

Windturbine overzicht

Type	Vermogen[MW]	Rotordiameter[m]	Minimum aantal turbines	Maximum aantal turbines	Tandwielkast	Prestatiefactor - Cp[%]	Cut-in windspeed [m/s]	Rated windspeed[m/s]	Cut-out windspeed[m/s]	Beschikbaarheid
Britannia	10	150	35	38		-	-	-	-	Cancelled
ST10	10	164	35	38		-	-	-	-	Prototype
SeaTitan 10MW	10	190	35	38	Nee	-	-	-	-	Prototype
Siemens SWT-8.0-154	8	154	43	47	Nee	-	-	-	-	Prototype
Vestas V164 8.0MW	8	164	43	47	Ja	20.53	4	11	25	Beschikbaar
AD 8-180	8	180	43	47		-	3	12	30	Beschikbaar
Siemens SWT-7.0-154	7	154	49	54	Nee	-	3	13	25	Beschikbaar
S7.0-171	7	171.2	49	54		-	-	-	-	Prototype
Bard 6.5	6.5	122	53	58		-	-	-	-	Discontinued
6.2M126	6.15	126	56	61	Ja	14.10	3.5	14	30	Beschikbaar
6.2M152	6.15	152	56	61		16.56	3.5	11.5	30	Beschikbaar
SWT-6.0-120	6	120	57	63		-	-	-	-	Discontinued
UP6000-136	6	136	57	63		-	3.5	12	25	Beschikbaar
SCD 6.0MW	6	140	57	63		-	3	-	22	Beschikbaar
Haliade 150-6MW	6	150	57	63		-	3	-	25	Beschikbaar
Siemens SWT-6.0-154	6	154	57	63		-	4	13	25	Beschikbaar
SL6000/155	6	155	57	63	Ja	13.71	3.5	12	25	Beschikbaar
SeaTitan 5.5MW	5.5	140	63	69	Nee	-	-	-	-	Prototype
HQ5500/140	5.5	140	63	69		-	3.5	13	25	Beschikbaar
HTW5.2-127	5.2	127	66	73		-	-	-	-	Beschikbaar
Senvion 5M	5.075	126	68	74		-	-	-	-	Discontinued
AD 5-116(Voorheen: M5000-116)	5	116	69	76	Ja	11.39	3.5	12	25	Beschikbaar
M5000-116	5	116	69	76	Ja	-	3.5	12	25	Discontinued
HTW5.0-126	5	126	69	76		-	-	-	-	Beschikbaar
SL5000/126	5	126	69	76		12.61	3.5	12	25	Beschikbaar
HZ 127-5MW	5	127	69	76		-	-	-	-	Beschikbaar
AD 5-132	5	132	69	76		-	2.5	13.5	27	Beschikbaar
AD 5-135	5	135	69	76		-	3.5	11.4	30	Beschikbaar
H 151-5MW	5	151	69	76		-	-	-	-	Beschikbaar
E112/4500	4.5	114	76	84		-	-	-	-	Discontinued
GE 4.1-113	4.1	113	84	92		-	-	-	-	Beschikbaar
SWT-4.0-120	4	120	86	95		-	-	-	-	Beschikbaar
Siemens SWT-4.0-130	4	130	86	95	Ja	-	-	-	-	Beschikbaar
EN-4.0-136	4	136	86	95		-	-	-	-	Beschikbaar

Weibullverdeling

Windsnelheid[m/s]	Kans[%]	Tijd per jaar[h]
0	0.00	0
1	1.19	103.9903234
2	2.64	231.1057053
3	4.11	359.9923207
4	5.48	479.7022783
5	6.64	581.7440029
6	7.53	659.7870534
7	8.10	709.8995363
8	8.34	730.7062977
9	8.26	723.3128201
10	7.89	690.9717794
11	7.29	638.5380623
12	6.53	571.7982459
13	5.67	496.7767148
14	4.78	419.1147394
15	3.92	343.5955532
16	3.13	273.8549876
17	2.42	212.281832
18	1.83	160.0821377
19	1.34	117.4620558
20	0.96	83.8762293
21	0.67	58.29202285
22	0.45	39.43075848
23	0.30	25.96159549
24	0.19	16.63804824
25	0.12	10.37873899
26	0.07	6.301557882
27	0.04	3.723891205
28	0.02	2.141765814
29	0.01	1.198807865
30	0.01	0.65298548

Totale energie in de wind

Windsnelheid[m/s]	Aantal uren windsnelheid[h]	Vermogen[kW]	Energie[kWh]
0	0	0.00	0.00
1	103.9903234	13.66	1420.17
2	231.1057053	109.25	25249.15
3	359.9923207	368.73	132740.40
4	479.7022783	874.03	419273.93
5	581.7440029	1707.09	993088.69
6	659.7870534	2949.85	1946272.50
7	709.8995363	4684.25	3325348.14
8	730.7062977	6992.24	5109270.76
9	723.3128201	9955.74	7201115.85
10	690.9717794	13656.71	9436401.63
11	638.5380623	18177.08	11606758.60
12	571.7982459	23598.80	13493750.12
13	496.7767148	30003.79	14905185.82
14	419.1147394	37474.01	15705911.58
15	343.5955532	46091.40	15836799.50
16	273.8549876	55937.89	15318869.26
17	212.281832	67095.42	14243138.51
18	160.0821377	79645.94	12749891.74
19	117.4620558	93671.38	11002832.64
20	83.8762293	109253.68	9163787.13
21	58.29202285	126474.80	7372471.75
22	39.43075848	145416.65	5733888.99
23	25.96159549	166161.20	4313809.81
24	16.63804824	188790.37	3141103.24
25	10.37873899	213386.10	2214678.67
26	6.301557882	240030.35	1512565.12
27	3.723891205	268805.03	1001000.71
28	2.141765814	299792.11	642084.50
29	1.198807865	333073.52	399291.15
30	0.65298548	368731.19	240776.11
Totale energie:			189188776.15

Windturbine: AD 5-116

Windsnelheid[m/s]	Vermogen[kW]	Tijd per jaar[h]	Opgewekte energie[kWh]
0	0	0.00	0
1	0	103.99	0
2	0	231.11	0
3	0	359.99	0
4	85.6	479.70	41062.51503
5	276.2	581.74	160677.6936
6	513.3	659.79	338668.6945
7	879.8	709.90	624569.612
8	1,319.70	730.71	964313.1011
9	1,867.90	723.31	1351076.017
10	2,643.40	690.97	1826514.802
11	3,552.20	638.54	2268214.905
12	4,702.40	571.80	2688824.071
13	5,000.00	496.78	2483883.574
14	5000	419.11	2095573.697
15	5000	343.60	1717977.766
16	5000	273.85	1369274.938
17	5000	212.28	1061409.16
18	5000	160.08	800410.6887
19	5000	117.46	587310.2792
20	5000	83.88	419381.1465
21	5000	58.29	291460.1142
22	5000	39.43	197153.7924
23	5000	25.96	129807.9774
24	5000	16.64	83190.2412
25	5000	10.38	51893.69494
26	0	6.30	0
27	0	3.72	0
28	0	2.14	0
29	0	1.20	0
30	0	0.65	0
Totale energie:			21552648.48
Prestatiefactor(Cp)			11.39

Windturbine: Senvion 6.2M 126

Windsnelheid[m/s]	Vermogen[kW]	Tijd per jaar[h]	Opgewekte energie[kWh]
0	0	0.00	0.00
1	0	103.99	0.00
2	0	231.11	0.00
3	0	359.99	0.00
4	109	479.70	52287.55
5	313	581.74	182085.87
6	625	659.79	412366.91
7	1085	709.90	770241.00
8	1700	730.71	1242200.71
9	2450	723.31	1772116.41
10	3360	690.97	2321665.18
11	4405	638.54	2812760.16
12	5390	571.80	3081992.55
13	6100	496.78	3030337.96
14	6200	419.11	2598511.38
15	6200	343.60	2130292.43
16	6200	273.85	1697900.92
17	6200	212.28	1316147.36
18	6200	160.08	992509.25
19	6200	117.46	728264.75
20	6200	83.88	520032.62
21	6200	58.29	361410.54
22	6200	39.43	244470.70
23	6200	25.96	160961.89
24	6200	16.64	103155.90
25	6200	10.38	64348.18
26	6200	6.30	39069.66
27	6200	3.72	23088.13
28	6200	2.14	13278.95
29	6200	1.20	7432.61
30	6200	0.65	4048.51
Totale energie:			26682978.08
Prestatiefactor(Cp)			14.10

Windturbine: Vestas V164

Windsnelheid[m/s]	Vermogen[kW]	Tijd per jaar[h]	Opgewekte energie[kWh]
0	0	0.00	0.00
1	0	103.99	0.00
2	0	231.11	0.00
3	0	359.99	0.00
4	113	479.70	54206.36
5	584	581.74	339738.50
6	1158	659.79	764033.41
7	1904	709.90	1351648.72
8	2958	730.71	2161429.23
9	4200	723.31	3037913.84
10	5686	690.97	3928865.54
11	7217	638.54	4608329.20
12	7915	571.80	4525783.12
13	7999	496.78	3973716.94
14	8000	419.11	3352917.92
15	8000	343.60	2748764.43
16	8000	273.85	2190839.90
17	8000	212.28	1698254.66
18	8000	160.08	1280657.10
19	8000	117.46	939696.45
20	8000	83.88	671009.83
21	8000	58.29	466336.18
22	8000	39.43	315446.07
23	8000	25.96	207692.76
24	8000	16.64	133104.39
25	8000	10.38	83029.91
26	0	6.30	0.00
27	0	3.72	0.00
28	0	2.14	0.00
29	0	1.20	0.00
30	0	0.65	0.00
Totale energie:			38833414.44
Prestatiefactor(Cp)			20.53

Senvion 6.2M 152

Windsnelheid[m/s]	Vermogen[kW]	Tijd per jaar[h]	Opgewekte energie[kWh]
0	0	0.00	0.00
1	0	103.99	0.00
2	0	231.11	0.00
3	0	359.99	0.00
4	128	479.70	61401.89
5	450	581.74	261784.80
6	931	659.79	614261.75
7	1620	709.90	1150037.25
8	2548	730.71	1861839.65
9	3645	723.31	2636475.23
10	4957	690.97	3425147.11
11	5990	638.54	3824842.99
12	6150	571.80	3516559.21
13	6150	496.78	3055176.80
14	6150	419.11	2577555.65
15	6150	343.60	2113112.65
16	6150	273.85	1684208.17
17	6150	212.28	1305533.27
18	6150	160.08	984505.15
19	6150	117.46	722391.64
20	6150	83.88	515838.81
21	6150	58.29	358495.94
22	6150	39.43	242499.16
23	6150	25.96	159663.81
24	6150	16.64	102324.00
25	6150	10.38	63829.24
26	6150	6.30	38754.58
27	6150	3.72	22901.93
28	6150	2.14	13171.86
29	6150	1.20	7372.67
30	6150	0.65	4015.86
Totale energie:			31323701.08
Prestatiefactor(Cp)			16.56

Windtubrine: Sinovel SL6000

Windsnelheid[m/s]	Vermogen[kW]	Tijd per jaar[h]	Opgewekte energie[kWh]
0	0	0.00	0.00
1	0	103.99	0.00
2	0	231.11	0.00
3	0	359.99	0.00
4	88.736	479.70	42566.86
5	311.095	581.74	180977.65
6	637.535	659.79	420637.34
7	1,088.80	709.90	772937.91
8	1,685.24	730.71	1231416.94
9	2,397.50	723.31	1734145.38
10	3,289.38	690.97	2272868.75
11	4,271.93	638.54	2727786.71
12	5,195.61	571.80	2970838.97
13	5,902.96	496.78	2932455.06
14	6,000.00	419.11	2514688.44
15	6,000.00	343.60	2061573.32
16	6,000.00	273.85	1643129.93
17	6,000.00	212.28	1273690.99
18	6,000.00	160.08	960492.83
19	6,000.00	117.46	704772.34
20	6,000.00	83.88	503257.38
21	6,000.00	58.29	349752.14
22	6,000.00	39.43	236584.55
23	6,000.00	25.96	155769.57
24	6,000.00	16.64	99828.29
25	6,000.00	10.38	62272.43
26	6,000.00	6.30	37809.35
27	6,000.00	3.72	22343.35
28	6,000.00	2.14	12850.59
29	6,000.00	1.20	7192.85
30	6,000.00	0.65	3917.91
Totale energie:			25936557.82
Prestatiefactor(Cp)			13.71

Windturbine: Sinovel SL5000

Windsnelheid[m/s]	Vermogen[kW]	Tijd per jaar[h]	Opgewekte energie[kWh]
0	0	0.00	0.00
1	0	103.99	0.00
2	0	231.11	0.00
3	0	359.99	0.00
4	123.9	479.70	59435.11
5	329.3	581.74	191568.30
6	658.5	659.79	434469.77
7	1,109.30	709.90	787491.56
8	1,723.70	730.71	1259518.45
9	2,506.30	723.31	1812838.92
10	3,400.90	690.97	2349925.92
11	4,400.70	638.54	2810014.45
12	4,994.20	571.80	2855674.80
13	5,000.00	496.78	2483883.57
14	5,000.00	419.11	2095573.70
15	5,000.00	343.60	1717977.77
16	5,000.00	273.85	1369274.94
17	5,000.00	212.28	1061409.16
18	5,000.00	160.08	800410.69
19	5,000.00	117.46	587310.28
20	5,000.00	83.88	419381.15
21	5,000.00	58.29	291460.11
22	5,000.00	39.43	197153.79
23	5,000.00	25.96	129807.98
24	5,000.00	16.64	83190.24
25	5,000.00	10.38	51893.69
26	0.00	6.30	0.00
27	0.00	3.72	0.00
28	0.00	2.14	0.00
29	0.00	1.20	0.00
30	0.00	0.65	0.00
Totale energie:			23849664.35
Prestatiefactor(Cp)			12.61