

Project:  
**Wind Resource Map Hiumaa**

Description:  
Data from file(s)  
C:\My Documents\WindPRO Data\PROJECTS\Baltic\Wind Data\Tuuled\_and\_NCAR\_winddata.txt

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**Energi- og Miljødata**  
Niels Jernesvej 10  
9220 Aalborg Ø  
Tlf.: 9635 4444  
Per Nielsen  
Calculated:  
27-03-2002 13:34/

**Meteo data report, height: 18.0**

Name of meteo object: 85% Level Direction replaced with 25m NCAR DATA

Data from: 09-3-1998 15:00 Data to: 08-11-1998 12:00 Observations: 5834 Observations per day: 24 Recovery rate: 100%

day	03-98	04-98	05-98	06-98	07-98	08-98	09-98	10-98	11-98
1		24	24	24	24	24	24	24	24
2		24	24	24	24	24	24	24	24
3		24	24	24	24	24	24	24	24
4		24	24	24	24	24	24	24	24
5		24	24	24	24	24	24	24	24
6		24	24	24	24	24	24	24	24
7		24	24	24	24	24	24	24	24
8		24	24	24	24	24	24	24	(13)
9	(9)	24	24	24	24	24	24	24	
10	24	24	24	24	24	24	24	24	
11	24	24	24	24	24	24	24	24	
12	24	24	24	24	24	24	24	24	
13	24	24	(4)	24	24	24	24	24	
14	24	24	24	24	24	24	24	24	
15	24	24	24	24	24	24	24	24	
16	24	24	24	24	24	24	24	24	
17	24	24	24	24	24	24	24	24	
18	24	24	24	24	24	24	24	24	
19	24	24	24	24	24	24	24	24	
20	24	24	24	24	24	24	24	24	
21	24	24	24	24	24	24	24	24	
22	24	24	24	24	24	24	24	24	
23	24	24	24	24	24	24	24	24	
24	24	24	24	24	24	24	24	24	
25	24	24	24	24	24	24	24	24	
26	24	24	24	24	24	24	24	24	
27	24	24	24	24	24	24	24	24	
28	24	24	24	24	24	24	24	24	
29	24	24	24	24	24	24	24	24	
30	24	24	24	24	24	24	24	24	
31	24		24		24	24		24	
%	100	100	(97)	100	100	100	100	100	(101)

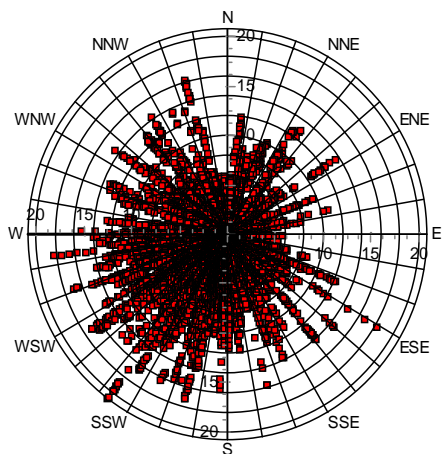
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**Meteo data report, height: 18.0**

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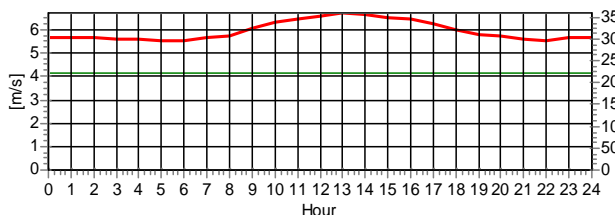


**Montly mean values of wind speed in m/s**

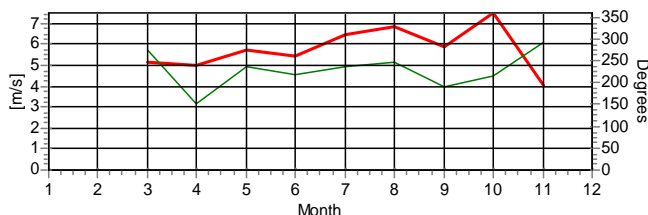
Month 1998 mean

jan		
feb		
mar	5.1	5.1
apr	5.0	5.0
maj	5.7	5.7
jun	5.5	5.5
jul	6.5	6.5
aug	6.8	6.8
sep	5.9	5.9
okt	7.5	7.5
nov	4.1	4.1
dec		
mean	6.0	6.0

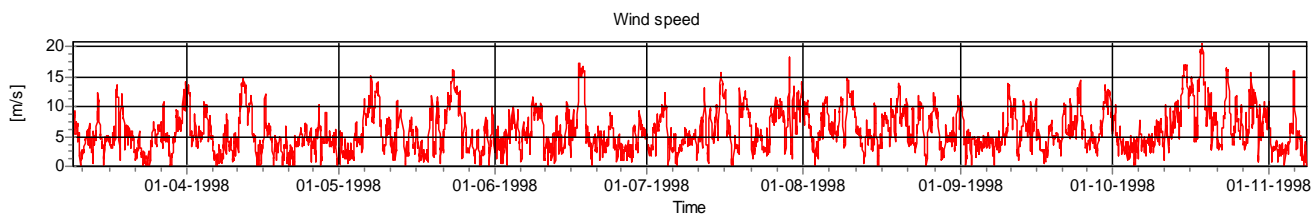
Wind speed [m/s]



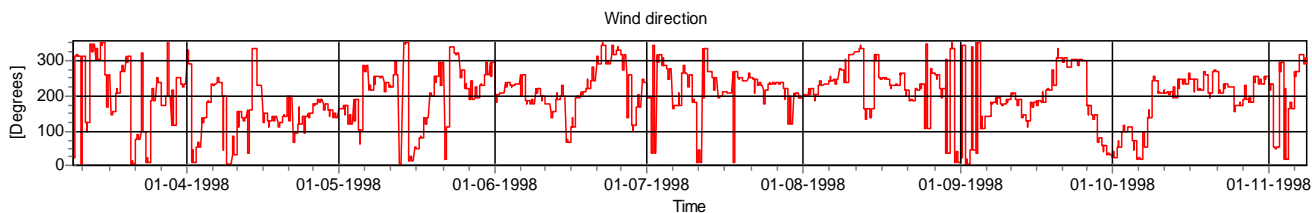
— Wind speed. Height: 18.0 m — Wind direction. Height: 18.0 m



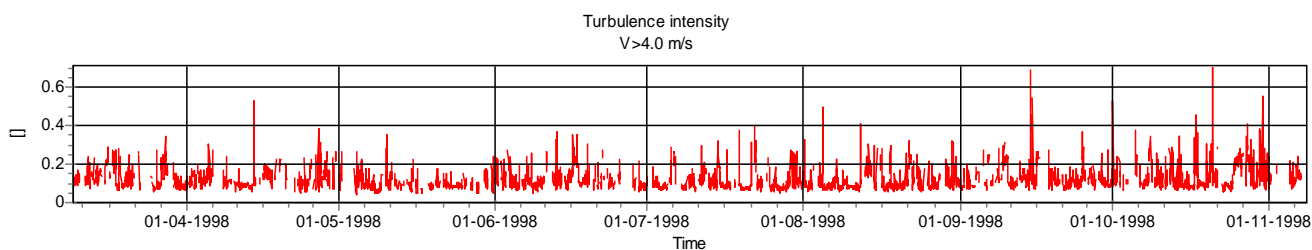
— Wind speed. Height: 18.0 m — Wind direction. Height: 18.0 m



— Height: 18.0 m



— Height: 18.0 m



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**Frequency**

Wind speed	Sum	N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW
0.00 - 0.49	90	11	5	5	3	5	7	10	11	13	4	4	12
0.50 - 1.49	238	18	9	4	25	15	25	31	28	39	16	9	19
1.50 - 2.49	442	36	15	19	35	39	35	62	80	48	28	14	31
2.50 - 3.49	676	38	30	34	26	34	56	116	129	72	53	39	49
3.50 - 4.49	826	68	37	54	37	62	90	139	96	84	68	42	49
4.50 - 5.49	807	66	33	29	28	53	82	151	85	132	56	37	55
5.50 - 6.49	602	29	29	15	11	51	34	87	81	110	52	64	39
6.50 - 7.49	428	8	18	11	2	28	23	62	70	99	48	31	28
7.50 - 8.49	392	18	23	6	2	14	11	47	58	99	57	35	22
8.50 - 9.49	344	4	20	3	1	9	17	38	66	83	62	28	13
9.50 - 10.49	318	10	15	2	1	3	17	39	67	78	47	28	11
10.50 - 11.49	204	8	2	7	1	6	17	23	33	45	29	19	14
11.50 - 12.49	167	2	6	5	0	6	6	12	33	32	27	14	24
12.50 - 13.49	110	0	3	1	0	1	13	5	23	23	12	11	18
13.50 - 14.49	71	0	0	1	0	2	7	8	16	18	11	1	7
14.50 - 15.49	48	0	0	0	0	2	0	3	20	17	2	1	3
15.50 - 16.49	38	0	0	0	0	0	0	3	17	11	1	0	6
16.50 - 17.49	17	0	0	0	0	1	0	0	6	9	1	0	0
17.50 - 18.49	3	0	0	0	0	1	0	0	0	0	2	0	0
18.50 - 19.49	7	0	0	0	0	0	0	0	7	0	0	0	0
19.50 - 20.49	4	0	0	0	0	0	0	0	4	0	0	0	0
20.50 - 21.49	2	0	0	0	0	0	0	0	2	0	0	0	0
Sum	5,834	316	245	196	172	332	440	836	932	1,012	576	377	400

**Turbulence**

Wind speed	Sum	N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW
0.00 - 0.49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.50 - 1.49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.50 - 2.49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2.50 - 3.49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3.50 - 4.49	0.150	0.139	0.135	0.149	0.114	0.143	0.157	0.160	0.155	0.157	0.144	0.145	0.174
4.50 - 5.49	0.145	0.131	0.120	0.128	0.130	0.141	0.146	0.177	0.152	0.140	0.139	0.125	0.129
5.50 - 6.49	0.130	0.108	0.119	0.106	0.121	0.149	0.139	0.168	0.149	0.117	0.104	0.117	0.109
6.50 - 7.49	0.117	0.101	0.112	0.109	0.128	0.118	0.104	0.146	0.124	0.107	0.104	0.127	0.102
7.50 - 8.49	0.108	0.088	0.101	0.100	0.090	0.108	0.147	0.126	0.118	0.096	0.116	0.105	0.095
8.50 - 9.49	0.096	0.085	0.105	0.130	0.092	0.115	0.123	0.131	0.095	0.080	0.087	0.092	0.087
9.50 - 10.49	0.096	0.089	0.106	0.120	0.078	0.086	0.116	0.113	0.098	0.088	0.090	0.088	0.079
10.50 - 11.49	0.097	0.086	0.098	0.108	0.074	0.088	0.108	0.116	0.103	0.082	0.098	0.093	0.099
11.50 - 12.49	0.091	0.102	0.087	0.093		0.085	0.101	0.122	0.099	0.086	0.077	0.086	0.088
12.50 - 13.49	0.088		0.081	0.085		0.090	0.087	0.104	0.093	0.082	0.080	0.091	0.092
13.50 - 14.49	0.091			0.081		0.092	0.083	0.101	0.109	0.090	0.067	0.119	0.084
14.50 - 15.49	0.091					0.099		0.098	0.093	0.089	0.083	0.097	0.078
15.50 - 16.49	0.096							0.099	0.104	0.091	0.076		0.085
16.50 - 17.49	0.094					0.090			0.104	0.089	0.084		
17.50 - 18.49	0.100					0.104					0.098		
18.50 - 19.49	0.095								0.095				
19.50 - 20.49	0.098								0.098				
20.50 - 21.49	0.089								0.089				
Sum	0.120	0.117	0.113	0.123	0.120	0.131	0.133	0.151	0.120	0.106	0.106	0.109	0.110

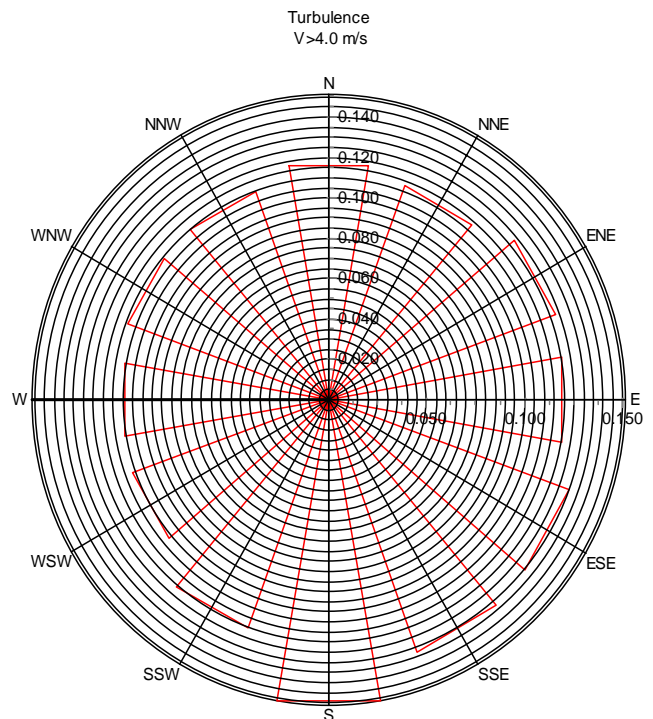
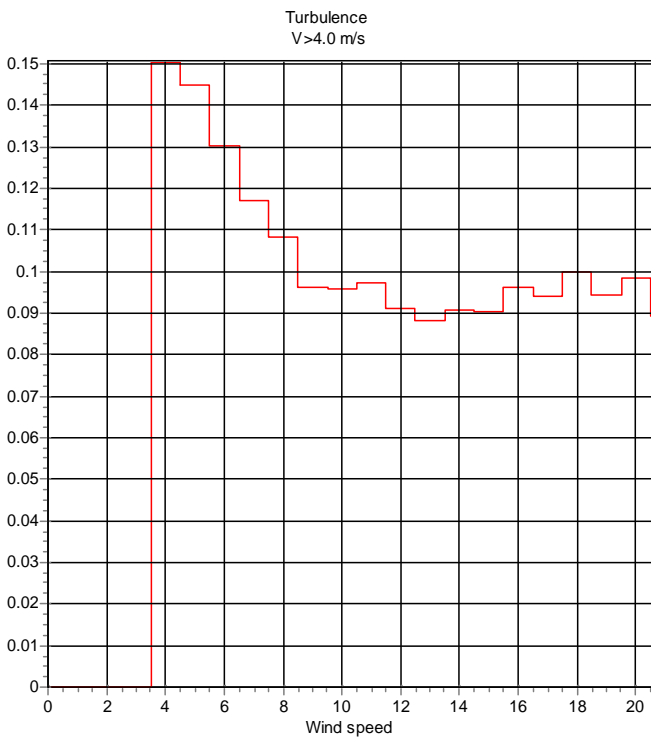
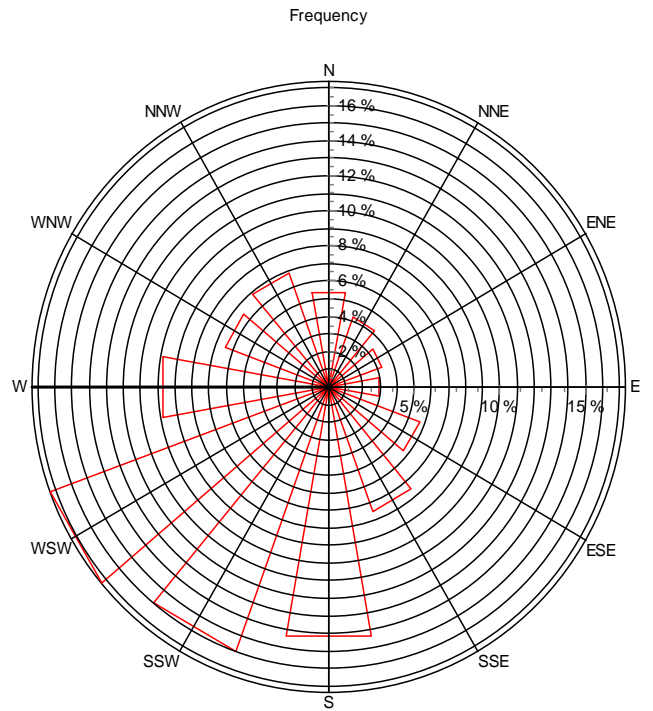
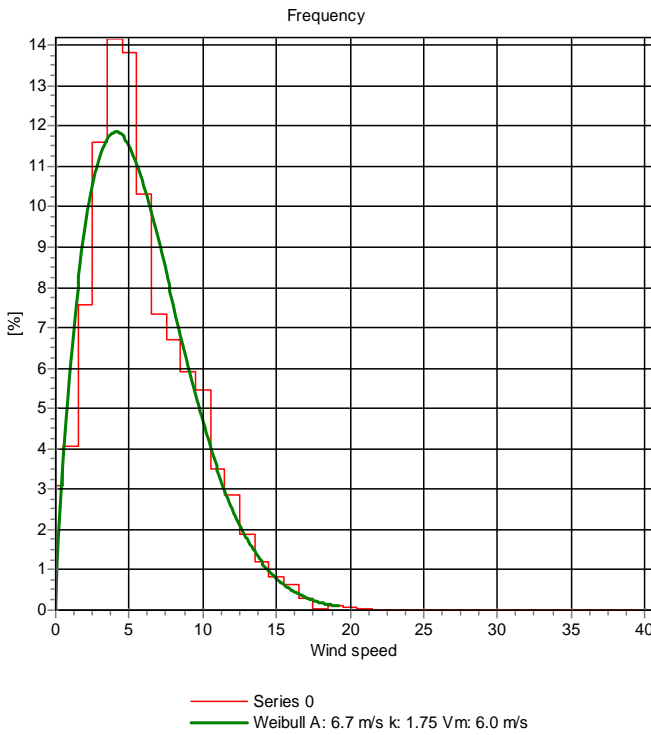
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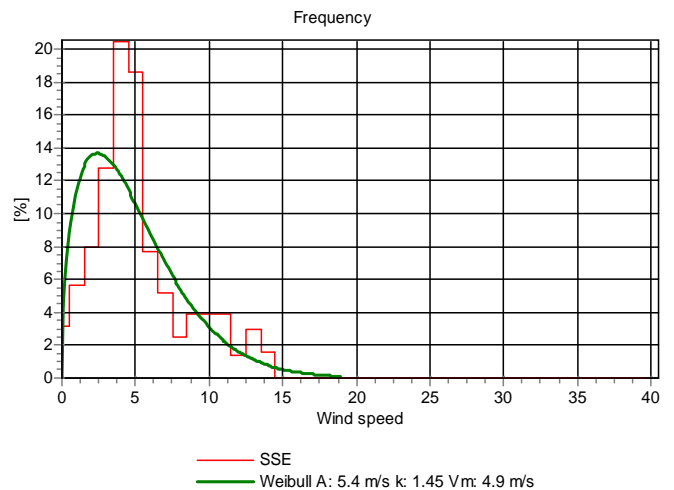
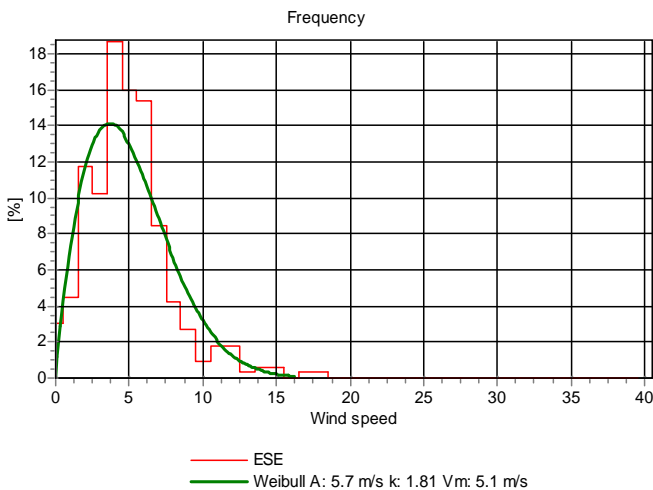
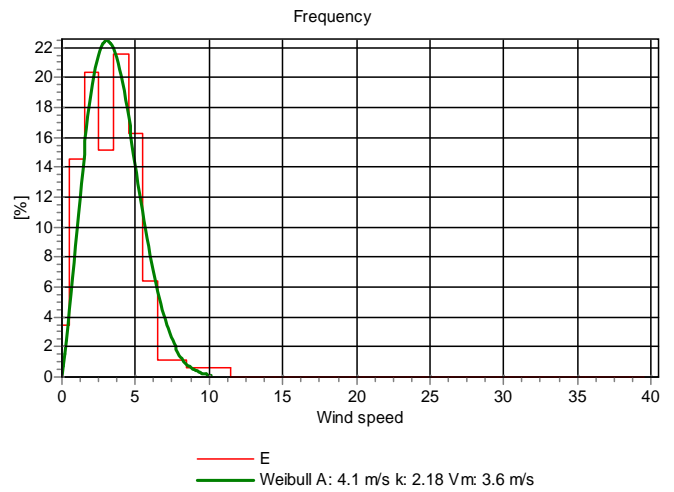
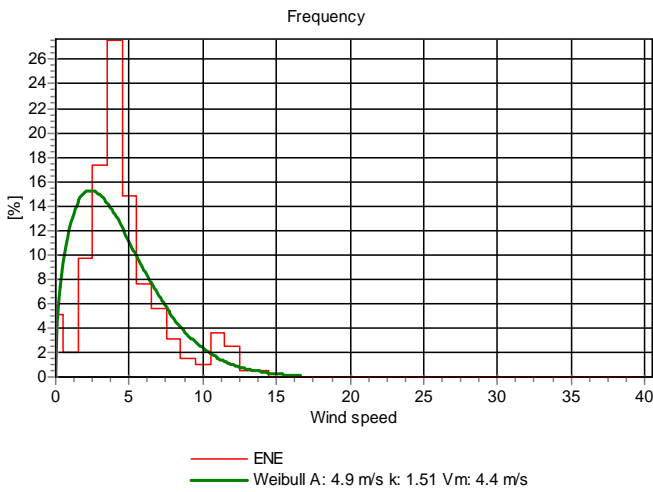
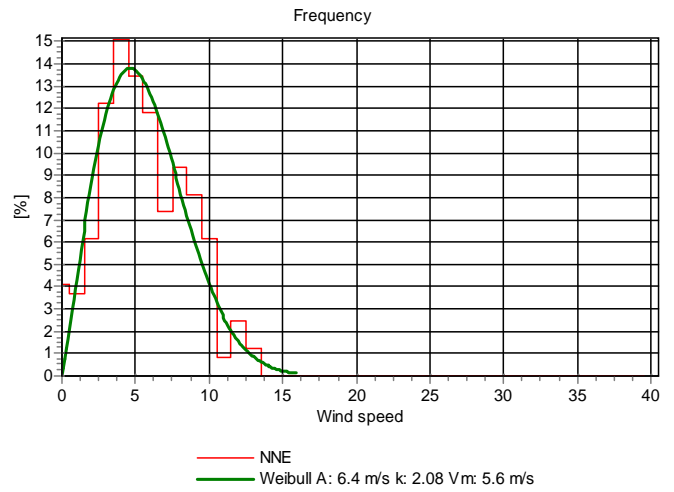
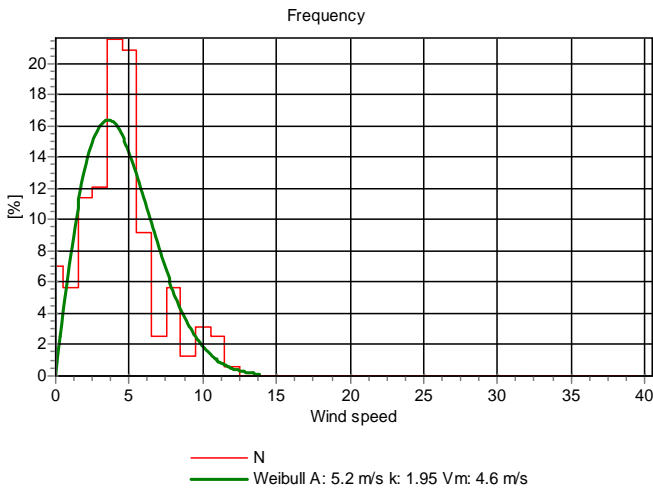
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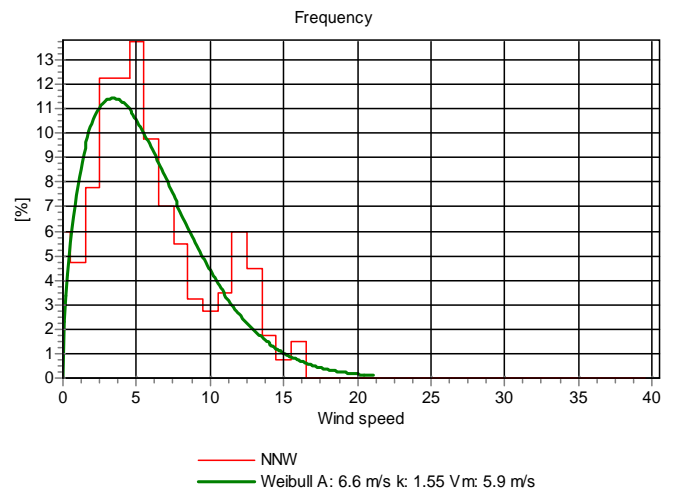
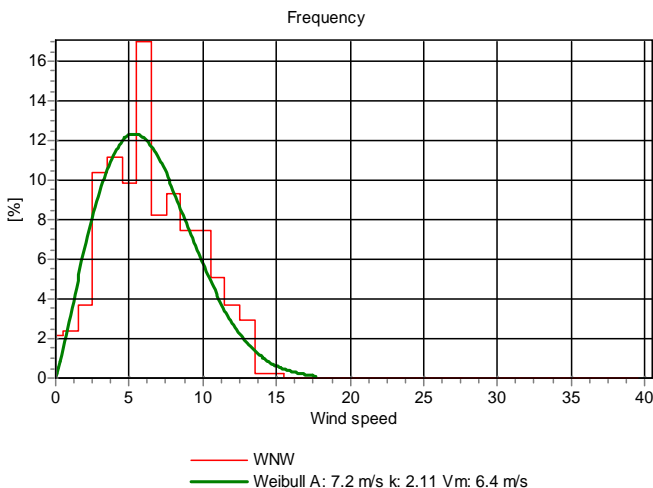
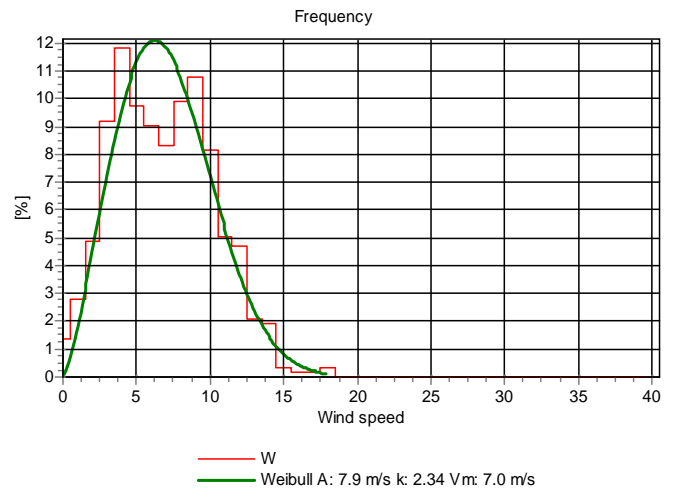
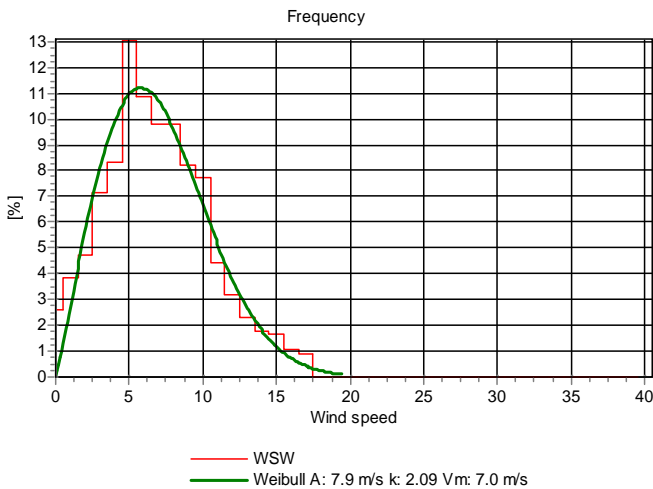
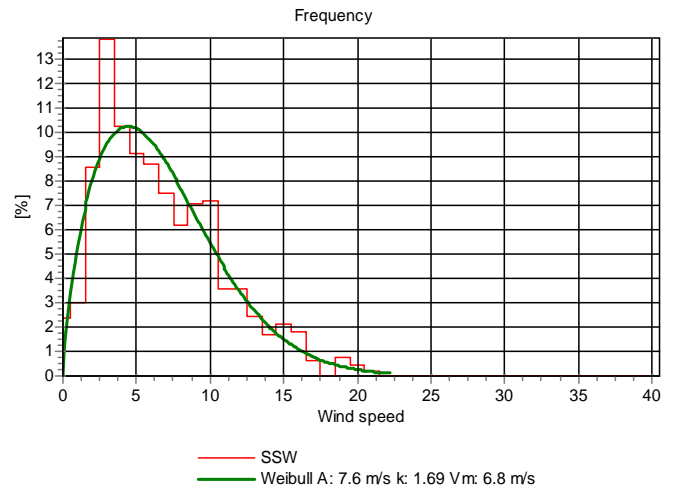
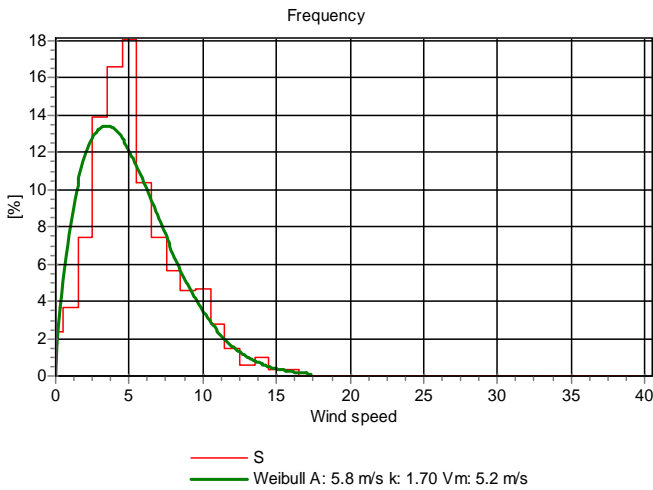
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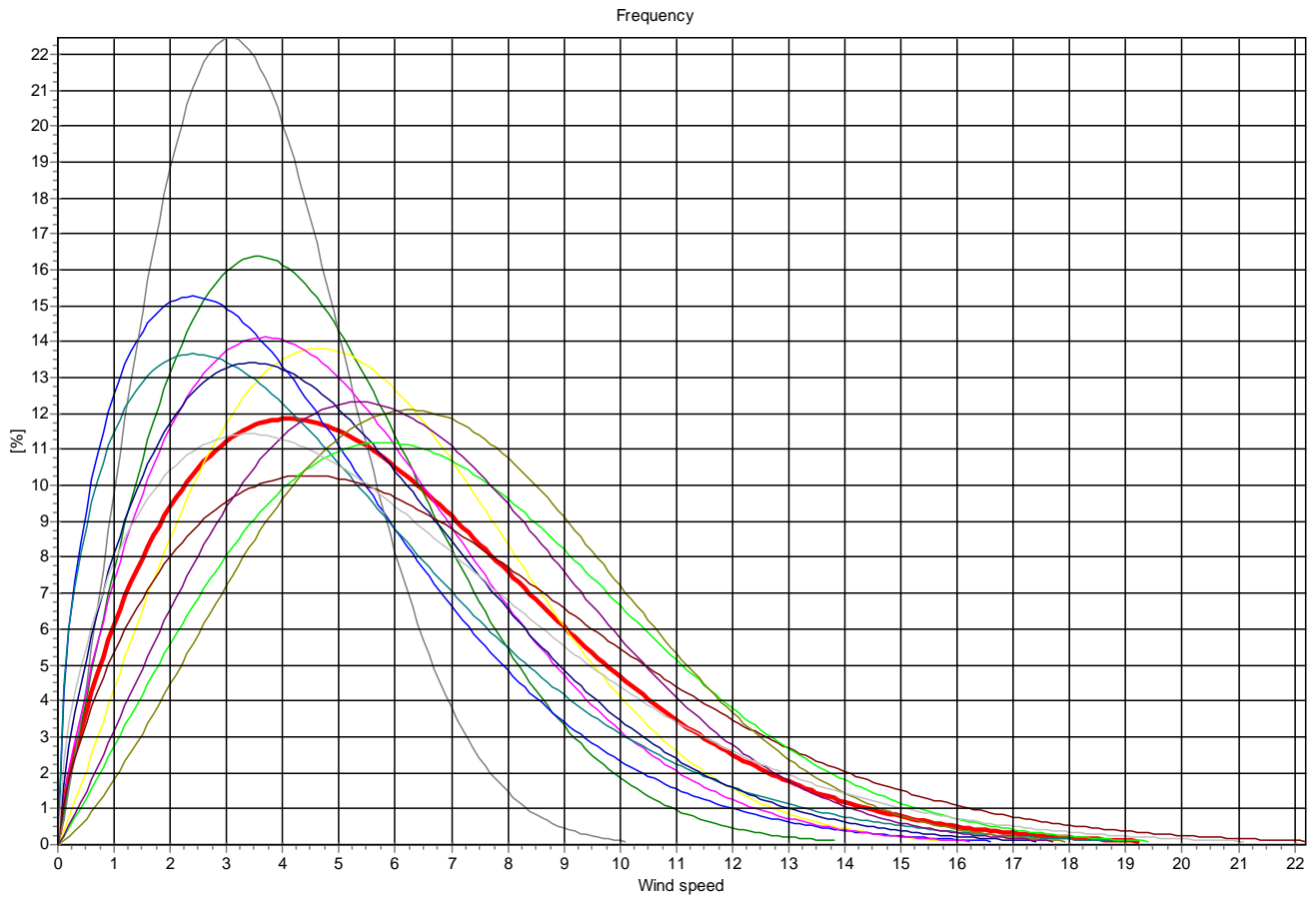
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**Weibull Data**

k-parameter correction: 0.0080/m

Sector	A- parameter [m/s]	Mean wind speed [m/s]	k- parameter	Frequency	Frequency [%]	Wind shear
0-N	5.15	4.57	1.949	5.42	5.4	0.00
1-NNE	6.37	5.64	2.080	4.20	4.2	0.00
2-ENE	4.89	4.41	1.510	3.36	3.4	0.00
3-E	4.06	3.59	2.183	2.95	2.9	0.00
4-ESE	5.72	5.09	1.814	5.69	5.7	0.00
5-SSE	5.41	4.91	1.450	7.54	7.5	0.00
6-S	5.82	5.20	1.698	14.33	14.3	0.00
7-SSW	7.58	6.77	1.687	15.98	16.0	0.00
8-WSW	7.90	6.99	2.093	17.35	17.3	0.00
9-W	7.93	7.03	2.342	9.87	9.9	0.00
10-WNW	7.23	6.40	2.113	6.46	6.5	0.00
11-NNW	6.59	5.93	1.554	6.86	6.9	0.00
mean	6.68	5.95	1.745	100.00	100.0	0.00



- Total A: 6.7 m/s k: 1.75 Vm: 6.0 m/s
- ENE A: 4.9 m/s k: 1.51 Vm: 4.4 m/s
- SSE A: 5.4 m/s k: 1.45 Vm: 4.9 m/s
- WSW A: 7.9 m/s k: 2.09 Vm: 7.0 m/s
- NNW A: 6.6 m/s k: 1.55 Vm: 5.9 m/s
- NA: 5.2 m/s k: 1.95 Vm: 4.6 m/s
- E A: 4.1 m/s k: 2.18 Vm: 3.6 m/s
- SA: 5.8 m/s k: 1.70 Vm: 5.2 m/s
- WA: 7.9 m/s k: 2.34 Vm: 7.0 m/s
- NNE A: 6.4 m/s k: 2.08 Vm: 5.6 m/s
- ESE A: 5.7 m/s k: 1.81 Vm: 5.1 m/s
- SSW A: 7.6 m/s k: 1.69 Vm: 6.8 m/s
- WNW A: 7.2 m/s k: 2.11 Vm: 6.4 m/s