

SHADOW - Main Result

Calculation: Vestas V162 - Worst & Real Case CUMULATIVE

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 time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
512	408	421	308	369	814	801	858	1 132	977	984	664	8 248

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:

DHM: DTM - Terrain model

Receptor grid resolution: 1,0 m

Topographic shadow included in calculation

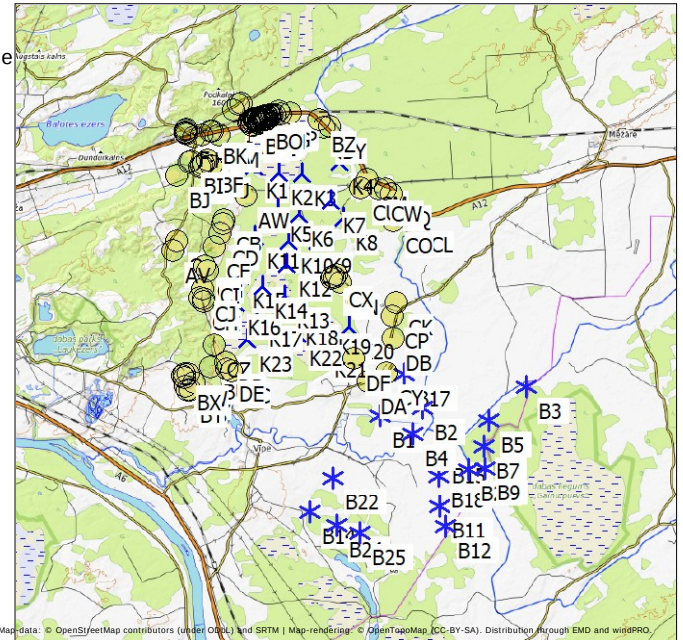
All coordinates are in

Geo [deg]-WGS84

WTGs

	Longitude	Latitude	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
					Valid	Manufact.					Calculation distance [m]	RPM [RPM]
1	26,133687° E	56,495255° N	92,4	K20	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
2	26,122079° E	56,490850° N	90,8	K21	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
3	26,124174° E	56,496394° N	91,0	K19	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
4	26,109636° E	56,498504° N	90,7	K18	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
5	26,111253° E	56,493739° N	90,3	K22	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
6	26,092987° E	56,533585° N	92,2	K1	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
7	26,131467° E	56,521036° N	92,6	K8	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
8	26,093765° E	56,498252° N	90,2	K17	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
9	26,103142° E	56,523214° N	92,5	K5	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
10	26,120254° E	56,515533° N	96,3	K9	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
11	26,093276° E	56,516918° N	93,0	K11	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
12	26,106853° E	56,510195° N	91,2	K12	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
13	26,089645° E	56,492430° N	90,5	K23	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
14	26,129593° E	56,534258° N	91,8	K4	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
15	26,113605° E	56,531660° N	92,4	K3	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
16	26,086963° E	56,507489° N	91,9	K15	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
17	26,106123° E	56,502711° N	90,6	K13	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
18	26,085094° E	56,501058° N	90,6	K16	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
19	26,096745° E	56,505013° N	90,7	K14	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
20	26,112453° E	56,521917° N	92,4	K6	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
21	26,103421° E	56,531927° N	91,9	K2	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
22	26,126045° E	56,525271° N	92,8	K7	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
23	26,107497° E	56,515765° N	94,0	K10	Yes	VESTAS	V162-6.2-6 200	6 200	162,0	149,0	2 042	-
24	26,147263° E	56,474202° N	86,6	B1	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
25	26,172826° E	56,452404° N	88,6	B11	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
26	26,175218° E	56,447698° N	88,8	B12	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
27	26,116912° E	56,451106° N	89,5	B14	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
28	26,172704° E	56,465904° N	87,5	B15	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
29	26,157352° E	56,484029° N	88,3	B17	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
30	26,172078° E	56,459777° N	87,4	B18	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
31	26,165173° E	56,476191° N	86,9	B2	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
32	26,126903° E	56,459445° N	88,5	B22	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
33	26,185332° E	56,461630° N	86,1	B23	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
34	26,128682° E	56,448011° N	89,6	B24	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
35	26,138586° E	56,446097° N	88,9	B25	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8
36	26,209970° E	56,481126° N	87,8	B3	Yes	NORDEX	N175/6.X-6 800	6 800	175,0	179,0	1 893	10,8

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Calculation: Vestas V162 - Worst & Real Case CUMULATIVE

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	Longitude	Latitude	Z	Row data/Description	WTG type				Rotor diameter [m]	Hub height [m]	Shadow data		
					Valid	Manufact.	Type-generator	Power, rated [kW]			Calculation distance [m]	RPM	
37	26,161081° E	56,469909° N	86,3	B4	Yes	NORDEX	N175/6.X-6	800	6 800	175,0	179,0	1 893	10,8
38	26,193913° E	56,473053° N	87,1	B5	Yes	NORDEX	N175/6.X-6	800	6 800	175,0	179,0	1 893	10,8
39	26,191707° E	56,466900° N	88,4	B7	Yes	NORDEX	N175/6.X-6	800	6 800	175,0	179,0	1 893	10,8
40	26,192580° E	56,461771° N	87,0	B9	Yes	NORDEX	N175/6.X-6	800	6 800	175,0	179,0	1 893	10,8

Shadow receptor-Input

No.	Name	Longitude	Latitude	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[m]	[°]		[m]
A	Mizuki	26,063286° E	56,541498° N	115,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	Lejas Sunas	26,063506° E	56,541370° N	114,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	Me ž sunas	26,063185° E	56,541958° N	117,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	Veca skola	26,064137° E	56,542003° N	115,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	Lejas Suni	26,067220° E	56,540460° N	107,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	Papeles	26,063771° E	56,540924° N	112,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	Vigriezes	26,087530° E	56,548261° N	102,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	Sunu Medilas	26,070454° E	56,540671° N	107,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	Kuku Pasile	26,084459° E	56,546804° N	104,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	Kuku Pasile 2	26,086284° E	56,548103° N	105,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	Bambari	26,071285° E	56,533849° N	106,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	Kukas Nr. 32	26,097933° E	56,545025° N	100,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	Zeltinkukas	26,097923° E	56,545071° N	100,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
N	Kukas Nr. 29	26,099665° E	56,545262° N	99,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
O	Lukapicku Bajari	26,059655° E	56,515709° N	136,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
P	Driksnas	26,097309° E	56,544914° N	100,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Q	Lei š u Sils	26,122977° E	56,542609° N	92,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
R	Silmalas	26,070518° E	56,533356° N	109,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
S	Purmalrasas 2	26,096086° E	56,544720° N	99,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
T	Rozes	26,096916° E	56,544879° N	100,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
U	Gobinas	26,069881° E	56,533175° N	109,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
V	Kukas Nr. 5A	26,108687° E	56,545953° N	93,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
W	Kukas Nr. 1	26,094393° E	56,544291° N	98,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
X	Kaplica	26,101901° E	56,545728° N	97,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Y	Kukas Nr. 8	26,096829° E	56,543964° N	97,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Z	Kukas Nr. 22	26,097396° E	56,545205° N	100,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AA	Vasjkova nams	26,096559° E	56,544498° N	99,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AB	Kukas Nr. 7	26,097318° E	56,544069° N	97,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AC	Kukas Nr. 28	26,100077° E	56,545512° N	98,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AD	Kukas Nr. 2	26,093910° E	56,544204° N	97,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AE	Kukas Nr. 33	26,095190° E	56,544610° N	99,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AF	Kukas Nr. 24	26,098771° E	56,545347° N	99,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AG	Kukas Nr. 27	26,099229° E	56,545399° N	99,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AH	Kukas Nr. 10	26,096024° E	56,543781° N	97,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AI	Kukas Nr. 9	26,096452° E	56,543877° N	97,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AJ	Kukas Nr. 3	26,093305° E	56,544298° N	97,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AK	1	26,090963° E	56,543704° N	97,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AL	1	26,091047° E	56,544021° N	97,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AM	Kuku Drava	26,077988° E	56,540746° N	102,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AN	Kukas Nr. 17	26,095025° E	56,544828° N	99,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AO	Maja 145,3. km	26,103352° E	56,546415° N	94,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AP	Kukas Nr. 6	26,104578° E	56,545778° N	96,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AQ	Kukas Nr. 23	26,098304° E	56,545304° N	99,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AR	Kukas Nr. 15	26,093682° E	56,544507° N	97,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AS	Kukas Nr. 16	26,094237° E	56,544642° N	98,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AT	Kukas Nr. 31	26,097683° E	56,544128° N	97,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AU	Dukernieki	26,074658° E	56,533321° N	109,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AV	Lukapickas	26,058230° E	56,513249° N	135,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AW	Purmalrasas	26,089573° E	56,526337° N	100,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AX	Kukas 11	26,095602° E	56,543691° N	97,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AY	Kukas Nr. 4	26,092904° E	56,544767° N	97,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
AZ	Kukas Nr. 34	26,091860° E	56,543045° N	95,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

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Calculation: Vestas V162 - Worst & Real Case CUMULATIVE

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No.	Name	Longitude	Latitude	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[m]	[°]		[m]
BA	Kuku Medilas	26,075079° E	56,541753° N	104,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BB	Kraukli	26,065152° E	56,534400° N	110,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BC	Kuku Balo ž i	26,098273° E	56,544306° N	97,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BD	Kukas Nr. 13	26,094800° E	56,543545° N	96,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BE	Kukas Nr. 12	26,095264° E	56,543601° N	96,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BF	Kartupnieki	26,073040° E	56,534828° N	105,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BG	Kukas Nr. 30	26,100708° E	56,545660° N	97,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BH	Zeltinkukas 1	26,098768° E	56,545101° N	99,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BI	Mednieki	26,065620° E	56,534715° N	109,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BJ	O š lejas	26,059760° E	56,531276° N	111,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BK	Kraces	26,074410° E	56,541680° N	105,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BL	Kukas Nr. 5	26,092328° E	56,544483° N	97,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BM	Jani š i	26,096074° E	56,545089° N	99,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BN	Kukas Nr. 36	26,092574° E	56,544009° N	96,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BO	Kukas Nr. 20	26,096859° E	56,545176° N	100,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BP	Speldzinu Ozolini	26,067071° E	56,482035° N	105,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BQ	Bisenieki 2	26,063230° E	56,480993° N	104,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BR	Dujas	26,062426° E	56,483614° N	104,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BS	Malini	26,065318° E	56,480229° N	109,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BT	Speldzinās	26,064354° E	56,480104° N	109,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BU	Virzinas	26,074364° E	56,485874° N	104,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BV	Lici š i	26,064859° E	56,484163° N	103,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BW	Priednieku Bisenieki	26,063061° E	56,484142° N	106,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BX	Bisenieki	26,062834° E	56,483109° N	103,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BY	Lei š u Sils	26,125444° E	56,542875° N	92,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
BZ	Lei š usils	26,121034° E	56,544456° N	94,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CA	Strazdi	26,079632° E	56,519765° N	106,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CB	Radini	26,079889° E	56,520588° N	108,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CC	Kreslini	26,071224° E	56,501171° N	107,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CD	Sili	26,078392° E	56,517462° N	105,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CE	Skujenieki	26,071168° E	56,502014° N	107,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CF	Salmini	26,075652° E	56,514176° N	109,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CG	Senci	26,072043° E	56,509743° N	111,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CH	Pakalni	26,069473° E	56,502185° N	111,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CI	Skalbes	26,072883° E	56,508558° N	110,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CJ	Kastani	26,070978° E	56,504189° N	108,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CK	Kvie š i	26,154401° E	56,500923° N	90,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CL	Pukulejas	26,163466° E	56,520588° N	91,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CM	Celinieki	26,141552° E	56,530263° N	91,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CN	Purvini	26,130133° E	56,505780° N	94,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CO	Salenieki	26,152954° E	56,520418° N	93,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CP	Ogu Purvs	26,152484° E	56,497834° N	90,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CQ	Me ž a Papuli	26,151833° E	56,526776° N	90,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CR	Noras	26,126508° E	56,506629° N	96,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CS	Me ž mali	26,126691° E	56,507313° N	97,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CT	Kurani	26,127398° E	56,506989° N	97,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CU	Berzkalni	26,138739° E	56,528258° N	92,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CV	Saulcerini	26,149626° E	56,528094° N	93,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CW	Airites	26,146614° E	56,528054° N	93,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CX	Lejnieki	26,128573° E	56,507638° N	96,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CY	Vipmali	26,149895° E	56,484226° N	91,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
CZ	Celmalas	26,076176° E	56,490952° N	108,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DA	Kalna Galvani	26,142426° E	56,482217° N	98,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DB	Su š i	26,153079° E	56,492558° N	90,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DC	Strautlejas	26,083178° E	56,484852° N	97,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DD	Irgeni	26,080875° E	56,486825° N	98,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DE	Alejas	26,081081° E	56,485255° N	101,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
DF	Galvani	26,135915° E	56,487671° N	95,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

SHADOW - Main Result

Calculation: Vestas V162 - Worst & Real Case CUMULATIVE

Calculation Results

Shadow receptor

No.	Name	Shadow, worst case			Shadow, expected values
		Shadow hours	Shadow days	Max shadow	Shadow hours
		per year [h/year]	per year [days/year]	hours per day [h/day]	per year [h/year]
A	Mizuki	3:59	21	0:18	0:37
B	Lejas Sunas	4:09	22	0:18	0:38
C	Me ž sunas	0:00	0	0:00	0:00
D	Veca skola	4:11	22	0:18	0:38
E	Lejas Suni	6:32	27	0:22	1:01
F	Papeles	4:23	23	0:18	0:41
G	Vigriezes	0:00	0	0:00	0:00
H	Sunu Medilas	8:52	32	0:24	1:22
I	Kuku Pasile	14:42	51	0:20	0:56
J	Kuku Pasile 2	0:00	0	0:00	0:00
K	Bambari	16:18	50	0:28	4:14
L	Kukas Nr. 32	22:59	53	0:40	1:24
M	Zeltinkukas	22:16	53	0:39	1:22
N	Kukas Nr. 29	21:28	43	0:43	1:16
O	Lukapicku Bajari	3:49	22	0:17	0:35
P	Driksnas	24:02	57	0:39	1:29
Q	Lei š u Sils	80:20	94	1:09	5:28
R	Silmalas	15:22	51	0:28	4:04
S	Purmalrasas 2	23:42	64	0:34	1:31
T	Rozes	23:46	59	0:36	1:29
U	Gobinas	10:42	34	0:27	2:54
V	Kukas Nr. 5A	32:45	88	0:31	2:15
W	Kukas Nr. 1	28:40	74	0:41	1:49
X	Kaplica	16:11	36	0:38	0:56
Y	Kukas Nr. 8	39:23	69	0:55	2:29
Z	Kukas Nr. 22	20:11	54	0:34	1:15
AA	Vasjkova nams	28:13	64	0:42	1:47
AB	Kukas Nr. 7	38:29	66	0:55	2:25
AC	Kukas Nr. 28	18:17	39	0:40	1:04
AD	Kukas Nr. 2	30:38	76	0:44	1:57
AE	Kukas Nr. 33	24:09	68	0:34	1:32
AF	Kukas Nr. 24	19:17	47	0:38	1:09
AG	Kukas Nr. 27	19:02	44	0:39	1:07
AH	Kukas Nr. 10	40:03	73	0:50	2:33
AI	Kukas Nr. 9	39:47	71	0:53	2:31
AJ	Kukas Nr. 3	29:25	77	0:43	1:52
AK	1	43:38	89	0:54	2:51
AL	1	38:00	86	0:50	2:27
AM	Kuku Drava	26:43	55	0:48	3:06
AN	Kukas Nr. 17	20:47	67	0:27	1:21
AO	Maja 145,3. km	10:28	36	0:22	0:37
AP	Kukas Nr. 6	24:21	78	0:26	1:43
AQ	Kukas Nr. 23	19:27	49	0:37	1:11
AR	Kukas Nr. 15	25:14	74	0:36	1:36
AS	Kukas Nr. 16	22:38	71	0:32	1:27
AT	Kukas Nr. 31	38:01	64	0:56	2:23
AU	Dukernieki	24:18	63	0:33	6:34
AV	Lukapickas	3:44	21	0:18	0:41
AW	Purmalrasas	106:17	233	0:52	20:26
AX	Kukas 11	40:56	76	0:52	2:37
AY	Kukas Nr. 4	22:05	75	0:31	1:25
AZ	Kukas Nr. 34	56:04	92	1:02	3:44
BA	Kuku Medilas	13:55	42	0:27	1:27
BB	Kraukli	6:21	26	0:22	1:35
BC	Kuku Balo ž i	35:09	60	0:50	2:12
BD	Kukas Nr. 13	43:17	80	0:55	2:46
BE	Kukas Nr. 12	42:19	78	0:54	2:43
BF	Kartupnieki	17:11	48	0:31	4:15
BG	Kukas Nr. 30	17:04	34	0:39	0:59
BH	Zeltinkukas 1	22:51	49	0:42	1:23
BI	Mednieki	6:41	27	0:22	1:39
BJ	O š lejas	0:00	0	0:00	0:00

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SHADOW - Main Result

Calculation: Vestas V162 - Worst & Real Case CUMULATIVE

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No.	Name	Shadow, worst case		Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
BK	Kraces	12:51	40	0:27	1:26
BL	Kukas Nr. 5	27:33	79	0:40	1:45
BM	Jani š i	19:20	60	0:22	1:16
BN	Kukas Nr. 36	35:50	82	0:49	2:17
BO	Kukas Nr. 20	19:56	57	0:30	1:16
BP	Speldzinu Ozolini	5:40	36	0:14	1:47
BQ	Bisenieki 2	0:00	0	0:00	0:00
BR	Dujas	9:29	42	0:20	2:58
BS	Malini	0:00	0	0:00	0:00
BT	Speldzinas	0:00	0	0:00	0:00
BU	Virzinas	17:37	48	0:30	5:34
BV	Lici š i	14:15	57	0:23	4:28
BW	Priednieku Bisenieki	9:43	42	0:21	3:03
BX	Bisenieki	11:34	52	0:20	3:38
BY	Lei š u Sils	72:35	98	1:09	4:54
BZ	Lei š usils	48:45	70	0:52	3:13
CA	Strazdi	68:59	180	1:01	13:17
CB	Radini	63:12	190	1:00	12:19
CC	Kreslini	90:01	207	0:44	23:18
CD	Sili	86:44	197	0:48	14:50
CE	Skujenieki	100:36	231	0:43	25:52
CF	Salmini	83:56	215	1:01	15:49
CG	Senci	89:34	217	0:51	17:07
CH	Pakalni	87:35	232	0:39	22:51
CI	Skalbes	95:26	205	0:57	18:30
CJ	Kastani	83:20	212	0:40	19:11
CK	Kvie š i	17:12	54	0:26	3:03
CL	Pukulejas	5:02	24	0:19	1:21
CM	Celinieki	111:16	221	0:46	21:54
CN	Purvini	99:06	228	1:03	14:17
CO	Salenieki	22:38	72	0:28	6:33
CP	Ogu Purvs	28:47	82	0:45	6:14
CQ	Me ž a Papuli	47:05	144	0:27	12:24
CR	Noras	100:21	234	1:14	14:49
CS	Me ž mali	90:04	245	0:58	15:25
CT	Kurani	93:53	246	1:05	15:23
CU	Berzkalni	117:42	197	1:04	15:26
CV	Saulcerini	55:41	159	0:28	14:08
CW	Airites	64:11	150	0:33	15:06
CX	Lejnieki	87:50	252	0:40	16:53
CY	Vipmali	246:10	268	1:45	61:55
CZ	Celmalas	60:56	127	0:45	18:46
DA	Kalna Galvani	143:08	246	1:09	24:35
DB	Su š i	77:58	157	0:44	10:43
DC	Strautlejas	9:12	42	0:20	2:53
DD	Irgeni	6:02	28	0:19	1:52
DE	Alejas	0:00	0	0:00	0:00
DF	Galvani	108:18	190	0:52	28:39

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

No.	Name	Worst case [h/year]	Expected [h/year]
1	K20	76:31	13:09
2	K21	88:22	26:47
3	K19	69:58	7:54
4	K18	46:55	8:07
5	K22	66:31	11:07
6	K1	204:21	22:25
7	K8	124:24	14:47
8	K17	57:41	12:21
9	K5	66:13	17:24
10	K9	15:04	1:05

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SHADOW - Main Result

Calculation: Vestas V162 - Worst & Real Case CUMULATIVE

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No.	Name	Worst case [h/year]	Expected [h/year]
11	K11	164:07	38:29
12	K12	53:01	13:30
13	K23	108:19	26:33
14	K4	160:08	25:49
15	K3	151:19	16:54
16	K15	216:49	48:43
17	K13	27:59	5:41
18	K16	120:48	23:11
19	K14	84:32	14:48
20	K6	27:59	5:40
21	K2	147:55	18:45
22	K7	81:41	17:48
23	K10	61:22	14:18
24	B1	103:54	6:52
25	B11	0:00	0:00
26	B12	0:00	0:00
27	B14	0:00	0:00
28	B15	0:00	0:00
29	B17	283:02	73:38
30	B18	0:00	0:00
31	B2	33:05	4:13
32	B22	0:00	0:00
33	B23	0:00	0:00
34	B24	0:00	0:00
35	B25	0:00	0:00
36	B3	0:00	0:00
37	B4	27:12	1:49
38	B5	0:00	0:00
39	B7	0:00	0:00
40	B9	0:00	0:00

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 - Map

Calculation: Vestas V162 - Worst & Real Case CUMULATIVE

