

## SHADOW - Main Result

Calculation: Varjutus 18 tuulikut D180m H180m  
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

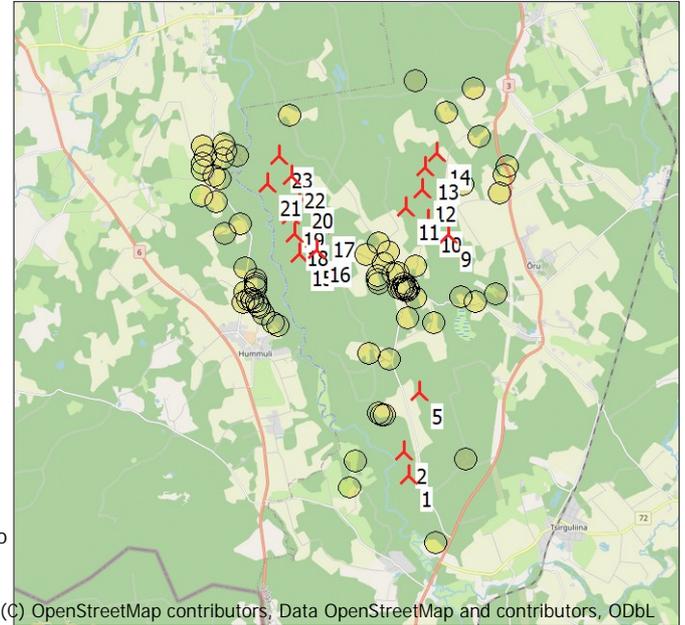
Minimum sun height over horizon for influence 3 °  
Day step for calculation 1 days  
Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) []  
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,08 2,33 4,53 6,36 8,58 8,60 8,67 7,34 5,07 2,56 1,00 0,78

Operational time  
N NE E SE S SW W NW Sum  
670 1 025 670 828 1 143 1 577 1 262 710 7 885

Monthly aggregation of real case reduction  
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:  
Height contours used: Height Contours: CONTOURLINE\_ONLINEDATA\_0.wpo  
Receptor grid resolution: 1,0 m  
Topographic shadow included in calculation

All coordinates are in  
Estonian Lambert L-EST97-EST97 (EE)



Scale 1:200 000  
New WTG Shadow receptor

### WTGs

	East	North	Z	Row data/Description	WTG type			Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
					Valid	Manufact.	Type-generator				Calculation distance [m]	RPM [RPM]
			[m]									
1	625 987	6 416 983	49,5	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
2	625 807	6 417 610	40,7	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
5	626 165	6 419 208	60,0	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
9	626 816	6 423 395	61,8	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
10	626 262	6 423 776	69,6	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
11	625 670	6 424 074	70,0	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
12	626 079	6 424 579	70,0	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
13	626 143	6 425 145	71,2	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
14	626 429	6 425 548	78,2	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
15	622 900	6 422 767	60,0	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
16	623 378	6 422 894	68,6	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
17	623 444	6 423 549	65,5	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
18	622 751	6 423 299	60,0	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
19	622 624	6 423 784	60,0	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
20	622 850	6 424 291	60,0	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
21	622 018	6 424 606	50,0	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
22	622 636	6 424 809	57,2	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-
23	622 275	6 425 352	57,8	Teoreetiline V180 7200 180.0 !O! ... Yes	Yes	Teoreetiline	V180-7 200	7 200	180,0	180,0	1 783	-

### Shadow receptor-Input

No.	Name	East	North	Z	Width	Height	Elevation	Slope of	Direction mode	Eye height
				[m]	[m]	[m]	a.g.l. [m]	window [°]		(ZVI) a.g.l. [m]
A	Aalte	625 032	6 422 044	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
B	Aedniku	621 785	6 421 867	67,8	15,0	15,0	1,5	0,0	"Green house mode"	1,5
C	Aia	621 711	6 421 530	60,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
D	Alla	620 603	6 424 751	50,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
E	Allaste	620 659	6 424 068	48,4	15,0	15,0	1,5	0,0	"Green house mode"	1,5
F	Aude	620 860	6 425 443	50,9	15,0	15,0	1,5	0,0	"Green house mode"	1,5
G	Eeriku-Peetri	625 276	6 418 570	50,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
H	Elbra	620 276	6 424 919	52,7	15,0	15,0	1,5	0,0	"Green house mode"	1,5
I	Haavatäre	620 910	6 423 243	50,4	15,0	15,0	1,5	0,0	"Green house mode"	1,5
J	Jaanimäe	625 129	6 422 581	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5

To be continued on next page...

## SHADOW - Main Result

Calculation: Varjutus 18 tuulikut D180m H180m

...continued from previous page

No.	Name	East	North	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[m]	[°]		[m]
K	Jõemetsa	621 181	6 425 313	40,2	15,0	15,0	1,5	0,0	"Green house mode"	1,5
L	Kajaja	626 756	6 415 190	57,8	15,0	15,0	1,5	0,0	"Green house mode"	1,5
M	Kajaja-Vidriku	625 368	6 420 051	62,6	15,0	15,0	1,5	0,0	"Green house mode"	1,5
N	Kalda	625 234	6 422 890	69,8	15,0	15,0	1,5	0,0	"Green house mode"	1,5
O	Kastre	621 480	6 422 340	59,5	15,0	15,0	1,5	0,0	"Green house mode"	1,5
P	Kiilatsi	627 580	6 421 640	60,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
Q	Kikka	628 253	6 425 028	79,8	15,0	15,0	1,5	0,0	"Green house mode"	1,5
R	Kirpu	625 658	6 421 943	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
S	Koidiku	628 309	6 425 268	80,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
T	Koidu	620 346	6 425 304	54,2	15,0	15,0	1,5	0,0	"Green house mode"	1,5
U	Kooba	622 529	6 426 421	51,5	15,0	15,0	1,5	0,0	"Green house mode"	1,5
V	Koolimaakoha	626 021	6 421 691	63,1	15,0	15,0	1,5	0,0	"Green house mode"	1,5
W	Kure	627 163	6 424 741	71,4	15,0	15,0	1,5	0,0	"Green house mode"	1,5
X	Kuusiku	624 654	6 422 789	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
Y	Kääriku-Vidriku	625 186	6 418 566	50,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
Z	Künka	625 821	6 421 922	63,8	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AA	Laanemetsa	624 994	6 422 144	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AB	Laksi	621 782	6 421 946	65,3	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AC	Liiva	621 594	6 421 504	60,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AD	Liivamäe	621 725	6 421 461	56,9	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AE	Lohu	621 767	6 421 809	66,7	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AF	Metsaääre	621 909	6 421 296	57,9	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AG	Metsniku	625 521	6 422 342	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AH	Mustajärve	626 495	6 421 044	68,4	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AI	Mõisa	620 747	6 424 703	45,9	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AJ	Männimetsa	624 982	6 422 247	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AK	Naadi	627 471	6 417 460	60,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AL	Nilbi	621 312	6 423 517	47,3	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AM	Penno	621 758	6 422 054	60,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AN	Perve	625 765	6 421 849	68,5	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AO	Pihlaka	621 828	6 421 453	60,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AP	Pulga	625 805	6 427 444	77,4	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AQ	Pustse-Kotteri	626 655	6 426 626	90,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AR	Pärtle-Vidriku	625 822	6 421 139	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AS	Raudsepa	628 132	6 424 530	74,5	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AT	Sakala	625 738	6 421 902	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AU	Sepa	625 681	6 422 045	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AV	Silla	621 456	6 421 419	60,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AW	Sillaste	620 250	6 425 536	53,6	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AX	Simmerga	621 503	6 421 703	60,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AY	Singa-Ado	624 555	6 417 293	50,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
AZ	Tamme	620 817	6 425 229	50,1	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BA	Tasa-Männiku	627 366	6 427 280	89,8	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BB	Tedre	620 277	6 424 211	50,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BC	Tiigi tn 6/2	622 267	6 420 898	40,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BD	Tiigi tn 8/1	622 386	6 420 849	42,5	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BE	Tuulepealse	622 024	6 421 128	50,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BF	Udumäe	620 822	6 425 611	51,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BG	Uibo	621 839	6 421 368	59,8	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BH	Une-Mati	624 995	6 423 098	63,6	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BI	Uniküla puhkeala	625 722	6 421 987	69,6	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BJ	Uue-Vidriku	625 132	6 418 588	50,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BK	Uulitse	624 819	6 420 173	61,9	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BL	Vabriku	628 106	6 421 871	60,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BM	Valli	625 388	6 422 309	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BN	Vanamõisa	625 787	6 421 969	65,3	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BO	Varnu	627 538	6 426 010	81,4	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BP	Vintsi	627 215	6 421 756	60,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BQ	Võndi	624 431	6 416 574	54,1	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BR	Väike-Make	625 981	6 422 526	62,7	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BS	Õhtupäikese	625 632	6 421 905	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BT	Õisu	625 563	6 421 933	70,0	15,0	15,0	1,5	0,0	"Green house mode"	1,5
BU	Õnne	620 267	6 425 082	53,7	15,0	15,0	1,5	0,0	"Green house mode"	1,5

## SHADOW - Main Result

Calculation: Varjutus 18 tuulikut D180m H180m

### Calculation Results

Shadow receptor

No.	Name	Shadow, expected values Shadow hours per year [h/year]
A	Aalte	0:00
B	Aedniku	6:48
C	Aia	0:00
D	Alla	6:50
E	Allaste	6:00
F	Aude	5:42
G	Eeriku-Peetri	13:02
H	Elbra	1:55
I	Haavatare	0:00
J	Jaanimäe	2:44
K	Jõemetsa	12:57
L	Kajaja	0:00
M	Kajaja-Vidriku	3:17
N	Kalda	7:23
O	Kastre	12:50
P	Kiilatsi	0:00
Q	Kikka	0:00
R	Kirpu	0:00
S	Koidiku	0:00
T	Koidu	0:00
U	Kooba	5:18
V	Koolimaakoha	0:00
W	Kure	27:47
X	Kuusiku	15:41
Y	Kääriku-Vidriku	16:30
Z	Künka	0:00
AA	Laanemetsa	4:27
AB	Laksi	9:17
AC	Liiva	0:00
AD	Liivamäe	0:00
AE	Lohu	5:19
AF	Metsäääre	0:00
AG	Metsniku	6:32
AH	Mustajärve	0:00
AI	Mõisa	8:58
AJ	Männimetsa	4:01
AK	Naadi	5:16
AL	Nilbi	15:17
AM	Penno	12:08
AN	Perve	0:00
AO	Pihlaka	0:00
AP	Pulga	0:00
AQ	Pustse-Kotteri	5:41
AR	Pärtle-Vidriku	0:00
AS	Raudsepa	1:38
AT	Sakala	0:00
AU	Sepa	0:00
AV	Silla	0:00
AW	Sillaste	0:00
AX	Simmerga	7:28
AY	Singa-Ado	8:57
AZ	Tamme	6:22
BA	Tasa-Männiku	0:00
BB	Tedre	0:00
BC	Tiigi tn 6/2	0:00
BD	Tiigi tn 8/1	0:00
BE	Tuulepealse	0:00
BF	Udumäe	4:45
BG	Uibo	0:00
BH	Une-Mati	17:08
BI	Uniküla puhkeala	0:00
BJ	Uue-Vidriku	16:31

To be continued on next page...

## SHADOW - Main Result

Calculation: Varjutus 18 tuulikut D180m H180m

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No.	Name	Shadow, expected values	
		Shadow hours	per year
		[h/year]	
BK	Uulitse	1:41	
BL	Vabriku	0:00	
BM	Valli	0:00	
BN	Vanamõisa	0:00	
BO	Varnu	6:03	
BP	Vintsi	0:00	
BQ	Võndi	11:51	
BR	Väike-Make	0:00	
BS	Õhtupäikese	0:00	
BT	Õisu	0:00	
BU	Õnne	0:00	

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

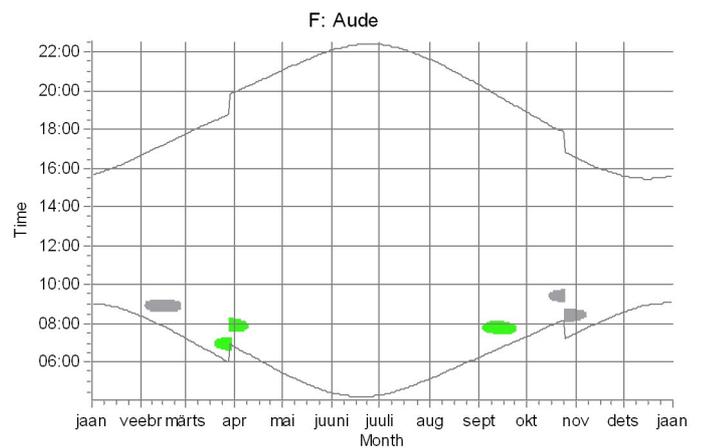
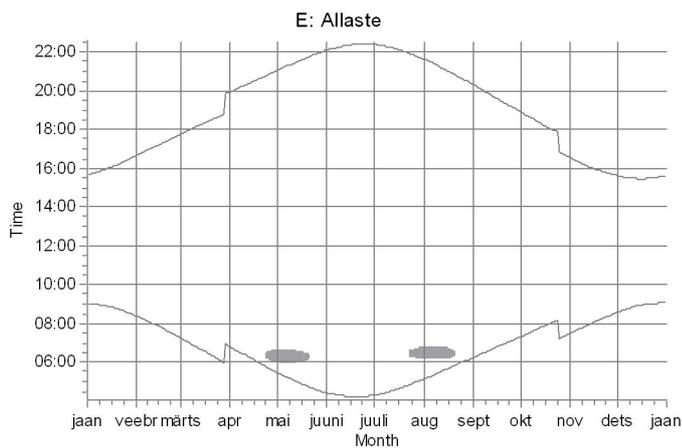
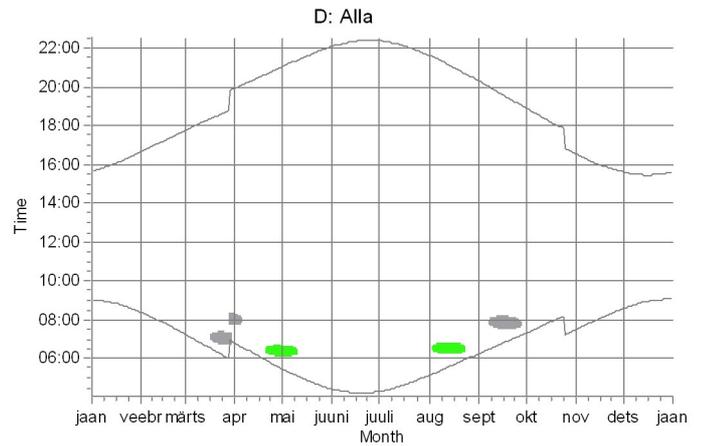
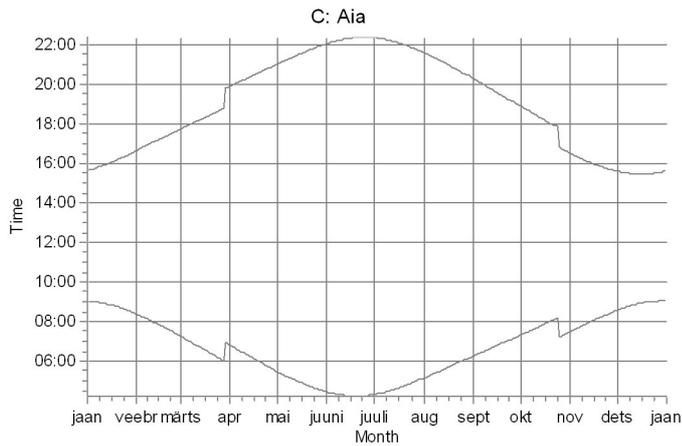
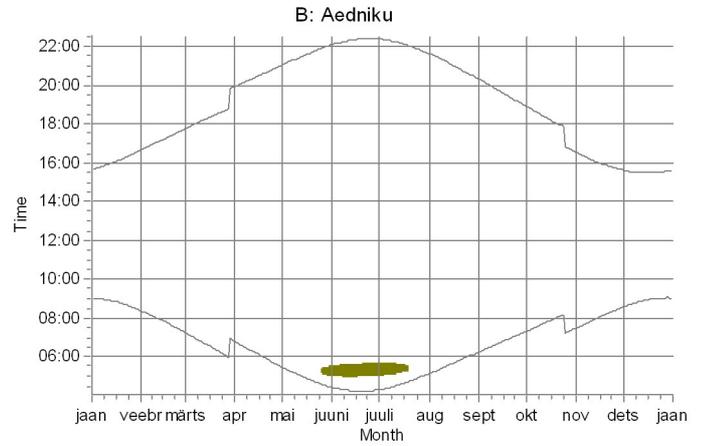
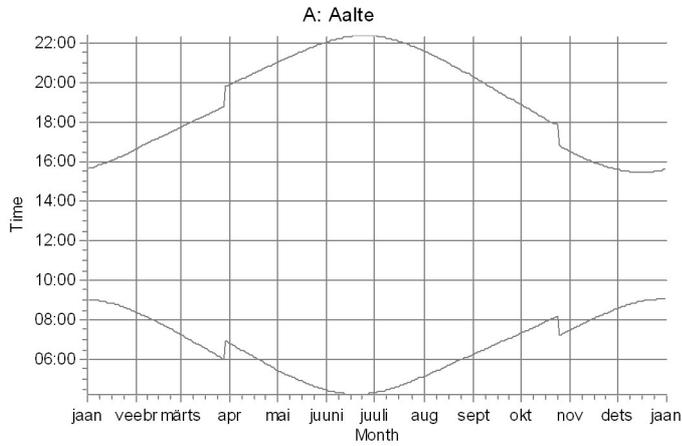
No.	Name	Expected
		[h/year]
1	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (81)	11:24
2	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (82)	23:45
5	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (83)	21:05
9	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (96)	14:16
10	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (87)	17:08
11	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (86)	2:01
12	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (85)	6:04
13	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (84)	18:06
14	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (98)	8:16
15	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (93)	28:30
16	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (94)	16:51
17	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (97)	12:22
18	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (90)	10:58
19	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (91)	5:30
20	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (92)	5:16
21	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (88)	20:21
22	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (89)	2:57
23	Teoreetiline V180 7200 180.0 !O! hub: 180,0 m (TOT: 270,0 m) (95)	25:00

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, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



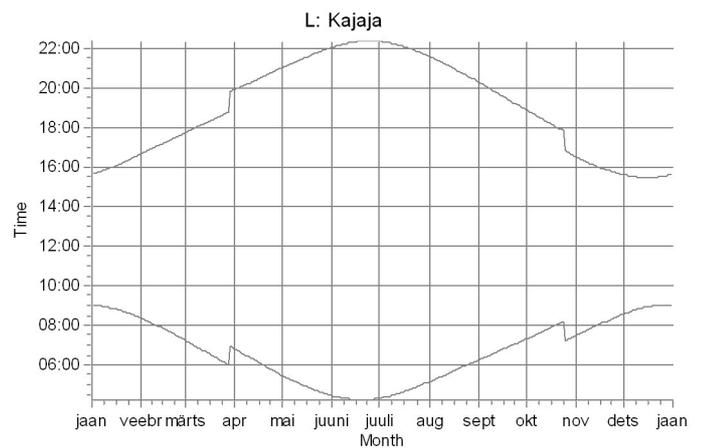
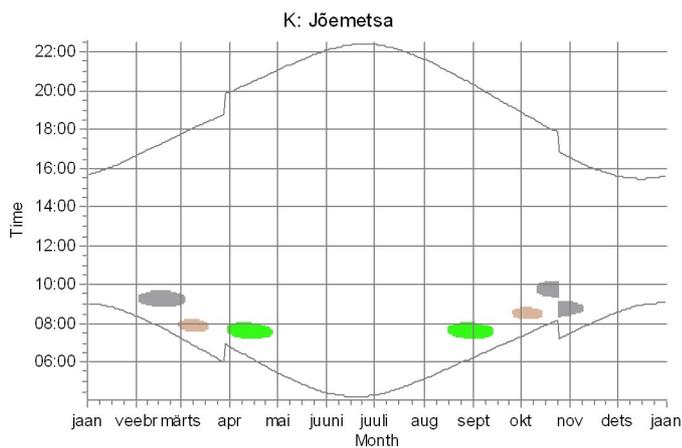
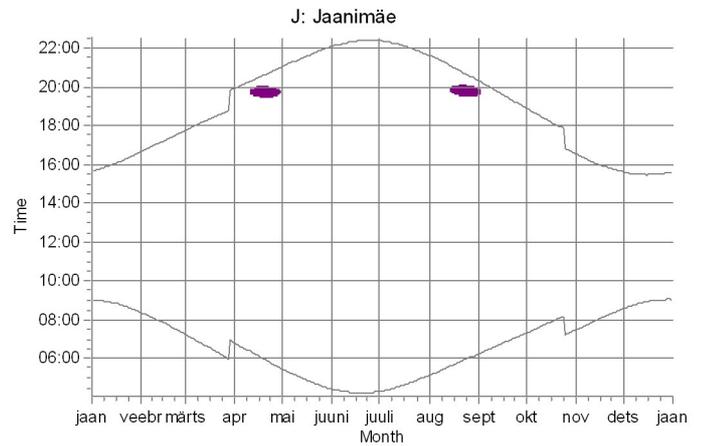
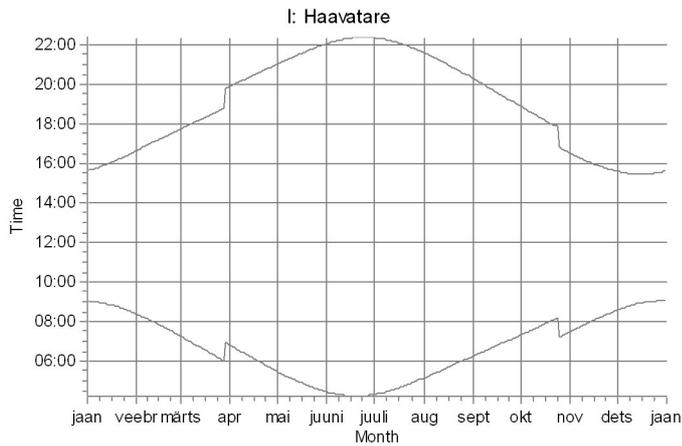
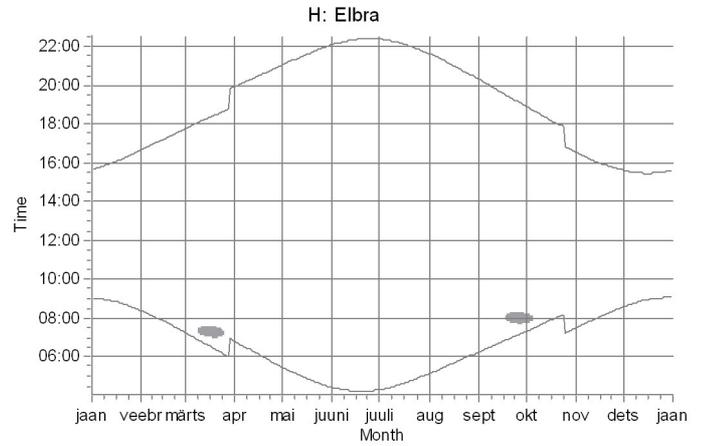
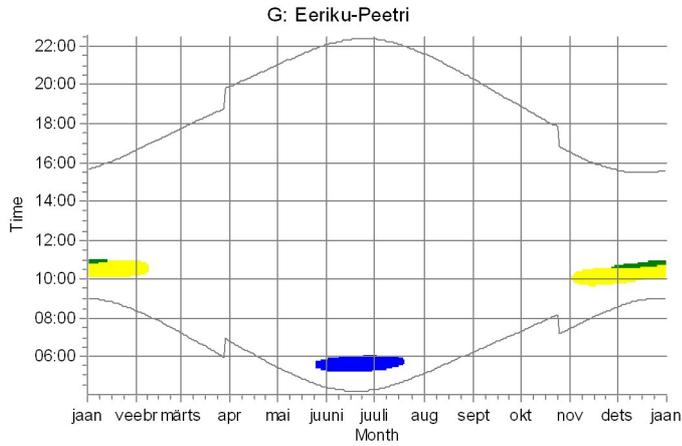
WTGs

15: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (93)  
21: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (88)

23: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (95)

## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



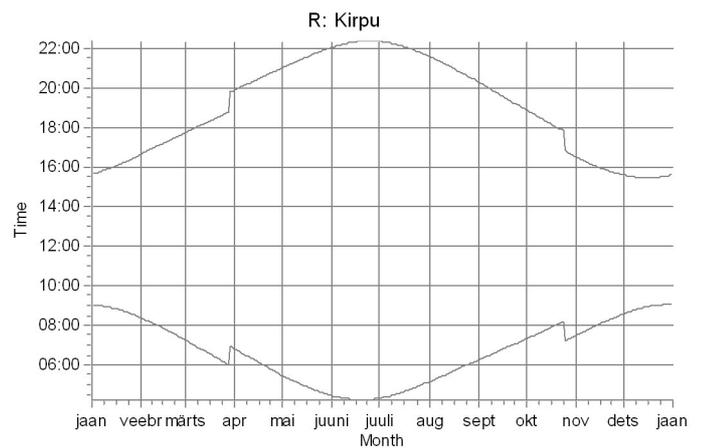
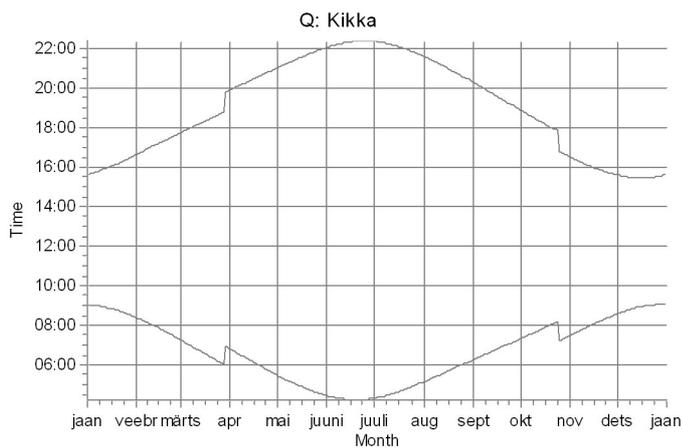
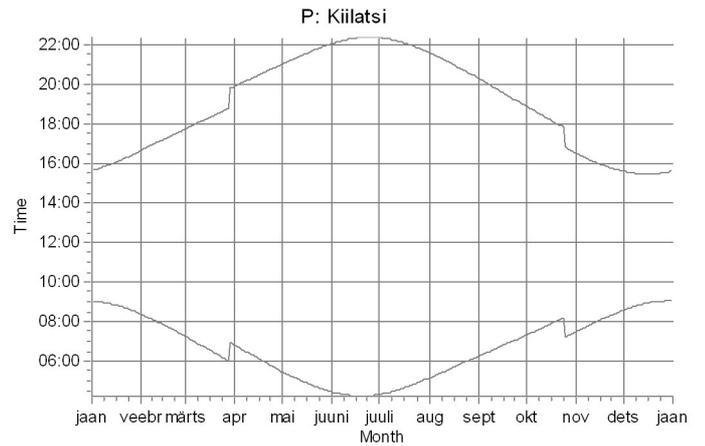
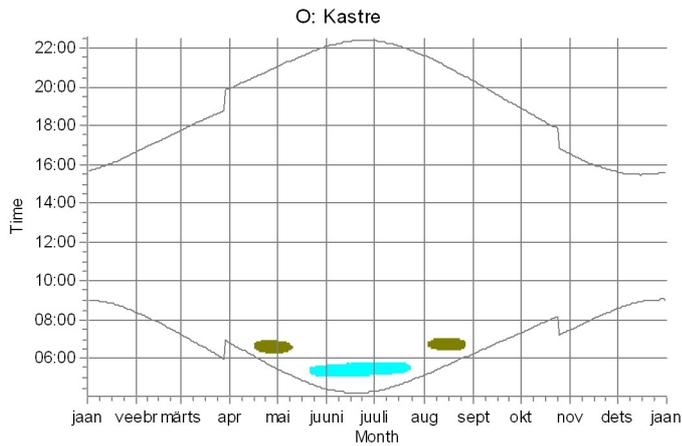
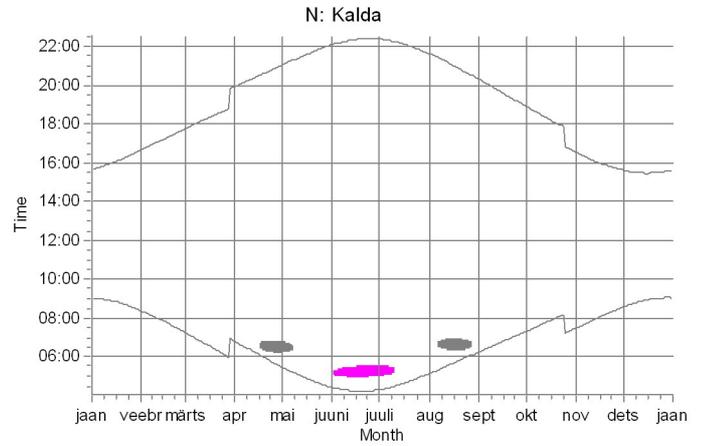
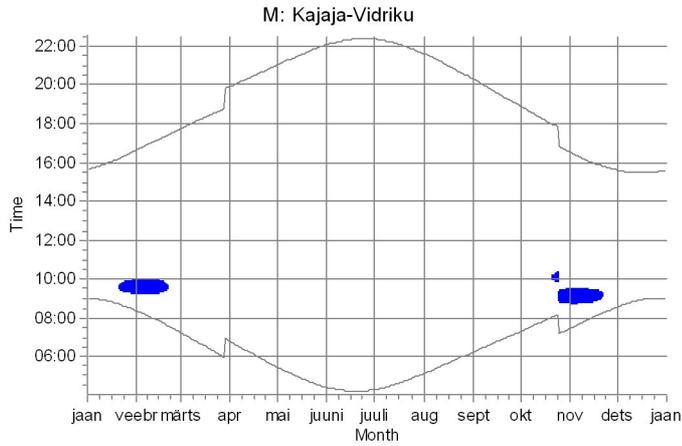
### WTGs

- 1: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (81)
- 2: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (82)
- 5: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (83)
- 16: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (94)

- 21: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (88)
- 22: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (89)
- 23: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (95)

## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



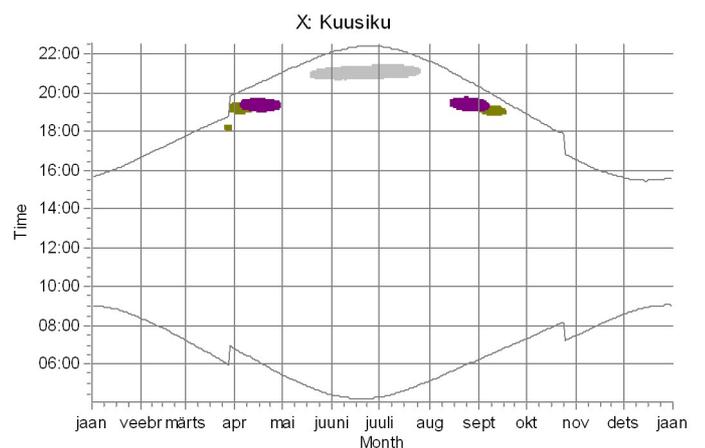
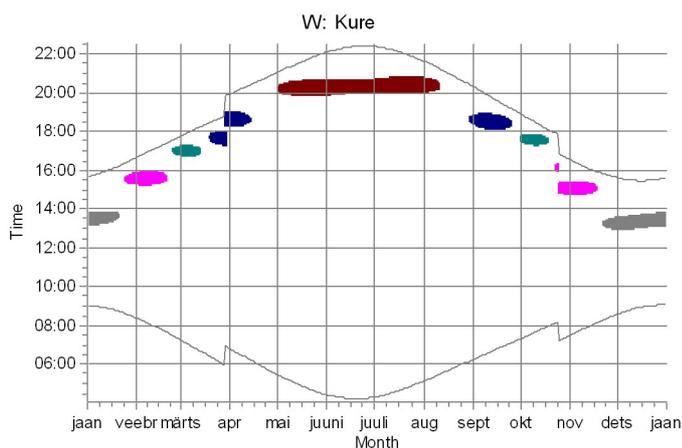
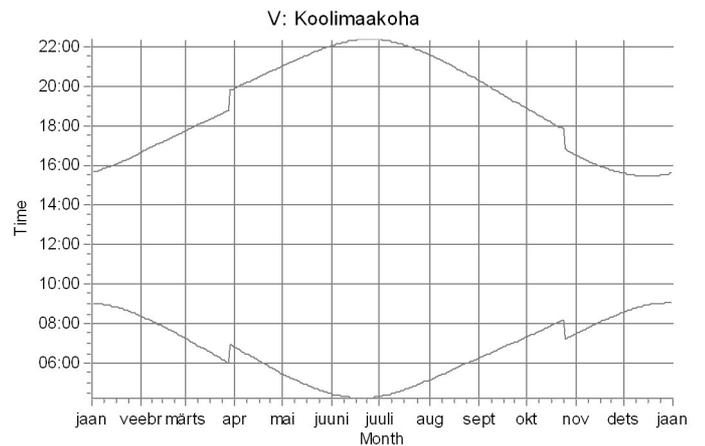
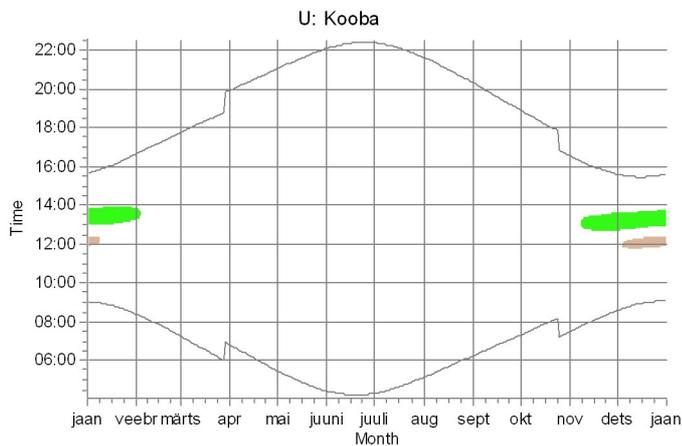
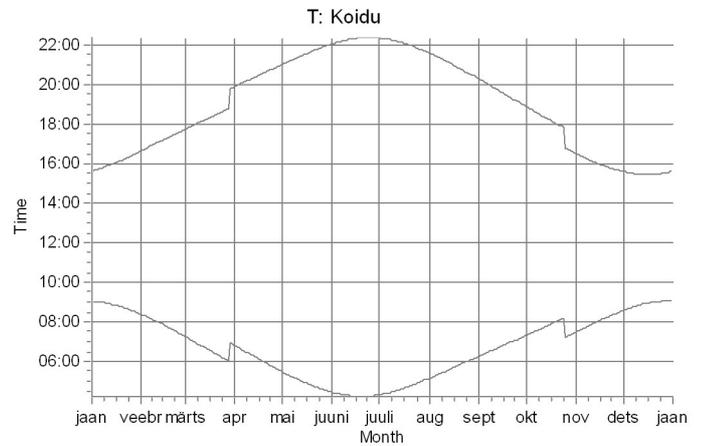
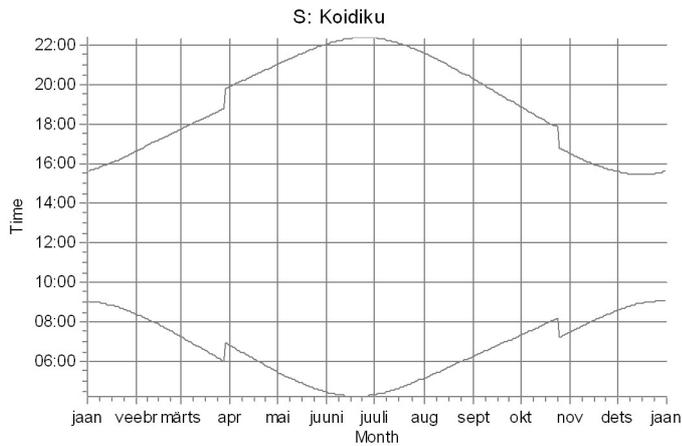
### WTGs

- 5: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (83)
- 9: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (96)
- 10: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (87)

- 15: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (93)
- 18: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (90)

## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



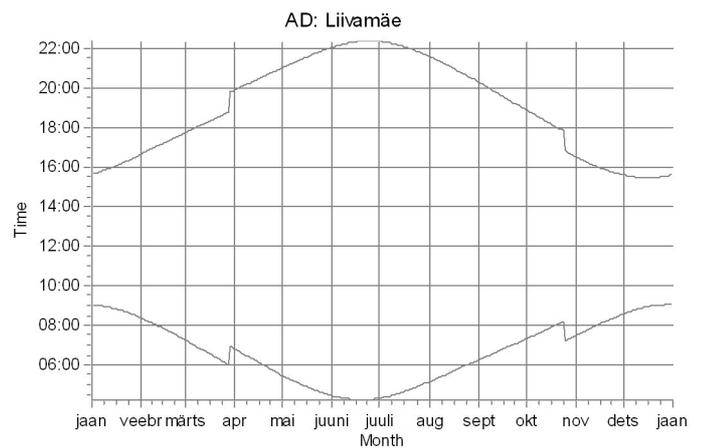
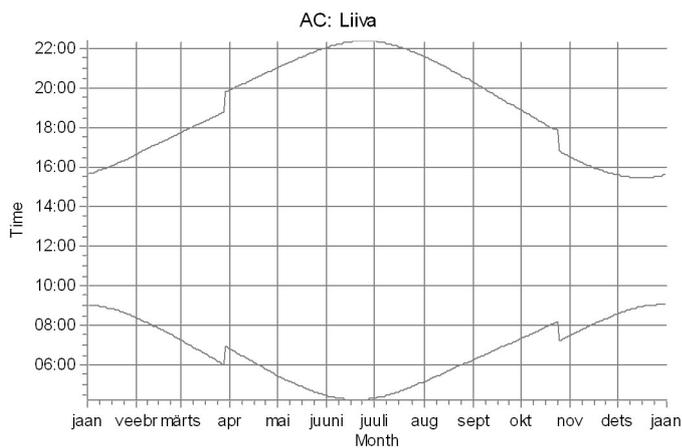
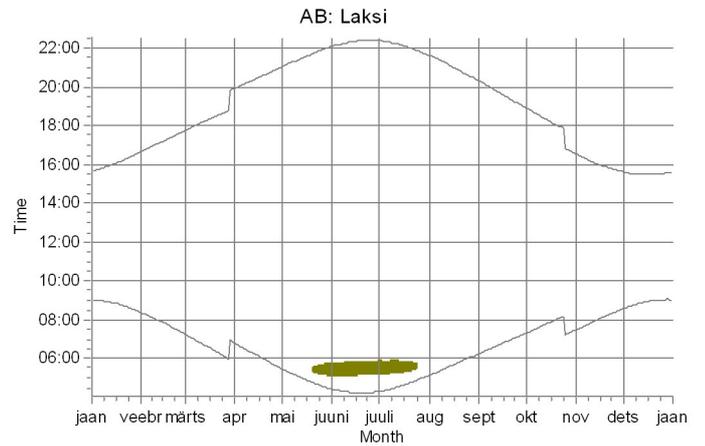
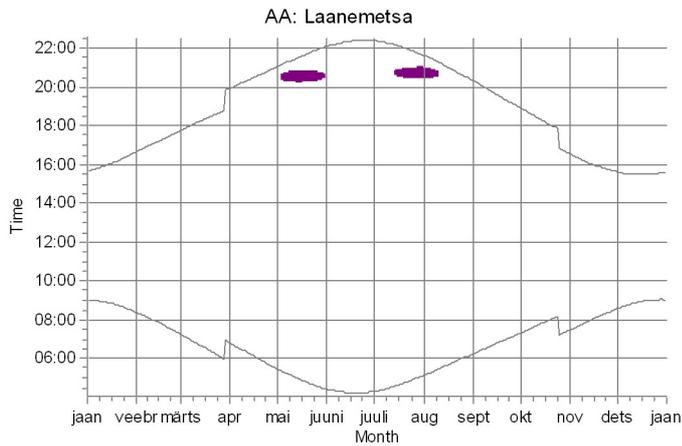
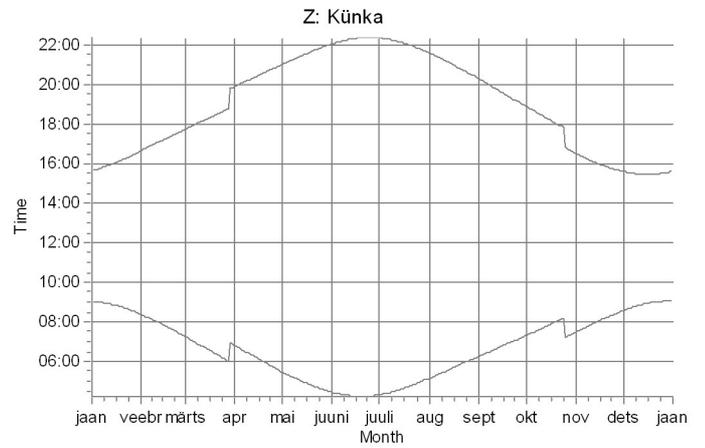
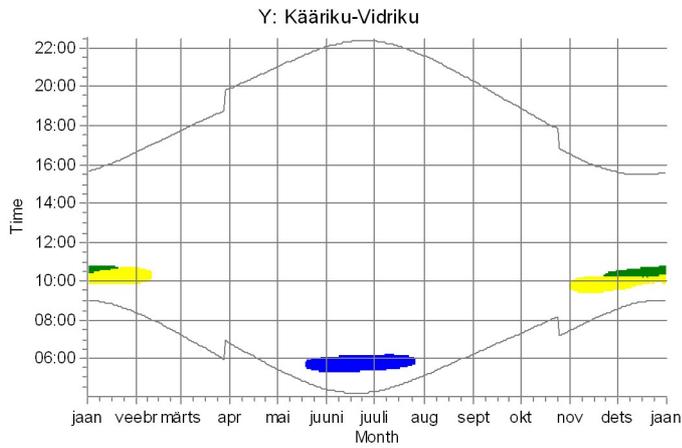
### WTGs

- 9: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (96)
- 10: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (87)
- 11: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (86)
- 12: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (85)
- 13: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (84)

- 15: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (93)
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- 17: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (97)
- 22: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (89)
- 23: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (95)

## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



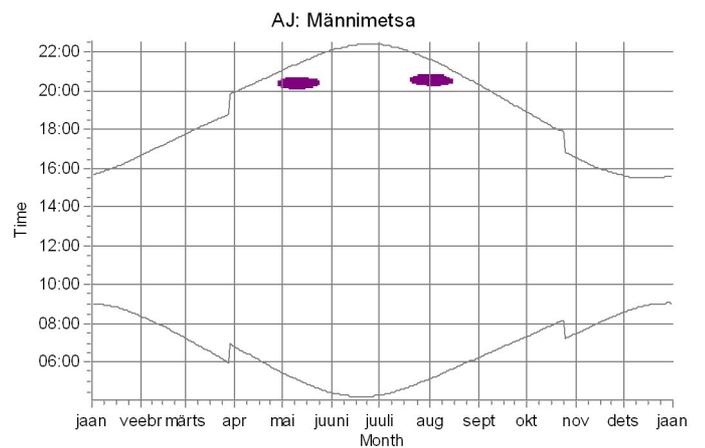
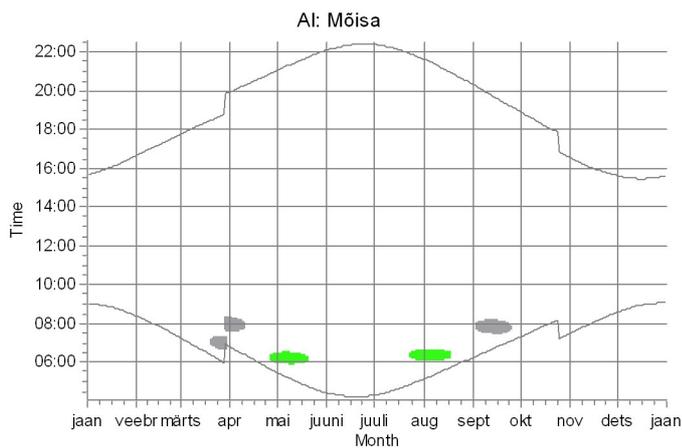
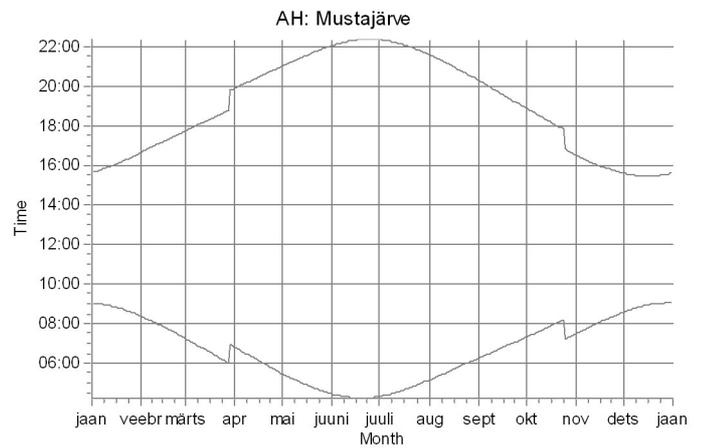
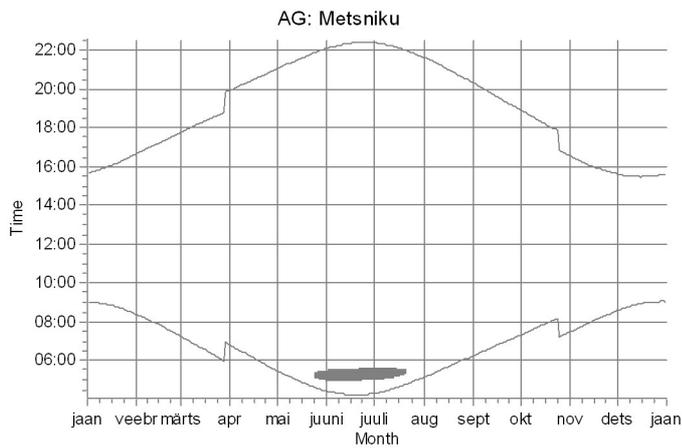
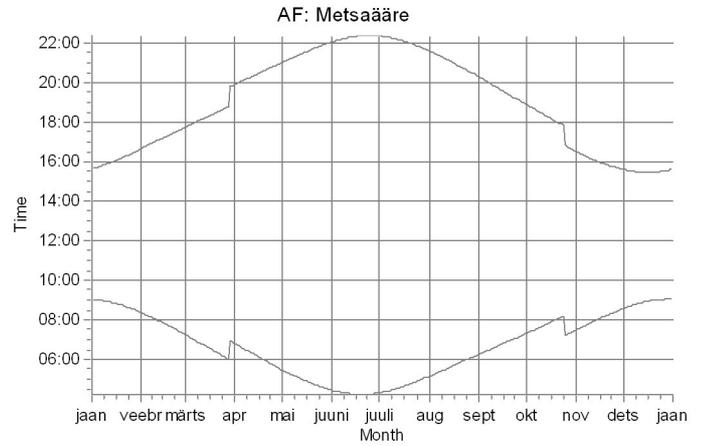
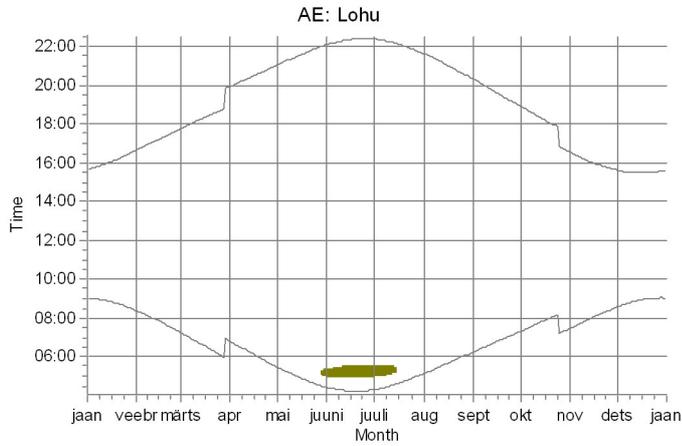
### WTGs

- 1: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (81)
- 2: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (82)
- 5: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (83)

- 15: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (93)
- 16: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (94)

## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



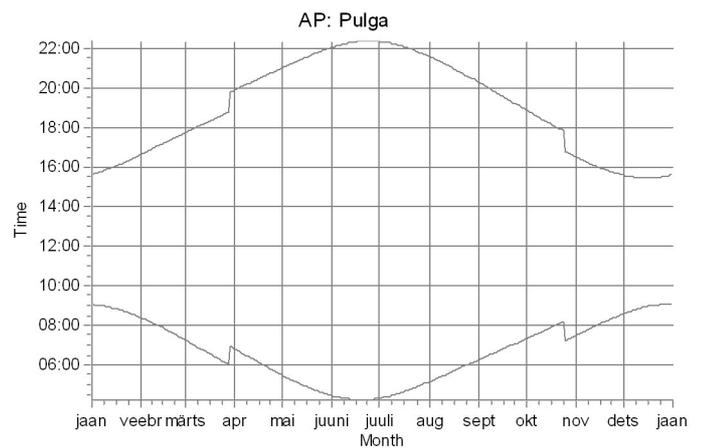
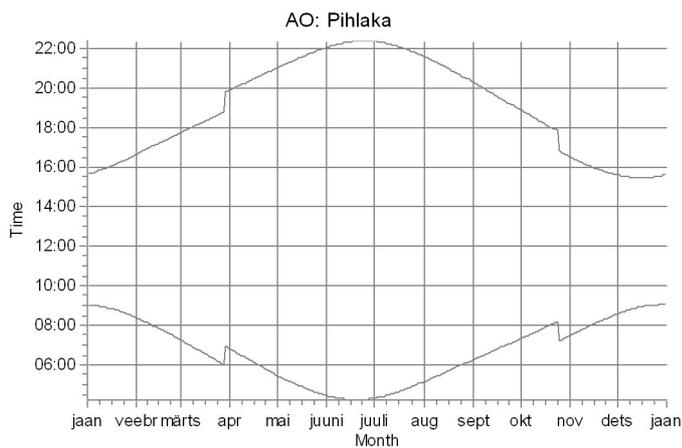
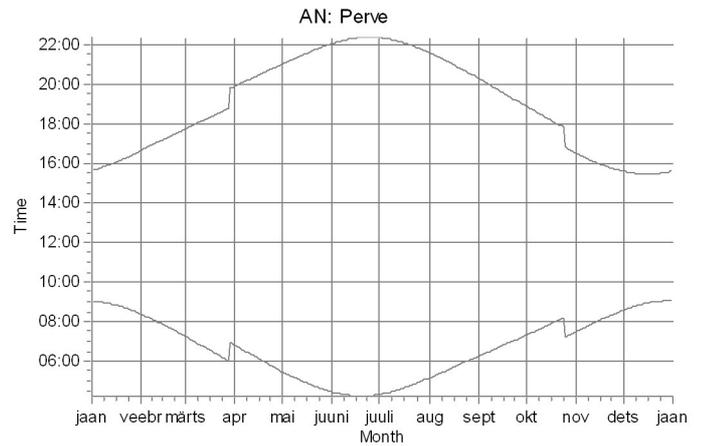
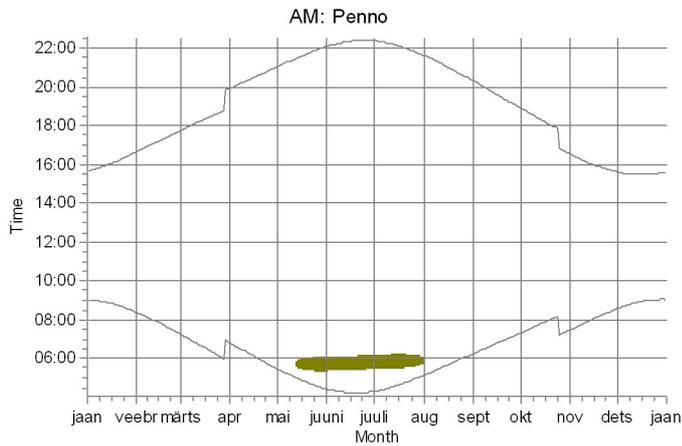
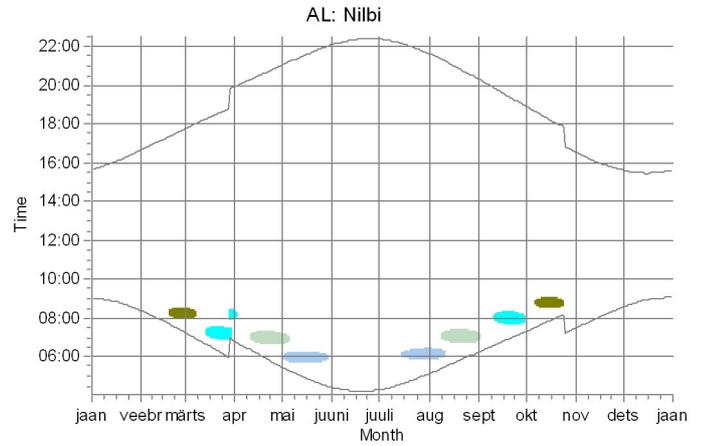
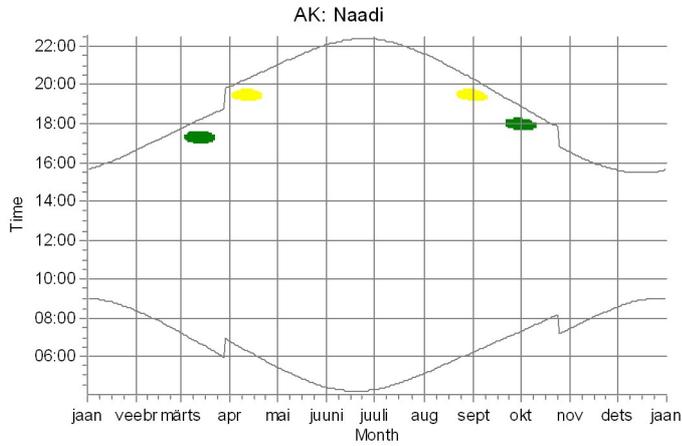
### WTGs

- 9: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (96)
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- 21: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (88)
- 23: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (95)

## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



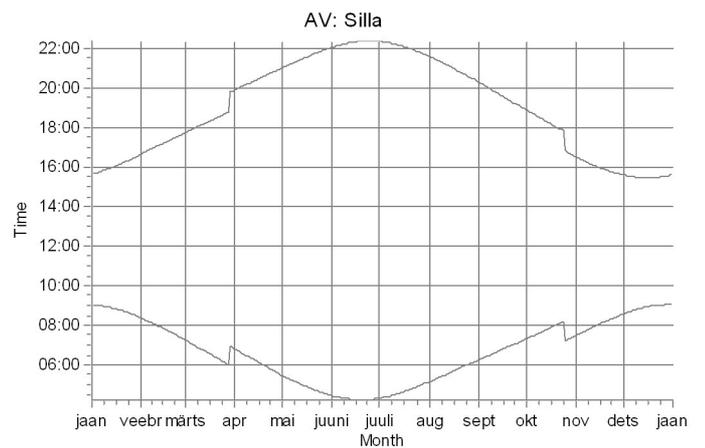
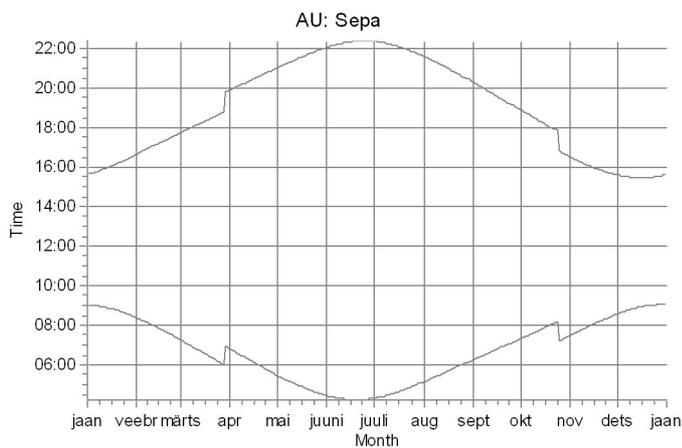
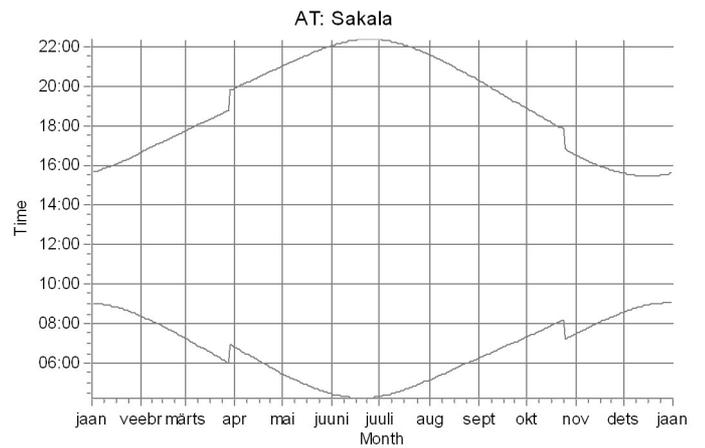
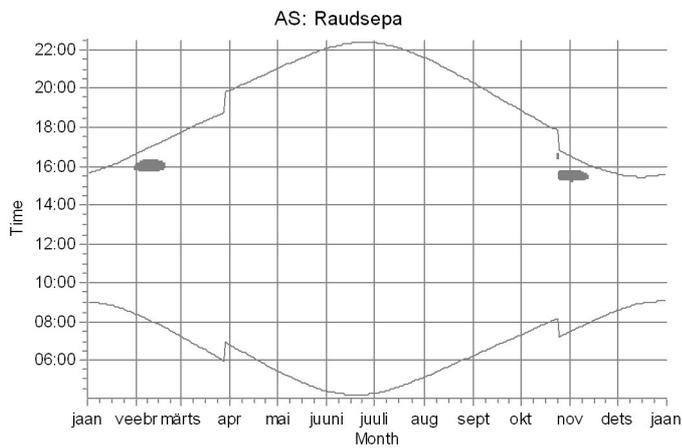
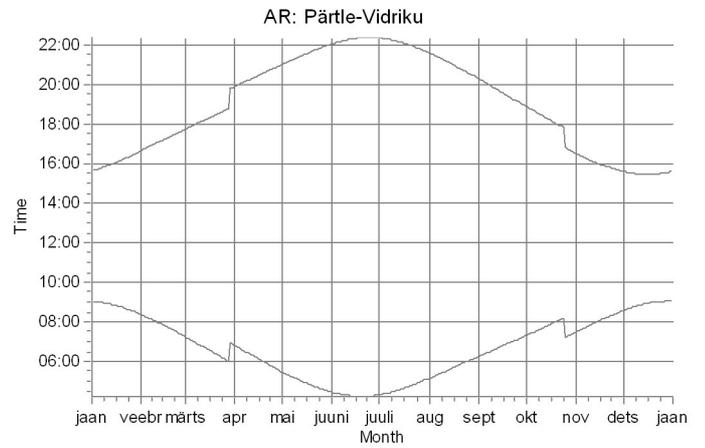
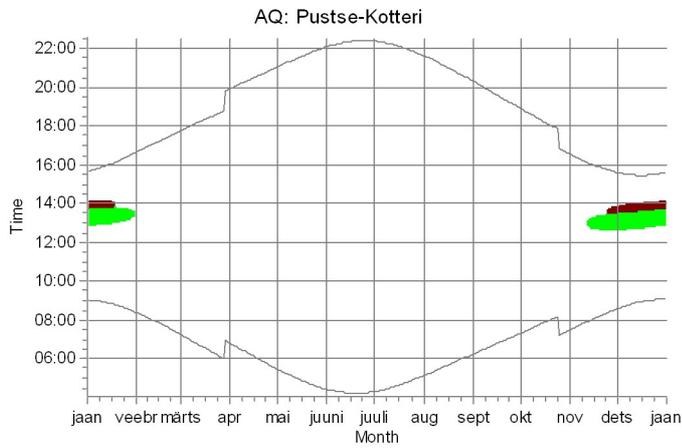
### WTGs

- 1: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (81)
- 2: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (82)
- 15: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (93)

- 18: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (90)
- 19: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (91)
- 20: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (92)

## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



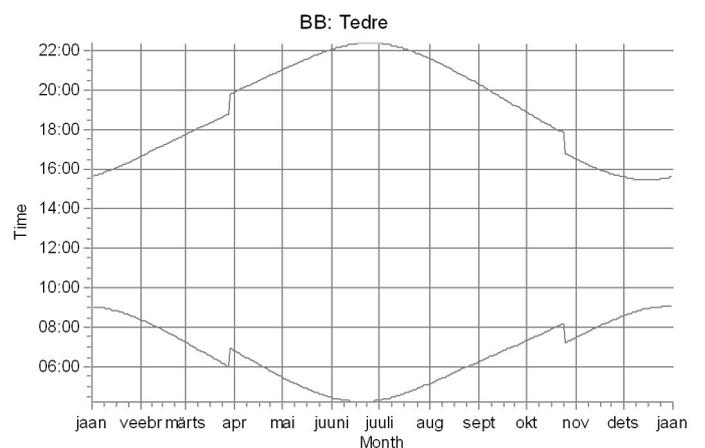
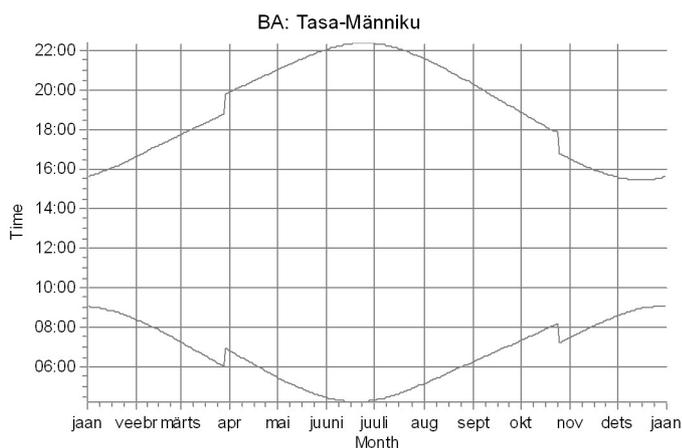
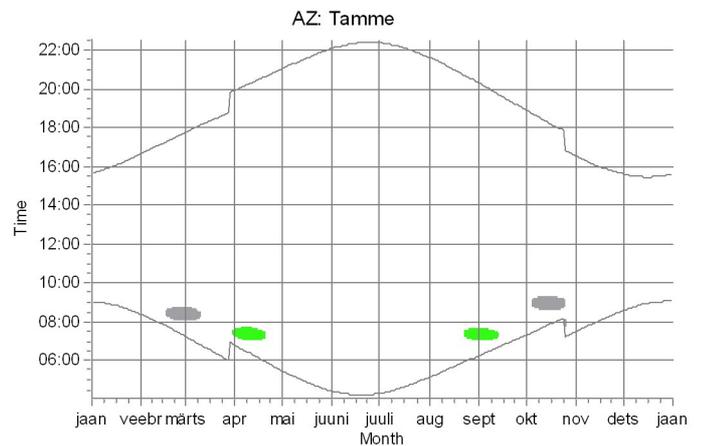
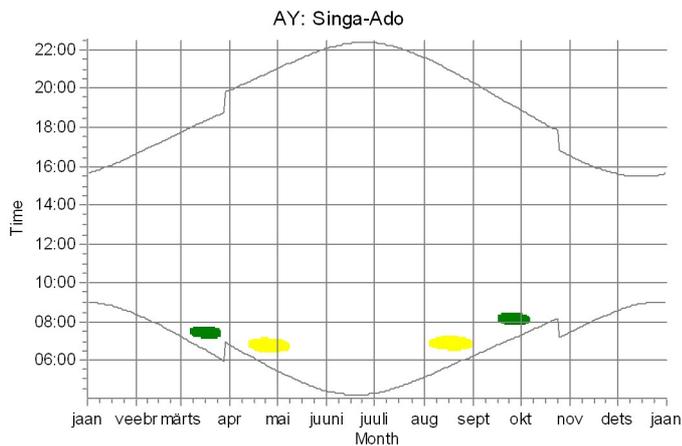
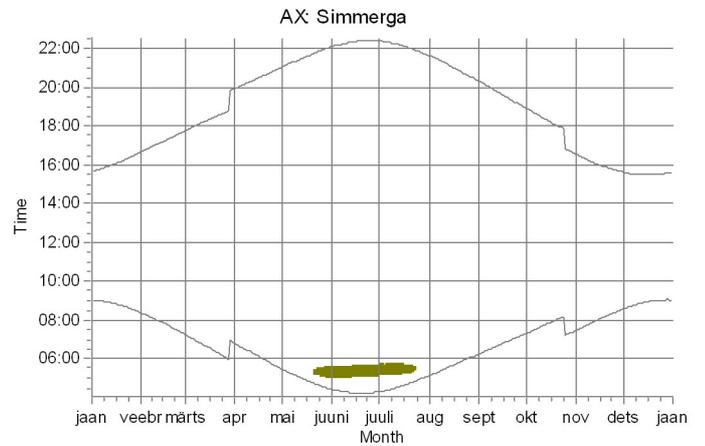
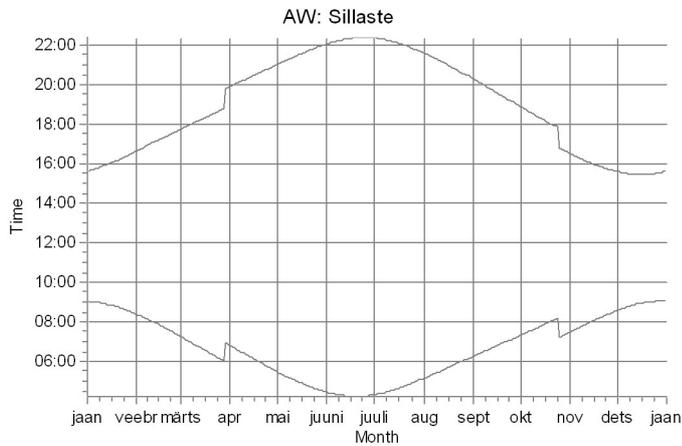
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## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



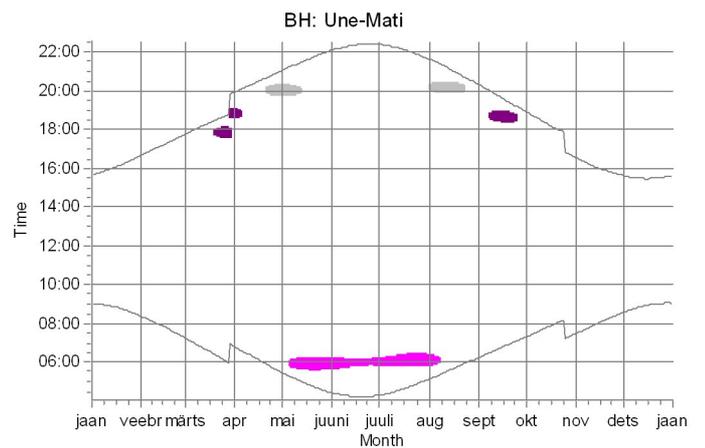
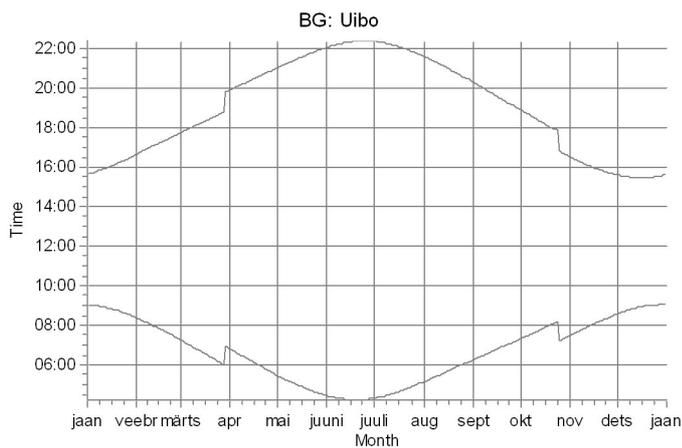
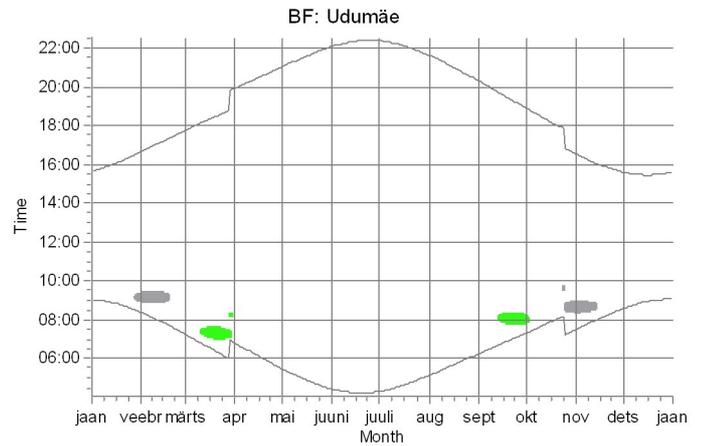
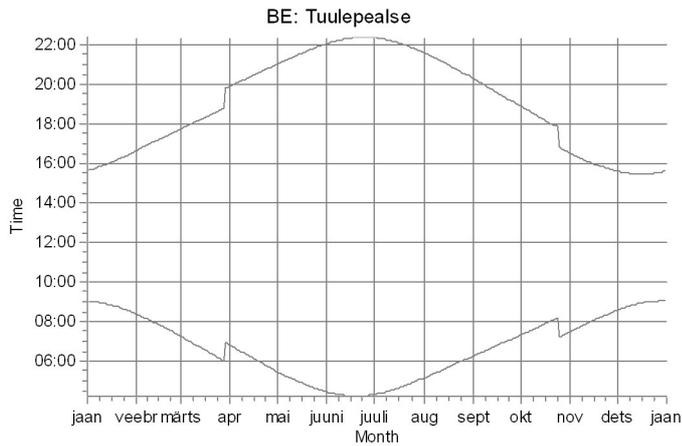
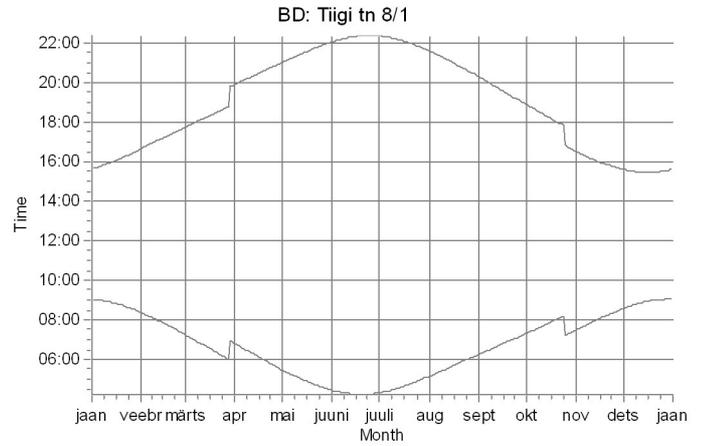
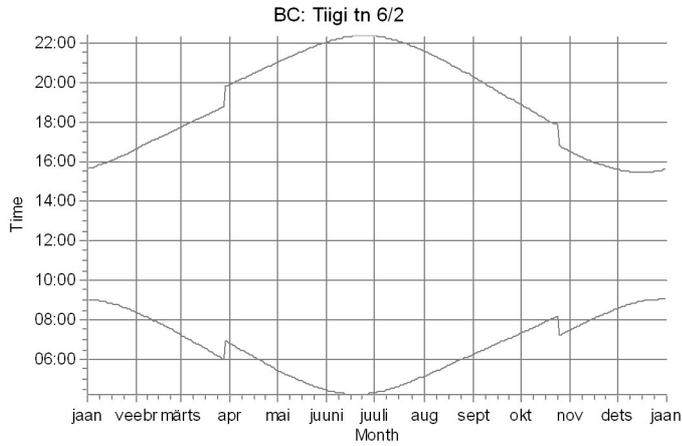
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## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



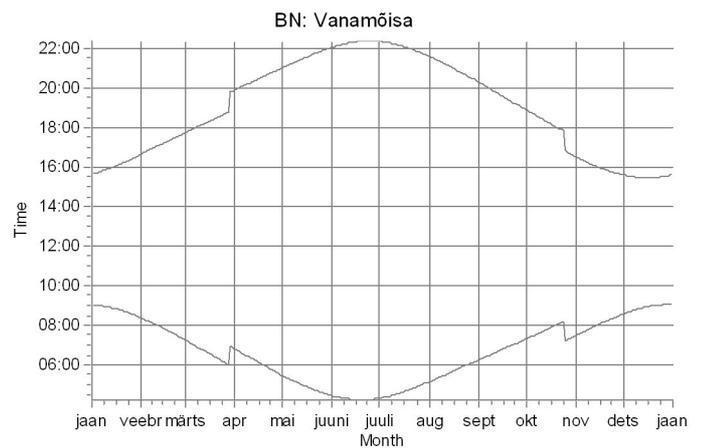
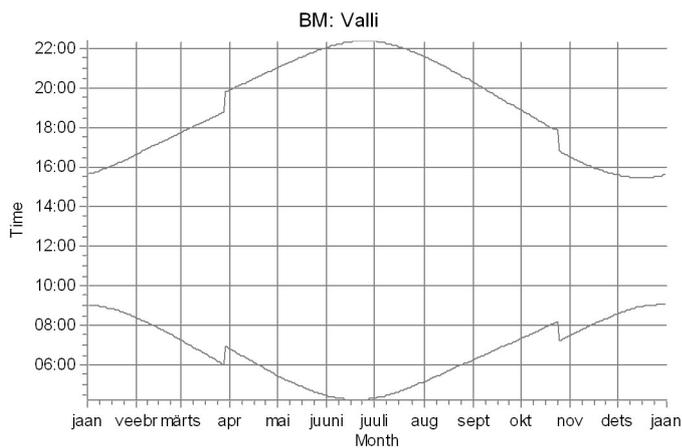
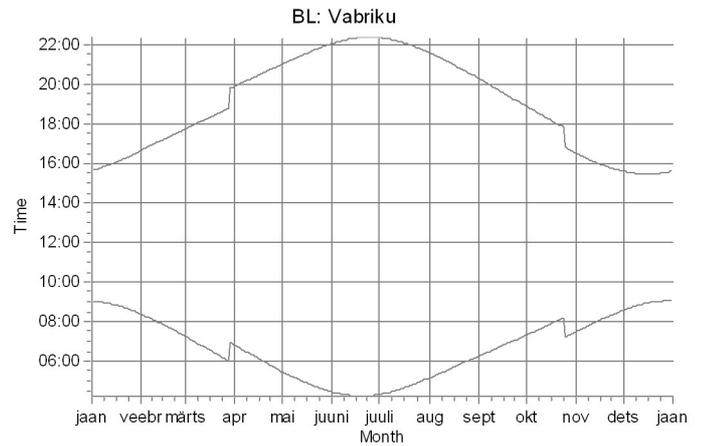
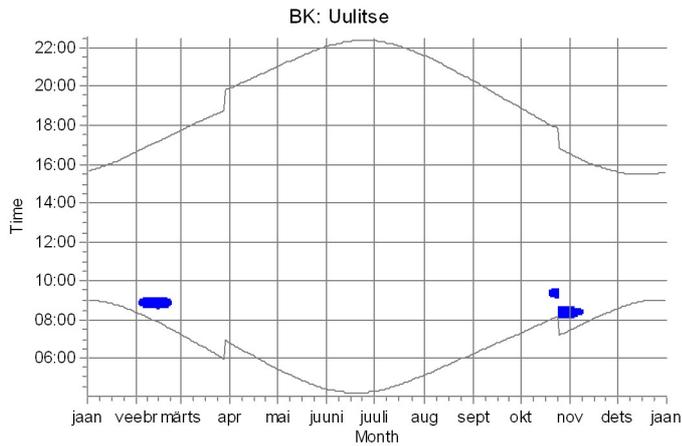
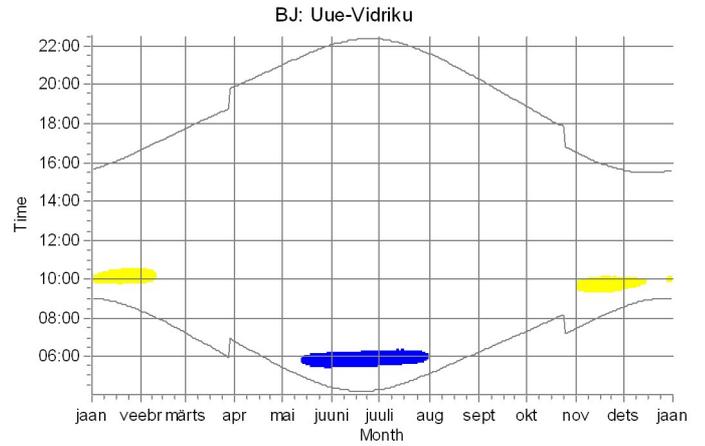
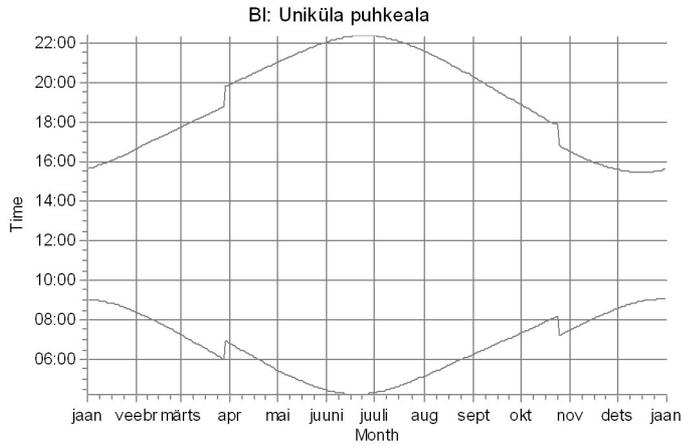
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- 10: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (87)
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## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



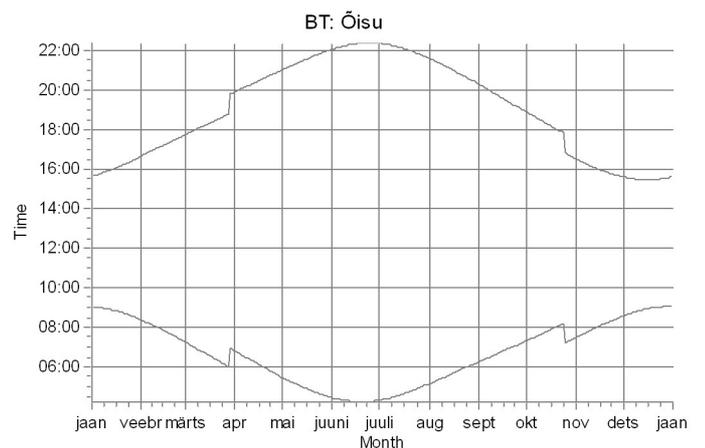
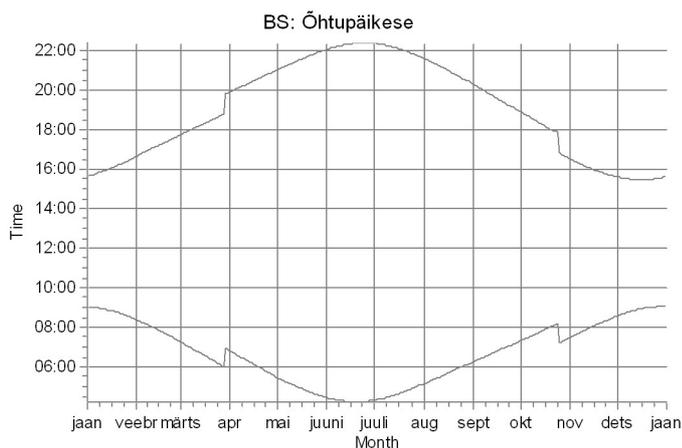
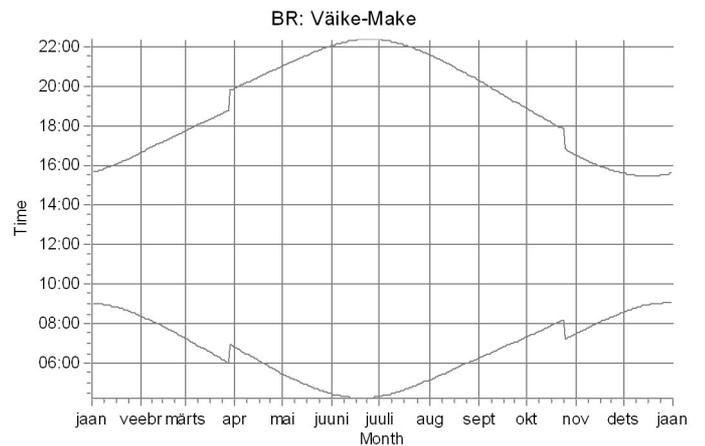
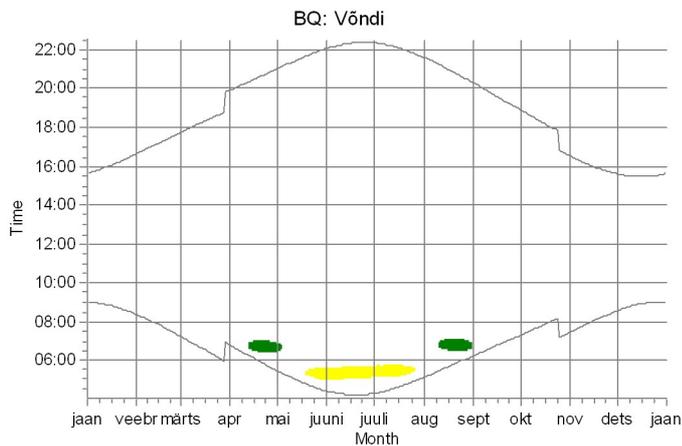
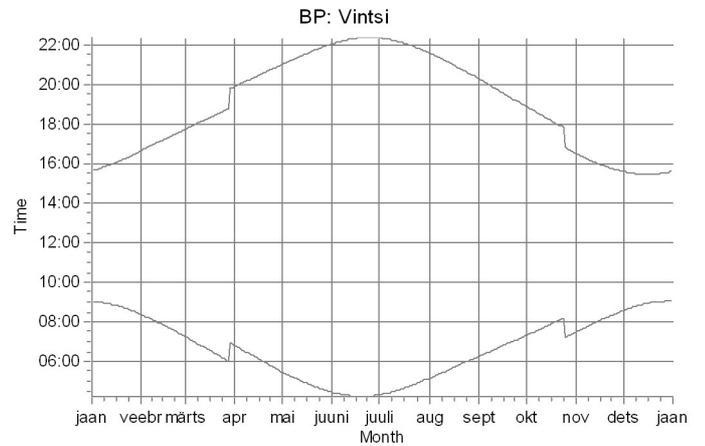
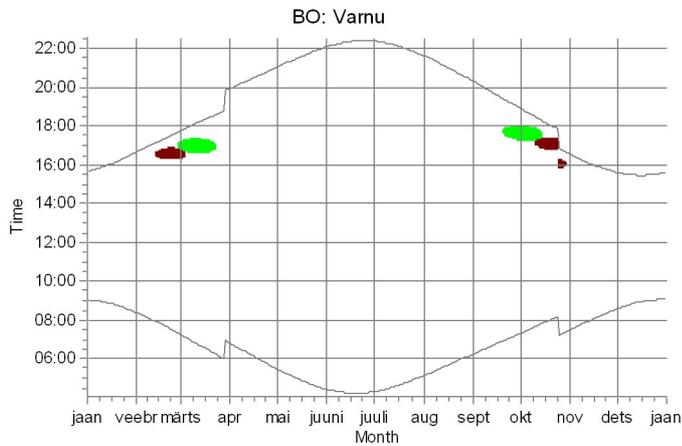
WTGs

2: Teoreetiline V180 7200 180.0 !OI! hub: 180,0 m (TOT: 270,0 m) (82)

5: Teoreetiline V180 7200 180.0 !OI! hub: 180,0 m (TOT: 270,0 m) (83)

## SHADOW - Calendar, graphical

Calculation: Varjutus 18 tuulikut D180m H180m



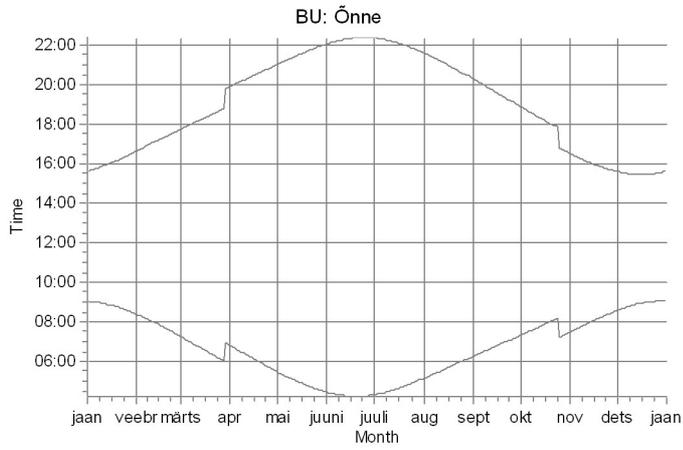
### WTGs

- 1: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (81)
- 2: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (82)

- 13: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (84)
- 14: Teoreetiline V180 7200 180.0 IOI hub: 180,0 m (TOT: 270,0 m) (98)

## SHADOW - Calendar, graphical

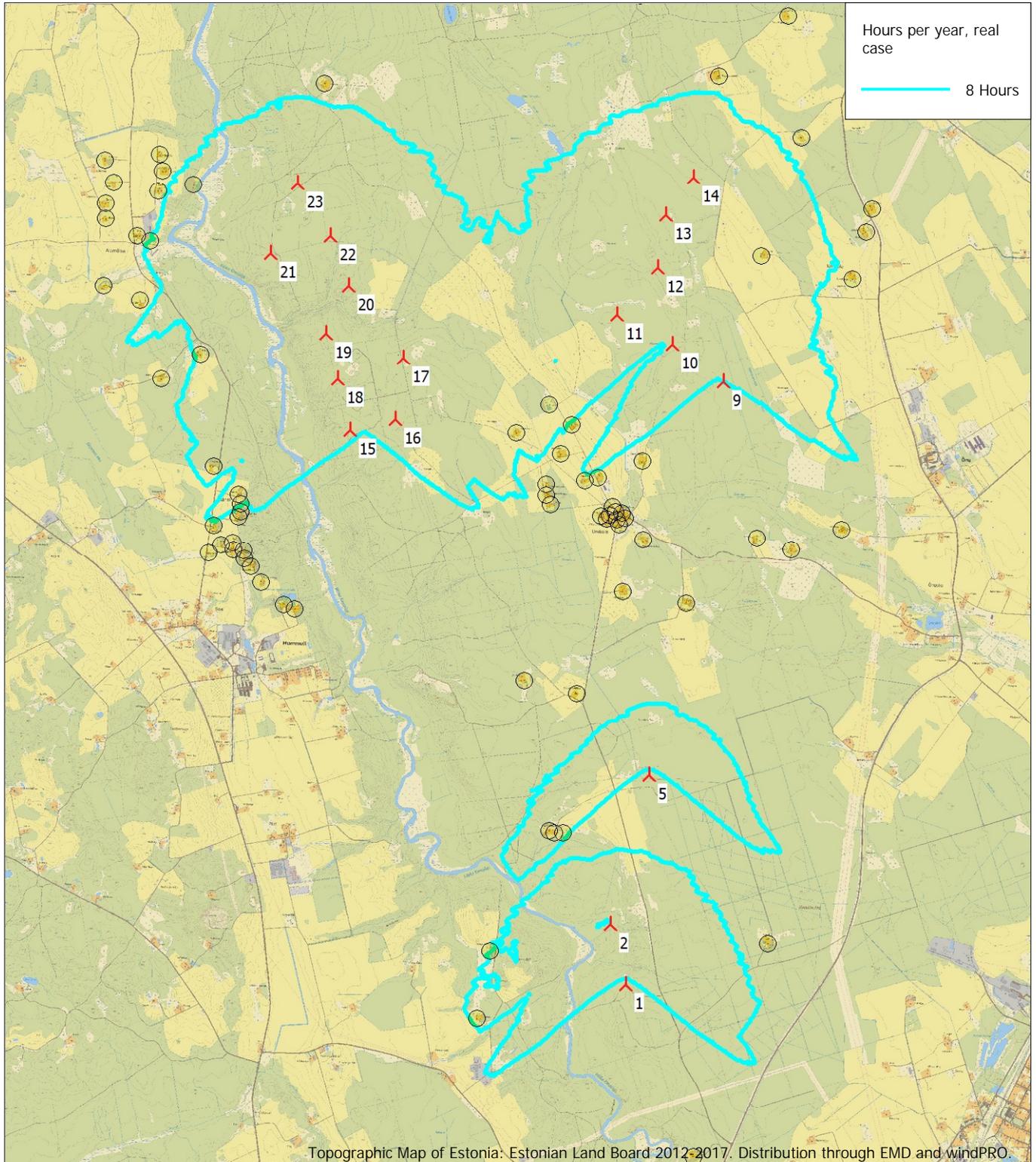
Calculation: Varjutus 18 tuulikut D180m H180m



WTGs

## SHADOW - Map

Calculation: Varjutus 18 tuulikut D180m H180m



Map: Estonian Topographic Map, Print scale 1:60 000, Map center Estonian Lambert L-EST97-EST97 (EE) East: 624 780 North: 6 421 280  
New WTG      Shadow receptor  
Flicker map level: Height Contours: CONTOURLINE\_ONLINEDATA\_0.wpo (1)  
Time step: 3 minutes, Day step: 7 days, Map resolution: 20 m, Visibility resolution: 10 m, Eye height: 1,5 m