

Uppdaterad 2023-02-28

SKUGGOR FRÅN VINDKRAFTVERK

Vid soligt och klart väder uppstår svepande skuggor från vindkraftverkets rotorblad. Hur långt bort skuggorna uppfattas beror på vindkraftverkens totalhöjd och landskapets utseende och topografi.

Det är möjligt att uppfatta skuggor från vindkraftverk på upp till cirka tre kilometers avstånd under ett par minuter vid tidpunkter då solen står lågt. Avstånd gör att skuggorna tunnas ut och tappar sin skärpa, på långt avstånd uppfattas skuggorna endast som diffusa ljusförändringar.

Skuggor från vindparken vid Östavall

En skuggberäkning har genomförts under 2022 utifrån exempellayouten i ansökan med 17 vindkraftverk med en totalhöjd på 290 meter. Beräkningen tar hänsyn till topografi och skog. Kartan redogör för den beräknade sannolika skuggtiden. I skuggberäkningen överskrids inga riktvärden för skuggtider vid bostäder runt Östavall.

Ansökt exempellayout har tagits fram med utgångspunkt att vindens resurser ska nyttjas på bästa sätt, med hänsyn till resultat från genomförda utredningar, yttranden från samrådet samt praxis och riktlinjer för påverkan på människor och miljö.

Om den slutliga layouten skulle medföra skuggor vid närliggande bostadshus som överskrider rekommenderade värden kommer vindkraftverken att utrustas med så kallad skuggstyrning. Tekniken innebär att vindkraftverket tillfälligt, under den tid som krävs, stängs av då skuggorna uppstår

vid närliggande bostäder. Detta säkerställer att skuggningen inte kommer att överskrida rekommenderade värden.

Kumulativ påverkan från skuggor

Flera vindparker inom ett område kan orsaka mer skuggbildning än en enskild vindpark.

Skuggberäkningen har tagit hänsyn till fyra närliggande vindparker med beviljat tillstånd eller under handläggning. I denna beräkning överskrids de teoretiska värdena vid en bostad öster om Björnberget. Bostaden påverkas inte av skuggeffekter från vindparken vid Östavall.

Riktvärden för skuggor från vindkraftverk

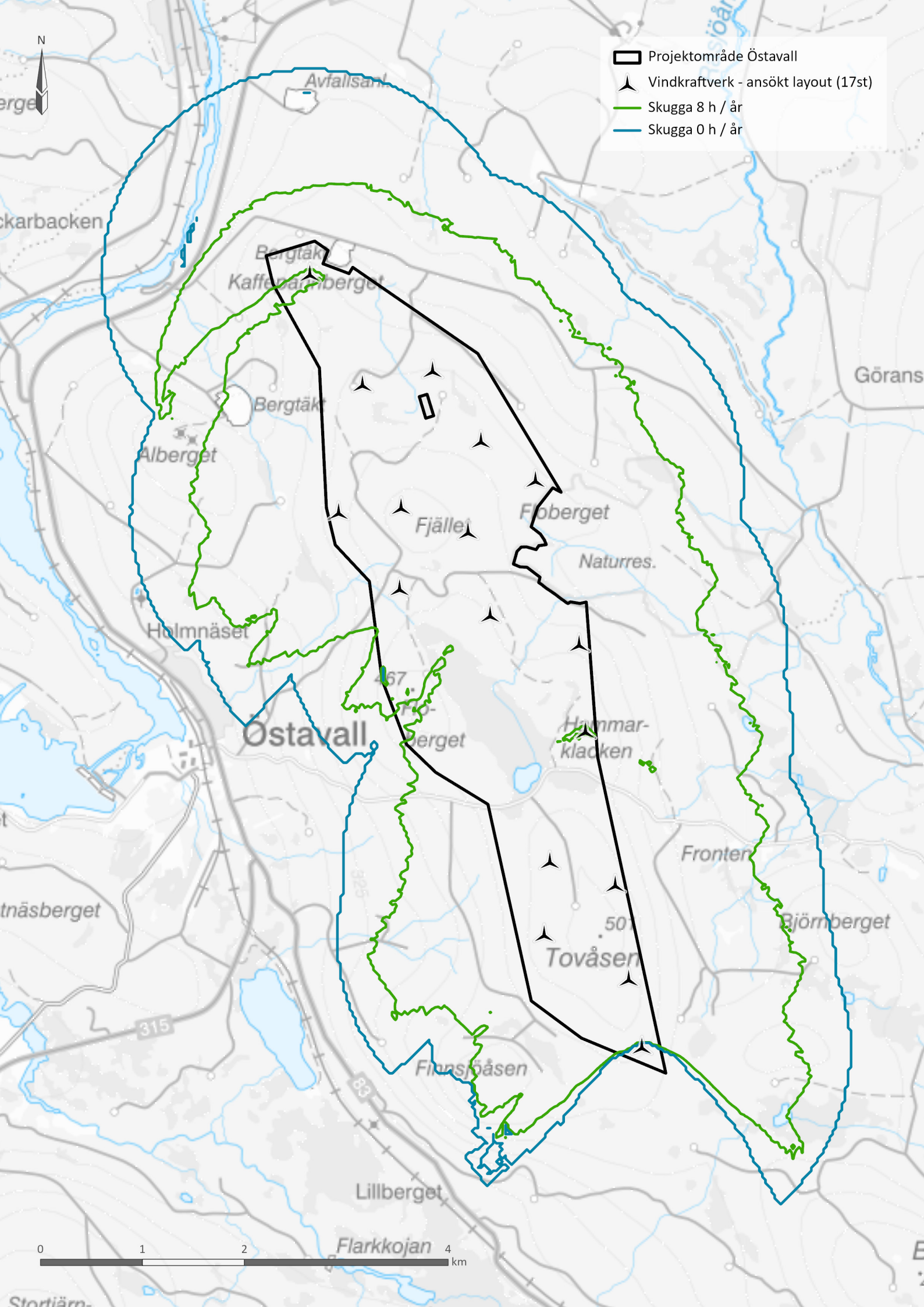
Enligt Boverkets rekommendationer för skuggor från vindkraftverk bör den faktiska skuggtiden inte överstiga åtta timmar per år eller 30 minuter per dag vid störningskänslig bebyggelse (Boverket 2009). För att göra en bedömning av påverkan från skuggor beräknas sannolik skuggtid.

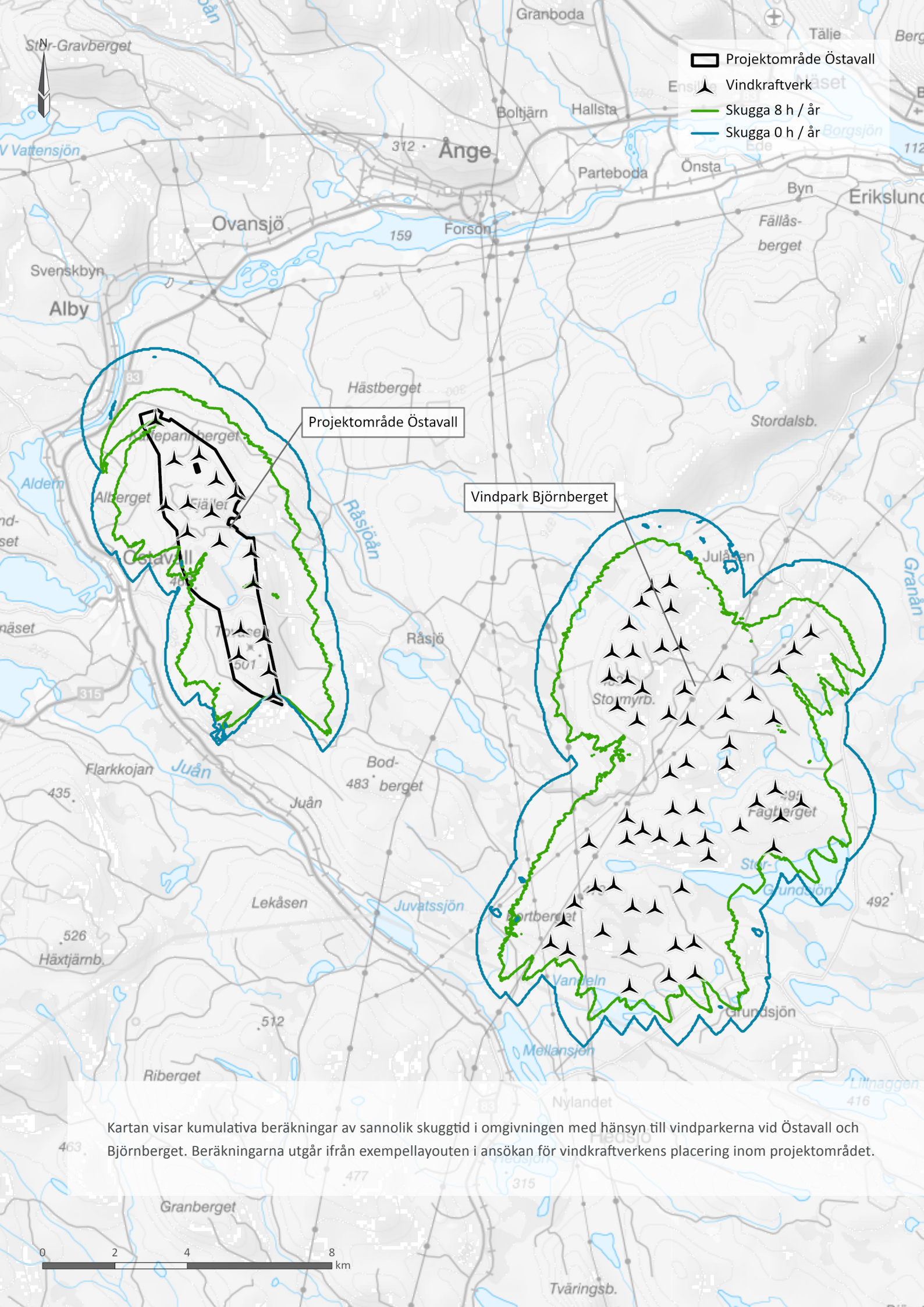
Beräkning av sannolik skuggtid

Den sannolika skuggtiden framställs baserat på:

- vindkraftverkens sannolikt högsta navhöjd och största rotordiameter
- områdets sannolikhet för solsken (med hjälp av solstatistik från SMHI)
- antagandet att vindkraftverken ständigt är i drift.









på uppdrag av

RWE



SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

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
0,99	2,42	4,91	6,90	7,93	8,42	8,25	6,66	4,30	2,63	1,35	0,62

Operational hours are calculated from WTGs in calculation and wind distribution:

EMD-WRF Europe+ (ERA5)_N62,451527_E015,620789

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
685	435	331	353	405	606	902	1 033	781	591	787	1 320	8 229

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

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: Swedish Elevation Model (GSD Höjddata, grid 50+ nh)

Area object(s) used in calculation:

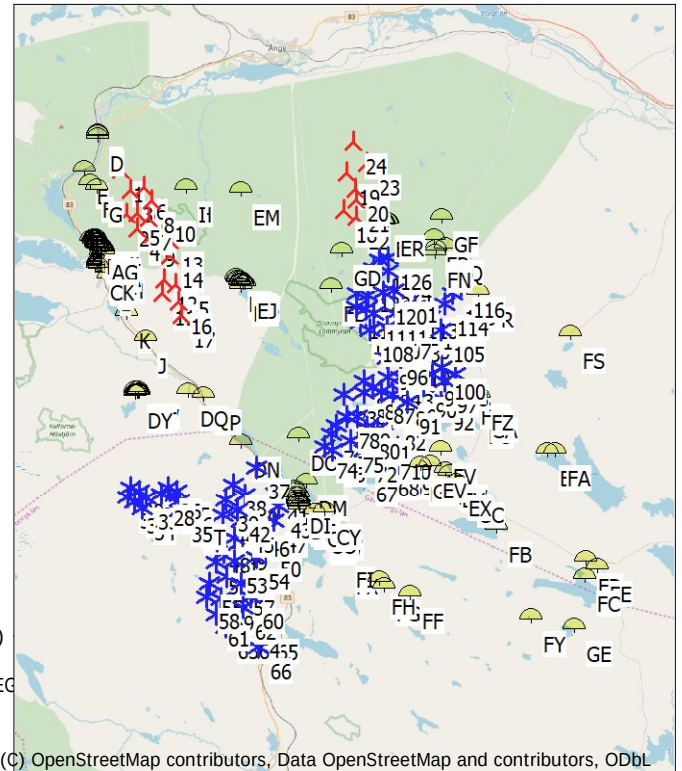
Area object (Heights a.g.l. for e.g. Forest (ORA tool) or ZVI obstructions): REC

Obstacles used in calculation

Receptor grid resolution: 1,0 m

All coordinates are in

Swedish UTM 33-SWREF99 (SE)



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:400 000
New WTG Existing WTG Shadow receptor

WTGs

	Easting	Northing	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]
			[m]									
1	525 720	6 926 275	369,9	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
2	526 001	6 923 928	395,1	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
3	526 237	6 925 186	395,0	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
4	526 600	6 923 176	418,4	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
5	526 615	6 923 977	442,0	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
6	526 925	6 925 325	383,2	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
7	527 273	6 923 735	422,5	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
8	527 398	6 924 630	396,9	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
9	527 489	6 922 916	430,3	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
10	527 934	6 924 244	397,4	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
11	528 019	6 919 769	476,0	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
12	528 074	6 920 487	455,6	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
13	528 362	6 922 627	430,8	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
14	528 424	6 921 772	459,8	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
15	528 716	6 920 257	461,3	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
16	528 849	6 919 330	465,3	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
17	528 978	6 918 662	442,6	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
18	537 603	6 924 260	449,7	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
19	537 737	6 926 240	396,2	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
20	538 136	6 925 398	470,2	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
21	538 225	6 924 840	504,0	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
22	538 240	6 923 925	427,1	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
23	538 786	6 926 724	446,9	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
24	538 041	6 927 903	370,1	Fiktiv RWE-200-10MW...	Yes	Fiktiv	RWE-200-10MW-10	10	200,0	190,0	2 035	8,8
25	528 853	6 909 277	490,6	VESTAS V117-4.2 420...	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
26	528 385	6 909 492	505,3	VESTAS V117-4.2 420...	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
27	528 482	6 908 932	491,6	VESTAS V117-4.2 420...	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
28	527 995	6 909 123	477,8	VESTAS V117-4.2 420...	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6

To be continued on next page...

SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

...continued from previous page

	Easting	Northing	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
			[m]									[RPM]
29	526 860	6 909 236	463,9	VESTAS V117-4.2 420... Yes	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
30	526 376	6 909 481	457,8	VESTAS V117-4.2 420... Yes	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
31	526 190	6 908 997	476,0	VESTAS V117-4.2 420... Yes	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
32	526 596	6 908 682	463,2	VESTAS V117-4.2 420... Yes	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
33	527 211	6 908 889	452,1	VESTAS V117-4.2 420... Yes	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
34	526 976	6 908 328	469,8	VESTAS V117-4.2 420... Yes	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
35	529 031	6 908 309	481,5	VESTAS V117-4.2 420... Yes	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
36	529 019	6 908 810	476,2	VESTAS V117-4.2 420... Yes	Yes	VESTAS	V117-4.2-4 200	4 200	117,0	140,0	1 732	13,6
37	533 067	6 910 566	350,0	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
38	531 836	6 909 662	431,5	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
39	531 442	6 908 869	477,2	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
40	532 484	6 909 090	433,2	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
41	534 122	6 909 224	362,7	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
42	532 038	6 908 337	441,7	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
43	534 266	6 908 528	412,5	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
44	531 276	6 908 000	448,3	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
45	532 258	6 907 705	443,3	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
46	533 048	6 907 548	371,9	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
47	533 989	6 907 734	393,6	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
48	531 028	6 906 669	407,6	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
49	531 910	6 906 819	404,4	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
50	533 736	6 906 502	359,9	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
51	530 944	6 905 523	474,3	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
52	531 350	6 906 023	440,6	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
53	531 919	6 905 614	436,6	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
54	533 093	6 905 830	376,4	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
55	530 600	6 904 401	412,2	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
56	531 503	6 904 746	438,5	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
57	532 284	6 904 406	417,9	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
58	530 446	6 903 644	397,0	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
59	531 229	6 903 628	391,5	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
60	532 795	6 903 703	374,7	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
61	530 978	6 902 732	390,0	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
62	532 435	6 903 149	381,0	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
63	531 459	6 902 104	397,2	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
64	532 594	6 902 099	384,0	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
65	533 598	6 902 087	354,2	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
66	533 303	6 901 072	392,7	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	205,0	2 034	8,8
67	538 823	6 910 542	398,6	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
68	539 909	6 910 836	433,5	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
69	540 634	6 910 923	463,6	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
70	540 601	6 911 773	444,9	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
71	540 096	6 911 700	444,8	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
72	538 798	6 911 593	428,9	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
73	537 107	6 911 567	428,8	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
74	536 641	6 911 763	432,3	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
75	538 078	6 912 095	456,2	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
76	537 003	6 912 377	475,2	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
77	537 300	6 912 883	448,0	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
78	537 876	6 913 328	460,9	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
79	538 386	6 913 377	458,9	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
80	538 904	6 912 778	452,2	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
81	539 522	6 912 743	444,1	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
82	540 268	6 913 306	416,6	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
83	537 706	6 914 560	436,7	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
84	538 747	6 914 656	461,4	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
85	539 183	6 914 921	481,3	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
86	538 753	6 915 250	451,9	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
87	539 655	6 914 728	478,0	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
88	540 268	6 914 608	460,0	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
89	540 912	6 914 681	471,6	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
90	541 877	6 915 011	463,6	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
91	541 012	6 914 181	463,9	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
92	542 806	6 914 430	422,0	Siemens Gamesa SG ... Yes	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8

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SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

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	Easting	Northing	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]
			[m]									
93	540 665	6 915 519	450,4	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
94	540 020	6 915 485	461,9	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
95	539 939	6 916 499	450,3	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
96	540 393	6 916 781	487,6	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
97	543 002	6 915 286	448,2	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
98	543 566	6 915 679	429,7	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
99	542 339	6 915 688	479,1	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
100	542 855	6 916 045	490,3	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
101	541 515	6 916 723	450,3	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
102	541 587	6 917 297	440,3	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
103	540 427	6 917 952	455,7	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
104	541 470	6 918 129	445,6	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
105	542 803	6 918 002	418,0	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
106	542 221	6 918 656	426,5	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
107	539 910	6 918 122	464,7	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
108	539 033	6 917 956	466,9	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
109	538 486	6 918 358	484,2	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
110	538 763	6 919 101	500,9	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
111	539 175	6 918 826	483,1	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
112	540 344	6 918 817	454,5	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
113	541 384	6 919 212	423,8	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
114	542 959	6 919 379	405,2	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
115	543 373	6 919 920	421,4	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
116	543 837	6 920 394	429,9	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
117	538 269	6 919 170	491,2	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
118	538 337	6 919 844	475,2	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
119	538 911	6 919 843	489,3	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
120	539 721	6 919 992	455,3	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
121	540 241	6 920 034	438,0	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
122	538 814	6 920 617	485,9	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
123	539 154	6 921 255	460,8	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
124	539 966	6 921 082	498,3	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
125	539 439	6 921 647	504,0	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8
126	539 932	6 921 776	483,0	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6 200	6 200	170,0	135,0	2 040	8,8

Shadow receptor-Input

No.	Easting	Northing	Z	Width	Height	Elevation	Degrees from	Slope of	Direction mode	Eye height
						a.g.l.	south cw	window		(ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]	[°]		[m]
A	524 525	6 928 088	223,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
B	524 551	6 928 004	226,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
C	524 549	6 927 876	230,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
D	524 544	6 927 914	229,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
E	523 798	6 926 190	239,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
F	524 118	6 925 494	275,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
G	524 451	6 925 224	288,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
H	529 206	6 925 204	293,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
I	529 227	6 925 221	291,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
J	527 151	6 917 205	279,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
K	526 096	6 918 533	294,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
L	525 118	6 920 514	262,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
M	524 967	6 920 904	263,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
N	524 970	6 920 875	263,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
O	524 985	6 920 843	263,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
P	524 998	6 920 816	262,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
Q	524 995	6 920 784	261,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
R	524 927	6 921 217	254,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
S	524 892	6 921 277	254,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
T	524 868	6 921 297	254,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
U	524 750	6 921 396	252,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
V	524 890	6 921 484	262,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
W	524 801	6 921 447	252,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0

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SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

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No.	Easting	Northing	Z	Width	Height	Elevation	Degrees from	Slope of	Direction mode	Eye height
						a.g.l.	south cw	window		(ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]	[°]		[m]
X	524 795	6 921 507	251,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
Y	524 776	6 921 670	259,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
Z	524 860	6 921 786	259,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AA	524 868	6 921 815	261,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AB	524 871	6 921 843	263,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AC	524 828	6 921 815	258,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AD	524 832	6 921 846	259,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AE	524 830	6 921 936	262,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AF	524 877	6 921 948	264,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AG	524 630	6 922 158	258,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AH	524 654	6 922 146	259,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AI	524 694	6 922 115	257,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AJ	524 724	6 922 082	261,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AK	524 772	6 922 073	267,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AL	524 800	6 922 025	264,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AM	524 679	6 922 053	257,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AN	524 685	6 922 025	257,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AO	524 547	6 922 103	248,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AP	524 570	6 922 126	250,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AQ	524 512	6 922 152	251,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AR	524 539	6 922 169	251,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AS	524 571	6 922 204	253,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AT	524 524	6 922 249	253,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AU	524 526	6 922 282	254,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AV	524 564	6 922 278	256,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AW	524 564	6 922 240	253,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AX	524 563	6 922 312	256,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AY	524 558	6 922 333	257,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
AZ	524 537	6 922 370	256,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BA	524 513	6 922 405	256,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BB	524 482	6 922 431	256,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BC	524 454	6 922 444	256,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BD	524 418	6 922 450	255,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BE	524 393	6 922 453	253,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BF	524 357	6 922 434	251,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BG	524 377	6 922 396	251,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BH	524 409	6 922 411	259,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BI	524 445	6 922 401	259,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BJ	524 479	6 922 379	256,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BK	524 494	6 922 348	255,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BL	524 462	6 922 324	255,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BM	524 425	6 922 301	251,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BN	524 411	6 922 332	252,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BO	524 445	6 922 268	253,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BP	524 481	6 922 294	254,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BQ	524 486	6 922 196	251,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BR	524 472	6 922 219	253,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BS	524 373	6 922 331	249,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BT	524 361	6 922 358	248,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BU	524 299	6 922 439	248,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BV	524 419	6 922 586	259,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BW	524 385	6 922 585	258,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BX	524 381	6 922 544	256,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BY	524 351	6 922 538	255,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
BZ	524 322	6 922 568	255,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CA	524 232	6 922 513	248,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CB	524 207	6 922 482	246,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CC	524 432	6 922 204	247,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CD	524 674	6 921 739	247,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CE	524 682	6 921 362	248,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CF	524 596	6 921 337	245,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CG	524 617	6 921 295	246,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CH	524 640	6 921 271	246,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CI	524 617	6 921 226	249,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0

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SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

...continued from previous page

No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Degrees from south cw	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]	[°]		[m]
CJ	524 590	6 921 135	249,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CK	524 563	6 921 081	249,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CL	524 639	6 921 053	250,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CM	524 836	6 921 140	252,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CN	536 333	6 907 718	320,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CO	536 335	6 907 685	320,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CP	536 390	6 907 753	319,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CQ	536 411	6 907 731	318,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CR	536 352	6 907 796	320,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CS	536 453	6 907 557	323,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CT	536 405	6 907 389	319,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CU	536 383	6 907 475	322,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CV	536 367	6 907 546	321,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CW	536 502	6 907 610	319,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CX	536 707	6 908 106	326,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CY	536 696	6 908 198	326,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
CZ	536 200	6 908 055	319,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DA	535 583	6 908 235	318,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DB	535 395	6 908 343	319,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DC	535 468	6 908 464	317,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DD	535 444	6 908 542	316,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DE	535 316	6 908 498	320,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DF	535 338	6 908 593	318,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DG	535 253	6 908 652	319,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DH	535 335	6 908 727	317,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DI	535 290	6 908 736	318,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DJ	535 167	6 909 253	318,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DK	535 227	6 909 013	322,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DL	535 118	6 909 317	320,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DM	535 730	6 909 665	319,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DN	532 272	6 911 826	319,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DO	535 275	6 912 145	351,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DP	530 204	6 914 264	299,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DQ	529 391	6 914 480	297,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DR	526 774	6 914 500	329,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DS	526 812	6 914 464	330,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DT	526 787	6 914 338	334,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DU	526 657	6 914 365	332,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DV	526 624	6 914 339	331,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DW	526 589	6 914 493	329,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DX	526 733	6 914 368	333,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DY	526 605	6 914 303	331,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
DZ	532 051	6 920 351	341,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EA	532 177	6 920 401	345,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EB	532 241	6 920 335	341,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EC	532 094	6 920 293	345,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
ED	532 063	6 920 251	342,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EE	532 122	6 920 216	340,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EF	531 909	6 920 481	354,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EG	531 955	6 920 448	351,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EH	532 136	6 920 031	328,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EI	532 159	6 920 045	330,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EJ	532 397	6 920 170	338,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EK	532 270	6 920 172	339,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EL	532 125	6 925 150	325,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EM	532 154	6 925 097	323,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EN	539 676	6 923 535	388,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EO	539 748	6 923 544	387,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EP	539 829	6 923 576	391,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EQ	539 863	6 923 569	389,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
ER	539 934	6 923 575	387,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
ES	529 681	6 907 857	416,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
ET	529 610	6 908 160	414,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EU	541 633	6 910 566	447,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0

To be continued on next page...

SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

...continued from previous page

No.	Easting	Northing	Z	Width	Height	Elevation	Degrees from	Slope of	Direction mode	Eye height
						a.g.l.	south cw	window		(ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]	[°]		[m]
EV	542 281	6 910 743	453,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EW	543 160	6 910 417	417,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EX	543 748	6 909 787	421,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EY	543 350	6 910 315	411,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
EZ	548 531	6 911 459	386,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FA	548 965	6 911 517	387,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FB	545 902	6 907 389	420,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FC	550 636	6 904 836	361,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FD	550 681	6 905 758	408,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FE	551 269	6 905 356	399,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FF	541 298	6 903 778	371,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FG	539 967	6 904 219	386,9	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FH	539 691	6 904 522	382,8	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FI	537 756	6 905 979	326,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FJ	536 554	6 907 623	317,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FK	535 315	6 908 987	316,6	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FL	536 905	6 920 038	400,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FM	539 745	6 923 536	386,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FN	542 443	6 921 923	482,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FO	542 468	6 922 198	478,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FP	542 373	6 922 735	438,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FQ	542 998	6 922 299	415,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FR	544 737	6 919 865	396,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FS	549 669	6 917 742	396,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FT	544 598	6 914 692	403,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FU	544 707	6 913 741	404,5	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FV	542 862	6 911 577	413,2	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FW	544 336	6 914 667	412,0	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FX	537 823	6 905 590	328,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FY	547 788	6 902 681	431,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
FZ	544 907	6 914 416	404,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
GA	544 863	6 914 000	402,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
GB	541 782	6 910 690	450,4	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
GC	544 207	6 909 466	439,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
GD	537 460	6 922 024	388,1	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
GE	550 097	6 902 173	422,7	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0
GF	542 784	6 923 827	361,3	5,0	5,0	2,0	0,0	0,0	Fixed direction	2,0

Calculation Results

Shadow receptor

No.	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]
A	0:00	0	0:00	0:00
B	0:00	0	0:00	0:00
C	0:00	0	0:00	0:00
D	0:00	0	0:00	0:00
E	0:00	0	0:00	0:00
F	0:00	0	0:00	0:00
G	24:41	73	0:27	5:44
H	0:00	0	0:00	0:00
I	0:00	0	0:00	0:00
J	0:00	0	0:00	0:00
K	0:00	0	0:00	0:00
L	0:00	0	0:00	0:00
M	0:00	0	0:00	0:00
N	0:00	0	0:00	0:00
O	0:00	0	0:00	0:00
P	0:00	0	0:00	0:00
Q	0:00	0	0:00	0:00
R	0:00	0	0:00	0:00
S	0:00	0	0:00	0:00

To be continued on next page...

Project:

220830_Östavall_Långåsen_SELLEE

Licensed user:

SWECO Energuide AB
 Gjörwellsgatan 22, Box 34004
 SE-100 26 Stockholm
 +46 8 695 60 00
 Leon Lee / leon.lee@sweco.se
 Calculated:
 2022-09-10 16:39/3.5.584

SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

...continued from previous page

No.	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]
T	0:00	0	0:00	0:00
U	0:00	0	0:00	0:00
V	0:00	0	0:00	0:00
W	0:00	0	0:00	0:00
X	0:00	0	0:00	0:00
Y	0:00	0	0:00	0:00
Z	0:00	0	0:00	0:00
AA	0:00	0	0:00	0:00
AB	0:00	0	0:00	0:00
AC	0:00	0	0:00	0:00
AD	0:00	0	0:00	0:00
AE	0:00	0	0:00	0:00
AF	0:00	0	0:00	0:00
AG	0:00	0	0:00	0:00
AH	0:00	0	0:00	0:00
AI	0:00	0	0:00	0:00
AJ	0:00	0	0:00	0:00
AK	0:00	0	0:00	0:00
AL	0:00	0	0:00	0:00
AM	0:00	0	0:00	0:00
AN	0:00	0	0:00	0:00
AO	0:00	0	0:00	0:00
AP	0:00	0	0:00	0:00
AQ	0:00	0	0:00	0:00
AR	0:00	0	0:00	0:00
AS	0:00	0	0:00	0:00
AT	0:00	0	0:00	0:00
AU	0:00	0	0:00	0:00
AV	0:00	0	0:00	0:00
AW	0:00	0	0:00	0:00
AX	0:00	0	0:00	0:00
AY	0:00	0	0:00	0:00
AZ	0:00	0	0:00	0:00
BA	0:00	0	0:00	0:00
BB	0:00	0	0:00	0:00
BC	0:00	0	0:00	0:00
BD	0:00	0	0:00	0:00
BE	0:00	0	0:00	0:00
BF	0:00	0	0:00	0:00
BG	0:00	0	0:00	0:00
BH	0:00	0	0:00	0:00
BI	0:00	0	0:00	0:00
BJ	0:00	0	0:00	0:00
BK	0:00	0	0:00	0:00
BL	0:00	0	0:00	0:00
BM	0:00	0	0:00	0:00
BN	0:00	0	0:00	0:00
BO	0:00	0	0:00	0:00
BP	0:00	0	0:00	0:00
BQ	0:00	0	0:00	0:00
BR	0:00	0	0:00	0:00
BS	0:00	0	0:00	0:00
BT	0:00	0	0:00	0:00
BU	0:00	0	0:00	0:00
BV	0:00	0	0:00	0:00
BW	0:00	0	0:00	0:00
BX	0:00	0	0:00	0:00
BY	0:00	0	0:00	0:00
BZ	0:00	0	0:00	0:00
CA	0:00	0	0:00	0:00
CB	0:00	0	0:00	0:00
CC	0:00	0	0:00	0:00
CD	0:00	0	0:00	0:00

To be continued on next page...

SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

...continued from previous page

No.	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]
CE	0:00	0	0:00	0:00
CF	0:00	0	0:00	0:00
CG	0:00	0	0:00	0:00
CH	0:00	0	0:00	0:00
CI	0:00	0	0:00	0:00
CJ	0:00	0	0:00	0:00
CK	0:00	0	0:00	0:00
CL	0:00	0	0:00	0:00
CM	0:00	0	0:00	0:00
CN	0:00	0	0:00	0:00
CO	0:00	0	0:00	0:00
CP	0:00	0	0:00	0:00
CQ	0:00	0	0:00	0:00
CR	0:00	0	0:00	0:00
CS	0:00	0	0:00	0:00
CT	0:00	0	0:00	0:00
CU	0:00	0	0:00	0:00
CV	0:00	0	0:00	0:00
CW	0:00	0	0:00	0:00
CX	0:00	0	0:00	0:00
CY	0:00	0	0:00	0:00
CZ	0:00	0	0:00	0:00
DA	0:00	0	0:00	0:00
DB	0:00	0	0:00	0:00
DC	0:00	0	0:00	0:00
DD	0:00	0	0:00	0:00
DE	0:00	0	0:00	0:00
DF	0:00	0	0:00	0:00
DG	0:00	0	0:00	0:00
DH	0:00	0	0:00	0:00
DI	0:00	0	0:00	0:00
DJ	0:00	0	0:00	0:00
DK	0:00	0	0:00	0:00
DL	0:00	0	0:00	0:00
DM	0:00	0	0:00	0:00
DN	0:00	0	0:00	0:00
DO	0:00	0	0:00	0:00
DP	0:00	0	0:00	0:00
DQ	0:00	0	0:00	0:00
DR	0:00	0	0:00	0:00
DS	0:00	0	0:00	0:00
DT	0:00	0	0:00	0:00
DU	0:00	0	0:00	0:00
DV	0:00	0	0:00	0:00
DW	0:00	0	0:00	0:00
DX	0:00	0	0:00	0:00
DY	0:00	0	0:00	0:00
DZ	0:00	0	0:00	0:00
EA	0:00	0	0:00	0:00
EB	0:00	0	0:00	0:00
EC	0:00	0	0:00	0:00
ED	0:00	0	0:00	0:00
EE	0:00	0	0:00	0:00
EF	0:00	0	0:00	0:00
EG	0:00	0	0:00	0:00
EH	0:00	0	0:00	0:00
EI	0:00	0	0:00	0:00
EJ	0:00	0	0:00	0:00
EK	0:00	0	0:00	0:00
EL	0:00	0	0:00	0:00
EM	0:00	0	0:00	0:00
EN	0:00	0	0:00	0:00
EO	0:00	0	0:00	0:00

To be continued on next page...

SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

...continued from previous page

No.	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]
EP	0:00	0	0:00	0:00
EQ	0:00	0	0:00	0:00
ER	0:00	0	0:00	0:00
ES	0:00	0	0:00	0:00
ET	0:00	0	0:00	0:00
EU	0:00	0	0:00	0:00
EV	0:00	0	0:00	0:00
EW	0:00	0	0:00	0:00
EX	0:00	0	0:00	0:00
EY	0:00	0	0:00	0:00
EZ	0:00	0	0:00	0:00
FA	0:00	0	0:00	0:00
FB	0:00	0	0:00	0:00
FC	0:00	0	0:00	0:00
FD	0:00	0	0:00	0:00
FE	0:00	0	0:00	0:00
FF	0:00	0	0:00	0:00
FG	0:00	0	0:00	0:00
FH	0:00	0	0:00	0:00
FI	0:00	0	0:00	0:00
FJ	0:00	0	0:00	0:00
FK	0:00	0	0:00	0:00
FL	0:00	0	0:00	0:00
FM	0:00	0	0:00	0:00
FN	0:00	0	0:00	0:00
FO	0:00	0	0:00	0:00
FP	0:00	0	0:00	0:00
FQ	0:00	0	0:00	0:00
FR	0:00	0	0:00	0:00
FS	0:00	0	0:00	0:00
FT	0:00	0	0:00	0:00
FU	0:00	0	0:00	0:00
FV	0:00	0	0:00	0:00
FW	0:00	0	0:00	0:00
FX	0:00	0	0:00	0:00
FY	0:00	0	0:00	0:00
FZ	0:00	0	0:00	0:00
GA	0:00	0	0:00	0:00
GB	22:40	50	0:35	5:43
GC	0:00	0	0:00	0:00
GD	0:00	0	0:00	0:00
GE	0:00	0	0:00	0:00
GF	0:00	0	0:00	0:00

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

No.	Name	Worst case [h/year]	Expected [h/year]
1	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (18)	12:55	2:57
2	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (19)	0:00	0:00
3	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (20)	11:46	2:46
4	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (21)	0:00	0:00
5	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (22)	0:00	0:00
6	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (23)	0:00	0:00
7	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (24)	0:00	0:00
8	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (25)	0:00	0:00
9	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (26)	0:00	0:00
10	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (27)	0:00	0:00
11	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (28)	0:00	0:00
12	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (29)	0:00	0:00
13	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (30)	0:00	0:00
14	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (31)	0:00	0:00
15	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (32)	0:00	0:00

To be continued on next page...

SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

...continued from previous page

No.	Name	Worst case [h/year]	Expected [h/year]
16	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (33)	0:00	0:00
17	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (34)	0:00	0:00
18	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (35)	0:00	0:00
19	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (36)	0:00	0:00
20	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (37)	0:00	0:00
21	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (38)	0:00	0:00
22	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (39)	0:00	0:00
23	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (40)	0:00	0:00
24	Fiktiv RWE-200-10MW 10 200.0 !O! hub: 190,0 m (TOT: 290,0 m) (41)	0:00	0:00
25	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (1)	0:00	0:00
26	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (2)	0:00	0:00
27	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (3)	0:00	0:00
28	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (4)	0:00	0:00
29	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (5)	0:00	0:00
30	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (6)	0:00	0:00
31	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (7)	0:00	0:00
32	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (8)	0:00	0:00
33	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (9)	0:00	0:00
34	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (10)	0:00	0:00
35	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (11)	0:00	0:00
36	VESTAS V117-4.2 4200 117.0 !O! hub: 140,0 m (TOT: 198,5 m) (12)	0:00	0:00
37	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (25)	0:00	0:00
38	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (26)	0:00	0:00
39	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (27)	0:00	0:00
40	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (28)	0:00	0:00
41	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (29)	0:00	0:00
42	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (30)	0:00	0:00
43	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (31)	0:00	0:00
44	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (32)	0:00	0:00
45	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (33)	0:00	0:00
46	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (34)	0:00	0:00
47	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (35)	0:00	0:00
48	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (36)	0:00	0:00
49	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (37)	0:00	0:00
50	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (38)	0:00	0:00
51	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (39)	0:00	0:00
52	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (40)	0:00	0:00
53	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (41)	0:00	0:00
54	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (42)	0:00	0:00
55	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (43)	0:00	0:00
56	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (44)	0:00	0:00
57	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (45)	0:00	0:00
58	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (46)	0:00	0:00
59	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (47)	0:00	0:00
60	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (48)	0:00	0:00
61	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (49)	0:00	0:00
62	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (50)	0:00	0:00
63	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (51)	0:00	0:00
64	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (52)	0:00	0:00
65	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (53)	0:00	0:00
66	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 205,0 m (TOT: 290,0 m) (54)	0:00	0:00
67	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (227)	0:00	0:00
68	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (228)	0:00	0:00
69	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (229)	22:40	5:43
70	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (230)	0:00	0:00
71	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (231)	0:00	0:00
72	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (232)	0:00	0:00
73	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (233)	0:00	0:00
74	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (234)	0:00	0:00
75	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (235)	0:00	0:00
76	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (236)	0:00	0:00
77	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (237)	0:00	0:00
78	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (238)	0:00	0:00
79	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (239)	0:00	0:00
80	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (240)	0:00	0:00

To be continued on next page...

SHADOW - Main Result

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog

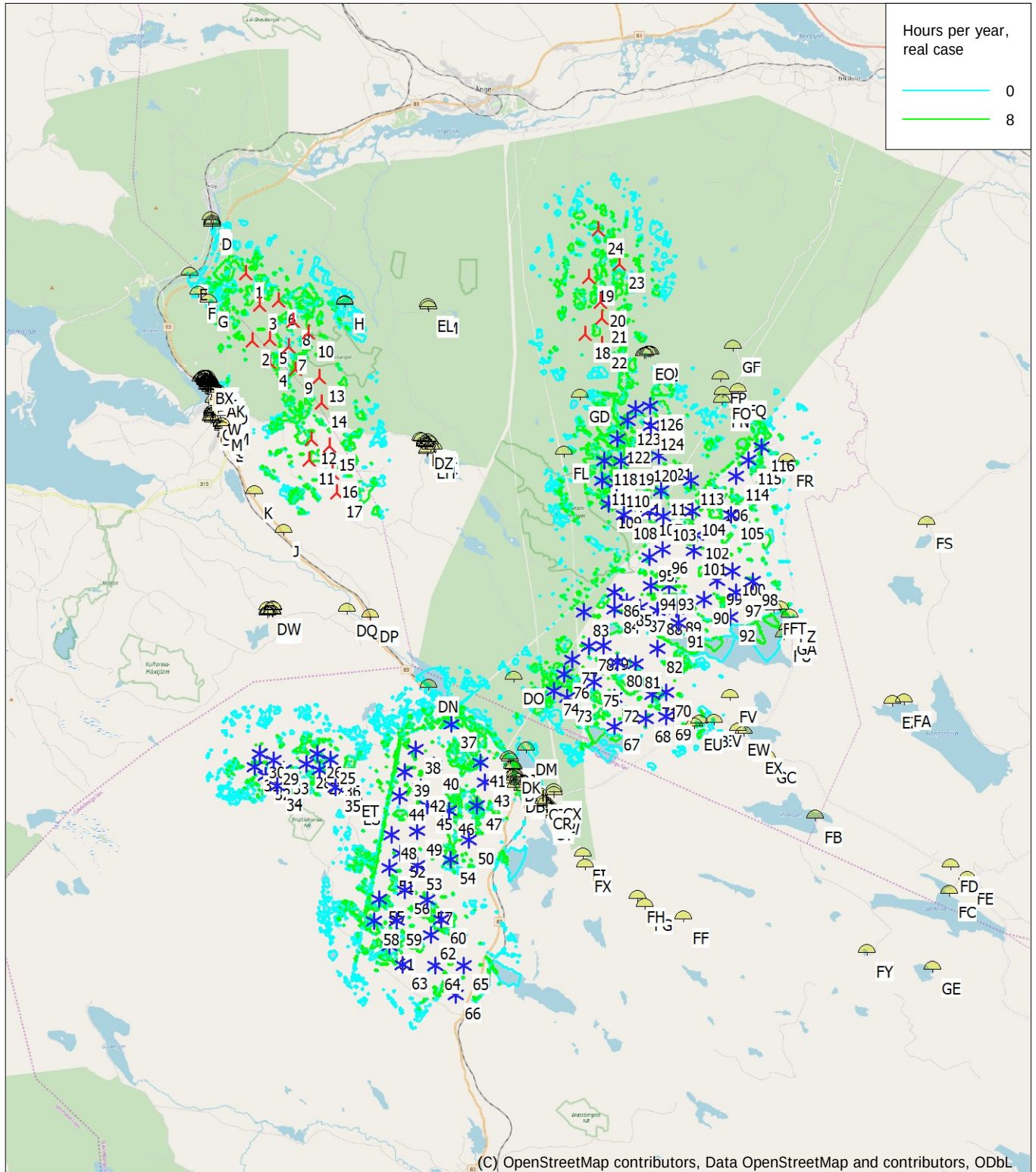
...continued from previous page

No.	Name	Worst case [h/year]	Expected [h/year]
81	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (241)	0:00	0:00
82	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (242)	0:00	0:00
83	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (243)	0:00	0:00
84	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (244)	0:00	0:00
85	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (245)	0:00	0:00
86	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (246)	0:00	0:00
87	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (247)	0:00	0:00
88	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (248)	0:00	0:00
89	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (249)	0:00	0:00
90	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (250)	0:00	0:00
91	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (251)	0:00	0:00
92	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (252)	0:00	0:00
93	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (253)	0:00	0:00
94	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (254)	0:00	0:00
95	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (255)	0:00	0:00
96	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (256)	0:00	0:00
97	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (257)	0:00	0:00
98	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (258)	0:00	0:00
99	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (259)	0:00	0:00
100	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (260)	0:00	0:00
101	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (261)	0:00	0:00
102	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (262)	0:00	0:00
103	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (263)	0:00	0:00
104	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (264)	0:00	0:00
105	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (265)	0:00	0:00
106	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (266)	0:00	0:00
107	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (267)	0:00	0:00
108	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (268)	0:00	0:00
109	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (269)	0:00	0:00
110	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (270)	0:00	0:00
111	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (271)	0:00	0:00
112	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (272)	0:00	0:00
113	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (273)	0:00	0:00
114	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (274)	0:00	0:00
115	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (275)	0:00	0:00
116	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (276)	0:00	0:00
117	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (277)	0:00	0:00
118	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (278)	0:00	0:00
119	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (279)	0:00	0:00
120	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (280)	0:00	0:00
121	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (281)	0:00	0:00
122	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (282)	0:00	0:00
123	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (283)	0:00	0:00
124	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (284)	0:00	0:00
125	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (285)	0:00	0:00
126	Siemens Gamesa SG 6.0-170 6200 170.0 !O! hub: 135,0 m (TOT: 220,0 m) (286)	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.

SHADOW - Map

Calculation: Skuggberäkning_ÖstavallOchNärliggandeprojekt_med_skog



Map: EMD OpenStreetMap , Print scale 1:200 000, Map center Swedish UTM 33-SWREF99 (SE) East: 535 196 North: 6 915 180
 New WTG Existing WTG Shadow receptor
 Flicker map level: Swedish Elevation Model (GSD Höjddata, grid 50+ nh) + Kundens höjddata 5m
 Time step: 4 minutes, Day step: 14 days, Map resolution: 30 m, Visibility resolution: 15 m, Eye height: 1,5 m