtailment WTG: 1 - 1

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	July	August	September	October	November	December
1	04:27 22:07	05:13 06:24-06:36/12 21:26 05:55-05:56/1	06:14 07:20-07:33/13 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	04:28 22:06	05:14 06:24-06:36/12 21:24 05:55-05:56/1	06:16 07:18-07:35/17 20:10	07:16 18:49	07:22 16:32	08:23 15:42
3	04:29 22:06	05:16 06:23-06:36/13 21:22 05:55-05:56/1	06:18 07:16-07:37/21 20:07	07:18 18:46	07:24 16:30	08:24 15:41
4	04:30 22:05	05:18 06:22-06:36/14 21:20	06:20 07:15-07:38/23 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	04:31 22:04	05:20 06:22-06:36/14 21:18 05:56-05:57/1	06:22 07:13-07:44/31 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	04:32 22:04	05:22 06:21-06:36/15 21:15	06:24 07:12-07:46/34 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	04:33 22:03	05:24 06:20-06:36/16 21:13	06:26 07:11-07:47/36 19:56	07:26 18:36	07:32 16:21	08:31 15:38
8	04:34 22:02	05:26 06:18-06:35/17 21:11	06:28 07:10-07:48/38 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	04:35 22:01	05:28 06:16-06:34/18 21:09	06:30 07:10-07:49/39 19:51	07:30 18:31	07:37 16:17	08:34 11:08-11:12/4 15:37
10	04:36 22:00	05:30 06:14-06:34/20 21:06	06:32 07:09-07:49/40 19:48	07:33 18:28	07:39 16:15	08:35 11:07-11:15/8 15:36
11	04:38 21:59	05:32 06:07-06:33/26 21:04	06:34 07:09-07:52/43 19:46	07:35 18:25	07:41 16:13	08:36 11:05-11:17/12 15:36
12	04:39 21:58	05:34 06:09-06:32/23 21:02	06:36 07:09-07:55/46 19:43	07:37 18:23	07:43 16:11	08:37 11:05-11:18/13 15:36
13	04:40 21:57	05:36 06:10-06:30/20 21:00	06:38 07:09-07:57/48 19:40	07:39 18:20	07:45 16:09	08:39 11:05-11:19/14 15:35
14	04:42 21:56	05:38 06:12-06:29/17 20:57	06:40 07:11-07:58/47 19:38	07:41 18:18	07:47 16:07	08:40 11:05-11:20/15 15:35
15	04:43 21:54	05:40 06:14-06:27/13 20:55	06:42 07:13-07:59/46 19:35	07:43 18:15	07:50 16:05	08:41 11:05-11:21/16 15:35
16	04:45 21:53	05:42 06:16-06:24/8 20:52	06:44 07:15-07:59/44 19:32	07:45 18:13	07:52 16:04	08:42 11:05-11:22/17 15:35
17	04:46 21:52	05:44 20:50	06:46 07:17-08:00/43 19:29	07:47 18:10	07:54 16:02	08:43 11:05-11:23/18 15:35
18	04:48 21:50	05:46 20:48	06:48 07:21-08:00/39 19:27	07:49 18:07	07:56 16:00	08:44 11:05-11:24/19 15:35
19	04:49 21:49	05:48 20:45	06:50 07:21-08:00/39 19:24	07:51 18:05	07:58 15:59	08:44 11:05-11:23/18 15:36
20	04:51 21:47	05:50 20:43	06:52 07:23-07:59/36 19:21	07:53 18:02	08:00 15:57	08:45 11:06-11:24/18 15:36
21	04:53 06:23-06:26/3 21:46	05:52 20:40	06:54 07:25-07:59/34 19:19	07:56 18:00	08:02 15:55	08:46 11:06-11:25/19 15:36
22	04:54 06:23-06:28/5 21:44	05:54 20:38	06:56 07:27-07:58/31 19:16	07:58 17:58	08:04 15:54	08:46 11:06-11:25/19 15:37
23	04:56 06:24-06:30/6 21:42	05:56 20:35	06:58 07:30-07:57/27 19:13	08:00 17:55	08:06 15:52	08:47 11:07-11:26/19 15:37
24	04:58 06:23-06:30/7 21:41	05:58 20:33	07:00 07:31-07:56/25 19:11	08:02 17:53	08:08 15:51	08:47 11:08-11:26/18 15:38
25	05:00 06:24-06:32/8 21:39	06:00 20:30	07:02 07:33-07:54/21 19:08	08:04 17:50	08:10 15:50	08:48 11:08-11:26/18 15:38
26	05:01 06:25-06:33/8 21:37	06:02 20:28	07:04 07:35-07:53/18 19:05	07:06 16:48	08:12 15:48	08:48 11:08-11:27/19 15:39
27	05:03 06:24-06:33/9 21:35 05:54-05:55/1	06:04 20:25	07:06 07:37-07:50/13 19:02	07:09 16:46	08:14 15:47	08:48 11:09-11:27/18 15:40
28	05:05 06:25-06:34/9 21:34	06:06 20:23	07:08 07:39-07:46/7 19:00	07:11 16:43	08:16 15:46	08:48 11:10-11:27/17 15:41
29	05:07 06:25-06:35/10 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:18 15:45	08:48 11:11-11:27/16 15:42
30	05:09 06:24-06:35/11 21:30 05:54-05:55/1	06:10 20:17	07:12 18:54	07:15 16:39	08:19 15:44	08:48 11:12-11:27/15 15:43
31	05:11 06:24-06:35/11 21:28	06:12 07:24-07:30/6 20:15		07:17 16:36		08:48 11:13-11:27/14 15:44
Potential sun hours	529	470	385	324	248	216
Sum of minutes with flicker	89	268	899	0	0	364

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:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 2 - 2

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:48 15:45	08:13 16:42	07:09 17:44	06:47 19:50	07:16-07:38/22 07:48-08:05/17	05:31 20:52	04:34 21:49	04:27 22:06	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43	
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	07:16-07:38/22 07:51-08:03/12	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:23 15:42	
3	08:47 15:48	08:09 16:46	07:04 17:49	06:41 19:54	07:16-07:37/21	05:26 20:56	04:31 21:52	04:29 22:05	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:30	08:24 15:41	
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	07:15-07:36/21	05:24 20:58	04:30 21:54	04:30 22:05	05:18 21:20	06:20 20:04	07:19-07:26/7	07:20 18:44	07:26 16:27	08:26 15:40
5	08:47 15:50	08:05 16:51	06:59 17:53	06:36 19:58	07:16-07:36/20	05:21 21:00	04:29 21:59	04:31 22:04	05:20 21:17	06:22 20:02	07:16-07:29/13	07:22 18:41	07:28 16:25	08:28 15:39
6	08:46 15:52	08:03 16:53	06:56 17:55	06:34 20:00	07:17-07:34/17	05:19 21:02	04:28 21:56	04:32 22:03	05:22 21:15	06:24 19:59	07:14-07:30/16	07:24 18:38	07:30 16:23	08:29 15:38
7	08:46 15:53	08:01 16:55	06:53 17:57	06:31 20:02	07:18-07:33/15	05:17 21:04	04:28 21:57	04:33 22:03	05:24 21:13	06:26 19:56	07:12-07:31/19	07:26 18:36	07:32 16:21	08:31 15:38
8	08:45 15:55	07:58 16:58	06:51 17:59	06:28 20:04	07:19-07:31/12	05:15 21:06	04:27 21:58	04:34 22:02	05:26 21:11	06:28 19:54	07:11-07:31/20	07:28 18:33	07:34 16:19	08:32 15:37
9	08:44 15:56	07:56 17:00	06:48 18:01	06:26 20:06	07:24-07:25/1	05:13 21:08	04:26 21:59	04:35 22:01	05:28 21:09	06:30 19:51	07:09-07:31/22	07:30 18:31	07:37 16:17	08:33 15:37
10	08:43 15:58	07:54 17:02	06:45 18:04	06:23 20:08	07:54	05:11 21:10	04:25 22:00	04:36 22:00	05:30 21:06	06:32 19:48	07:09-07:31/22	07:32 18:28	07:39 16:15	08:35 15:36
11	08:43 16:00	07:52 17:04	06:43 18:06	06:20 20:10	07:55	05:08 21:12	04:25 22:01	04:38 21:59	05:32 21:04	06:34 19:46	07:08-07:31/23	07:35 18:25	07:41 16:13	08:36 15:36
12	08:42 16:01	07:50 17:07	06:40 18:08	06:18 20:13	07:56	05:06 21:14	04:24 22:02	04:39 21:58	05:34 21:02	06:36 19:43	07:08-07:30/22	07:37 18:23	07:43 16:11	08:37 15:36
13	08:41 16:03	07:47 17:09	06:38 18:10	06:15 20:15	07:57	05:04 21:16	04:24 22:03	04:40 21:57	05:36 20:55	06:38 19:40	07:09-07:30/21	07:39 18:20	07:45 16:09	08:39 15:35
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	07:58	05:02 21:18	04:23 22:04	04:42 21:55	05:38 20:57	06:40 19:37	07:11-07:29/18	07:41 18:18	07:47 16:07	08:40 15:35
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	07:59	05:00 21:20	04:23 22:04	04:43 21:54	05:40 20:55	06:42 19:35	07:13-07:27/14	07:43 18:15	07:49 16:05	08:41 15:35
16	08:38 16:09	07:41 17:15	06:30 18:16	06:07 20:21	08:00	04:59 21:22	04:23 22:05	04:45 21:53	05:42 20:52	06:44 19:32	07:15-07:26/11	07:45 18:12	07:52 16:04	08:42 15:35
17	08:36 16:10	07:38 17:18	06:27 18:18	06:05 20:23	08:01	04:57 21:24	04:23 22:06	04:46 21:52	05:44 20:50	06:46 19:29	07:17-07:24/7	07:47 18:10	07:54 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	08:02	04:55 21:26	04:23 22:06	04:48 21:50	05:46 20:48	06:48 19:27	07:33-08:02/29	07:49 18:07	07:56 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:22 18:23	06:00 20:27	08:03	04:53 21:28	04:23 22:07	04:49 21:49	05:48 20:45	06:50 19:24	07:33-08:02/29	07:51 18:05	07:58 15:59	08:44 15:36
20	08:32 16:16	07:31 17:24	06:19 18:25	05:57 20:29	08:04	04:51 21:30	04:23 22:07	04:51 21:47	05:50 20:43	06:52 19:21	07:32-08:01/29	07:53 18:02	08:00 15:57	08:45 15:36
21	08:31 16:18	07:29 17:27	06:16 18:27	05:55 20:31	08:05	04:49 21:31	04:23 22:07	04:53 21:46	05:52 20:40	06:54 19:19	07:32-08:01/29	07:56 18:00	08:02 15:55	08:46 15:36
22	08:30 16:20	07:26 17:29	06:14 18:29	05:52 20:33	08:06	04:48 21:33	04:23 22:07	04:54 21:44	05:54 20:38	06:56 19:16	07:32-08:00/28	07:58 17:57	08:04 15:54	08:46 15:37
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:35	08:07	04:46 21:35	04:23 22:08	04:56 21:42	05:56 20:35	06:58 19:13	07:33-07:59/26	08:00 17:55	08:06 15:52	08:47 15:37
24	08:27 16:25	07:21 17:33	06:08 18:33	05:47 20:38	08:08	04:45 21:37	04:23 22:08	04:58 21:41	05:58 20:33	07:00 19:10	07:33-07:58/25	08:02 17:53	08:08 15:51	08:47 15:38
25	08:25 16:27	07:19 17:35	06:06 18:35	05:45 20:40	08:09	04:43 21:38	04:24 22:08	05:00 21:39	06:00 20:30	07:02 19:08	07:34-07:57/23	08:04 17:50	08:10 15:50	08:47 15:38
26	08:23 16:29	07:16 17:38	06:03 18:37	05:42 20:42	08:10	04:42 21:40	04:24 22:08	05:01 21:37	06:02 20:28	07:04 19:05	07:35-07:55/20	07:06 16:48	08:12 15:48	08:48 15:39
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	08:11	04:40 21:42	04:25 22:08	05:03 21:35	06:04 20:25	07:06 19:02	07:37-07:53/16	07:08 16:45	08:14 15:47	08:48 15:40
28	08:20 16:33	07:11 17:42	05:58 18:41	05:38 20:46	08:12	04:39 21:43	04:25 22:07	05:05 21:34	06:06 20:24	07:08 19:00	07:39-07:50/11	07:11 16:43	08:16 15:46	08:48 15:41
29	08:18 16:35	07:09 17:43	05:55 18:43	05:35 20:48	08:13	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	07:10 18:50	07:11-07:29/18	07:13 16:41	08:17 15:45	08:48 15:42
30	08:16 16:38	07:07 17:46	05:52 18:46	05:33 20:50	08:14	04:36 21:47	04:26 22:07	05:09 21:30	06:10 20:17	07:12 18:54	07:15-07:26/11	07:15 16:39	08:19 15:44	08:48 15:43
31	08:14 16:40	07:06 17:48	05:49 18:48	05:31 20:51	08:15	04:35 21:48	04:27 22:08	05:11 21:28	06:12 20:15	07:13 18:56	07:17-07:28/12	07:17 16:36	08:18 15:44	08:48 15:44
Potential sun hours	235	265	365	466	425	507	528	529	470	385	666	324	248	216
Sum of minutes with flicker	0	0	0	0	180	0	0	0	0	0	0	0	0	0

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 3 - 10

Assumptions for shadow calculations

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:30	04:33	04:27	05:12	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:32	04:28	05:14	06:16	07:16	07:21	08:23
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:41	05:26	04:31	04:29	05:16	06:18	07:18	07:24	08:24
	15:47	16:46	17:48	19:54	20:56	21:52	22:05	21:22	20:07	18:46	16:29	15:41
4	08:47	08:07	07:01	06:39	05:24	04:30	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:48	17:51	19:56	20:58	21:54	22:05	21:20	20:04	18:44	16:27	15:40
5	08:47	08:05	06:58	06:36	05:21	04:29	04:31	05:20	06:22	07:22	07:28	08:28
	15:50	16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:01	18:41	16:25	15:39
6	08:46	08:03	06:56	06:33	05:19	04:28	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:03	21:15	19:59	18:38	16:23	15:38
7	08:46	08:00	06:53	06:31	05:17	04:27	04:33	05:24	06:26	07:26	07:32	08:31
	15:53	16:55	17:57	20:02	21:04	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:57	17:59	20:04	21:06	21:58	22:02	21:11	19:53	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:30	07:37	08:33
	15:56	17:00	18:01	20:06	21:08	21:59	22:01	21:09	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:10	04:25	04:36	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:04	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:36
11	08:43	07:52	06:43	06:20	05:08	04:25	04:38	05:32	06:34	07:34	07:41	08:36
	15:59	17:04	18:06	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:50	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:37	07:43	08:37
	16:01	17:06	18:08	20:13	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:35
13	08:41	07:47	06:38	06:15	05:04	04:24	04:40	05:36	06:38	07:39	07:45	08:38
	16:03	17:09	18:10	20:15	21:16	22:03	21:57	20:59	19:40	18:20	16:09	15:35
14	08:40	07:45	06:35	06:12	05:02	04:23	04:42	05:38	06:40	07:41	07:47	08:40
	16:05	17:11	18:12	20:17	21:18	22:04	21:56	20:57	19:37	18:17	16:07	15:35
15	08:39	07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:49	08:41
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:05	15:35
16	08:38	07:41	06:30	06:07	04:58	04:23	04:45	05:42	06:44	07:45	07:52	08:42
	16:08	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:04	15:35
17	08:36	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:54	08:43
	16:10	17:18	18:18	20:23	21:24	22:06	21:52	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:55	04:22	04:48	05:46	06:48	07:49	07:56	08:43
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:48	19:27	18:07	16:00	15:35
19	08:34	07:33	06:22	06:00	04:53	04:22	04:49	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:58	15:35
20	08:32	07:31	06:19	05:57	04:51	04:22	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:25	20:29	21:30	22:07	21:47	20:43	19:21	18:02	15:57	15:36
21	08:31	07:29	06:16	05:55	04:49	04:22	04:53	05:52	06:54	07:56	08:02	08:46
	16:18	17:27	18:27	20:31	21:32	22:07	21:46	20:40	19:19	18:00	15:55	15:36
22	08:30	07:26	06:14	05:52	04:48	04:23	04:54	05:54	06:56	07:58	08:04	08:46
	16:20	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:57	15:54	15:36
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:22	17:31	18:31	20:35	21:35	22:08	21:42	20:35	19:13	17:55	15:52	15:37
24	08:27	07:21	06:08	05:47	04:44	04:23	04:58	05:58	07:00	08:02	08:08	08:47
	16:24	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:10	17:53	15:51	15:38
25	08:25	07:19	06:05	05:45	04:43	04:24	04:59	06:00	07:02	08:04	08:10	08:47
	16:27	17:35	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:50	15:38
26	08:23	07:16	06:03	05:42	04:41	04:24	05:01	06:02	07:04	08:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:48	15:39
27	08:22	07:14	06:00	05:40	04:40	04:24	05:03	06:04	07:06	08:08	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:40
28	08:20	07:11	05:57	05:37	04:38	04:25	05:05	06:06	07:08	08:11	08:16	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:34	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:37	04:26	05:07	06:08	07:10	08:13	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:41
30	08:16		06:52	05:33	04:36	04:26	05:09	06:10	07:12	08:15	08:19	08:48
	16:37		19:45	20:50	21:47	22:07	21:30	20:17	18:54	16:38	15:44	15:42
31	08:14		06:49		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	265	365	425	507	529	529	470	385	324	248	216
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

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

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 4 - 15

Assumptions for shadow calculations

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:30	04:33	04:27	05:12	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:50	22:06	21:26	20:12	18:52	16:34	15:42
2	08:48	08:11	07:06	06:44	05:28	04:32	04:28	05:14	06:16	07:16	07:21	08:23
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:41	05:26	04:31	04:29	05:16	06:18	07:18	07:24	08:24
	15:47	16:46	17:48	19:54	20:56	21:52	22:05	21:22	20:07	18:46	16:29	15:41
4	08:47	08:07	07:01	06:39	05:23	04:30	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:48	17:51	19:56	20:58	21:54	22:05	21:20	20:04	18:44	16:27	15:40
5	08:47	08:05	06:58	06:36	05:21	04:29	04:31	05:20	06:22	07:22	07:28	08:28
	15:50	16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:01	18:41	16:25	15:39
6	08:46	08:03	06:56	06:33	05:19	04:28	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:04	21:15	19:59	18:38	16:23	15:38
7	08:46	08:00	06:53	06:31	05:17	04:27	04:33	05:24	06:26	07:26	07:32	08:31
	15:53	16:55	17:57	20:02	21:04	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:57	17:59	20:04	21:06	21:58	22:02	21:11	19:53	18:33	16:19	15:37
9	08:44	07:56	06:48	06:25	05:13	04:26	04:35	05:28	06:30	07:30	07:37	08:33
	15:56	17:00	18:01	20:06	21:08	21:59	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:10	04:25	04:36	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:03	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:36
11	08:43	07:52	06:43	06:20	05:08	04:25	04:37	05:32	06:34	07:34	07:41	08:36
	15:59	17:04	18:06	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:50	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:37	07:43	08:37
	16:01	17:06	18:08	20:13	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:35
13	08:41	07:47	06:38	06:15	05:04	04:24	04:40	05:36	06:38	07:39	07:45	08:39
	16:03	17:09	18:10	20:15	21:16	22:03	21:57	20:59	19:40	18:20	16:09	15:35
14	08:40	07:45	06:35	06:12	05:02	04:23	04:42	05:38	06:40	07:41	07:47	08:40
	16:05	17:11	18:12	20:17	21:18	22:04	21:56	20:57	19:37	18:17	16:07	15:35
15	08:39	07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:49	08:41
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:05	15:35
16	08:38	07:41	06:30	06:07	04:58	04:23	04:45	05:42	06:44	07:45	07:52	08:42
	16:08	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:04	15:35
17	08:36	07:38	06:27	06:05	04:56	04:23	04:46	05:44	06:46	07:47	07:54	08:43
	16:10	17:18	18:18	20:23	21:24	22:06	21:52	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:55	04:22	04:48	05:46	06:48	07:49	07:56	08:43
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:48	19:27	18:07	16:00	15:35
19	08:34	07:33	06:22	06:00	04:53	04:22	04:49	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:58	15:35
20	08:32	07:31	06:19	05:57	04:51	04:22	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:25	20:29	21:30	22:07	21:47	20:43	19:21	18:02	15:57	15:36
21	08:31	07:29	06:16	05:55	04:49	04:22	04:53	05:52	06:54	07:56	08:02	08:46
	16:18	17:26	18:27	20:31	21:32	22:07	21:46	20:40	19:19	18:00	15:55	15:36
22	08:30	07:26	06:14	05:52	04:48	04:23	04:54	05:54	06:56	07:58	08:04	08:46
	16:20	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:57	15:54	15:36
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:22	17:31	18:31	20:35	21:35	22:08	21:42	20:35	19:13	17:55	15:52	15:37
24	08:27	07:21	06:08	05:47	04:44	04:23	04:58	05:58	07:00	08:02	08:08	08:47
	16:24	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:10	17:53	15:51	15:38
25	08:25	07:19	06:05	05:45	04:43	04:23	04:59	06:00	07:02	08:04	08:10	08:48
	16:27	17:35	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:49	15:38
26	08:23	07:16	06:03	05:42	04:41	04:24	05:01	06:02	07:04	08:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:48	15:39
27	08:22	07:14	06:00	05:40	04:40	04:24	05:03	06:04	07:06	08:08	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:40
28	08:20	07:11	05:57	05:37	04:38	04:25	05:05	06:06	07:08	08:11	08:16	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:34	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:37	04:26	05:07	06:08	07:10	08:13	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:41
30	08:16		06:52	05:33	04:36	04:26	05:09	06:10	07:12	08:15	08:19	08:48
	16:37		19:45	20:50	21:47	22:07	21:30	20:17	18:54	16:38	15:43	15:42
31	08:14		06:49		04:35		05:10	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

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

Project:

2026-02-Ecosoul-MEŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 5 - 12

Assumptions for shadow calculations

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

		January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	10:07-10:26/19	08:13	07:09	06:47	05:30	04:33	04:27	05:12	06:14	07:14	07:19	08:21
	15:45		16:42	17:44	19:50	20:52	21:50	22:07	21:26	20:12	18:52	16:34	15:42
2	08:48	10:08-10:27/19	08:11	07:06	06:44	05:28	04:32	04:28	05:14	06:16	07:21	08:23	10:02-10:04/2
	15:46		16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	10:08-10:26/18	08:09	07:04	06:41	05:26	04:31	04:29	05:16	06:18	07:18	07:24	10:00-10:08/8
	15:47		16:46	17:48	19:54	20:56	21:52	22:06	21:22	20:07	18:46	16:29	15:41
4	08:47	10:10-10:27/17	08:07	07:01	06:39	05:24	04:30	04:30	05:18	06:20	07:20	07:26	09:59-10:10/11
	15:49		16:48	17:51	19:56	20:58	21:54	22:05	21:20	20:04	18:44	16:27	15:40
5	08:47	10:10-10:27/17	08:05	06:58	06:36	05:21	04:29	04:31	05:20	06:22	07:22	07:28	09:58-10:11/13
	15:50		16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:01	18:41	16:25	15:39
6	08:46	10:11-10:26/15	08:03	06:56	06:33	05:19	04:28	04:32	05:22	06:24	07:24	07:30	09:57-10:12/15
	15:52		16:53	17:55	20:00	21:02	21:56	22:04	21:15	19:59	18:38	16:23	15:38
7	08:46	10:12-10:26/14	08:01	06:53	06:31	05:17	04:27	04:33	05:24	06:26	07:26	07:32	08:31 09:57-10:13/16
	15:53		16:55	17:57	20:02	21:04	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	10:13-10:25/12	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32 09:58-10:15/17
	15:55		16:57	17:59	20:04	21:07	21:58	22:02	21:11	19:54	18:33	16:19	15:37
9	08:44	10:15-10:25/10	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:30	07:37	08:34 09:57-10:15/18
	15:56		17:00	18:01	20:06	21:09	21:59	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	10:17-10:23/6	07:54	06:45	06:23	05:10	04:25	04:36	05:30	06:32	07:32	07:39	08:35 09:58-10:16/18
	15:58		17:02	18:04	20:08	21:11	22:00	22:00	21:06	19:48	18:28	16:15	15:36
11	08:43		07:52	06:43	06:20	05:08	04:25	04:38	05:32	06:34	07:34	07:41	08:36 09:57-10:17/20
	15:59		17:04	18:06	20:10	21:13	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42		07:50	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:37	07:43	08:37 09:57-10:17/20
	16:01		17:06	18:08	20:13	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:35
13	08:41		07:47	06:38	06:15	05:04	04:24	04:40	05:36	06:38	07:39	07:45	08:39 09:58-10:18/20
	16:03		17:09	18:10	20:15	21:16	22:03	21:57	21:00	19:40	18:20	16:09	15:35
14	08:40		07:45	06:35	06:12	05:02	04:23	04:42	05:38	06:40	07:41	07:47	08:40 09:58-10:19/21
	16:05		17:11	18:12	20:17	21:18	22:04	21:56	20:57	19:37	18:17	16:07	15:35
15	08:39		07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:50	08:41 09:59-10:19/20
	16:07		17:13	18:14	20:19	21:20	22:05	21:54	20:55	19:35	18:15	16:05	15:35
16	08:38		07:41	06:30	06:07	04:58	04:23	04:45	05:42	06:44	07:45	07:52	08:42 09:59-10:20/21
	16:08		17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:04	15:35
17	08:36		07:38	06:27	06:05	04:56	04:23	04:46	05:44	06:46	07:47	07:54	08:43 09:59-10:21/22
	16:10		17:18	18:18	20:23	21:24	22:06	21:52	20:50	19:29	18:10	16:02	15:35
18	08:35		07:36	06:24	06:02	04:55	04:22	04:48	05:46	06:48	07:49	07:56	08:43 10:00-10:21/21
	16:12		17:20	18:20	20:25	21:26	22:06	21:50	20:48	19:27	18:07	16:00	15:35
19	08:34		07:33	06:22	06:00	04:53	04:22	04:49	05:48	06:50	07:51	07:58	08:44 09:59-10:21/22
	16:14		17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:58	15:35
20	08:32		07:31	06:19	05:57	04:51	04:22	04:51	05:50	06:52	07:53	08:00	08:45 10:00-10:22/22
	16:16		17:24	18:25	20:29	21:30	22:07	21:47	20:43	19:21	18:02	15:57	15:36
21	08:31		07:29	06:16	05:55	04:49	04:22	04:53	05:52	06:54	07:56	08:02	08:46 10:01-10:23/22
	16:18		17:27	18:27	20:31	21:32	22:07	21:46	20:40	19:19	18:00	15:55	15:36
22	08:30		07:26	06:14	05:52	04:48	04:23	04:54	05:54	06:56	07:58	08:04	08:46 10:01-10:23/22
	16:20		17:29	18:29	20:33	21:33	22:08	21:44	20:38	19:16	17:57	15:54	15:36
23	08:28		07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47 10:02-10:24/22
	16:22		17:31	18:31	20:36	21:35	22:08	21:42	20:35	19:13	17:55	15:52	15:37
24	08:27		07:21	06:08	05:47	04:44	04:23	04:58	05:58	07:00	08:02	08:08	08:47 10:02-10:24/22
	16:24		17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:10	17:53	15:51	15:38
25	08:25		07:19	06:05	05:45	04:43	04:23	04:59	06:00	07:02	08:04	08:10	08:48 10:02-10:24/22
	16:27		17:35	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:50	15:38
26	08:23		07:16	06:03	05:42	04:41	04:24	05:01	06:02	07:04	07:06	08:12	08:48 10:03-10:24/21
	16:29		17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:48	15:39
27	08:22		07:14	06:00	05:40	04:40	04:24	05:03	06:04	07:06	07:08	08:14	08:48 10:03-10:25/22
	16:31		17:40	18:39	20:44	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:40
28	08:20		07:11	05:57	05:37	04:38	04:25	05:05	06:06	07:08	07:11	08:16	08:48 10:04-10:25/21
	16:33		17:42	18:41	20:46	21:44	22:07	21:34	20:22	19:00	16:43	15:46	15:41
29	08:18			05:55	05:35	04:37	04:26	05:07	06:08	07:10	07:13	08:17	08:48 10:05-10:25/20
	16:35			18:43	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:41
30	08:16			06:52	05:33	04:36	04:26	05:09	06:10	07:12	07:15	08:19	08:48 10:05-10:26/21
	16:37			19:46	20:50	21:47	22:07	21:30	20:17	18:54	16:38	15:44	15:42
31	08:14			06:49		04:35		05:10	06:12		07:17		08:48 10:06-10:26/20
	16:40			19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216	562
Sum of minutes with flicker	147	0	0	0	0	0	0	0	0	0	0	0	562

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: Alternative - Real Case Curtailment WTG: 6 - 18

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 13:57-14:30/33 15:45	08:13 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50
2	08:48 13:58-14:31/33 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51
3	08:48 13:58-14:31/33 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52
4	08:47 14:00-14:32/32 15:49	08:07 16:48	07:01 17:51	06:39 19:56	05:23 20:58	04:30 21:54
5	08:47 14:00-14:32/32 15:50	08:05 08:37-08:39/2 16:51	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55
6	08:46 14:01-14:31/30 15:51	08:03 08:35-08:42/7 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56
7	08:46 14:02-14:31/29 15:53	08:01 08:33-08:44/11 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:27 21:57
8	08:45 14:03-14:31/28 15:54	07:58 08:30-08:44/14 16:57	06:51 17:59	06:28 20:04	05:15 21:06	04:27 21:58
9	08:44 14:05-14:31/26 15:56	07:56 08:28-08:45/17 17:00	06:48 18:01	06:25 20:06	05:12 21:09	04:26 21:59
10	08:44 14:07-14:31/24 15:58	07:54 08:26-08:46/20 17:02	06:45 18:03	06:23 20:08	05:10 21:11	04:25 22:00
11	08:43 14:14-14:31/17 15:59	07:52 08:24-08:46/22 17:04	06:43 18:06	06:20 20:10	05:08 21:13	04:25 22:01
12	08:42 14:16-14:31/15 16:01	07:50 08:24-08:47/23 17:06	06:40 18:08	06:18 20:13	05:06 21:14	04:24 22:02
13	08:41 14:17-14:30/13 16:03	07:47 08:24-08:46/22 17:09	06:37 18:10	06:15 20:15	05:04 21:16	04:24 22:03
14	08:40 14:19-14:28/9 16:05	07:45 08:24-08:47/23 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04
15	08:39 14:23-14:26/3 16:06	07:43 08:24-08:46/22 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05
16	08:38 16:08	07:41 08:25-08:46/21 17:15	06:30 18:16	06:07 20:21	04:58 21:22	04:23 22:05
17	08:36 16:10	07:38 08:26-08:46/20 17:18	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06
18	08:35 16:12	07:36 08:27-08:44/17 17:20	06:24 18:20	06:02 20:25	04:55 21:26	04:22 22:06
19	08:34 16:14	07:33 08:27-08:42/15 17:22	06:22 18:22	06:00 20:27	04:53 21:28	04:22 22:07
20	08:32 16:16	07:31 08:30-08:40/10 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07
21	08:31 16:18	07:29 17:26	06:16 18:27	05:55 20:31	04:49 21:32	04:22 22:07
22	08:30 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:48 21:33	04:23 22:08
23	08:28 16:22	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:08
24	08:27 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08
25	08:25 16:26	07:19 17:35	06:05 18:35	05:45 20:40	04:43 21:39	04:23 22:08
26	08:23 16:29	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07
30	08:16 16:37		06:52 19:45	05:33 20:50	04:36 21:47	04:26 22:07
31	08:14 16:39		06:49 19:48		04:34 21:48	
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	357	266	0	0	0	0

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

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

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 6 - 18

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:23 15:41
3	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:41
4	04:29 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:38
8	04:34 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:34 15:36
10	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:37 15:35
13	04:40 21:57	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	04:42 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:35
19	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	04:52 21:46	05:52 20:40	06:54 19:18	07:56 18:00	08:02 15:55	08:46 15:36
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	05:01 21:37	06:02 20:28	07:04 19:05	08:06 16:48	08:12 15:48	08:48 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02	08:08 16:45	08:14 15:47	08:48 15:40
28	05:05 21:34	06:06 20:22	07:08 19:00	08:10 16:43	08:16 15:46	08:48 15:40
29	05:07 21:32	06:08 20:20	07:10 18:57	08:12 16:41	08:17 15:45	08:48 15:41
30	05:09 21:30	06:10 20:17	07:12 18:54	08:14 16:38	08:19 15:43	08:48 15:42
31	05:10 21:28	06:12 20:15		08:16 16:36		08:48 15:43
Potential sun hours	530	470	385	324	248	216
Sum of minutes with flicker	0	0	0	188	114	1005

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: Alternative - Real Case Curtailment WTG: 7 - 14

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 14:17-14:44/27 15:45	08:13 09:22-09:37/15 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50
2	08:48 14:18-14:45/27 15:46	08:11 09:23-09:39/16 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51
3	08:48 14:18-14:45/27 15:47	08:09 09:25-09:41/16 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52
4	08:47 09:29-09:30/1 15:49 14:20-14:46/26	08:07 09:26-09:44/18 16:48	07:01 17:51	06:39 19:56	05:23 20:58	04:30 21:54
5	08:47 09:28-09:29/1 15:50 14:20-14:46/26	08:05 09:29-09:39/10 16:51	06:59 17:53	06:36 19:58	05:21 21:00	04:29 21:55
6	08:46 09:27-09:29/2 15:52 14:20-14:46/26	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56
7	08:46 09:26-09:29/3 15:53 14:21-14:46/25	08:01 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:57
8	08:45 09:25-09:28/3 15:55 14:21-14:46/25	07:58 16:57	06:51 17:59	06:28 20:04	05:15 21:07	04:27 21:58
9	08:44 09:24-09:28/4 15:56 14:22-14:46/24	07:56 17:00	06:48 18:01	06:26 20:06	05:12 21:09	04:26 21:59
10	08:44 09:23-09:28/5 15:58 14:22-14:46/24	07:54 17:02	06:45 18:04	06:23 20:08	05:10 21:11	04:25 22:00
11	08:43 09:22-09:28/6 15:59 14:23-14:47/24	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:13	04:25 22:01
12	08:42 09:21-09:29/8 16:01 14:24-14:47/23	07:50 17:06	06:40 18:08	06:18 20:13	05:06 21:15	04:24 22:02
13	08:41 09:20-09:29/9 16:03 14:25-14:47/22	07:47 17:09	06:38 18:10	06:15 20:15	05:04 21:16	04:24 22:03
14	08:40 09:18-09:28/10 16:05 14:26-14:46/20	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04
15	08:39 09:18-09:29/11 16:07 14:27-14:46/19	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05
16	08:38 09:18-09:29/11 16:08 14:28-14:45/17	07:41 17:15	06:30 18:16	06:07 20:21	04:58 21:22	04:23 22:05
17	08:36 09:17-09:29/12 16:10 14:30-14:45/15	07:38 17:18	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06
18	08:35 09:18-09:28/10 16:12 14:31-14:43/12	07:36 17:20	06:24 18:20	06:02 20:25	04:55 21:26	04:22 22:06
19	08:34 09:17-09:29/12 16:14 14:34-14:42/8	07:33 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:22 22:07
20	08:33 09:17-09:29/12 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07
21	08:31 09:18-09:30/12 16:18	07:29 17:26	06:16 18:27	05:55 20:31	04:49 21:32	04:22 22:07
22	08:30 09:18-09:30/12 16:20	07:26 17:29	06:14 18:29	05:52 20:33	04:48 21:33	04:23 22:08
23	08:28 09:18-09:30/12 16:22	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08
24	08:27 09:18-09:30/12 16:24	07:21 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08
25	08:25 09:18-09:31/13 16:27	07:19 17:35	06:05 18:35	05:45 20:40	04:43 21:39	04:23 22:08
26	08:23 09:18-09:31/13 16:29	07:16 17:38	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08
27	08:22 09:18-09:32/14 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08
28	08:20 09:19-09:32/13 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08
29	08:18 09:19-09:33/14 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:26 22:07
30	08:16 09:20-09:34/14 16:37		06:52 19:46	05:33 20:50	04:36 21:47	04:26 22:07
31	08:14 09:21-09:35/14 16:40		06:49 19:48		04:35 21:48	
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	680	75	0	0	0	0

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

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

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 7 - 14

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 09:03-09:10/7 15:42 14:06-14:28/22
2	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:23 09:05-09:11/6 15:41 14:06-14:29/23
3	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 09:07-09:12/5 15:41 14:06-14:30/24
4	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 09:09-09:13/4 15:40 14:06-14:31/25
5	04:31 22:04	05:20 21:17	06:22 20:02	07:22 18:41	07:28 16:25	08:28 09:11-09:14/3 15:39 14:07-14:32/25
6	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 09:00-09:07/7 16:23	08:29 09:12-09:14/2 15:38 14:06-14:31/25
7	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 08:58-09:13/15 16:21	08:31 09:14-09:16/2 15:38 14:07-14:32/25
8	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 08:56-09:12/16 16:19	08:32 09:16-09:17/1 15:37 14:07-14:33/26
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 08:54-09:10/16 16:17	08:34 09:17-09:18/1 15:37 14:07-14:33/26
10	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 08:54-09:09/15 16:15	08:35 14:08-14:34/26 15:36
11	04:37 21:59	05:32 21:04	06:34 19:45	07:35 18:25	07:41 08:52-09:07/15 16:13	08:36 14:08-14:34/26 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 08:53-09:07/14 16:11	08:37 14:08-14:34/26 15:35
13	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 08:52-09:06/14 16:09	08:39 14:09-14:36/27 15:35
14	04:42 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 08:51-09:05/14 16:07	08:40 14:10-14:36/26 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 08:52-09:05/13 16:05	08:41 14:10-14:36/26 15:35
16	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 08:51-09:05/14 16:03	08:42 14:10-14:37/27 15:35
17	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 08:52-09:05/13 16:02	08:43 14:11-14:37/26 15:35
18	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 08:52-09:05/13 16:00	08:44 14:11-14:38/27 15:35
19	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 08:52-09:04/12 15:58	08:44 14:11-14:38/27 15:35
20	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 08:53-09:05/12 15:57	08:45 09:29-09:30/1 15:36 14:12-14:38/26
21	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 08:53-09:05/12 15:55	08:46 09:30-09:31/1 15:36 14:13-14:39/26
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 08:53-09:05/12 15:54	08:46 09:30-09:31/1 15:36 14:13-14:39/26
23	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 08:53-09:05/12 15:52 14:13-14:16/3	08:47 09:31-09:32/1 15:37 14:14-14:40/26
24	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:53	08:08 08:55-09:06/11 15:51 14:10-14:20/10	08:47 09:31-09:32/1 15:37 14:14-14:40/26
25	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 08:55-09:07/12 15:49 14:09-14:22/13	08:48 14:14-14:41/27 15:38
26	05:01 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:12 08:56-09:07/11 15:48 14:08-14:24/16	08:48 14:14-14:41/27 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 08:57-09:08/11 15:47 14:07-14:25/18	08:48 14:15-14:41/26 15:40
28	05:05 21:34	06:06 20:22	07:08 19:00	07:11 16:43	08:16 08:57-09:08/11 15:46 14:06-14:26/20	08:48 14:15-14:42/27 15:41
29	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:17 08:59-09:09/10 15:45 14:06-14:27/21	08:48 14:16-14:42/26 15:41
30	05:09 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:19 09:01-09:09/8 15:43 14:06-14:28/22	08:48 14:17-14:43/26 15:42
31	05:10 21:28	06:12 20:15	07:14 16:36	07:17 16:36	08:21 09:03-09:10/7 15:42	08:48 14:17-14:44/27 15:43
Potential sun hours	530	470	385	324	248	216
Sum of minutes with flicker	0	0	0	0	436	837

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: Alternative - Real Case Curtailment WTG: 8 - 17

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:13 15:07-15:08/1 16:42	07:09 07:39-08:18/39 17:44	06:47 19:50	05:30 20:52	04:33 21:50
2	08:48 15:46	08:11 15:08-15:09/1 16:44	07:06 07:38-08:15/37 17:46	06:44 19:52	05:28 20:54	04:32 21:51
3	08:48 15:47	08:09 15:09-15:10/1 16:46	07:04 07:37-08:13/36 17:48	06:41 19:54	05:26 20:56	04:31 21:52
4	08:47 15:49	08:07 16:48	07:01 07:37-08:13/36 17:51	06:39 19:56	05:23 20:58	04:30 21:54
5	08:47 15:50	08:05 15:11-15:12/1 16:51	06:58 07:36-08:11/35 17:53	06:36 19:58	05:21 21:00	04:29 21:55
6	08:46 15:51	08:03 16:53	06:56 07:36-08:09/33 17:55	06:33 20:00	05:19 21:02	04:28 21:56
7	08:46 15:53	08:01 16:55	06:53 07:37-08:07/30 17:57	06:31 20:02	05:17 21:04	04:27 21:57
8	08:45 15:54	07:58 16:57	06:51 07:37-08:05/28 17:59	06:28 20:04	05:15 21:07	04:27 21:58
9	08:44 15:10-15:17/7 15:56	07:56 17:00	06:48 07:37-08:04/27 18:01	06:25 20:06	05:12 21:09	04:26 21:59
10	08:44 15:09-15:14/5 15:58	07:54 17:02	06:45 07:39-08:03/24 18:03	06:23 20:08	05:10 21:11	04:25 22:00
11	08:43 15:08-15:12/4 15:59	07:52 17:04	06:43 07:39-08:02/23 18:06	06:20 20:10	05:08 21:13	04:25 22:01
12	08:42 15:07-15:11/4 16:01	07:50 17:06	06:40 07:40-08:00/20 18:08	06:18 20:13	05:06 21:15	04:24 22:02
13	08:41 15:07-15:10/3 16:03	07:47 17:09	06:38 07:42-07:57/15 18:10	06:15 20:15	05:04 21:16	04:24 22:03
14	08:40 15:06-15:09/3 16:05	07:45 17:11	06:35 07:45-07:54/9 18:12	06:12 20:17	05:02 21:18	04:23 22:04
15	08:39 15:06-15:08/2 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05
16	08:38 15:05-15:07/2 16:08	07:41 08:11-08:13/2 17:15	06:30 18:16	06:07 20:21	04:58 21:22	04:23 22:05
17	08:36 15:05-15:07/2 16:10	07:38 08:09-08:17/8 17:18	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06
18	08:35 15:04-15:07/3 16:12	07:36 08:06-08:18/12 17:20	06:24 18:20	06:02 20:25	04:55 21:26	04:22 22:06
19	08:34 15:05-15:07/2 16:14	07:33 08:04-08:20/16 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:22 22:07
20	08:33 15:04-15:06/2 16:16	07:31 08:01-08:20/19 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07
21	08:31 15:04-15:06/2 16:18	07:29 07:58-08:20/22 17:26	06:16 18:27	05:55 20:31	04:49 21:32	04:22 22:07
22	08:30 15:05-15:07/2 16:20	07:26 07:56-08:21/25 17:29	06:14 18:29	05:52 20:33	04:48 21:33	04:22 22:08
23	08:28 15:04-15:06/2 16:22	07:24 07:53-08:21/28 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08
24	08:27 15:04-15:06/2 16:24	07:21 07:51-08:22/31 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08
25	08:25 15:04-15:06/2 16:26	07:19 07:48-08:21/33 17:35	06:05 18:35	05:45 20:40	04:43 21:39	04:23 22:08
26	08:23 15:04-15:06/2 16:29	07:16 07:45-08:20/35 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08
27	08:22 15:05-15:06/1 16:31	07:14 07:43-08:20/37 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08
28	08:20 15:05-15:06/1 16:33	07:11 07:40-08:18/38 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08
29	08:18 15:05-15:07/2 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07
30	08:16 15:06-15:07/1 16:37		06:52 19:45	05:33 20:50	04:36 21:47	04:26 22:07
31	08:14 15:06-15:08/2 16:39		06:49 19:48		04:34 21:48	
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	58	310	392	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: Alternative - Real Case Curtailment WTG: 8 - 17

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14 08:22-08:37/15	07:19	08:21 14:49-14:53/4
	22:07	21:26	20:12	18:52	16:34	15:42
2	04:28	05:14	06:16	07:16 08:19-08:39/20	07:21	08:23 14:51-14:55/4
	22:06	21:24	20:09	18:49	16:32	15:41
3	04:29	05:16	06:18	07:18 08:17-08:40/23	07:24	08:24 15:01-15:02/1
	22:06	21:22	20:07	18:46	16:29	15:41 14:53-14:59/6
4	04:29	05:18	06:20	07:20 08:16-08:40/24	07:26	08:26 14:55-15:01/6
	22:05	21:20	20:04	18:44	16:27	15:40
5	04:30	05:20	06:22	07:22 08:14-08:41/27	07:28	08:28
	22:04	21:17	20:01	18:41	16:25	15:39
6	04:31	05:22	06:24	07:24 08:13-08:41/28	07:30	08:29
	22:04	21:15	19:59	18:38	16:23	15:38
7	04:33	05:24	06:26	07:26 08:12-08:42/30	07:32 14:40-14:41/1	08:31
	22:03	21:13	19:56	18:36	16:21	15:38
8	04:34	05:26	06:28	07:28 08:12-08:45/33	07:35	08:32
	22:02	21:11	19:53	18:33	16:19	15:37
9	04:35	05:28	06:30	07:30 08:12-08:46/34	07:37 14:39-14:40/1	08:34
	22:01	21:09	19:51	18:30	16:17	15:36
10	04:36	05:30	06:32	07:32 08:11-08:47/36	07:39 14:39-14:40/1	08:35
	22:00	21:06	19:48	18:28	16:15	15:36
11	04:37	05:32	06:34	07:34 08:11-08:47/36	07:41 14:38-14:39/1	08:36
	21:59	21:04	19:45	18:25	16:13	15:36
12	04:39	05:34	06:36	07:37 08:11-08:49/38	07:43 14:37-14:38/1	08:37
	21:58	21:02	19:43	18:23	16:11	15:35
13	04:40	05:36	06:38	07:39 08:11-08:50/39	07:45 14:38-14:39/1	08:39
	21:57	21:00	19:40	18:20	16:09	15:35
14	04:42	05:38	06:40	07:41 08:13-08:52/39	07:47 14:37-14:39/2	08:40
	21:56	20:57	19:37	18:17	16:07	15:35
15	04:43	05:40	06:42	07:43 08:15-08:52/37	07:50 14:38-14:39/1	08:41
	21:54	20:55	19:35	18:15	16:05	15:35
16	04:44	05:42	06:44	07:45 08:17-08:52/35	07:52 14:38-14:39/1	08:42 11:52-11:54/2
	21:53	20:52	19:32	18:12	16:03	15:35
17	04:46	05:44	06:46	07:47 08:19-08:52/33	07:54 14:37-14:39/2	08:43 11:52-11:54/2
	21:52	20:50	19:29	18:10	16:02	15:35
18	04:48	05:46	06:48	07:49 08:22-08:53/31	07:56 14:38-14:40/2	08:44 11:53-11:55/2
	21:50	20:48	19:27	18:07	16:00	15:35
19	04:49	05:48	06:50	07:51 08:24-08:53/29	07:58 14:38-14:40/2	08:44 11:52-11:54/2
	21:49	20:45	19:24	18:05	15:58	15:35
20	04:51	05:50	06:52	07:53 08:26-08:52/26	08:00 14:39-14:41/2	08:45 11:53-11:55/2
	21:47	20:43	19:21	18:02	15:57	15:36
21	04:52	05:52	06:54	07:56 08:28-08:51/23	08:02 14:40-14:42/2	08:46 11:54-11:56/2
	21:46	20:40	19:19	18:00	15:55	15:36
22	04:54	05:54	06:56	07:58 08:31-08:51/20	08:04 14:40-14:42/2	08:46 11:53-11:56/3
	21:44	20:38	19:16	17:57	15:54	15:36
23	04:56	05:56	06:58	08:00 08:33-08:50/17	08:06 14:41-14:43/2	08:47 11:55-11:57/2
	21:42	20:35	19:13	17:55	15:52	15:37
24	04:58	05:58	07:00	08:02 08:35-08:48/13	08:08 14:41-14:43/2	08:47 11:55-11:57/2
	21:41	20:33	19:10	17:52	15:51	15:37
25	04:59	06:00	07:02	08:04 08:38-08:47/9	08:10 14:43-14:45/2	08:48 11:55-11:57/2
	21:39	20:30	19:08	17:50	15:49	15:38
26	05:01	06:02	07:04	07:06 07:40-07:44/4	08:12 14:44-14:46/2	08:48 11:56-11:58/2
	21:37	20:28	19:05	16:48	15:48	15:39
27	05:03	06:04	07:06	07:08	08:14 14:44-14:47/3	08:48 11:57-11:58/1
	21:35	20:25	19:02	16:45	15:47	15:40
28	05:05	06:06	07:08	07:11	08:16 14:45-14:48/3	08:48 11:57-11:59/2
	21:34	20:22	19:00	16:43	15:46	15:40
29	05:07	06:08	07:10	07:13	08:17 14:46-14:49/3	08:48
	21:32	20:20	18:57	16:41	15:45	15:41
30	05:09	06:10	07:12 08:25-08:34/9	07:15	08:19 14:48-14:51/3	08:48
	21:30	20:17	18:54	16:38	15:43	15:42
31	05:10	06:12		07:17		08:48
	21:28	20:15		16:36		15:43
Potential sun hours	530	470	385	324	248	216
Sum of minutes with flicker	0	0	9	699	42	47

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:

2026-02-Ecosoul-MEŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

WTG: 9 - 24

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June
1	08:48 14:01-14:09/8 15:45	08:13 15:17-15:24/7 16:42	07:09 17:44	06:47 18:34-18:54/20 19:50	05:30 20:52	04:33 21:49
2	08:48 14:02-14:10/8 15:46	08:11 15:18-15:25/7 16:44	07:06 17:46	06:44 18:35-18:51/16 19:52	05:28 20:21-20:24/3 20:54	04:32 21:51
3	08:48 14:02-14:10/8 15:47	08:09 15:19-15:25/6 16:46	07:04 17:48	06:41 18:39-18:49/10 19:54	05:26 20:19-20:26/7 20:56	04:31 21:52
4	08:47 14:03-14:11/8 15:49	08:07 15:20-15:26/6 16:48	07:01 17:51	06:39 19:56	05:23 20:17-20:26/9 20:58	04:30 21:54
5	08:47 14:03-14:11/8 15:50	08:05 15:23-15:28/5 16:51	06:58 17:53	06:36 19:58	05:21 20:16-20:24/8 21:00	04:29 21:55
6	08:46 14:04-14:11/7 15:51	08:03 15:28-15:30/2 16:53	06:56 17:55	06:33 20:00	05:19 20:15-20:19/4 21:02	04:28 21:56
7	08:46 14:04-14:12/8 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 20:14-20:16/2 21:04	04:27 21:57
8	08:45 14:05-14:12/7 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:15 20:14-20:15/1 21:06	04:26 21:58
9	08:44 14:06-14:13/7 15:56	07:56 17:00	06:48 18:01	06:25 20:06	05:12 21:08	04:26 21:59
10	08:44 14:07-14:13/6 15:58	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00
11	08:43 15:17-15:21/4 15:59	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:12	04:25 22:01
12	08:42 15:16-15:23/7 16:01	07:50 17:06	06:40 18:08	06:18 20:12	05:06 21:14	04:24 22:02
13	08:41 15:16-15:25/9 16:03	07:47 17:09	06:37 18:10	06:15 20:15	05:04 21:16	04:24 22:03
14	08:40 15:14-15:26/12 16:05	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04
15	08:39 15:14-15:25/11 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04
16	08:38 15:13-15:23/10 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:23 22:05
17	08:36 15:13-15:23/10 16:10	07:38 17:17	06:27 17:44-17:52/8 18:18	06:05 20:23	04:56 21:24	04:22 22:06
18	08:35 15:13-15:22/9 16:12	07:36 17:20	06:24 17:41-17:55/14 18:20	06:02 20:25	04:54 21:26	04:22 22:06
19	08:34 15:13-15:22/9 16:14	07:33 17:22	06:21 17:38-17:57/19 18:22	06:00 20:27	04:53 21:28	04:22 22:07
20	08:32 15:13-15:22/9 16:16	07:31 17:24	06:19 17:36-17:58/22 18:25	05:57 20:29	04:51 21:30	04:22 22:07
21	08:31 15:12-15:21/9 16:18	07:29 17:26	06:16 17:36-18:00/24 18:27	05:55 20:31	04:49 21:32	04:22 22:07
22	08:30 15:13-15:22/9 16:20	07:26 17:29	06:13 17:34-18:00/26 18:29	05:52 20:33	04:47 21:33	04:22 22:07
23	08:28 15:13-15:21/8 16:22	07:24 17:31	06:11 17:33-18:00/27 18:31	05:50 20:35	04:46 21:35	04:23 22:08
24	08:26 15:13-15:21/8 16:24	07:21 17:33	06:08 17:32-18:00/28 18:33	05:47 20:38	04:44 21:37	04:23 22:08
25	08:25 15:13-15:21/8 16:26	07:19 17:35	06:05 17:32-18:01/29 18:35	05:45 20:40	04:43 21:39	04:23 22:08
26	08:23 15:13-15:21/8 16:29	07:16 17:37	06:03 17:32-18:00/28 18:37	05:42 20:42	04:41 21:40	04:24 22:08
27	08:22 15:13-15:21/8 16:31	07:14 17:40	06:00 17:31-17:59/28 18:39	05:40 20:44	04:40 21:42	04:24 22:08
28	08:20 15:14-15:21/7 16:33	07:11 17:42	05:57 17:32-17:59/27 18:41	05:37 20:46	04:38 21:43	04:25 22:07
29	08:18 15:14-15:22/8 16:35		05:55 17:32-17:58/26 18:43	05:35 20:48	04:37 21:45	04:25 22:07
30	08:16 15:15-15:22/7 16:37		06:52 18:32-18:57/25 19:45	05:33 20:50	04:36 21:47	04:26 22:07
31	08:14 15:16-15:23/7 16:39		06:49 18:33-18:56/23 19:48		04:34 21:48	
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	284	33	354	46	34	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: Alternative - Real Case Curtailment WTG: 9 - 24

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:23 15:41
3	04:29 22:05	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:40
4	04:29 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:37
8	04:34 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:33 15:36
10	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:36 18:23	07:43 16:11	08:37 15:35
13	04:40 21:57	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:38 15:35
14	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:41 15:35
16	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	04:48 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:35
19	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:46 15:36
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	05:01 21:37	06:02 20:27	07:04 19:05	08:06 17:48	08:12 15:48	08:48 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02	08:08 17:45	08:14 15:47	08:48 15:40
28	05:05 21:34	06:06 20:22	07:08 19:00	08:11 17:43	08:16 15:46	08:48 15:40
29	05:07 21:32	06:08 20:20	07:10 18:57	08:13 17:41	08:17 15:44	08:48 15:41
30	05:08 21:30	06:10 20:17	07:12 18:54	08:15 17:38	08:19 15:43	08:48 15:42
31	05:10 21:28	06:12 20:15		08:17 17:36		08:48 15:43
Potential sun hours	530	470	385	324	248	216
Sum of minutes with flicker	0	36	406	0	226	260

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: Alternative - Real Case Curtailment WTG: 10 - 21-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:13 08:46-09:14/28 16:42	07:09 16:23-16:28/5 17:44	06:47 19:50	05:30 20:52	04:33 21:50
2	08:48 15:46	08:11 08:55-09:14/19 16:44 08:44-08:50/6	07:06 16:22-16:27/5 17:46	06:44 19:52	05:28 20:54	04:32 21:51
3	08:48 15:47	08:09 09:00-09:15/15 16:46 08:42-08:46/4	07:04 16:20-16:25/5 17:48	06:41 19:54	05:26 20:56	04:31 21:52
4	08:47 15:49	08:07 09:01-09:14/13 16:48 08:40-08:43/3	07:01 16:18-16:22/4 17:51	06:39 19:56	05:23 20:58	04:30 21:54
5	08:47 15:50	08:05 08:39-08:42/3 16:51 09:04-09:14/10	06:58 16:16-16:19/3 17:53	06:36 19:58	05:21 21:00	04:29 21:55
6	08:46 15:51	08:03 08:40-08:41/1 16:53 09:05-09:14/9	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56
7	08:46 15:53	08:00 09:07-09:13/6 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:27 21:57
8	08:45 15:54	07:58 16:18-16:20/2 16:57 09:07-09:12/5	06:51 17:59	06:28 20:04	05:14 21:06	04:26 21:58
9	08:44 15:56	07:56 16:20-16:24/4 16:59 09:08-09:11/3	06:48 18:01	06:25 20:06	05:12 21:08	04:26 21:59
10	08:44 15:58	07:54 16:21-16:25/4 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00
11	08:43 15:59	07:52 16:23-16:27/4 17:04	06:43 18:06	06:20 20:10	05:08 21:12	04:24 22:01
12	08:42 16:01	07:50 16:24-16:29/5 17:06	06:40 18:08	06:18 20:12	05:06 21:14	04:24 22:02
13	08:41 16:03	07:47 16:25-16:30/5 17:08	06:37 18:10	06:15 20:15	05:04 21:16	04:23 22:03
14	08:40 16:05	07:45 16:26-16:31/5 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04
15	08:39 16:06	07:43 16:26-16:32/6 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04
16	08:38 16:08	07:40 16:27-16:33/6 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:22 22:05
17	08:36 16:10	07:38 16:27-16:33/6 17:17	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06
18	08:35 16:12	07:36 16:28-16:34/6 17:20	06:24 18:20	06:02 20:25	04:54 21:26	04:22 22:06
19	08:34 16:14	07:33 16:28-16:33/5 17:22	06:21 18:22	06:00 20:27	04:53 21:28	04:22 22:07
20	08:32 16:16	07:31 16:28-16:34/6 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07
21	08:31 16:18	07:29 16:28-16:34/6 17:26	06:16 18:27	05:54 20:31	04:49 21:32	04:22 22:07
22	08:30 16:20	07:26 16:28-16:34/6 17:29	06:13 18:29	05:52 20:33	04:47 21:33	04:22 22:08
23	08:28 16:22	07:24 16:28-16:33/5 17:31	06:11 18:31	05:49 20:35	04:46 21:35	04:23 22:08
24	08:27 09:02-09:07/5 16:24	07:21 16:27-16:33/6 17:33	06:08 18:33	05:47 20:38	04:44 21:37	04:23 22:08
25	08:25 09:00-09:08/8 16:26	07:19 16:27-16:33/6 17:35	06:05 18:35	05:45 20:40	04:43 21:39	04:23 22:08
26	08:23 08:58-09:09/11 16:29	07:16 16:26-16:32/6 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08
27	08:22 08:56-09:11/15 16:31	07:14 16:26-16:31/5 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08
28	08:20 08:54-09:11/17 16:33	07:11 16:24-16:30/6 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07
29	08:18 08:52-09:12/20 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07
30	08:16 08:50-09:13/23 16:37		06:52 19:45	05:33 20:50	04:36 21:47	04:26 22:07
31	08:14 08:48-09:13/25 16:39		06:49 19:47		04:34 21:48	
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	124	235	22	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: Alternative - Real Case Curtailment WTG: 10 - 21-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:31	08:23 15:41
3	04:28 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:40
4	04:29 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	04:31 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	04:32 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:37
8	04:34 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:33 15:36
10	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:36 18:23	07:43 16:11	08:37 15:35
13	04:40 21:57	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	04:41 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:41 15:35
16	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	04:47 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:35
19	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:35
21	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:46 15:36
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:48 15:38
26	05:01 21:37	06:02 20:27	07:04 19:05	08:06 17:48	08:12 15:48	08:48 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02	08:08 17:45	08:14 15:47	08:48 15:39
28	05:05 21:34	06:06 20:22	07:08 19:00	08:11 17:43	08:16 15:46	08:48 15:40
29	05:07 21:32	06:08 20:20	07:10 18:57	08:13 17:41	08:17 15:44	08:48 15:41
30	05:08 21:30	06:10 20:17	07:12 18:54	08:15 17:38	08:19 15:43	08:48 15:42
31	05:10 21:28	06:12 20:15	07:14 18:52	08:17 17:36	08:21 15:41	08:48 15:43
Potential sun hours	530	470	385	324	248	216
Sum of minutes with flicker	0	0	0	126	265	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:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment
Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

WTG: 11 - 22-A

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June
1	08:48 14:29-14:42/13 15:45 12:20-12:21/1	08:12 14:31-14:48/17 16:42 08:46-09:09/23	07:09 17:44 07:06	06:47 18:49-19:14/25 19:50	05:30 19:44-20:13/29 20:52	04:33 21:49
2	08:48 14:30-14:43/13 15:46	08:11 14:29-14:46/17 16:44 08:46-09:10/24	07:06 17:46 07:04	06:44 18:49-19:13/24 19:52	05:28 19:44-20:13/29 20:54	04:32 21:51
3	08:48 14:30-14:43/13 15:47	08:09 14:28-14:43/15 16:46 08:46-09:11/25	07:04 17:48 07:01	06:41 18:50-19:13/23 19:54	05:26 19:44-20:13/29 20:56	04:31 21:52
4	08:47 14:31-14:45/14 15:49	08:07 14:33-14:39/6 16:48 08:45-09:10/25	07:01 17:50 06:58	06:39 18:50-19:11/21 19:56	05:23 19:44-20:13/29 20:58	04:30 21:54
5	08:47 14:32-14:45/13 15:50	08:05 08:46-09:11/25 16:51	06:58 17:53 06:56	06:36 18:50-19:10/20 19:58	05:21 19:45-20:12/27 21:00	04:29 21:55
6	08:46 14:32-14:45/13 15:51	08:03 08:46-09:11/25 16:53	06:56 17:55 06:53	06:33 18:52-19:08/16 20:00	05:19 19:45-20:12/27 21:02	04:28 21:56
7	08:46 14:32-14:46/14 15:53	08:00 08:47-09:12/25 16:55	06:53 17:57 06:51	06:31 18:54-19:05/11 20:02	05:17 19:46-20:11/25 21:04	04:27 21:57
8	08:45 14:33-14:46/13 15:54	07:58 08:46-09:11/25 16:57	06:51 17:59 06:48	06:28 20:04 06:25	05:14 19:46-20:11/25 21:06	04:26 21:58
9	08:44 14:33-14:47/14 15:56	07:56 08:47-09:11/24 16:59	06:48 18:01 06:45	06:25 20:06 06:23	05:12 19:47-20:10/23 21:08	04:26 21:59
10	08:43 14:34-14:48/14 15:58	07:54 08:48-09:10/22 17:02	06:45 18:03 06:43	06:23 20:08 20:10	05:10 19:48-20:09/21 21:10	04:25 22:00
11	08:43 14:35-14:48/13 15:59	07:52 08:48-09:09/21 17:04	06:43 18:06 06:40	06:20 20:10 06:18	05:08 19:49-20:07/18 21:12	04:24 22:01
12	08:42 14:35-14:49/14 16:01	07:50 08:50-09:08/18 17:06	06:40 18:08 06:37	06:18 20:12 06:15	05:06 19:50-20:06/16 21:14	04:24 22:02
13	08:41 14:36-14:50/14 16:03	07:47 08:51-09:06/15 17:08	06:37 18:10 06:35	06:15 20:15 06:12	05:04 19:52-20:04/12 21:16	04:23 22:03
14	08:40 14:36-14:50/14 16:05	07:45 08:53-09:05/12 17:11	06:35 18:12 06:32	06:12 20:17 06:10	05:02 19:55-20:02/7 21:18	04:23 22:04
15	08:39 14:36-14:51/15 16:06	07:43 17:13 17:13	06:32 18:14 06:29	06:10 20:19 20:19	05:00 21:20 04:58	04:23 22:04
16	08:38 14:36-14:50/14 16:08	07:40 17:15 17:15	06:29 18:16 06:27	06:07 20:21 20:21	04:58 21:22 04:56	04:22 22:05
17	08:36 14:37-14:51/14 16:10	07:38 17:17 17:17	06:27 18:18 06:24	06:05 20:23 06:02	04:56 21:24 04:54	04:22 22:06
18	08:35 14:37-14:51/14 16:12	07:36 17:20 17:20	06:24 18:20 06:21	06:02 20:25 06:00	04:54 21:26 04:53	04:22 22:07
19	08:34 14:38-14:52/14 16:14	07:33 17:22 17:22	06:21 18:22 06:19	06:00 20:27 05:57	04:53 21:28 04:51	04:22 22:07
20	08:32 14:37-14:52/15 16:16	07:31 17:24 17:24	06:19 18:24 06:16	05:57 20:29 05:54	04:51 21:30 04:49	04:22 22:07
21	08:31 14:37-14:52/15 16:18	07:29 17:26 17:26	06:16 18:27 06:13	05:54 19:58-20:03/5 20:31	04:49 21:31 21:31	04:22 22:07
22	08:30 14:38-14:53/15 16:20	07:26 17:29 17:29	06:13 18:29 06:11	05:52 19:54-20:05/11 20:33	04:47 21:33 21:33	04:22 22:07
23	08:28 14:38-14:52/14 16:22	07:24 17:31 17:31	06:11 18:01-18:05/4 18:31	05:49 19:51-20:07/16 20:35	04:46 21:35 21:35	04:23 22:08
24	08:26 14:37-14:52/15 16:24	07:21 17:33 17:33	06:08 17:57-18:07/10 18:33	05:47 19:50-20:09/19 20:37	04:44 21:37 21:37	04:23 22:08
25	08:25 14:37-14:52/15 16:26	07:19 17:35 17:35	06:05 17:55-18:09/14 18:35	05:45 19:49-20:11/22 20:40	04:43 21:38 21:38	04:23 22:08
26	08:23 14:36-14:52/16 16:28	07:16 17:37 17:37	06:03 17:53-18:11/18 18:37	05:42 19:47-20:12/25 20:42	04:41 21:40 21:40	04:24 22:08
27	08:22 14:36-14:51/15 16:31	07:14 17:40 17:40	06:00 17:52-18:13/21 18:39	05:40 19:46-20:12/26 20:44	04:40 21:42 21:42	04:24 22:08
28	08:20 14:35-14:51/16 16:33	07:11 17:42 17:42	05:57 17:51-18:15/24 18:41	05:37 19:46-20:13/27 20:46	04:38 21:43 21:43	04:25 22:07
29	08:18 14:35-14:50/15 16:35	07:09 17:40 17:40	05:55 17:50-18:15/25 18:43	05:35 19:45-20:13/28 20:48	04:37 21:45 21:45	04:25 22:07
30	08:16 14:34-14:50/16 16:37	07:07 17:38 17:38	05:53 18:49-19:15/26 19:45	05:33 19:44-20:13/29 20:50	04:36 21:47 21:47	04:26 22:07
31	08:14 14:33-14:49/16 16:39	07:05 17:36 17:36	05:51 18:50-19:15/25 19:47	05:31 21:48 21:48	04:34 21:48 21:48	04:26 22:07
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	512	364	167	348	317	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:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 11 - 22-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	July	August	September	October	November	December
1	04:27 22:06	05:12 20:00-20:16/16 21:26	06:14 20:12	07:14 18:51	07:19 08:17-08:39/22 16:34	08:21 14:17-14:30/13 15:42
2	04:28 22:06	05:14 19:59-20:18/19 21:24	06:16 20:09	07:16 18:49	07:21 08:16-08:39/23 16:31	08:23 14:17-14:31/14 15:41
3	04:28 22:05	05:16 19:58-20:19/21 21:22	06:18 20:07	07:18 18:46	07:24 08:16-08:41/25 16:29	08:24 14:17-14:31/14 15:40
4	04:29 22:05	05:18 19:57-20:20/23 21:19	06:20 20:04	07:20 18:43	07:26 08:16-08:40/24 16:27	08:26 14:18-14:31/13 15:40
5	04:30 22:04	05:20 19:56-20:20/24 21:17	06:22 18:53-19:00/7 20:01	07:22 18:41	07:28 08:16-08:41/25 16:25	08:28 14:17-14:31/14 15:39
6	04:31 22:03	05:22 19:55-20:21/26 21:15	06:24 18:49-19:03/14 19:59	07:24 18:38	07:30 08:16-08:41/25 16:23	08:29 14:18-14:31/13 15:38
7	04:32 22:03	05:24 19:55-20:21/26 21:13	06:26 18:47-19:04/17 19:56	07:26 18:36	07:32 08:15-08:41/26 16:21	08:31 14:19-14:32/13 15:37
8	04:34 22:02	05:26 19:54-20:22/28 21:11	06:28 18:45-19:05/20 19:53	07:28 18:33	07:34 14:01-14:12/11 16:19	08:32 14:18-14:32/14 15:37
9	04:35 22:01	05:28 19:54-20:22/28 21:09	06:30 18:44-19:06/22 19:51	07:30 18:30	07:37 13:58-14:15/17 16:17	08:33 14:19-14:32/13 15:36
10	04:36 22:00	05:30 19:53-20:21/28 21:06	06:32 18:43-19:06/23 19:48	07:32 18:28	07:39 14:01-14:18/17 16:15	08:35 14:19-14:32/13 15:36
11	04:37 21:59	05:32 19:53-20:22/29 21:04	06:34 18:42-19:07/25 19:45	07:34 18:25	07:41 14:03-14:19/16 16:13	08:36 14:20-14:33/13 15:36
12	04:39 21:58	05:34 19:53-20:22/29 21:02	06:36 18:41-19:07/26 19:43	07:36 18:22	07:43 14:04-14:20/16 16:11	08:37 14:20-14:33/13 15:35
13	04:40 21:57	05:36 19:53-20:21/28 20:59	06:38 18:41-19:06/25 19:40	07:39 18:20	07:45 14:06-14:22/16 16:09	08:38 14:20-14:33/13 15:35
14	04:41 21:56	05:38 19:53-20:21/28 20:57	06:40 18:41-19:06/25 19:37	07:41 18:17	07:47 14:07-14:23/16 16:07	08:40 14:21-14:34/13 15:35
15	04:43 21:54	05:40 19:53-20:21/28 20:55	06:42 18:41-19:05/24 19:35	07:43 18:15	07:49 14:09-14:24/15 16:05	08:41 14:21-14:34/13 15:35
16	04:44 21:53	05:42 19:54-20:20/26 20:52	06:44 18:41-19:04/23 19:32	07:45 18:12	07:52 14:09-14:24/15 16:03	08:42 14:21-14:34/13 15:35
17	04:46 21:52	05:44 19:53-20:19/26 20:50	06:46 18:41-19:02/21 19:29	07:47 18:10	07:54 14:10-14:25/15 16:02	08:43 14:22-14:35/13 15:35
18	04:47 21:50	05:46 19:54-20:18/24 20:47	06:48 18:42-18:59/17 19:27	07:49 18:07	07:56 14:11-14:26/15 16:00	08:44 14:21-14:34/13 15:35
19	04:49 21:49	05:48 19:55-20:15/20 20:45	06:50 18:42-18:55/13 19:24	07:51 18:05	07:58 14:11-14:26/15 15:58	08:44 14:22-14:35/13 15:35
20	04:51 21:47	05:50 19:56-20:13/17 20:43	06:52 18:44-18:53/9 19:21	07:53 18:02	08:00 14:12-14:27/15 15:57	08:45 14:23-14:35/12 15:35
21	04:52 21:46	05:52 19:58-20:11/13 20:40	06:54 18:47-18:50/3 19:18	07:55 18:00	08:02 14:13-14:28/15 15:55	08:46 14:24-14:36/12 15:36
22	04:54 21:44	05:54 20:01-20:09/8 20:38	06:56 19:16	07:58 17:57	08:04 14:13-14:28/15 15:54	08:46 14:24-14:36/12 15:36
23	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 14:14-14:28/14 15:52	08:47 14:24-14:36/12 15:37
24	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 14:14-14:28/14 15:51	08:47 14:25-14:37/12 15:37
25	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 14:15-14:29/14 15:49	08:47 14:25-14:38/13 15:38
26	05:01 21:37	06:02 20:27	07:04 19:05	07:06 16:48	08:12 14:15-14:30/15 15:48	08:48 14:25-14:38/13 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:14 14:16-14:30/14 15:47	08:48 14:26-14:39/13 15:39
28	05:05 21:33	06:06 20:22	07:08 19:00	07:10 08:24-08:33/9 16:43	08:16 14:16-14:30/14 15:46	08:48 14:27-14:39/12 15:40
29	05:07 21:32	06:08 20:20	07:10 18:57	07:13 08:21-08:36/15 16:41	08:17 14:16-14:30/14 15:44	08:48 14:27-14:40/13 15:41
30	05:08 20:06-20:11/5 21:30	06:10 20:17	07:12 18:54	07:15 08:19-08:37/18 16:38	08:19 14:16-14:30/14 15:43	08:48 14:28-14:41/13 15:42
31	05:10 20:03-20:15/12 21:28	06:12 20:15		07:17 08:19-08:39/20 16:36		08:48 14:29-14:42/13 15:43
Potential sun hours	530	470	385	324	248	216
Sum of minutes with flicker	17	515	314	62	667	423

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: Alternative - Real Case Curtailment WTG: 12 - 20-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:49
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51
3	08:47 15:47	08:09 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52
4	08:47 15:49	08:07 16:48	07:01 17:51	06:39 19:56	05:23 20:58	04:30 21:54
5	08:47 15:50	08:05 16:51	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55
6	08:46 15:51	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56
7	08:46 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:27 21:57
8	08:45 15:54	07:58 16:57	06:51 17:59	06:28 20:04	05:15 21:06	04:26 21:58
9	08:44 15:56	07:56 17:00	06:48 18:01	06:25 20:06	05:12 21:08	04:26 21:59
10	08:43 15:58	07:54 17:02	06:45 18:03	06:23 20:08	05:10 21:10	04:25 22:00
11	08:43 15:59	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:12	04:25 22:01
12	08:42 16:01	07:50 17:06	06:40 18:08	06:18 20:12	05:06 21:14	04:24 22:02
13	08:41 16:03	07:47 17:09	06:37 18:10	06:15 20:15	05:04 21:16	04:24 22:03
14	08:40 16:05	07:45 17:11	06:35 18:12	06:12 20:17	05:02 21:18	04:23 22:04
15	08:39 16:06	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:04
16	08:37 16:08	07:40 17:15	06:29 18:16	06:07 20:21	04:58 21:22	04:23 22:05
17	08:36 16:10	07:38 17:17	06:27 18:18	06:05 20:23	04:56 21:24	04:22 22:06
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:55 21:26	04:22 22:06
19	08:34 16:14	07:33 17:22	06:21 18:22	06:00 20:27	04:53 21:28	04:22 22:07
20	08:32 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07
21	08:31 16:18	07:29 17:26	06:16 18:27	05:55 20:31	04:49 21:31	04:22 22:07
22	08:30 16:20	07:26 17:29	06:13 18:29	05:52 20:33	04:48 21:33	04:22 22:07
23	08:28 16:22	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	04:23 22:08
24	08:26 16:24	07:21 17:33	06:08 18:33	05:47 20:37	04:44 21:37	04:23 22:08
25	08:25 16:26	07:19 17:35	06:05 18:35	05:45 20:40	04:43 21:38	04:23 22:08
26	08:23 16:29	07:16 17:37	06:03 18:37	05:42 20:42	04:41 21:40	04:24 22:08
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08
28	08:20 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:43	04:25 22:07
29	08:18 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07
30	08:16 16:37		06:52 19:45	05:33 20:50	04:36 21:46	04:26 22:07
31	08:14 16:39		06:49 19:47		04:34 21:48	
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	0	0	5	211	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: Alternative - Real Case Curtailment WTG: 12 - 20-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:23 15:41
3	04:29 22:05	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:40
4	04:29 22:05	05:18 21:19	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
6	04:31 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:38
8	04:34 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:33 15:36
10	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:36 18:23	07:43 16:11	08:37 15:35
13	04:40 21:57	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:38 15:35
14	04:41 21:55	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	08:40 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:41 15:35
16	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	08:42 15:35
17	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	04:48 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:35
19	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 15:55	08:46 15:36
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:52	08:08 15:51	08:47 15:37
25	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	08:47 15:38
26	05:01 21:37	06:02 20:27	07:04 19:05	08:06 16:48	08:12 15:48	08:48 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02	08:08 16:45	08:14 15:47	08:48 15:40
28	05:05 21:33	06:06 20:22	07:08 19:00	08:10 16:43	08:16 15:46	08:48 15:40
29	05:07 21:32	06:08 20:20	07:10 18:57	08:13 16:41	08:17 15:44	08:48 15:41
30	05:08 21:30	06:10 20:17	07:12 18:54	08:15 16:38	08:19 15:43	08:48 15:42
31	05:10 21:28	06:12 20:15		08:17 16:36		08:48 15:43
Potential sun hours	530	470	385	324	248	216
Sum of minutes with flicker	0	118	102	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:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

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Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 13 - 19-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45 16:42	08:12 16:42	07:09 16:43-17:06/23	06:47 17:44	05:30 19:50	04:33 20:52	04:27 21:49	05:12 22:06	06:14 21:26	07:14 20:12	07:19 18:52	08:21 15:42
2	08:48 15:46 16:44	08:11 16:44	07:06 16:44-17:06/22	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:23 15:41
3	08:48 15:47 16:46	08:09 16:46	07:04 16:44-17:05/21	06:41 17:48	05:26 20:56	04:31 21:52	04:29 22:05	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:24 15:41
4	08:47 15:49 16:48	08:07 16:48	07:01 16:44-17:03/19	06:39 17:51	05:23 20:58	04:30 21:54	04:29 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	08:47 15:50 16:51	08:05 16:51	06:58 16:46-17:02/16	06:36 17:53	05:21 21:00	04:29 21:55	04:30 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:28 15:39
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8	08:45 15:54 16:57	07:58 16:57	06:51 17:59	06:28 20:04	05:15 21:06	04:27 21:58	04:34 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
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11	08:43 15:59 17:04	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:12	04:25 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
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19	08:34 16:14 17:22	07:33 17:22	06:21 18:22	06:00 20:27	04:53 21:28	04:22 22:07	04:49 21:49	05:49 20:45	06:50 19:24	07:51 18:05	07:58 16:00	08:44 15:35
20	08:32 16:16 17:24	07:31 17:24	16:51-16:56/5	06:19 18:25	05:57 20:29	04:22 21:30	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 16:00	08:45 15:36
21	08:31 16:18 17:26	07:29 17:26	16:48-16:58/10	06:16 18:27	05:55 20:31	04:22 21:31	04:52 21:46	05:52 20:40	06:54 19:18	07:55 18:00	08:02 16:00	08:46 15:36
22	08:30 16:20 17:29	07:26 17:29	16:47-17:01/14	06:13 18:29	05:52 20:33	04:22 21:33	04:54 22:07	05:54 20:38	06:56 19:16	07:58 17:57	08:04 16:00	08:46 15:36
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29	08:18 16:35 17:46			05:55 18:43	05:35 20:48	04:25 21:45	05:07 22:07	06:08 21:32	07:10 20:20	08:13 17:57	08:17 16:41	08:48 15:41
30	08:16 16:37 17:47			05:52 19:45	05:33 20:50	04:26 21:47	05:09 22:07	06:10 21:30	07:12 20:17	08:15 17:54	08:19 16:38	08:48 15:42
31	08:14 16:39 17:48			06:49 19:48		04:34 21:48		05:10 21:28	06:12 20:15	07:17 16:36		08:48 15:43
Potential sun hours	235	265	365	425	507	529	530	470	385	324	248	216
Sum of minutes with flicker	0	163	113	0	0	0	0	0	0	282	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:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 14 - 16-A

Assumptions for shadow calculations

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:48 15:45	08:12 16:42	07:09 17:44	17:05-17:17/12 17:44	06:47 19:50	05:30 20:52	04:33 21:49	04:27 22:06	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:42
2	08:48 15:46	08:11 16:44	07:06 17:46	17:04-17:20/16 17:46	06:44 19:52	05:28 20:54	04:32 21:51	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:23 15:41
3	08:48 15:47	08:09 16:46	07:04 17:48	17:03-17:22/19 17:48	06:41 19:54	05:26 20:56	04:31 21:52	04:29 22:05	05:16 21:22	06:18 20:07	07:18 18:46	17:45-17:56/11 16:29	08:24 15:41
4	08:47 15:49	08:07 16:48	07:01 17:51	17:02-17:24/22 17:51	06:39 19:56	05:23 20:58	04:30 21:54	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	17:42-17:57/15 16:27	08:26 15:40
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6	08:46 15:52	08:03 16:53	06:56 17:55	17:02-17:24/22 17:55	06:33 20:00	05:19 21:02	04:28 21:56	04:32 22:03	05:22 21:15	06:24 19:59	07:24 18:38	17:39-17:59/20 16:23	08:29 15:38
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9	08:44 15:56	07:56 17:00	06:48 18:01	17:03-17:21/18 18:01	06:25 20:06	05:12 21:08	04:26 21:59	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	17:37-17:58/21 16:17	08:33 15:37
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11	08:43 15:59	07:52 17:04	06:43 18:06	17:07-17:18/11 18:06	06:20 20:10	05:08 21:12	04:25 22:01	04:37 21:59	05:32 21:04	06:34 19:45	07:34 18:25	17:37-17:56/19 16:13	08:36 15:36
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16	08:38 16:08	07:40 17:15	06:30 18:16	17:40-18:16 18:16	06:07 20:21	04:58 21:22	04:23 22:05	04:45 21:53	06:42 20:52	07:44 19:32	18:15 18:12	17:41-17:46/5 16:03	08:42 15:35
17	08:36 16:10	07:38 17:18	06:27 18:18	17:38-18:18 18:18	06:05 20:23	04:56 21:24	04:22 22:06	04:46 21:52	06:44 20:50	07:46 19:29	18:12 18:10	17:41-17:46/5 16:02	08:43 15:35
18	08:35 16:12	07:36 17:20	06:24 18:20	17:36-18:20 18:20	06:02 20:25	04:55 21:26	04:22 22:06	04:48 21:50	06:46 20:47	07:49 19:27	18:10 18:07	17:41-17:46/5 16:00	08:43 15:35
19	08:34 16:14	07:33 17:22	06:22 18:22	17:33-18:22 18:22	06:00 20:27	04:53 21:28	04:22 22:07	04:49 21:49	06:50 20:45	07:51 19:24	18:07 18:05	17:41-17:46/5 15:58	08:44 15:35
20	08:32 16:16	07:31 17:24	06:19 18:25	17:31-18:25 18:25	05:57 20:29	04:51 21:30	04:22 22:07	04:51 21:47	06:52 20:43	07:53 19:21	18:05 18:02	17:41-17:46/5 15:57	08:45 15:36
21	08:31 16:18	07:29 17:26	06:16 18:27	17:29-18:27 18:27	05:55 20:31	04:49 21:31	04:22 22:07	04:53 21:46	06:54 20:40	07:55 19:18	18:02 18:00	17:41-17:46/5 15:55	08:46 15:36
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29	08:18 16:35	07:09 17:43	05:55 18:43	17:09-18:43 18:43	05:35 20:48	04:37 21:45	04:26 22:07	05:07 21:32	06:08 20:20	08:10 18:57	17:13 16:41	17:41-17:46/5 15:45	08:48 15:41
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31	08:14 16:40	07:05 17:45	05:49 19:48	17:05-18:45 19:48	05:31 21:48	04:35 21:48	04:27 22:08	05:10 21:28	06:12 20:15	08:14 18:56	17:16 16:36	17:41-17:46/5 15:43	08:48 15:43
Potential sun hours	235	265	365	425	507	529	529	470	385	324	209	248	216
Sum of minutes with flicker	0	12	197	0	0	0	0	0	0	0	0	0	0

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 15 - 13-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 13:26-13:35/9 15:45	08:13 15:50-16:09/19 16:42	07:09 17:44	06:47 19:50	05:30 20:52	04:33 21:50
2	08:48 13:27-13:36/9 15:46	08:11 15:50-16:12/22 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51
3	08:48 13:29-13:37/8 15:47	08:09 08:46-08:47/1 16:46	07:04 17:48	06:41 19:54	05:26 20:56	04:31 21:52
4	08:47 13:32-13:36/4 15:49	08:07 08:44-08:45/1 16:48	07:01 17:51	06:39 19:56	05:23 20:58	04:30 21:54
5	08:47 15:50	08:05 08:43-08:45/2 16:51	06:59 17:53	06:36 19:58	05:21 21:00	04:29 21:55
6	08:46 15:51	08:03 15:50-16:22/32 16:53	06:56 17:55	06:33 20:00	05:19 21:02	04:28 21:56
7	08:46 15:53	08:01 15:51-16:23/32 16:55	06:53 17:57	06:31 20:02	05:17 21:05	04:27 21:57
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9	08:44 15:56	07:56 15:52-16:24/32 17:00	06:48 18:01	06:26 20:06	05:12 21:09	04:26 22:00
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27	08:22 15:55-15:57/2 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:24 22:08
28	08:20 15:53-15:59/6 16:33	07:11 17:42	05:57 18:41	05:37 20:46	04:38 21:44	04:25 22:08
29	08:18 15:52-16:02/10 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:25 22:07
30	08:16 15:51-16:04/13 16:37		06:52 19:46	05:33 20:50	04:36 21:47	04:26 22:07
31	08:15 15:51-16:07/16 16:40		06:49 19:48		04:34 21:48	
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	77	422	0	0	0	0

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

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

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 15 - 13-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	15:22-15:53/31 15:42
2	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:32	15:21-15:53/32 15:41
3	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	15:21-15:53/32 15:41
4	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	15:20-15:53/33 15:40
5	04:30 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	15:20-15:53/33 15:39
6	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	15:20-15:50/30 15:38
7	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:14-08:16/2 15:20-15:48/28
8	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:15-08:16/1 15:20-15:46/26
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:16-08:17/1 15:20-15:43/23
10	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	15:21-15:42/21 15:36
11	04:37 21:59	05:32 21:04	06:34 19:45	07:35 18:25	07:41 16:13	15:22-15:39/17 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	15:22-15:37/15 15:35
13	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	15:24-15:35/11 15:35
14	04:42 21:56	05:38 20:57	06:40 19:37	07:41 18:17	07:47 16:07	15:24-15:33/9 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	15:27-15:31/4 15:35
16	04:44 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:03	15:28-15:32/12 15:35
17	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	15:28-15:32/11 15:35
18	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	15:28-15:32/12 15:35
19	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	15:28-15:32/11 15:35
20	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	15:28-15:32/12 15:36
21	04:52 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:55	15:28-15:32/12 15:36
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	15:28-15:32/12 15:36
23	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	15:28-15:32/12 15:37
24	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:53	08:08 15:51	15:28-15:32/12 15:37
25	04:59 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:49	15:28-15:32/11 15:38
26	05:01 21:37	06:02 20:28	07:04 19:05	08:42-08:43/1 16:48	08:12 15:48	15:28-15:32/12 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02	08:42-08:43/1 16:45	08:14 15:47	15:28-15:32/11 15:40
28	05:05 21:34	06:06 20:22	07:08 19:00	15:30-15:50/20 16:43	08:16 15:46	15:28-15:33/12 15:40
29	05:07 21:32	06:08 20:20	07:10 18:57	15:27-15:52/25 16:41	08:18 15:45	15:28-15:33/11 15:41
30	05:09 21:30	06:10 20:17	07:12 18:54	15:25-15:52/27 16:38	08:19 15:43	15:28-15:34/11 15:42
31	05:10 21:28	06:12 20:15	07:17 18:54	15:24-15:53/29 16:36	08:48 15:43	15:25-15:35/10 15:43
Potential sun hours	530	470	385	324	248	216
Sum of minutes with flicker	0	0	0	128	349	249

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:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 16 - 11-A

Assumptions for shadow calculations

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:30	04:33	04:27	05:12	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:49	22:06	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:32	04:28	05:14	06:16	07:16	07:21	08:23
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:41	05:26	04:31	04:29	05:16	06:18	07:18	07:24	08:24
	15:48	16:46	17:49	19:54	20:56	21:52	22:05	21:22	20:07	18:46	16:29	15:41
4	08:47	08:07	07:01	06:39	05:24	04:30	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:49	17:51	19:56	20:58	21:54	22:05	21:20	20:04	18:44	16:27	15:40
5	08:47	08:05	06:59	06:36	05:21	04:29	04:31	05:20	06:22	07:22	07:28	08:28
	15:50	16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:02	18:41	16:25	15:39
6	08:46	08:03	06:56	06:33	05:19	04:28	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:04	21:15	19:59	18:38	16:23	15:38
7	08:46	08:01	06:53	06:31	05:17	04:28	04:33	05:24	06:26	07:26	07:32	08:31
	15:53	16:55	17:57	20:02	21:04	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:57	17:59	20:04	21:06	21:58	22:02	21:11	19:54	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:30	07:37	08:33
	15:56	17:00	18:01	20:06	21:08	21:59	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:10	04:25	04:36	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:04	20:08	21:10	22:00	22:00	21:06	19:48	18:28	16:15	15:36
11	08:43	07:52	06:43	06:20	05:08	04:25	04:38	05:32	06:34	07:35	07:41	08:36
	16:00	17:04	18:06	20:10	21:12	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:50	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:37	07:43	08:37
	16:01	17:06	18:08	20:13	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:38	06:15	05:04	04:24	04:40	05:36	06:38	07:39	07:45	08:39
	16:03	17:09	18:10	20:15	21:16	22:03	21:57	20:59	19:40	18:20	16:09	15:35
14	08:40	07:45	06:35	06:13	05:02	04:23	04:42	05:38	06:40	07:41	07:47	08:40
	16:05	17:11	18:12	20:17	21:18	22:04	21:56	20:57	19:37	18:18	16:07	15:35
15	08:39	07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:50	08:41
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:05	15:35
16	08:38	07:41	06:30	06:07	04:58	04:23	04:45	05:42	06:44	07:45	07:52	08:42
	16:08	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:04	15:35
17	08:36	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:54	08:43
	16:10	17:18	18:18	20:23	21:24	22:06	21:52	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:55	04:23	04:48	05:46	06:48	07:49	07:56	08:43
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:48	19:27	18:07	16:00	15:35
19	08:34	07:33	06:22	06:00	04:53	04:22	04:49	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:59	15:35
20	08:32	07:31	06:19	05:57	04:51	04:22	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:25	20:29	21:30	22:07	21:47	20:43	19:21	18:02	15:57	15:36
21	08:31	07:29	06:16	05:55	04:49	04:23	04:53	05:52	06:54	07:56	08:02	08:46
	16:18	17:27	18:27	20:31	21:32	22:07	21:46	20:40	19:19	18:00	15:55	15:36
22	08:30	07:26	06:14	05:52	04:48	04:23	04:54	05:54	06:56	07:58	08:04	08:46
	16:20	17:29	18:29	20:33	21:33	22:07	21:44	20:38	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:22	17:31	18:31	20:35	21:35	22:08	21:42	20:35	19:13	17:55	15:52	15:37
24	08:27	07:21	06:08	05:47	04:44	04:23	04:58	05:58	07:00	08:02	08:08	08:47
	16:25	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:10	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:48
	16:27	17:35	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:50	15:38
26	08:23	07:16	06:03	05:42	04:41	04:24	05:01	06:02	07:04	08:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:48	15:39
27	08:22	07:14	06:00	05:40	04:40	04:25	05:03	06:04	07:06	08:08	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:40
28	08:20	07:11	05:57	05:38	04:39	04:25	05:05	06:06	07:08	08:11	08:16	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:34	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:37	04:26	05:07	06:08	07:10	08:13	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:26	05:09	06:10	07:12	08:15	08:19	08:48
	16:37		19:46	20:50	21:47	22:07	21:30	20:17	18:54	16:38	15:44	15:43
31	08:14		06:49		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

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

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 17 - 09-A

Assumptions for shadow calculations

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48	08:13	07:09	06:47	05:30	04:33	04:27	05:12	06:14	07:14	07:19	08:21
	15:45	16:42	17:44	19:50	20:52	21:50	22:06	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:32	04:28	05:14	06:16	07:16	07:21	08:23
	15:46	16:44	17:46	19:52	20:54	21:51	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:41	05:26	04:31	04:29	05:16	06:18	07:18	07:24	08:24
	15:47	16:46	17:48	19:54	20:56	21:52	22:06	21:22	20:07	18:46	16:29	15:41
4	08:47	08:07	07:01	06:39	05:24	04:30	04:30	05:18	06:20	07:20	07:26	08:26
	15:49	16:48	17:51	19:56	20:58	21:54	22:05	21:20	20:04	18:44	16:27	15:40
5	08:47	08:05	06:59	06:36	05:21	04:29	04:31	05:20	06:22	07:22	07:28	08:28
	15:50	16:51	17:53	19:58	21:00	21:55	22:04	21:17	20:02	18:41	16:25	15:39
6	08:46	08:03	06:56	06:33	05:19	04:28	04:32	05:22	06:24	07:24	07:30	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:04	21:15	19:59	18:38	16:23	15:38
7	08:46	08:01	06:53	06:31	05:17	04:27	04:33	05:24	06:26	07:26	07:32	08:31
	15:53	16:55	17:57	20:02	21:04	21:57	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:57	17:59	20:04	21:06	21:58	22:02	21:11	19:54	18:33	16:19	15:37
9	08:44	07:56	06:48	06:26	05:13	04:26	04:35	05:28	06:30	07:30	07:37	08:33
	15:56	17:00	18:01	20:06	21:09	21:59	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:10	04:25	04:36	05:30	06:32	07:32	07:39	08:35
	15:58	17:02	18:04	20:08	21:11	22:00	22:00	21:06	19:48	18:28	16:15	15:36
11	08:43	07:52	06:43	06:20	05:08	04:25	04:38	05:32	06:34	07:35	07:41	08:36
	15:59	17:04	18:06	20:10	21:13	22:01	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:50	06:40	06:18	05:06	04:24	04:39	05:34	06:36	07:37	07:43	08:37
	16:01	17:06	18:08	20:13	21:14	22:02	21:58	21:02	19:43	18:23	16:11	15:35
13	08:41	07:47	06:38	06:15	05:04	04:24	04:40	05:36	06:38	07:39	07:45	08:39
	16:03	17:09	18:10	20:15	21:16	22:03	21:57	21:00	19:40	18:20	16:09	15:35
14	08:40	07:45	06:35	06:13	05:02	04:23	04:42	05:38	06:40	07:41	07:47	08:40
	16:05	17:11	18:12	20:17	21:18	22:04	21:56	20:57	19:37	18:18	16:07	15:35
15	08:39	07:43	06:32	06:10	05:00	04:23	04:43	05:40	06:42	07:43	07:50	08:41
	16:07	17:13	18:14	20:19	21:20	22:04	21:54	20:55	19:35	18:15	16:05	15:35
16	08:38	07:41	06:30	06:07	04:58	04:23	04:45	05:42	06:44	07:45	07:52	08:42
	16:08	17:15	18:16	20:21	21:22	22:05	21:53	20:52	19:32	18:12	16:04	15:35
17	08:36	07:38	06:27	06:05	04:57	04:23	04:46	05:44	06:46	07:47	07:54	08:43
	16:10	17:18	18:18	20:23	21:24	22:06	21:52	20:50	19:29	18:10	16:02	15:35
18	08:35	07:36	06:24	06:02	04:55	04:22	04:48	05:46	06:48	07:49	07:56	08:43
	16:12	17:20	18:20	20:25	21:26	22:06	21:50	20:48	19:27	18:07	16:00	15:35
19	08:34	07:33	06:22	06:00	04:53	04:22	04:49	05:48	06:50	07:51	07:58	08:44
	16:14	17:22	18:23	20:27	21:28	22:07	21:49	20:45	19:24	18:05	15:58	15:35
20	08:32	07:31	06:19	05:57	04:51	04:22	04:51	05:50	06:52	07:53	08:00	08:45
	16:16	17:24	18:25	20:29	21:30	22:07	21:47	20:43	19:21	18:02	15:57	15:36
21	08:31	07:29	06:16	05:55	04:49	04:23	04:53	05:52	06:54	07:56	08:02	08:46
	16:18	17:27	18:27	20:31	21:32	22:07	21:46	20:40	19:19	18:00	15:55	15:36
22	08:30	07:26	06:14	05:52	04:48	04:23	04:54	05:54	06:56	07:58	08:04	08:46
	16:20	17:29	18:29	20:33	21:33	22:08	21:44	20:38	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:23	04:56	05:56	06:58	08:00	08:06	08:47
	16:22	17:31	18:31	20:36	21:35	22:08	21:42	20:35	19:13	17:55	15:52	15:37
24	08:27	07:21	06:08	05:47	04:44	04:23	04:58	05:58	07:00	08:02	08:08	08:47
	16:24	17:33	18:33	20:38	21:37	22:08	21:41	20:33	19:10	17:53	15:51	15:38
25	08:25	07:19	06:06	05:45	04:43	04:24	05:00	06:00	07:02	08:04	08:10	08:48
	16:27	17:35	18:35	20:40	21:39	22:08	21:39	20:30	19:08	17:50	15:50	15:38
26	08:23	07:16	06:03	05:42	04:41	04:24	05:01	06:02	07:04	08:06	08:12	08:48
	16:29	17:38	18:37	20:42	21:40	22:08	21:37	20:28	19:05	16:48	15:48	15:39
27	08:22	07:14	06:00	05:40	04:40	04:24	05:03	06:04	07:06	08:08	08:14	08:48
	16:31	17:40	18:39	20:44	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:40
28	08:20	07:11	05:57	05:38	04:39	04:25	05:05	06:06	07:08	08:11	08:16	08:48
	16:33	17:42	18:41	20:46	21:43	22:07	21:34	20:22	19:00	16:43	15:46	15:41
29	08:18		05:55	05:35	04:37	04:26	05:07	06:08	07:10	08:13	08:17	08:48
	16:35		18:43	20:48	21:45	22:07	21:32	20:20	18:57	16:41	15:45	15:42
30	08:16		06:52	05:33	04:36	04:26	05:09	06:10	07:12	08:15	08:19	08:48
	16:37		19:46	20:50	21:47	22:07	21:30	20:17	18:54	16:38	15:44	15:43
31	08:14		06:49		04:35		05:11	06:12		07:17		08:48
	16:40		19:48		21:48		21:28	20:15		16:36		15:44
Potential sun hours	235	265	365	425	507	529	529	470	385	324	248	216
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

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

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 18 - 08-A

Assumptions for shadow calculations

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:13 08:46-08:55/9 16:42	07:09 17:44	06:47 07:23-07:50/27 19:50	05:30 20:52	04:33 21:50
2	08:48 15:46	08:11 08:44-08:57/13 16:44	07:06 17:46	06:44 07:23-07:51/28 19:52	05:28 20:54	04:32 21:51
3	08:48 15:47	08:09 08:42-08:59/17 16:46	07:04 17:49	06:41 07:23-07:50/27 19:54	05:26 20:56	04:31 21:52
4	08:47 15:49	08:07 08:39-08:59/20 16:48	07:01 17:51	06:39 07:23-07:48/25 19:56	05:24 20:58	04:30 21:54
5	08:47 15:50	08:05 08:37-09:00/23 16:51	06:59 17:53	06:36 07:24-07:48/24 19:58	05:21 21:00	04:29 21:55
6	08:46 15:52	08:03 08:37-09:01/24 16:53	06:56 17:55	06:33 07:24-07:46/22 20:00	05:19 21:02	04:28 21:56
7	08:46 15:53	08:01 08:37-09:02/25 16:55	06:53 17:57	06:31 07:25-07:45/20 20:02	05:17 21:05	04:27 21:57
8	08:45 15:55	07:58 08:36-09:02/26 16:57	06:51 17:59	06:28 07:26-07:43/17 20:04	05:15 21:07	04:27 21:58
9	08:44 15:56	07:56 08:36-09:02/26 17:00	06:48 18:01	06:26 07:28-07:40/12 20:06	05:13 21:09	04:26 21:59
10	08:44 15:58	07:54 08:36-09:03/27 17:02	06:45 18:04	06:23 20:08	05:10 21:11	04:25 22:00
11	08:43 15:59	07:52 08:36-09:02/26 17:04	06:43 18:06	06:20 20:11	05:08 21:13	04:25 22:01
12	08:42 16:01	07:50 08:37-09:02/25 17:06	06:40 18:08	06:18 20:13	05:06 21:15	04:24 22:02
13	08:41 16:03	07:47 08:37-09:01/24 17:09	06:38 18:10	06:15 20:15	05:04 21:17	04:24 22:03
14	08:40 16:05	07:45 08:38-09:01/23 17:11	06:35 18:12	06:13 20:17	05:02 21:18	04:23 22:04
15	08:39 16:07	07:43 08:39-09:01/22 17:13	06:32 18:14	06:10 20:19	05:00 21:20	04:23 22:05
16	08:38 16:08	07:41 08:39-08:59/20 17:15	06:30 18:16	06:07 20:21	04:58 21:22	04:23 22:05
17	08:36 16:10	07:38 08:41-08:58/17 17:18	06:27 18:18	06:05 20:23	04:57 21:24	04:23 22:06
18	08:35 16:12	07:36 08:43-08:55/12 17:20	06:24 18:20	06:02 20:25	04:55 21:26	04:22 22:06
19	08:34 16:14	07:34 08:48-08:51/3 17:22	06:22 18:23	06:00 20:27	04:53 21:28	04:22 22:07
20	08:33 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	04:22 22:07
21	08:31 16:18	07:29 17:27	06:16 18:27	05:55 20:31	04:49 21:32	04:22 22:07
22	08:30 16:20	07:26 17:29	06:14 18:29	05:52 20:33	04:48 21:33	04:23 22:08
23	08:28 16:22	07:24 17:31	06:11 18:31	05:50 20:36	04:46 21:35	04:23 22:08
24	08:27 16:24	07:21 17:33	06:08 06:36-06:46/10 18:33	05:47 20:38	04:44 21:37	04:23 22:08
25	08:25 16:27	07:19 17:35	06:06 06:33-06:48/15 18:35	05:45 20:40	04:43 21:39	04:24 22:08
26	08:23 16:29	07:16 17:38	06:03 06:30-06:49/19 18:37	05:42 20:42	04:41 21:40	04:24 22:08
27	08:22 16:31	07:14 17:40	06:00 06:28-06:50/22 18:39	05:40 20:44	04:40 21:42	04:24 22:08
28	08:20 16:33	07:11 17:42	05:57 06:26-06:51/25 18:41	05:38 20:46	04:39 21:44	04:25 22:08
29	08:18 16:35		05:55 06:25-06:51/26 18:43	05:35 20:48	04:37 21:45	04:26 22:07
30	08:16 16:37		06:52 07:25-07:51/26 19:46	05:33 20:50	04:36 21:47	04:26 22:07
31	08:15 08:48-08:52/4 16:40		06:49 07:24-07:51/27 19:48		04:35 21:48	
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	4	382	170	202	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: Alternative - Real Case Curtailment WTG: 18 - 08-A

Assumptions for shadow calculations

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	July	August	September	October	November	December
1	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:05-08:32/27 15:43
2	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:06-08:32/26 15:42
3	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:29	08:06-08:32/26 15:41
4	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:06-08:31/25 15:40
5	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:07-08:31/24 15:39
6	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:07-08:30/23 15:38
7	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:09-08:30/21 15:38
8	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:11-08:29/18 15:37
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:13-08:28/15 15:37
10	04:36 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:16-08:27/11 15:36
11	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:18-08:25/7 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:21-08:22/1 15:35
13	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	04:42 21:56	05:38 20:57	06:40 19:37	07:41 18:18	07:47 16:07	08:40 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:04	08:42 15:35
17	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:58	08:44 15:35
20	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:55	08:46 15:36
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:36
23	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:53	09:13-09:24/11 15:51	08:47 15:38
25	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	09:12-09:27/15 15:50	08:48 15:38
26	05:01 21:37	06:02 20:28	07:04 19:05	07:06 16:48	08:10-08:28/18 15:48	08:48 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02	07:08 16:45	08:08-08:29/21 15:47	08:48 15:40
28	05:05 21:34	06:06 20:22	07:08 19:00	07:11 16:43	08:08-08:31/23 15:46	08:48 15:41
29	05:07 21:32	06:08 20:20	07:10 18:57	07:13 16:41	08:07-08:31/24 15:45	08:48 15:42
30	05:09 21:30	06:10 20:17	07:12 18:54	07:15 16:38	08:06-08:31/25 15:44	08:48 15:43
31	05:11 21:28	06:12 20:15		07:17 16:36	08:06-08:32/26 15:44	08:48 15:44
Potential sun hours	530	470	385	324	248	216
Sum of minutes with flicker	0	0	384	163	224	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: Alternative - Real Case Curtailment WTG: 19 - 03-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 10:18-10:41/23 15:45	08:13 16:42 17:44	07:09 17:44	06:47 19:50 20:52	05:30 20:52 21:50	04:33 21:50 21:50
2	08:48 10:20-10:41/21 15:46	08:11 16:44 17:46	07:06 17:46	06:44 19:52 20:54	05:28 20:54 21:51	04:32 21:51 21:51
3	08:48 10:20-10:41/21 15:48	08:09 16:46 17:49	07:04 17:49	06:41 19:54 20:56	05:26 20:56 21:52	04:31 21:52 21:52
4	08:47 10:21-10:42/21 15:49	08:07 16:49 17:51	07:01 17:51	06:39 19:56 20:58	05:24 20:58 21:54	04:30 21:54 21:54
5	08:47 10:22-10:41/19 15:50	08:05 16:51 17:53	06:59 17:53	06:36 19:58 21:00	05:21 21:00 21:55	04:29 21:55 21:55
6	08:46 10:23-10:41/18 15:52	08:03 16:53 17:55	06:56 17:55	06:34 20:00 21:03	05:19 21:03 21:56	04:28 21:56 21:56
7	08:46 10:24-10:41/17 15:53	08:01 16:55 17:57	06:53 17:57	06:31 20:02 21:05	05:17 21:05 21:57	04:27 21:57 21:57
8	08:45 10:25-10:40/15 15:55	07:59 16:57 17:59	06:51 17:59	06:28 20:04 21:07	05:15 21:07 21:58	04:27 21:58 21:58
9	08:44 10:26-10:40/14 15:56	07:56 17:00 18:01	06:48 18:01	06:26 20:06 21:09	05:13 21:09 22:00	04:26 22:00 22:00
10	08:44 10:28-10:39/11 15:58	07:54 17:02 18:04	06:46 18:04	06:23 20:08 21:11	05:10 21:11 22:01	04:25 22:01 22:01
11	08:43 10:30-10:38/8 16:00	07:52 17:04 18:06	06:43 18:06	06:20 20:11 21:13	05:08 21:13 22:01	04:25 22:01 22:01
12	08:42 16:01 16:01	07:50 17:06 18:08	06:40 18:08	06:18 20:13 21:15	05:06 21:15 22:02	04:24 22:02 22:02
13	08:41 16:03 16:03	07:48 17:09 18:10	06:38 18:10	06:15 20:15 21:17	05:04 21:17 22:03	04:24 22:03 22:03
14	08:40 16:05 16:05	07:45 17:11 18:12	06:35 18:12	06:13 20:17 21:18	05:02 21:18 22:04	04:23 22:04 22:04
15	08:39 16:07 16:07	07:43 17:13 18:14	06:32 18:14	06:10 20:19 21:20	05:00 21:20 22:05	04:23 22:05 22:05
16	08:38 16:08 16:08	07:41 17:15 18:16	06:30 18:16	06:07 20:21 21:22	04:58 21:22 22:05	04:23 22:05 22:05
17	08:36 16:10 16:10	07:38 17:18 18:18	06:27 18:18	06:05 20:23 21:24	04:57 21:24 22:06	04:23 22:06 22:06
18	08:35 16:12 16:12	07:36 17:20 18:21	06:24 18:21	06:02 20:25 21:26	04:55 21:26 22:06	04:22 22:06 22:06
19	08:34 16:14 16:14	07:34 17:22 18:23	06:22 18:23	06:00 20:27 21:28	04:53 21:28 22:07	04:22 22:07 22:07
20	08:33 16:16 16:16	07:31 17:24 18:25	06:19 18:25	05:57 20:29 21:30	04:51 21:30 22:07	04:22 22:07 22:07
21	08:31 16:18 16:18	07:29 17:27 18:27	06:16 18:27	05:55 20:31 21:32	04:49 21:32 22:07	04:23 22:07 22:07
22	08:30 16:20 16:20	07:26 17:29 18:29	06:14 18:29	05:52 20:33 21:33	04:48 21:33 22:08	04:23 22:08 22:08
23	08:28 16:22 16:22	07:24 17:31 18:31	06:11 18:31	05:50 20:36 21:35	04:46 21:35 22:08	04:23 22:08 22:08
24	08:27 16:25 16:25	07:21 17:33 18:33	06:08 18:33	05:47 20:38 21:37	04:44 21:37 22:08	04:23 22:08 22:08
25	08:25 16:27 16:27	07:19 17:35 18:35	06:06 18:35	05:45 20:40 21:39	04:43 21:39 22:08	04:24 22:08 22:08
26	08:23 16:29 16:29	07:16 17:38 18:37	06:03 18:37	05:42 20:42 21:40	04:41 21:40 22:08	04:24 22:08 22:08
27	08:22 16:31 16:31	07:14 17:40 18:39	06:00 18:39	05:40 20:44 21:42	04:40 21:42 22:08	04:24 22:08 22:08
28	08:20 16:33 16:33	07:11 17:42 18:41	05:58 18:41	05:38 20:46 21:44	04:39 21:44 22:08	04:25 22:08 22:08
29	08:18 16:35 16:35		05:55 18:44	05:35 20:48 21:45	04:37 21:45 22:07	04:26 22:07 22:07
30	08:16 16:37 16:37		06:52 19:46	05:33 20:50 21:47	04:36 21:47 22:07	04:26 22:07 22:07
31	08:15 16:40 16:40		06:50 19:48		04:35 21:48	
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	188	0	244	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: Alternative - Real Case Curtailment WTG: 19 - 03-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,17 2,29 4,58 6,82 8,69 9,44 8,63 7,75 5,49 2,82 0,76 0,60

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
373 431 565 449 510 745 768 916 1 192 1 023 777 489 8 238
Idle start wind speed3,0m/s

	July	August	September	October	November	December
1	04:27 22:07	05:12 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	04:28 22:06	05:14 21:24	06:16 20:09	07:16 18:49	07:22 16:32	08:23 15:42
3	04:29 22:06	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:30	08:24 15:41
4	04:30 22:05	05:18 21:20	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	04:31 22:04	05:20 21:18	06:22 20:02	07:22 18:41	07:28 16:25	08:28 15:39
6	04:32 22:04	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:38
8	04:34 22:02	05:26 21:11	06:28 19:54	07:28 18:33	07:35 16:19	08:32 15:37
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:31	07:37 16:17	08:34 15:37
10	04:36 22:00	05:30 21:07	06:32 19:48	07:33 18:28	07:39 16:15	08:35 15:36
11	04:38 21:59	05:32 21:04	06:34 19:46	07:35 18:25	07:41 16:13	08:36 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:37 15:36
13	04:40 21:57	05:36 21:00	06:38 19:40	07:39 18:20	07:45 16:09	08:39 15:35
14	04:42 21:56	05:38 20:57	06:40 19:38	07:41 18:18	07:47 16:07	08:40 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:50 16:05	08:41 15:35
16	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:04	08:42 15:35
17	04:46 21:52	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:43 15:35
18	04:48 21:50	05:46 20:48	06:48 19:27	07:49 18:07	07:56 16:00	08:44 15:35
19	04:49 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:35
20	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	04:53 21:46	05:52 20:40	06:54 19:19	07:55 18:00	08:02 15:55	08:46 15:36
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:57	08:04 15:54	08:46 15:37
23	04:56 21:43	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	04:58 21:41	05:58 20:33	07:00 19:11	08:02 17:53	08:08 15:51	08:47 15:38
25	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:48 15:38
26	05:01 21:37	06:02 20:28	07:04 19:05	08:06 16:48	08:12 15:48	08:48 15:39
27	05:03 21:36	06:04 20:25	07:06 19:02	08:09 16:45	08:14 15:47	08:48 15:40
28	05:05 21:34	06:06 20:23	07:08 19:00	08:11 16:43	08:16 15:46	08:48 15:41
29	05:07 21:32	06:08 20:20	07:10 18:57	08:13 16:41	08:18 15:45	08:48 15:42
30	05:09 21:30	06:10 20:17	07:12 18:54	08:15 16:38	08:19 15:44	08:48 15:43
31	05:11 21:28	06:12 20:15		07:17 16:36		08:48 15:44
Potential sun hours	530	470	385	324	248	216
Sum of minutes with flicker	0	0	184	66	0	650

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: Alternative - Real Case Curtailment WTG: 20 - 04-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 09:41-10:05/24 15:45	08:13 16:42 17:44	07:09 17:44	06:47 19:50 20:52	05:30 20:52 21:50	04:33 21:50 21:50
2	08:48 09:42-10:06/24 15:46	08:11 16:44 17:46	07:06 17:46	06:44 19:52 20:54	05:28 20:54 21:51	04:32 21:51 21:51
3	08:48 09:42-10:06/24 15:48	08:09 16:46 17:49	07:04 17:49	06:41 19:54 20:56	05:26 20:56 21:52	04:31 21:52 21:52
4	08:47 09:43-10:07/24 15:49	08:07 16:49 17:51	07:01 17:51	06:39 19:56 20:58	05:24 20:58 21:54	04:30 21:54 21:54
5	08:47 09:43-10:07/24 15:50	08:05 16:51 17:53	06:59 17:53	06:36 19:58 21:00	05:21 21:00 21:55	04:29 21:55 21:55
6	08:46 09:43-10:08/25 15:52	08:03 16:53 17:55	06:56 17:55	06:34 20:00 21:02	05:19 21:02 21:56	04:28 21:56 21:56
7	08:46 09:44-10:08/24 15:53	08:01 16:55 17:57	06:53 17:57	06:31 20:02 21:05	05:17 21:05 21:57	04:28 21:57 21:57
8	08:45 09:44-10:08/24 15:55	07:58 16:57 17:59	06:51 17:59	06:28 20:04 21:07	05:15 21:07 21:58	04:27 21:58 21:58
9	08:44 09:45-10:08/23 15:56	07:56 17:00 18:01	06:48 18:01	06:26 20:06 21:09	05:13 21:09 21:59	04:26 21:59 21:59
10	08:44 09:46-10:09/23 15:58	07:54 17:02 18:04	06:46 18:04	06:23 20:08 21:11	05:10 21:11 22:00	04:25 22:00 22:00
11	08:43 09:46-10:09/23 16:00	07:52 17:04 18:06	06:43 18:06	06:20 20:11 21:13	05:08 21:13 22:01	04:25 22:01 22:01
12	08:42 09:47-10:09/22 16:01	07:50 17:06 18:08	06:40 18:08	06:18 20:13 21:15	05:06 21:15 22:02	04:24 22:02 22:02
13	08:41 09:48-10:09/21 16:03	07:47 17:09 18:10	06:38 18:10	06:15 20:15 21:16	05:04 21:16 22:03	04:24 22:03 22:03
14	08:40 09:48-10:09/21 16:05	07:45 17:11 18:12	06:35 18:12	06:13 20:17 21:18	05:02 21:18 22:04	04:23 22:04 22:04
15	08:39 09:50-10:09/19 16:07	07:43 17:13 18:14	06:32 18:14	06:10 20:19 21:20	05:00 21:20 22:05	04:23 22:05 22:05
16	08:38 09:51-10:09/18 16:09	07:41 17:15 18:16	06:30 18:16	06:07 20:21 21:22	04:58 21:22 22:05	04:23 22:05 22:05
17	08:36 09:52-10:08/16 16:10	07:38 17:18 18:18	06:27 18:18	06:05 20:23 21:24	04:57 21:24 22:06	04:23 22:06 22:06
18	08:35 09:54-10:08/14 16:12	07:36 17:20 18:21	06:24 18:21	06:02 20:25 21:26	04:55 21:26 22:06	04:23 22:06 22:06
19	08:34 09:55-10:06/11 16:14	07:34 17:22 18:23	06:22 18:23	06:00 20:27 21:28	04:53 21:28 22:07	04:22 22:07 22:07
20	08:33 09:57-10:04/7 16:16	07:31 17:24 18:25	06:19 18:25	05:57 20:29 21:30	04:51 21:30 22:07	04:22 22:07 22:07
21	08:31 16:18 17:27	07:29 17:27 18:27	06:16 18:27	05:55 20:31 21:32	04:49 21:32 22:07	04:23 22:07 22:07
22	08:30 16:20 17:29	07:26 17:29 18:29	06:14 18:29	05:52 20:33 21:33	04:48 21:33 22:08	04:23 22:08 22:08
23	08:28 16:22 17:31	07:24 17:31 18:31	06:11 18:31	05:50 20:36 21:35	04:46 21:35 22:08	04:23 22:08 22:08
24	08:27 16:25 17:33	07:21 17:33 18:33	06:08 18:33	05:47 20:38 21:37	04:44 21:37 22:08	04:23 22:08 22:08
25	08:25 16:27 17:35	07:19 17:35 18:35	06:06 18:35	05:45 20:40 21:39	04:43 21:39 22:08	04:24 22:08 22:08
26	08:23 16:29 17:38	07:16 17:38 18:37	06:03 18:37	05:42 20:42 21:40	04:41 21:40 22:08	04:24 22:08 22:08
27	08:22 16:31 17:40	07:14 17:40 18:39	06:00 18:39	05:40 20:44 21:42	04:40 21:42 22:08	04:25 22:08 22:08
28	08:20 16:33 17:42	07:11 17:42 18:41	05:58 18:41	05:38 20:46 21:44	04:39 21:44 22:08	04:25 22:08 22:08
29	08:18 16:35 17:43	07:09 17:43 18:43	05:55 18:43	05:35 20:48 21:45	04:37 21:45 22:07	04:26 22:07 22:07
30	08:16 16:37 17:44	07:07 17:44 18:44	05:52 18:44	05:33 20:50 21:47	04:36 21:47 22:07	04:26 22:07 22:07
31	08:14 16:40 17:45	07:05 17:45 18:45	05:50 18:45	05:31 20:52 21:49	04:34 21:49 22:08	04:26 22:08 22:08
Potential sun hours	235	265	365	425	507	529
Sum of minutes with flicker	411	0	259	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: Alternative - Real Case Curtailment WTG: 20 - 04-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	July	August	September	October	November	December
1	04:27	05:12	06:14	07:14 07:45-08:08/23	07:19	08:21 09:29-09:51/22
	22:07	21:26	20:12	18:52	16:34	15:43
2	04:28	05:14	06:16	07:16 07:47-08:07/20	07:21	08:23 09:29-09:51/22
	22:06	21:24	20:09	18:49	16:32	15:42
3	04:29	05:16	06:18	07:18 07:49-08:06/17	07:24	08:24 09:29-09:52/23
	22:06	21:22	20:07	18:46	16:29	15:41
4	04:30	05:18	06:20	07:20 07:51-08:05/14	07:26	08:26 09:29-09:53/24
	22:05	21:20	20:04	18:44	16:27	15:40
5	04:31	05:20	06:22	07:22 07:53-08:03/10	07:28	08:28 09:30-09:54/24
	22:04	21:17	20:02	18:41	16:25	15:39
6	04:32	05:22	06:24	07:24 07:55-08:00/5	07:30	08:29 09:29-09:53/24
	22:04	21:15	19:59	18:38	16:23	15:38
7	04:33	05:24	06:26	07:26	07:32	08:31 09:30-09:54/24
	22:03	21:13	19:56	18:36	16:21	15:38
8	04:34	05:26	06:28	07:28	07:35	08:32 09:31-09:55/24
	22:02	21:11	19:54	18:33	16:19	15:37
9	04:35	05:28	06:30	07:30	07:37	08:34 09:31-09:55/24
	22:01	21:09	19:51	18:31	16:17	15:37
10	04:36	05:30	06:32	07:32	07:39	08:35 09:32-09:56/24
	22:00	21:06	19:48	18:28	16:15	15:36
11	04:38	05:32	06:34	07:35	07:41	08:36 09:32-09:56/24
	21:59	21:04	19:46	18:25	16:13	15:36
12	04:39	05:34	06:36	07:37	07:43	08:37 09:32-09:56/24
	21:58	21:02	19:43	18:23	16:11	15:36
13	04:40	05:36	06:38	07:39	07:45	08:39 09:33-09:57/24
	21:57	21:00	19:40	18:20	16:09	15:35
14	04:42	05:38	06:40	07:41	07:47	08:40 09:33-09:58/25
	21:56	20:57	19:37	18:18	16:07	15:35
15	04:43	05:40	06:42	07:43	07:50	08:41 09:34-09:58/24
	21:54	20:55	19:35	18:15	16:05	15:35
16	04:45	05:42	06:44	07:45	07:52	08:42 09:34-09:58/24
	21:53	20:52	19:32	18:12	16:04	15:35
17	04:46	05:44	06:46	07:47	07:54	08:43 09:35-09:59/24
	21:52	20:50	19:29	18:10	16:02	15:35
18	04:48	05:46	06:48	07:49	07:56	08:44 09:35-09:59/24
	21:50	20:48	19:27	18:07	16:00	15:35
19	04:49	05:48	06:50	07:51	07:58	08:44 09:35-09:59/24
	21:49	20:45	19:24	18:05	15:59	15:35
20	04:51	05:50	06:52	07:53	08:00	08:45 09:36-10:00/24
	21:47	20:43	19:21	18:02	15:57	15:36
21	04:53	05:52	06:54	07:56	08:02	08:46 09:37-10:01/24
	21:46	20:40	19:19	18:00	15:55	15:36
22	04:54	05:54	06:56 07:55-08:04/9	07:58	08:04	08:46 09:37-10:01/24
	21:44	20:38	19:16	17:57	15:54	15:37
23	04:56	05:56	06:58 07:52-08:06/14	08:00	08:06 09:33-09:41/8	08:47 09:38-10:02/24
	21:42	20:35	19:13	17:55	15:52	15:37
24	04:58	05:58	07:00 07:50-08:08/18	08:02	08:08 09:32-09:44/12	08:47 09:38-10:02/24
	21:41	20:33	19:10	17:53	15:51	15:38
25	05:00	06:00	07:02 07:48-08:09/21	08:04	08:10 09:31-09:46/15	08:48 09:38-10:02/24
	21:39	20:30	19:08	17:50	15:50	15:38
26	05:01	06:02	07:04 07:47-08:09/22	07:06	08:12 09:30-09:47/17	08:48 09:38-10:02/24
	21:37	20:28	19:05	16:48	15:48	15:39
27	05:03	06:04	07:06 07:46-08:09/23	07:08	08:14 09:29-09:48/19	08:48 09:39-10:03/24
	21:35	20:25	19:02	16:45	15:47	15:40
28	05:05	06:06	07:08 07:45-08:09/24	07:11	08:16 09:29-09:48/19	08:48 09:39-10:03/24
	21:34	20:22	19:00	16:43	15:46	15:41
29	05:07	06:08	07:10 07:45-08:09/24	07:13	08:17 09:29-09:49/20	08:48 09:40-10:04/24
	21:32	20:20	18:57	16:41	15:45	15:42
30	05:09	06:10	07:12 07:45-08:09/24	07:15	08:19 09:28-09:50/22	08:48 09:40-10:05/25
	21:30	20:17	18:54	16:38	15:44	15:43
31	05:11	06:12		07:17		08:48 09:41-10:05/24
	21:28	20:15		16:36		15:44
Potential sun hours	529	470	385	324	248	216
Sum of minutes with flicker	0	0	179	89	132	741

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:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 21 - 06-A

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:48 15:45 16:42	08:13 16:42 17:44	07:09 17:44 17:51	06:47 07:14-07:20/6 19:50 20:52	05:30 20:52 21:49	04:34 21:49 22:06	04:27 22:06 22:06	05:13 22:06 22:06	06:14 07:00-07:21/21 20:12 22:06	07:14 18:52 18:52	07:19 16:34 16:34	08:21 15:43 15:43
2	08:48 15:46 16:44	08:11 16:44 17:46	07:06 17:46 17:51	06:44 07:12-07:23/11 19:52 20:54	05:28 20:54 21:51	04:32 21:51 22:06	04:28 22:06 22:06	05:14 22:06 22:06	06:16 06:59-07:22/23 20:09 22:06	07:16 18:49 18:49	07:21 16:32 16:32	08:23 15:42 15:42
3	08:47 15:48 16:46	08:09 16:46 17:49	07:04 17:49 17:54	06:41 07:09-07:24/15 19:54 20:56	05:26 20:56 21:52	04:31 21:52 22:05	04:29 22:05 22:05	05:16 22:05 22:05	06:18 06:58-07:22/24 20:07 22:06	07:18 18:46 18:46	07:24 16:30 16:30	08:24 15:41 15:41
4	08:47 15:49 16:49	08:07 16:49 17:51	07:01 17:51 17:56	06:39 07:06-07:24/18 19:56 20:58	05:24 20:58 21:54	04:30 21:54 22:05	04:30 22:05 22:05	05:18 22:05 22:05	06:20 06:58-07:22/24 20:04 22:06	07:20 18:44 18:44	07:26 16:27 16:27	08:26 15:40 15:40
5	08:47 15:50 16:51	08:05 16:51 17:53	06:59 17:53 17:58	06:36 07:04-07:25/21 19:58 21:00	05:21 21:00 21:55	04:29 21:55 22:04	04:31 22:04 22:04	05:20 22:04 22:04	06:22 06:58-07:22/24 20:01 22:06	07:22 18:41 18:41	07:28 16:25 16:25	08:28 15:39 15:39
6	08:46 15:52 16:53	08:03 16:53 17:55	06:56 17:55 18:00	06:33 07:01-07:25/24 20:00 21:02	05:19 21:02 21:56	04:28 21:56 22:03	04:32 22:03 22:03	05:22 22:03 22:03	06:24 06:58-07:21/23 19:59 22:06	07:24 18:38 18:38	07:30 16:23 16:23	08:29 15:38 15:38
7	08:46 15:53 16:55	08:00 16:55 17:57	06:53 17:57 18:02	06:31 07:01-07:25/24 20:02 21:04	05:17 21:04 21:57	04:28 21:57 22:03	04:33 22:03 22:03	05:24 22:03 22:03	06:26 06:58-07:21/23 19:56 22:06	07:26 18:36 18:36	07:32 16:21 16:21	08:31 15:38 15:38
8	08:45 15:55 16:58	07:58 16:58 17:59	06:51 17:59 18:04	06:28 07:00-07:25/25 20:04 21:06	05:15 21:06 21:58	04:27 21:58 22:02	04:34 22:02 22:02	05:26 22:02 22:02	06:28 07:00-07:20/20 19:54 22:06	07:28 18:33 18:33	07:34 16:19 16:19	08:32 15:37 15:37
9	08:44 15:56 17:00	07:56 17:00 18:01	06:48 18:01 18:06	06:26 07:00-07:24/24 20:06 21:08	05:13 21:08 21:59	04:26 21:59 22:01	04:35 22:01 22:01	05:28 22:01 22:01	06:30 07:01-07:18/17 19:51 22:06	07:30 18:31 18:31	07:37 16:17 16:17	08:33 15:37 15:37
10	08:43 15:58 17:02	07:54 17:02 18:04	06:45 18:04 18:09	06:23 07:00-07:24/24 20:08 21:10	05:11 21:10 22:00	04:25 22:00 22:00	04:36 22:00 22:00	05:30 22:00 22:00	06:32 07:03-07:16/13 19:48 22:06	07:32 18:28 18:28	07:39 16:15 16:15	08:35 15:36 15:36
11	08:43 16:00 17:04	07:52 17:04 18:06	06:43 18:06 18:10	06:20 07:00-07:22/22 20:10 21:12	05:08 21:12 22:01	04:25 22:01 21:59	04:38 21:59 21:04	05:32 21:04 21:04	06:34 07:05-07:15/10 19:45 22:06	07:35 18:25 18:25	07:41 16:13 16:13	08:36 15:36 15:36
12	08:42 16:01 17:06	07:50 17:06 18:08	06:40 18:08 18:13	06:18 07:01-07:22/21 20:13 21:14	05:06 21:14 22:02	04:24 22:02 21:58	04:39 21:58 21:02	05:34 21:02 21:02	06:36 07:07-07:12/5 19:43 22:06	07:37 18:23 18:23	07:43 16:11 16:11	08:37 15:36 15:36
13	08:41 16:03 17:09	07:47 17:09 18:10	06:38 18:10 18:15	06:15 07:01-07:20/19 20:15 21:16	05:04 21:16 22:03	04:24 22:03 21:57	04:40 21:57 20:59	05:36 20:59 20:59	06:38 19:40 19:40	07:39 18:20 18:20	07:45 16:09 16:09	08:38 15:35 15:35
14	08:40 16:05 17:11	07:45 17:11 18:12	06:35 18:12 18:17	06:13 07:03-07:19/16 20:17 21:18	05:02 21:18 22:04	04:23 22:04 21:55	04:42 21:55 20:57	05:38 20:57 20:57	06:40 19:37 19:37	07:41 18:18 18:18	07:47 16:07 16:07	08:40 15:35 15:35
15	08:39 16:07 17:13	07:43 17:13 18:14	06:32 18:14 18:19	06:10 07:04-07:16/12 20:19 21:20	05:00 21:20 22:04	04:23 22:04 21:54	04:43 21:54 20:55	05:40 20:55 20:55	06:42 19:35 19:35	07:43 18:15 18:15	07:49 16:05 16:05	08:41 15:35 15:35
16	08:38 16:09 17:15	07:41 17:15 18:16	06:30 18:16 18:21	06:07 07:08-07:12/4 20:21 21:22	04:58 21:22 22:05	04:23 22:05 21:53	04:45 21:53 20:52	05:42 20:52 20:52	06:44 19:32 19:32	07:45 18:12 18:12	07:52 16:04 16:04	08:42 15:35 15:35
17	08:36 16:10 17:18	07:38 17:18 18:18	06:27 18:18 18:23	06:05 18:23 18:28	04:57 21:24 22:06	04:23 22:06 21:52	04:46 21:52 20:50	05:44 20:50 20:50	06:46 19:29 19:29	07:47 18:10 18:10	07:54 16:02 16:02	08:43 15:35 15:35
18	08:35 16:12 17:20	07:36 17:20 18:20	06:24 18:20 18:25	06:02 18:25 18:30	04:55 21:26 22:06	04:23 22:06 21:50	04:48 21:50 20:48	05:46 20:48 20:48	06:48 19:27 19:27	07:49 18:07 18:07	07:56 16:00 16:00	08:43 15:35 15:35
19	08:34 16:14 17:22	07:33 17:22 18:23	06:22 18:23 18:28	06:00 18:28 18:33	04:53 21:28 22:07	04:23 22:07 21:49	04:49 21:49 20:45	05:48 20:45 20:45	06:50 19:24 19:24	07:51 18:05 18:05	07:58 15:59 15:59	08:44 15:36 15:36
20	08:32 16:16 17:24	07:31 17:24 18:25	06:19 18:25 18:30	05:57 18:30 18:35	04:51 21:30 22:07	04:23 22:07 21:47	04:51 21:47 20:43	05:50 20:43 20:43	06:52 19:21 19:21	07:53 18:02 18:02	08:00 15:57 15:57	08:45 15:36 15:36
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22	08:30 16:20 17:29	07:26 17:29 18:29	06:14 18:29 18:34	05:52 18:34 18:39	04:48 21:33 22:07	04:23 22:07 21:44	04:54 21:44 20:38	05:54 20:38 20:38	06:56 19:16 19:16	07:58 18:04 18:04	08:04 15:54 15:54	08:46 15:37 15:37
23	08:28 16:22 17:31	07:24 17:31 18:31	06:11 18:31 18:36	05:50 18:36 18:41	04:46 21:35 22:08	04:23 22:08 21:42	04:56 21:42 20:35	05:56 20:35 20:35	06:58 19:13 19:13	08:00 17:55 17:55	08:06 15:52 15:52	08:47 15:37 15:37
24	08:26 16:25 17:33	07:21 17:33 18:33	06:08 18:33 18:38	05:47 18:38 18:43	04:45 21:37 22:08	04:23 22:08 21:41	04:58 21:41 20:33	05:58 20:33 20:33	07:00 19:10 19:10	08:02 17:53 17:53	08:08 15:51 15:51	08:47 15:38 15:38
25	08:25 16:27 17:35	07:19 17:35 18:35	06:06 18:35 18:40	05:45 18:40 18:45	04:43 21:38 22:08	04:24 22:08 21:39	05:00 21:39 20:30	06:00 20:30 20:30	07:02 19:08 19:08	08:04 17:50 17:50	08:10 15:50 15:50	08:47 15:38 15:38
26	08:23 16:29 17:38	07:16 17:38 18:37	06:03 18:37 18:42	05:42 18:42 18:47	04:41 21:40 22:08	04:24 22:08 21:37	05:01 21:37 20:28	06:02 20:28 20:28	07:04 19:05 19:05	08:06 17:48 17:48	08:12 15:48 15:48	08:48 15:39 15:39
27	08:22 16:31 17:40	07:14 17:40 18:39	06:00 18:39 18:44	05:40 18:44 18:49	04:40 21:42 22:08	04:25 22:08 21:35	05:03 21:35 20:25	06:04 20:25 20:25	07:06 19:02 19:02	08:08 17:45 17:45	08:14 15:47 15:47	08:48 15:40 15:40
28	08:20 16:33 17:42	07:11 17:42 18:41	05:57 18:41 18:46	05:38 18:46 18:51	04:39 21:43 22:07	04:25 22:07 21:33	05:05 21:33 20:22	06:06 07:08-07:16/8 20:22 20:22	07:08 19:00 19:00	08:10 17:43 17:43	08:16 15:46 15:46	08:48 15:41 15:41
29	08:18 16:35 17:45	07:09 17:45 18:44	05:55 18:44 18:49	05:35 18:49 18:54	04:37 21:45 22:07	04:26 22:07 21:32	05:07 21:32 20:20	06:08 07:05-07:19/14 20:20 20:20	07:10 18:57 18:57	08:12 17:41 17:41	08:18 15:45 15:45	08:48 15:42 15:42
30	08:16 16:37 17:46	07:07 17:46 18:45	05:52 18:45 18:50	05:33 18:50 18:55	04:36 21:47 22:07	04:26 22:07 21:30	05:09 21:30 20:17	06:10 07:02-07:19/17 20:17 20:17	07:12 18:54 18:54	08:14 17:38 17:38	08:19 15:44 15:44	08:48 15:43 15:43
31	08:14 16:40	07:05 16:40	06:49 19:48	05:30 19:48	04:35 21:48	05:11 21:28	06:12 07:01-07:20/19 20:15	07:17 20:15	07:17 16:36	08:17 15:44	08:23 15:44	08:48 15:44
Potential sun hours	235	265	365	425	507	528	529	470	385	324	248	216
Sum of minutes with flicker	0	0	0	286	0	0	0	58	227	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: Alternative - Real Case Curtailment WTG: 22 - 31-C

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:12 08:56-09:29/33 16:42	07:09 17:44	06:47 19:50	05:31 20:52	04:34 21:49
2	08:48 15:46	08:11 08:56-09:29/33 16:44	07:06 17:46	06:44 19:52	05:28 20:54	04:32 21:51
3	08:47 15:48	08:09 08:56-09:27/31 16:46	07:04 17:49	06:41 19:54	05:26 20:56	04:31 21:52
4	08:47 15:49	08:07 08:57-09:27/30 16:49	07:01 17:51	06:39 19:56	05:24 20:58	04:30 21:53
5	08:47 15:50	08:05 08:57-09:26/29 16:51	06:58 17:53	06:36 19:58	05:21 21:00	04:29 21:55
6	08:46 15:52	08:03 08:58-09:25/27 16:53	06:56 17:55	06:34 20:00	05:19 21:02	04:29 21:56
7	08:45 15:53	08:00 08:59-09:22/23 16:55	06:53 17:57	06:31 20:02	05:17 21:04	04:28 21:57
8	08:45 15:55	07:58 09:00-09:18/18 16:58	06:51 17:59	06:28 20:04	05:15 21:06	04:27 21:58
9	08:44 15:56	07:56 09:02-09:17/15 17:00	06:48 18:01	06:26 20:06	05:13 21:08	04:26 21:59
10	08:43 15:58	07:54 09:04-09:14/10 17:02	06:45 07:14-07:24/10 18:04	06:23 20:08	05:11 21:10	04:26 22:00
11	08:43 16:00	07:52 17:04	06:43 07:11-07:26/15 18:06	06:20 20:10	05:09 21:12	04:25 22:01
12	08:42 16:01	07:50 17:07	06:40 07:08-07:28/20 18:08	06:18 20:13	05:06 21:14	04:24 22:02
13	08:41 16:03	07:47 17:09	06:38 07:05-07:28/23 18:10	06:15 20:15	05:04 21:16	04:24 22:03
14	08:40 16:05	07:45 17:11	06:35 07:04-07:30/26 18:12	06:13 20:17	05:02 21:18	04:24 22:04
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16	08:37 16:09	07:40 17:15	06:30 07:02-07:30/28 18:16	06:07 20:21	04:59 21:22	04:23 22:05
17	08:36 09:14-09:18/4 16:11	07:38 17:18	06:27 07:02-07:30/28 18:18	06:05 20:23	04:57 21:24	04:23 22:05
18	08:35 09:12-09:20/8 16:12	07:36 17:20	06:24 07:01-07:30/29 18:20	06:02 20:25	04:55 21:26	04:23 22:06
19	08:34 09:11-09:22/11 16:14	07:33 17:22	06:22 07:00-07:29/29 18:23	06:00 20:27	04:53 21:28	04:23 22:06
20	08:32 09:09-09:23/14 16:16	07:31 17:24	06:19 07:01-07:29/28 18:25	05:57 20:29	04:51 21:30	04:23 22:07
21	08:31 09:07-09:24/17 16:18	07:29 17:27	06:16 07:01-07:28/27 18:27	05:55 20:31	04:50 21:31	04:23 22:07
22	08:29 09:06-09:25/19 16:20	07:26 17:29	06:14 07:01-07:27/26 18:29	05:52 20:33	04:48 21:33	04:23 22:07
23	08:28 09:04-09:26/22 16:23	07:24 17:31	06:11 07:01-07:25/24 18:31	05:50 20:35	04:46 21:35	04:23 22:07
24	08:26 09:02-09:27/25 16:25	07:21 17:33	06:08 07:03-07:24/21 18:33	05:47 20:38	04:45 21:37	04:23 22:08
25	08:25 09:00-09:27/27 16:27	07:19 17:35	06:06 07:04-07:22/18 18:35	05:45 20:40	04:43 21:38	04:24 22:08
26	08:23 08:58-09:28/30 16:29	07:16 17:38	06:03 07:05-07:18/13 18:37	05:42 20:42	04:42 21:40	04:24 22:08
27	08:21 08:56-09:28/32 16:31	07:14 17:40	06:00 18:39	05:40 20:44	04:40 21:42	04:25 22:07
28	08:20 08:56-09:28/32 16:33	07:11 17:42	05:58 18:41	05:38 20:46	04:39 21:43	04:25 22:07
29	08:18 08:56-09:28/32 16:35		05:55 18:43	05:35 20:48	04:37 21:45	04:26 22:07
30	08:16 08:56-09:29/33 16:38		06:52 19:46	05:33 20:50	04:36 21:46	04:27 22:07
31	08:14 08:56-09:29/33 16:40		06:49 19:48		04:35 21:48	
Potential sun hours	235	265	365	425	507	528
Sum of minutes with flicker	339	249	392	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: Alternative - Real Case Curtailment WTG: 22 - 31-C

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27 22:06	05:13 21:26	06:14 20:12	07:14 18:52	07:19 16:34	08:21 15:43
2	04:28 22:06	05:15 21:24	06:16 20:09	07:16 18:49	07:21 16:32	08:23 15:42
3	04:29 22:05	05:16 21:22	06:18 20:07	07:18 18:46	07:24 16:30	08:24 15:41
4	04:30 22:05	05:18 21:19	06:20 20:04	07:20 18:44	07:26 16:27	08:26 15:40
5	04:31 22:04	05:20 21:17	06:22 20:01	07:22 18:41	07:28 16:25	08:27 15:39
6	04:32 22:03	05:22 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:39
7	04:33 22:03	05:24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:30 15:38
8	04:34 22:02	05:26 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:31 15:37
9	04:35 22:01	05:28 21:09	06:30 19:51	07:30 18:31	07:37 16:17	08:33 15:37
10	04:37 22:00	05:30 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	04:38 21:59	05:32 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:37 15:36
13	04:40 21:57	05:36 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:38 15:35
14	04:42 21:55	05:38 20:57	06:40 19:37	07:41 18:18	07:47 16:07	08:39 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:43 18:15	07:49 16:05	08:41 15:35
16	04:45 21:53	05:42 20:52	06:44 19:32	07:45 18:12	07:52 16:04	08:41 15:35
17	04:46 21:51	05:44 20:50	06:46 19:29	07:47 18:10	07:54 16:02	08:42 15:35
18	04:48 21:50	05:46 20:47	06:48 19:27	07:49 18:07	07:56 16:00	08:43 15:35
19	04:50 21:49	05:48 20:45	06:50 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	04:51 21:47	05:50 20:43	06:52 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	04:53 21:46	05:52 20:40	06:54 19:19	07:55 18:00	08:02 15:55	08:45 15:36
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:46 15:37
23	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:47 15:37
24	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:53	08:08 15:51	08:47 15:38
25	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:47 15:38
26	05:01 21:37	06:02 20:28	07:04 19:05	08:06 17:48	08:12 15:48	08:48 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02	08:08 17:45	08:14 15:47	08:48 15:40
28	05:05 21:33	06:06 20:22	07:08 19:00	08:11 17:43	08:15 15:46	08:48 15:41
29	05:07 21:32	06:08 20:20	07:10 18:57	08:13 17:41	08:17 15:45	08:48 15:42
30	05:09 21:30	06:10 20:17	07:12 18:54	08:15 17:39	08:19 15:44	08:48 15:43
31	05:11 21:28	06:12 20:15		08:17 17:36		08:48 15:44
Potential sun hours	529	470	385	324	248	217
Sum of minutes with flicker	0	0	333	69	592	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:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Calendar per WTG

Calculation: Alternative - Real Case Curtailment WTG: 23 - 32-C

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:12 08:58-09:07/9 16:42	07:09 17:44	06:47 07:21-07:41/20 19:50	05:31 07:22-07:23/1 20:52	04:34 21:49
2	08:48 15:46	08:11 08:57-09:07/10 16:44	07:06 17:46	06:44 07:22-07:41/19 19:52	05:28 07:20-07:22/2 20:54	04:32 21:51
3	08:47 15:48	08:09 08:56-09:06/10 16:46	07:04 17:49	06:42 07:22-07:40/18 19:54	05:26 07:17-07:19/2 20:56	04:31 21:52
4	08:47 15:49	08:07 08:55-09:06/11 16:49	07:01 17:51	06:39 07:22-07:38/16 19:56	05:24 07:15-07:17/2 20:58	04:30 21:53
5	08:47 15:50	08:05 08:55-09:07/12 16:51	06:59 17:53	06:36 07:24-07:36/12 19:58	05:21 07:11-07:14/3 21:00	04:29 21:55
6	08:46 15:52	08:03 08:55-09:07/12 16:53	06:56 17:55	06:34 07:27-07:32/5 20:00	05:19 21:02	04:29 21:56
7	08:46 15:53	08:00 08:54-09:06/12 16:55	06:53 17:57	06:31 07:21-07:23/2 20:02	05:17 21:04	04:28 21:57
8	08:45 15:55	07:58 08:54-09:07/13 16:58	06:51 17:59	06:28 07:23-07:25/2 20:04	05:15 21:06	04:27 21:58
9	08:44 15:56	07:56 08:55-09:08/13 17:00	06:48 18:01	06:26 07:25-07:26/1 20:06	05:13 21:08	04:26 21:59
10	08:43 15:58	07:54 08:54-09:07/13 17:02	06:45 18:04	06:23 07:27-07:28/1 20:08	05:11 21:10	04:26 22:00
11	08:43 16:00	07:52 08:55-09:08/13 17:04	06:43 18:06	06:20 07:28-07:29/1 20:10	05:09 21:12	04:25 22:01
12	08:42 16:01	07:50 08:55-09:09/14 17:07	06:40 18:08	06:18 07:29-07:30/1 20:13	05:06 21:14	04:24 22:02
13	08:41 16:03	07:47 08:55-09:10/15 17:09	06:38 18:10	06:15 07:29-07:31/2 20:15	05:04 21:16	04:24 22:03
14	08:40 16:05	07:45 08:56-09:11/15 17:11	06:35 18:12	06:13 07:30-07:32/2 20:17	05:02 21:18	04:24 22:04
15	08:39 16:07	07:43 08:56-09:11/15 17:13	06:32 18:14	06:10 07:30-07:31/1 20:19	05:01 21:20	04:23 22:04
16	08:37 16:09	07:41 08:57-09:13/16 17:16	06:30 18:16	06:07 07:31-07:32/1 20:21	04:59 21:22	04:23 22:05
17	08:36 09:14-09:17/3 16:11	07:38 08:57-09:14/17 17:18	06:27 18:18	06:05 07:30-07:32/2 20:23	04:57 21:24	04:23 22:06
18	08:35 09:12-09:19/7 16:12	07:36 08:58-09:17/19 17:20	06:24 18:21	06:02 07:31-07:32/1 20:25	04:55 21:26	04:23 22:06
19	08:34 09:11-09:21/10 16:14	07:33 08:59-09:20/21 17:22	06:22 18:23	06:00 07:30-07:32/2 20:27	04:53 21:28	04:23 22:06
20	08:32 09:09-09:17/8 16:16	07:31 09:01-09:26/25 17:24	06:19 18:25	05:57 07:30-07:32/2 20:29	04:51 21:30	04:23 22:07
21	08:31 09:07-09:14/7 16:18	07:29 09:02-09:24/22 17:27	06:16 18:27	05:55 07:31-07:32/1 20:31	04:50 21:31	04:23 22:07
22	08:30 09:06-09:14/8 16:20	07:26 09:05-09:21/16 17:29	06:14 18:29	05:52 07:30-07:31/1 20:33	04:48 21:33	04:23 22:07
23	08:28 09:04-09:12/8 16:23	07:24 09:09-09:16/7 17:31	06:11 18:31	05:50 07:29-07:31/2 20:35	04:46 21:35	04:23 22:08
24	08:26 09:03-09:11/8 16:25	07:21 09:09-09:11/8 17:33	06:08 06:36-06:39/3 18:33	05:47 07:28-07:29/1 20:38	04:45 21:37	04:23 22:08
25	08:25 09:03-09:10/7 16:27	07:19 09:09-09:10/7 17:35	06:06 06:33-06:40/7 18:35	05:45 07:28-07:29/1 20:40	04:43 21:38	04:24 22:08
26	08:23 09:03-09:09/6 16:29	07:16 09:09-09:09/6 17:38	06:03 06:30-06:41/11 18:37	05:42 07:27-07:29/2 20:42	04:42 21:40	04:24 22:08
27	08:22 09:03-09:09/6 16:31	07:14 09:09-09:09/6 17:40	06:00 06:28-06:43/15 18:39	05:40 07:27-07:28/1 20:44	04:40 21:42	04:25 22:07
28	08:20 09:01-09:08/7 16:33	07:11 09:09-09:08/7 17:42	05:58 06:25-06:43/18 18:41	05:38 07:25-07:26/1 20:46	04:39 21:43	04:25 22:07
29	08:18 09:00-09:08/8 16:35		05:55 06:22-06:43/21 18:43	05:35 07:24-07:26/2 20:48	04:37 21:45	04:26 22:07
30	08:16 08:59-09:07/8 16:38		06:52 07:22-07:43/21 19:46	05:33 07:23-07:24/1 20:50	04:36 21:46	04:27 22:07
31	08:14 08:58-09:07/9 16:40		06:50 07:21-07:42/21 19:48		04:35 21:48	
Potential sun hours	235	265	365	425	507	528
Sum of minutes with flicker	110	330	117	124	10	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: Alternative - Real Case Curtailment WTG: 23 - 32-C

Assumptions for shadow calculations

Flicker curtailment applied to this turbine

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed 3,0m/s

	July	August	September	October	November	December
1	04:27 22:06	05:13 21:26	06:14 20:12	07:28-07:29/1 18:52	07:19 16:34	08:24-08:38/14 15:43
2	04:28 22:06	05:15 21:24	06:16 20:09	07:26-07:27/1 18:49	07:21 16:32	08:24-08:37/13 15:42
3	04:29 22:05	05:16 21:22	06:18 20:07	07:24-07:26/2 18:46	07:24 16:30	08:24-08:37/13 15:41
4	04:30 22:05	05:18 21:19	06:20 20:04	07:22-07:24/2 18:44	07:26 16:27	08:24-08:37/13 15:40
5	04:31 22:04	05:20 21:17	06:22 20:01	07:19-07:21/2 18:41	07:28 16:25	08:25-08:37/12 15:39
6	04:32 22:03	05:22 21:15	06:24 19:59	07:15-07:17/2 18:38	07:30 16:23	08:25-08:37/12 15:39
7	04:33 22:03	05:24 21:13	06:26 19:56	07:22-07:30/8 18:36	07:32 16:21	08:25-08:36/11 15:38
8	04:34 22:02	05:26 21:11	06:28 19:54	07:19-07:32/13 18:33	07:34 16:19	08:26-08:37/11 15:37
9	04:35 22:01	05:28 21:09	06:30 19:51	07:17-07:33/16 18:31	07:37 16:17	08:27-08:37/10 15:37
10	04:37 22:00	05:30 21:06	06:32 19:48	07:15-07:33/18 18:28	07:39 16:15	08:28-08:38/10 15:36
11	04:38 21:59	05:32 21:04	06:34 19:46	07:14-07:34/20 18:25	07:41 16:13	08:29-08:38/9 15:36
12	04:39 21:58	05:34 21:02	06:36 19:43	07:13-07:34/21 18:23	07:43 16:11	08:30-08:38/8 15:36
13	04:40 21:57	05:36 20:59	06:38 19:40	07:12-07:34/22 18:20	07:45 16:09	08:32-08:40/8 15:35
14	04:42 21:55	05:38 20:57	06:40 19:37	07:12-07:33/21 18:18	07:47 16:07	08:33-08:40/7 15:35
15	04:43 21:54	05:40 20:55	06:42 19:35	07:13-07:33/20 18:15	07:49 16:06	08:35-08:41/6 15:35
16	04:45 21:53	05:42 20:52	06:44 19:32	07:15-07:32/17 18:12	07:52 16:04	08:36-08:42/6 15:35
17	04:46 21:51	05:44 20:50	06:46 19:29	07:17-07:31/14 18:10	07:54 16:02	08:36-08:43/7 15:35
18	04:48 21:50	05:46 20:48	06:48 19:27	07:19-07:30/11 18:07	07:56 16:00	08:37-08:45/8 15:35
19	04:50 21:49	05:48 20:45	06:50 19:24	07:21-07:28/7 18:05	07:58 15:59	08:37-08:46/9 15:36
20	04:51 21:47	05:50 20:43	06:52 19:21	07:23-07:24/1 18:02	08:00 15:57	08:39-08:47/8 15:36
21	04:53 21:46	05:52 20:40	06:54 19:19	07:56 18:00	08:02 15:55	08:42-08:49/7 15:36
22	04:54 21:44	05:54 20:38	06:56 19:16	07:58 17:58	08:04 15:54	08:44-08:51/7 15:37
23	04:56 21:42	05:56 20:35	06:58 19:13	08:00 17:55	08:06 15:53	08:46-08:54/8 15:37
24	04:58 21:41	05:58 20:33	07:00 19:10	08:02 17:53	08:08 15:51	08:48-08:56/8 15:38
25	05:00 21:39	06:00 20:30	07:02 19:08	08:04 17:50	08:10 15:50	08:51-08:56/5 15:38
26	05:01 21:37	06:02 20:28	07:04 19:05	08:06 16:48	08:12 15:48	08:53-08:55/2 15:39
27	05:03 21:35	06:04 20:25	07:06 19:02	08:08 16:46	08:14 15:47	08:48 15:40
28	05:05 21:33	06:06 20:22	07:08 19:00	08:11 16:43	08:16 15:46	08:48 15:41
29	05:07 21:32	06:08 20:20	07:10 18:57	08:13 16:41	08:17 15:45	08:48 15:42
30	05:09 21:30	06:10 20:17	07:12 18:54	08:15 16:39	08:19 15:44	08:48 15:43
31	05:11 21:28	06:12 20:15	07:29-07:30/1 18:54	08:17 16:36	08:25-08:38/13 15:44	08:48 15:44
Potential sun hours	529	470	385	324	248	217
Sum of minutes with flicker	0	38	219	214	232	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: Alternative - Real Case Curtailment WTG: 24 - 33-C

Assumptions for shadow calculations

Reference year for calendar 2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

	January	February	March	April	May	June
1	08:48 15:45	08:12 16:42	07:09 17:44	06:47 19:50	05:31 20:52	06:02-06:25/23 21:49
2	08:48 15:46	08:11 16:44	07:06 17:46	06:44 19:52	05:28 20:54	06:01-06:25/24 21:51
3	08:47 15:48	08:09 16:46	07:04 17:49	06:41 19:54	05:26 20:56	06:00-06:24/24 21:52
4	08:47 15:49	08:07 16:49	07:01 17:51	06:39 19:56	05:24 20:58	06:00-06:25/25 21:53
5	08:47 15:50	08:05 16:51	06:58 17:53	06:36 19:58	05:21 21:00	06:00-06:24/24 21:55
6	08:46 15:52	08:03 16:53	06:56 17:55	06:33 20:00	05:19 21:02	06:00-06:24/24 21:56
7	08:46 15:53	08:00 16:55	06:53 17:57	06:31 20:02	05:17 21:04	06:00-06:24/24 21:57
8	08:45 15:55	07:58 16:58	06:51 17:59	06:28 20:04	05:15 21:06	06:01-06:23/22 21:58
9	08:44 15:56	07:56 17:00	06:48 18:01	06:26 20:06	05:13 21:08	06:01-06:23/22 21:59
10	08:43 15:58	07:54 17:02	06:45 18:04	06:23 20:08	05:11 21:10	06:02-06:22/20 22:00
11	08:43 16:00	07:52 17:04	06:43 18:06	06:20 20:10	05:08 21:12	06:03-06:22/19 22:01
12	08:42 16:01	07:50 17:06	06:40 18:08	06:18 20:13	05:06 21:14	06:04-06:20/16 22:02
13	08:41 16:03	07:47 17:09	06:38 18:10	06:15 20:15	05:04 21:16	06:05-06:19/14 22:03
14	08:40 16:05	07:45 17:11	06:35 18:12	06:13 20:17	05:02 21:18	06:07-06:16/9 22:04
15	08:39 16:07	07:43 17:13	06:32 18:14	06:10 20:19	05:00 21:20	22:04
16	08:37 16:09	07:40 17:15	06:30 18:16	06:07 20:21	04:59 21:22	22:05
17	08:36 16:10	07:38 17:18	06:27 18:18	06:05 20:23	04:57 21:24	22:06
18	08:35 16:12	07:36 17:20	06:24 18:20	06:02 20:25	04:55 21:26	22:06
19	08:34 16:14	07:33 17:22	06:22 18:23	06:00 20:27	04:53 21:28	22:06
20	08:32 16:16	07:31 17:24	06:19 18:25	05:57 20:29	04:51 21:30	22:07
21	08:31 16:18	07:29 17:27	06:16 18:27	05:55 20:31	04:49 21:31	22:07
22	08:29 16:20	07:26 17:29	06:14 18:29	05:52 20:33	04:48 21:33	22:07
23	08:28 16:23	07:24 17:31	06:11 18:31	05:50 20:35	04:46 21:35	22:08
24	08:26 16:25	07:21 17:33	06:08 18:33	05:47 20:38	04:45 21:37	22:08
25	08:25 16:27	07:19 17:35	06:06 18:35	05:45 20:40	06:14-06:18/4 21:38	22:08
26	08:23 16:29	07:16 17:38	06:03 18:37	05:42 20:42	06:12-06:21/9 21:40	22:08
27	08:22 16:31	07:14 17:40	06:00 18:39	05:40 20:44	06:10-06:23/13 21:42	22:07
28	08:20 16:33	07:11 17:42	05:57 18:41	05:38 20:46	06:07-06:23/16 21:43	22:07
29	08:18 16:35		05:55 18:43	05:35 20:48	06:05-06:24/19 21:45	22:07
30	08:16 16:37		06:52 19:45	05:33 20:50	06:03-06:24/21 21:46	22:07
31	08:14 16:40		06:49 19:48		04:35 21:48	
Potential sun hours	235	265	365	425	507	528
Sum of minutes with flicker	0	0	545	82	290	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: Alternative - Real Case Curtailment WTG: 24 - 33-C

Assumptions for shadow calculations

Reference year for calendar

2025

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,17	2,29	4,58	6,82	8,69	9,44	8,63	7,75	5,49	2,82	0,76	0,60

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
373	431	565	449	510	745	768	916	1 192	1 023	777	489	8 238

Idle start wind speed3,0m/s

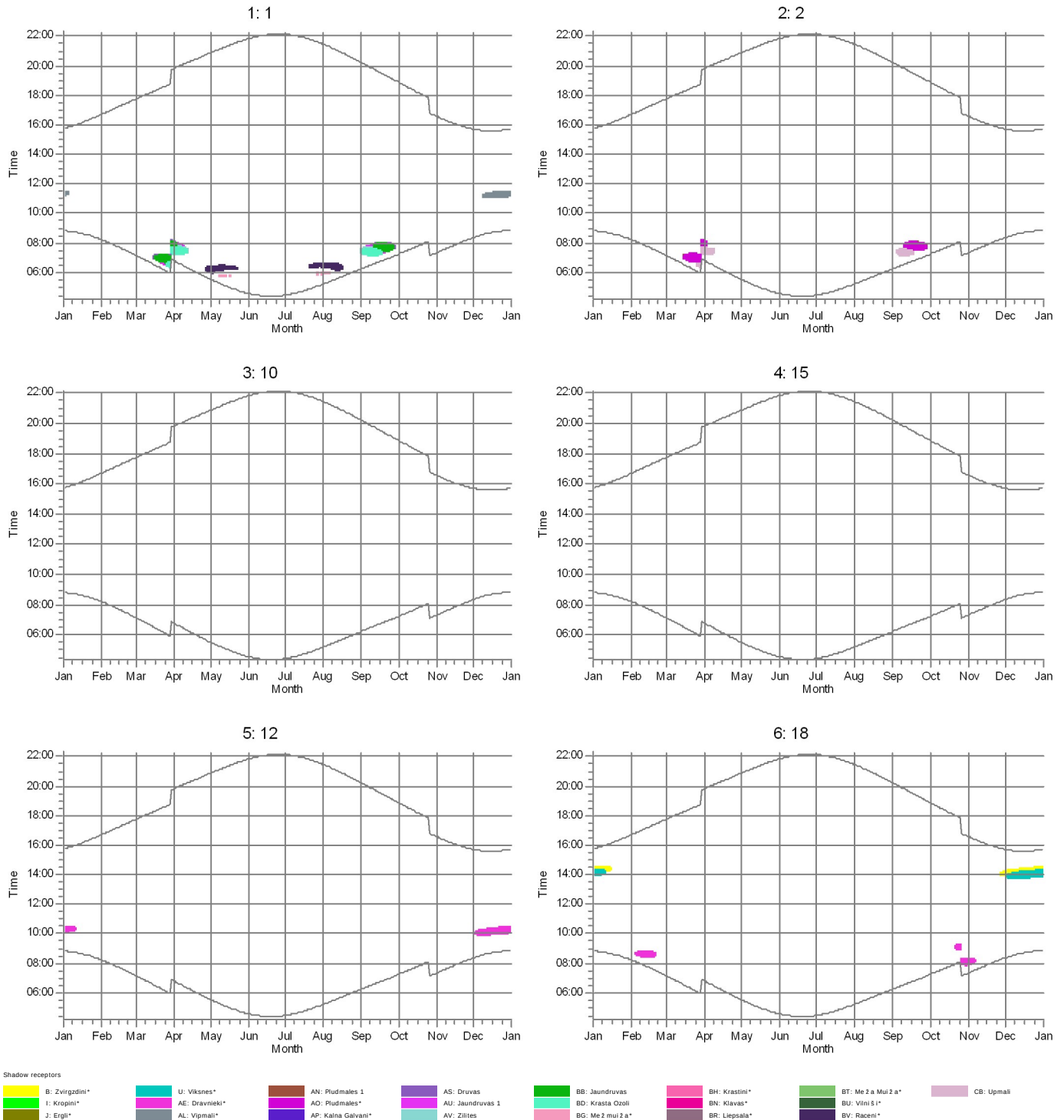
	July	August	September	October	November	December
1	04:27 22:06	05:13 06:15-06:30/15 21:26	06:14 20:12	07:14 07:45-08:10/25 18:52	07:19 16:34	08:21 15:43
2	04:28 22:06	05:14 06:14-06:32/18 21:24	06:16 20:09	07:16 07:47-08:09/22 18:49	07:21 16:32	08:23 15:42
3	04:29 22:05	05:16 06:12-06:32/20 21:22	06:18 20:07	07:18 07:49-08:07/18 18:46	07:24 16:30	08:24 15:41
4	04:30 22:05	05:18 06:12-06:33/21 21:19	06:20 20:04	07:20 07:51-08:04/13 18:44	07:26 16:27	08:26 15:40
5	04:31 22:04	05:20 06:11-06:33/22 21:17	06:22 20:01	07:22 07:54-08:00/6 18:41	07:28 16:25	08:27 15:39
6	04:32 22:03	05:22 06:11-06:34/23 21:15	06:24 19:59	07:24 18:38	07:30 16:23	08:29 15:38
7	04:33 22:03	05:24 06:10-06:34/24 21:13	06:26 19:56	07:26 18:36	07:32 16:21	08:31 15:38
8	04:34 22:02	05:26 06:10-06:34/24 21:11	06:28 19:53	07:28 18:33	07:34 16:19	08:32 15:37
9	04:35 22:01	05:28 06:10-06:34/24 21:09	06:30 19:51	07:30 18:30	07:37 16:17	08:33 15:37
10	04:36 22:00	05:30 06:10-06:34/24 21:06	06:32 19:48	07:32 18:28	07:39 16:15	08:35 15:36
11	04:38 21:59	05:32 06:10-06:34/24 21:04	06:34 19:45	07:34 18:25	07:41 16:13	08:36 15:36
12	04:39 21:58	05:34 06:10-06:34/24 21:02	06:36 19:43	07:37 18:23	07:43 16:11	08:37 15:36
13	04:40 21:57	05:36 06:10-06:32/22 20:59	06:38 19:40	07:39 18:20	07:45 16:09	08:38 15:35
14	04:42 21:55	05:38 06:12-06:32/20 20:57	06:40 19:37	07:41 18:18	07:47 16:07	08:39 15:35
15	04:43 21:54	05:40 06:14-06:31/17 20:55	06:42 07:51-08:02/11 19:35	07:43 18:15	07:49 16:05	08:41 15:35
16	04:45 21:53	05:42 06:16-06:30/14 20:52	06:44 07:48-08:04/16 19:32	07:45 18:12	07:52 16:04	08:42 15:35
17	04:46 21:51	05:44 06:18-06:28/10 20:50	06:46 07:46-08:06/20 19:29	07:47 18:10	07:54 16:02	08:42 15:35
18	04:48 21:50	05:46 06:20-06:26/6 20:47	06:48 07:44-08:10/26 19:27	07:49 18:07	07:56 16:00	08:43 15:35
19	04:49 21:49	05:48 20:45	06:50 07:43-08:12/29 19:24	07:51 18:05	07:58 15:59	08:44 15:36
20	04:51 21:47	05:50 20:43	06:52 07:42-08:13/31 19:21	07:53 18:02	08:00 15:57	08:45 15:36
21	04:53 21:46	05:52 20:40	06:54 07:41-08:14/33 19:19	07:55 18:00	08:02 15:55	08:45 15:36
22	04:54 21:44	05:54 20:38	06:56 07:40-08:15/35 19:16	07:58 17:57	08:04 15:54	08:46 15:37
23	04:56 21:42	05:56 20:35	06:58 07:40-08:15/35 19:13	08:00 17:55	08:06 15:52	08:47 15:37
24	04:58 21:41	05:58 20:33	07:00 07:40-08:15/35 19:10	08:02 17:53	08:08 15:51	08:47 15:38
25	05:00 21:39	06:00 20:30	07:02 07:39-08:15/36 19:08	08:04 17:50	08:10 15:50	08:47 15:38
26	05:01 21:37	06:02 20:28	07:04 07:39-08:15/36 19:05	07:06 16:48	08:12 15:48	08:48 15:39
27	05:03 21:35	06:04 20:25	07:06 07:40-08:14/34 19:02	07:08 16:45	08:14 15:47	08:48 15:40
28	05:05 21:33	06:06 20:22	07:08 07:40-08:14/34 19:00	07:11 16:43	08:15 15:46	08:48 15:41
29	05:07 21:32	06:08 20:20	07:10 07:41-08:13/32 18:57	07:13 16:41	08:17 15:45	08:48 15:42
30	05:09 06:18-06:26/8 21:30	06:10 20:17	07:12 07:43-08:12/29 18:54	07:15 16:38	08:19 15:44	08:48 15:43
31	05:11 06:16-06:29/13 21:28	06:12 20:15		07:17 16:36		08:48 15:44
Potential sun hours	529	470	385	324	248	217
Sum of minutes with flicker	21	352	472	84	0	0

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

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

SHADOW - Calendar per WTG, graphical

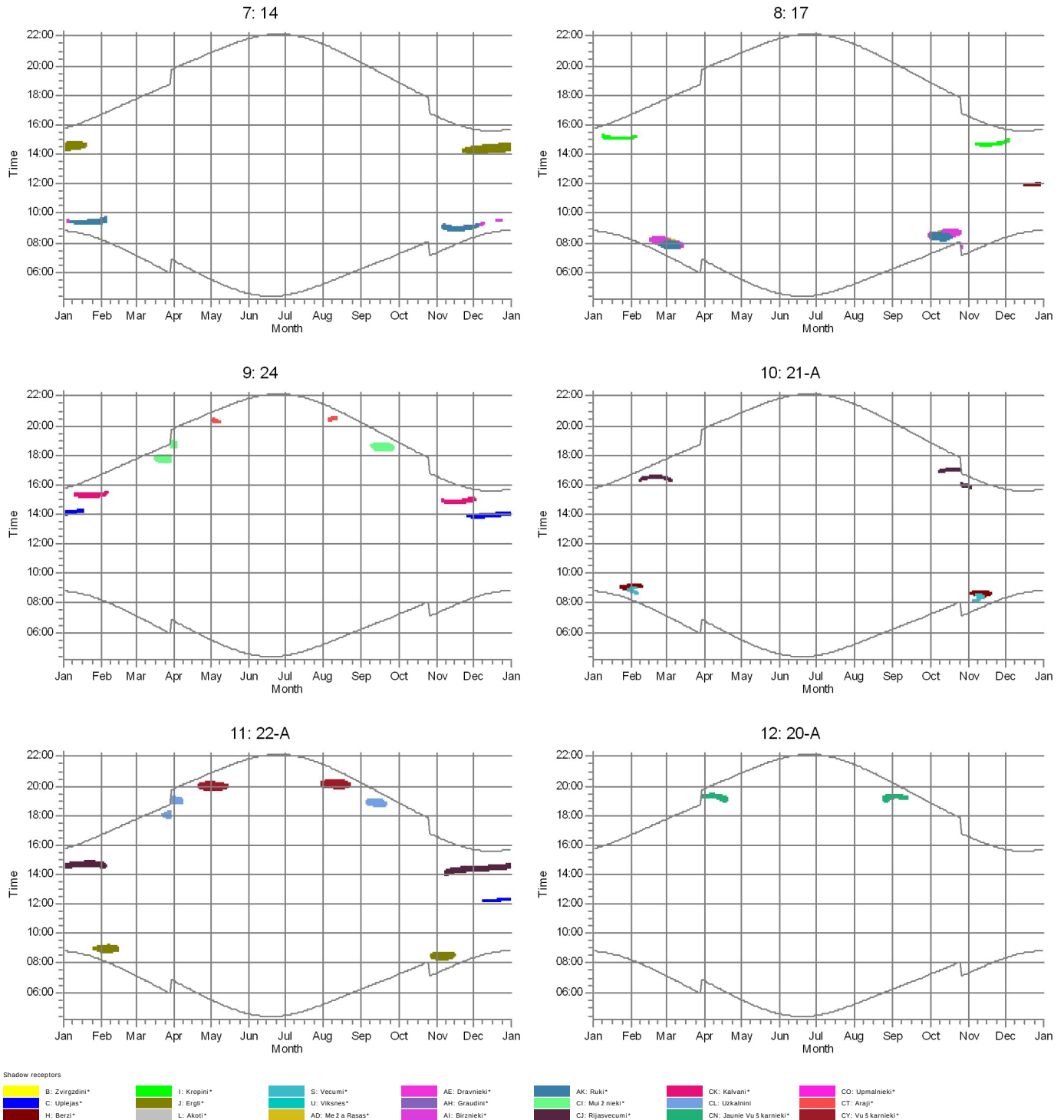
Calculation: Alternative - Real Case Curtailment



* Results reduced by flicker curtailment

SHADOW - Calendar per WTG, graphical

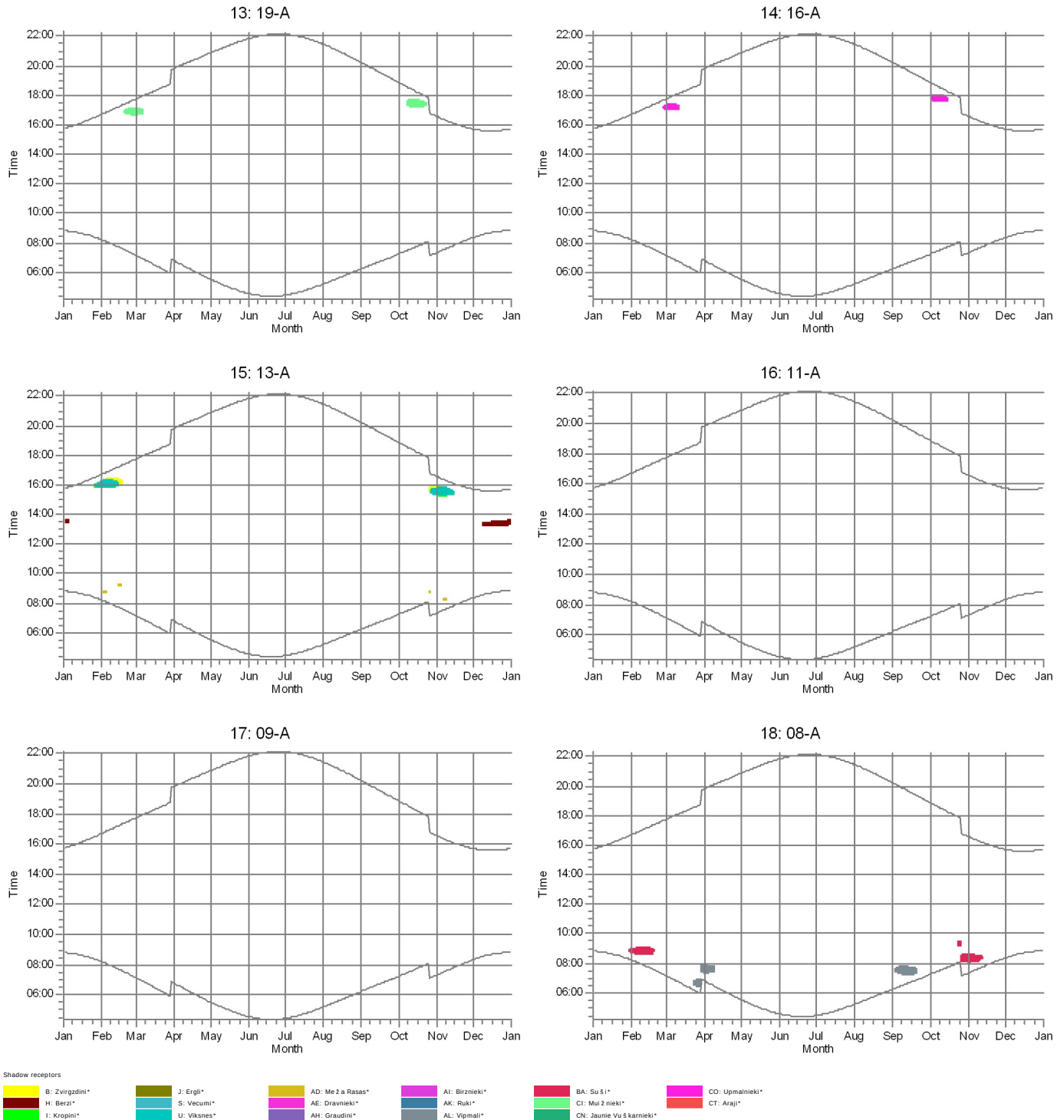
Calculation: Alternative - Real Case Curtailment



* Results reduced by flicker curtailment

SHADOW - Calendar per WTG, graphical

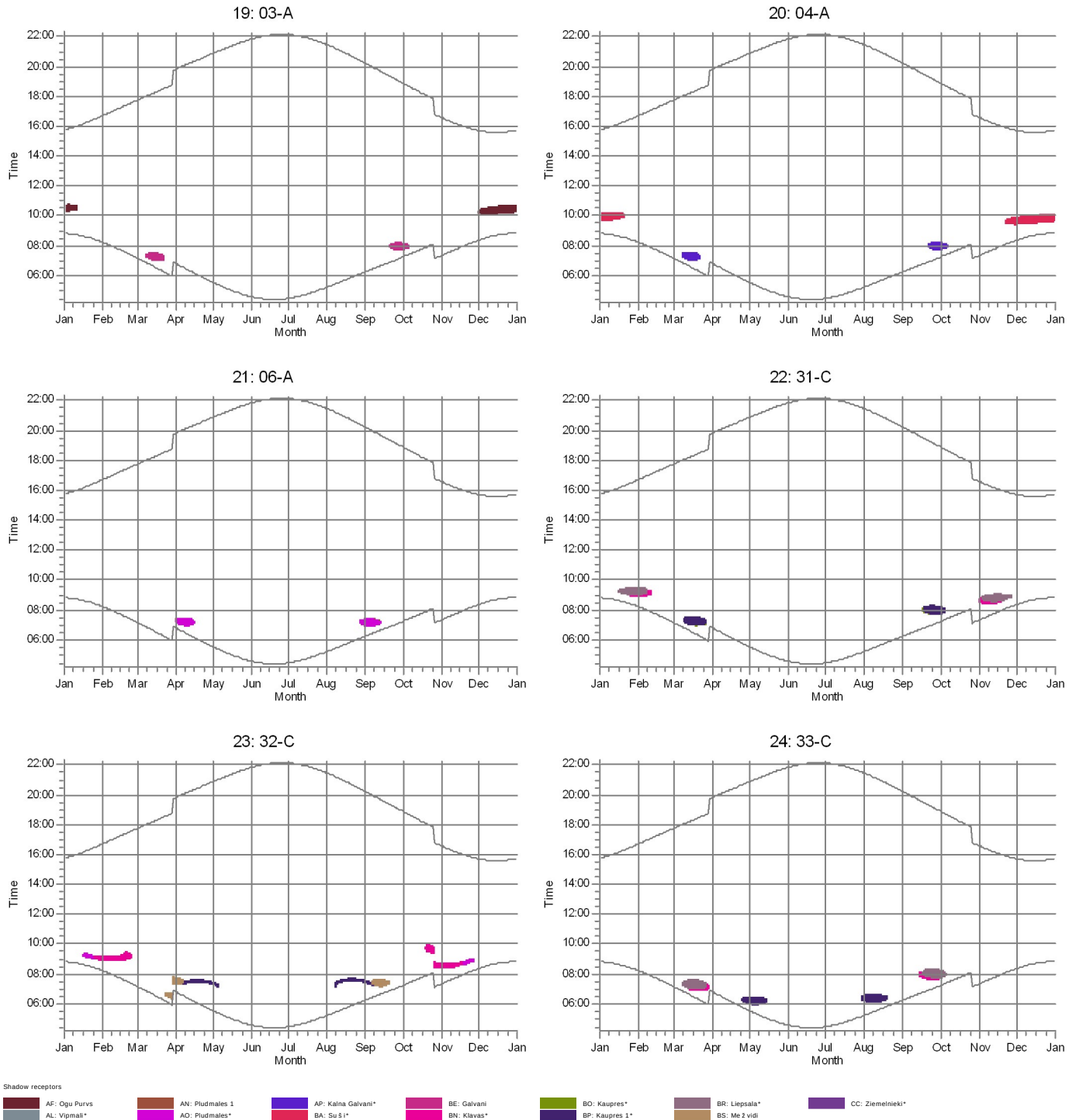
Calculation: Alternative - Real Case Curtailment



* Results reduced by flicker curtailment

SHADOW - Calendar per WTG, graphical

Calculation: Alternative - Real Case Curtailment



* Results reduced by flicker curtailment

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

Licensed user:

Skepast & Puhkim OÜ

Laki põik 2

EE-12919 Tallinn

+37253462494

Mihkel Lindpere / mihkel.lindpere@skpk.ee

Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 1 - 1

Flicker curtailment by stopping specific turbines

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

Project:

2026-02-Ecosoul-MEŽARES-UIPE

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Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 2 - 2

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 3 - 10

Flicker curtailment by stopping specific turbines

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 4 - 15

Flicker curtailment by stopping specific turbines

January February March April May June July August September October November December

1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 5 - 12

Flicker curtailment by stopping specific turbines

January February March April May June July August September October November December

1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 6 - 18

Flicker curtailment by stopping specific turbines

	January	February	March	April	May	June	July	August	September	October	November	December
1	12:48-12:50											
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												12:37-12:42
13												12:37-12:45
14												12:36-12:46
15												12:35-12:47
16												12:35-12:48
17												12:35-12:49
18												12:36-12:50
19												12:35-12:50
20												12:36-12:51
21												12:36-12:52
22												12:36-12:52
23												12:37-12:53
24												12:38-12:53
25												12:38-12:53
26												12:39-12:53
27												12:39-12:53
28												12:40-12:53
29												12:41-12:53
30												12:43-12:53
31												12:45-12:53

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 7 - 14

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 8 - 17

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 8 - 17

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 9 - 24

Flicker curtailment by stopping specific turbines

January	February	March	April	May	June
1 14:09-14:39 10:04-10:34	15:24-15:47				20:11-20:41
2 14:10-14:40 10:05-10:35	15:25-15:47				20:11-20:40
3 14:10-14:40 10:06-10:35	15:25-15:45				20:11-20:40
4 14:11-14:41 10:07-10:36	15:26-15:44			20:26-20:28	20:12-20:40
5 14:11-14:41 10:07-10:36	15:28-15:43			20:24-20:30	20:12-20:39
6 14:11-14:41 10:07-10:36	15:31-15:41			20:19-20:32	20:13-20:40
7 14:12-14:42 10:08-10:36				20:16-20:34	20:13-20:39
8 14:12-14:42 10:08-10:36				20:15-20:36	20:15-20:40
9 14:13-14:42 10:09-10:36				20:13-20:37	20:15-20:39
10 14:13-14:42 10:10-10:36				20:12-20:39	20:16-20:40
11 14:14-14:43 10:11-10:37				20:11-20:41	20:16-20:39
12 14:15-14:43 10:12-10:37				20:10-20:41	20:17-20:39
13 14:16-14:44 10:13-10:37				20:09-20:41	20:16-20:38
14 15:26-15:27 14:16-14:43 10:13-10:36				20:09-20:42	20:17-20:39
15 15:25-15:29 14:17-14:43 10:15-10:36				20:08-20:41	20:18-20:39
16 15:23-15:31 14:17-14:43 10:15-10:35				20:08-20:41	20:18-20:39
17 15:23-15:34 14:19-14:43 10:17-10:35				20:08-20:41	20:19-20:39
18 15:22-15:35 14:19-14:42 10:18-10:33				20:08-20:41	20:19-20:39
19 15:22-15:38 14:21-14:42 10:21-10:32				20:07-20:41	20:20-20:39
20 15:22-15:40 14:22-14:41 10:24-10:29				20:08-20:41	20:20-20:39
21 15:21-15:42 14:23-14:40				20:07-20:41	20:20-20:39
22 15:22-15:45 14:26-14:39				20:08-20:41	20:20-20:39
23 15:21-15:45 14:29-14:37				20:07-20:41	20:21-20:40
24 15:21-15:46				20:08-20:41	20:21-20:40
25 15:21-15:46				20:08-20:41	20:20-20:40
26 15:21-15:46				20:08-20:41	20:21-20:41
27 15:21-15:47				20:08-20:41	20:20-20:41
28 15:21-15:47				20:09-20:41	20:21-20:42
29 15:22-15:47				20:09-20:41	20:20-20:41
30 15:22-15:47				20:10-20:41	20:20-20:42
31 15:23-15:47				20:10-20:41	

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 9 - 24

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 10 - 21-A

Flicker curtailment by stopping specific turbines

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

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

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Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 10 - 21-A

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 11 - 22-A

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 11 - 22-A

Flicker curtailment by stopping specific turbines

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

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

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Calculated:

15.06.2026 11:14/4.1.287

SKEPAST & PUHKIM

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 12 - 20-A

Flicker curtailment by stopping specific turbines

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

Project:

2026-02-Ecosoul-ME ŽARES-UIPE

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15.06.2026 11:14/4.1.287

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SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 13 - 19-A

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 14 - 16-A

Flicker curtailment by stopping specific turbines

January February March April May June July August September October November December

1												
2												
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Project:

2026-02-Ecosoul-ME ŽARES-UIPE

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SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 15 - 13-A

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 16 - 11-A

Flicker curtailment by stopping specific turbines

January February March April May June July August September October November December

1												
2												
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28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 17 - 09-A

Flicker curtailment by stopping specific turbines

January February March April May June July August September October November December

1												
2												
3												
4												
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31												

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 18 - 08-A

Flicker curtailment by stopping specific turbines

January February March April May June July August September October November December

1												
2												
3												
4												
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Project:

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SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 19 - 03-A

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 20 - 04-A

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 21 - 06-A

Flicker curtailment by stopping specific turbines

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

Project:

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SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 22 - 31-C

Flicker curtailment by stopping specific turbines

	January	February	March	April	May	June	July	August	September	October	November	December
1						05:22-05:45	05:30-05:48					
2						05:22-05:45	05:30-05:49					
3						05:23-05:46	05:30-05:50					
4						05:23-05:45	05:31-05:50					
5						05:23-05:45	05:31-05:51					
6						05:23-05:45	05:31-05:51					
7						05:25-05:45	05:30-05:52					
8						05:25-05:45	05:30-05:52					
9						05:26-05:45	05:30-05:52					
10						05:26-05:45	05:30-05:53					
11						05:26-05:45	05:30-05:53					
12						05:26-05:44	05:30-05:53					
13						05:27-05:44	05:30-05:54					
14						05:28-05:45	05:30-05:54					
15					05:33-05:37	05:28-05:45	05:30-05:54					
16					05:32-05:40	05:28-05:44	05:30-05:55					
17					05:30-05:41	05:28-05:44	05:30-05:54					
18					05:28-05:41	05:29-05:44	05:30-05:54					
19					05:27-05:42	05:29-05:44	05:31-05:54					
20					05:25-05:43	05:29-05:44	05:30-05:54					
21					05:24-05:44	05:30-05:45	05:31-05:54					
22					05:22-05:43	05:30-05:45	05:32-05:54					
23					05:21-05:44	05:30-05:45	05:34-05:54					
24					05:21-05:45	05:30-05:45	05:35-05:53					
25					05:21-05:44	05:31-05:46	05:37-05:53					
26					05:21-05:45	05:30-05:46	05:39-05:52					
27					05:21-05:45	05:31-05:47	05:40-05:51					
28					05:21-05:45	05:30-05:47	05:42-05:50					
29					05:21-05:45	05:31-05:48	05:44-05:49					
30					05:21-05:45	05:31-05:48	05:45-05:46					
31					05:21-05:45							

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 23 - 32-C

Flicker curtailment by stopping specific turbines

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

SHADOW - Flicker curtailment calendar

Calculation: Alternative - Real Case Curtailment WTG: 24 - 33-C

Flicker curtailment by stopping specific turbines

January February March April May June July August September October November December

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SHADOW - Flicker curtailment protection

Calculation: Alternative - Real Case Curtailment

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SHADOW - Flicker curtailment protection

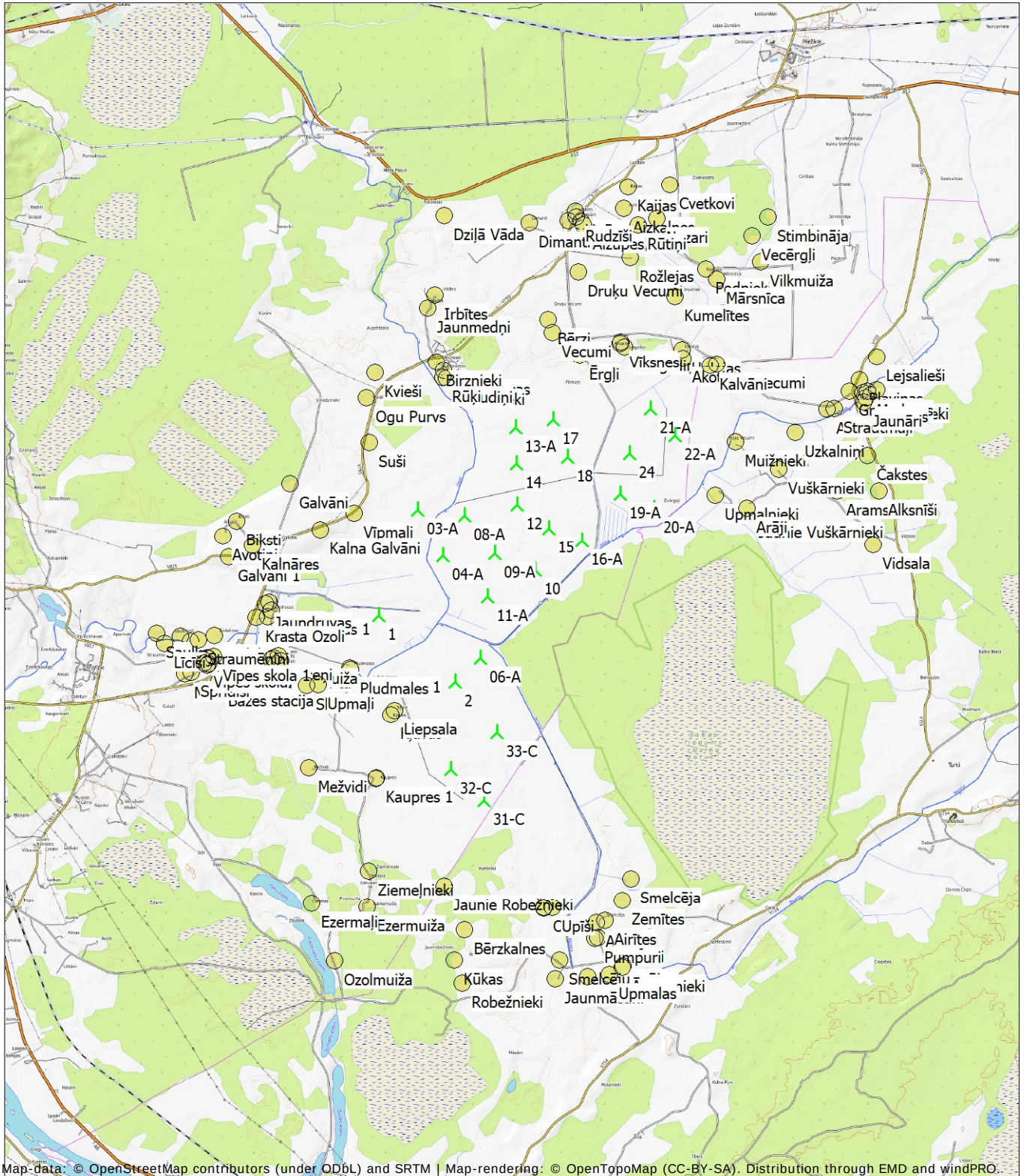
Calculation: Alternative - Real Case Curtailment

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	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX
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SHADOW - Map

Calculation: Alternative - Real Case Curtailment



Map data: © OpenStreetMap contributors (under ODbL) and SRTM | Map-rendering: © OpenTopoMap (CC-BY-SA). Distribution through EMD and windPRO.



New WTG

Map: OpenTopoMap, Print scale 1:75 000, Map center Geo WGS84 East: 26,185019° E North: 56,475703° N

Shadow receptor

Flicker map level: DTM model