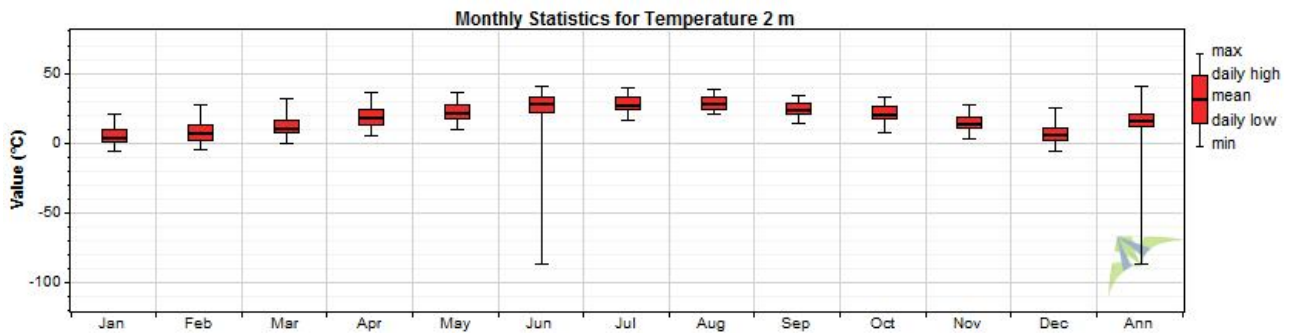


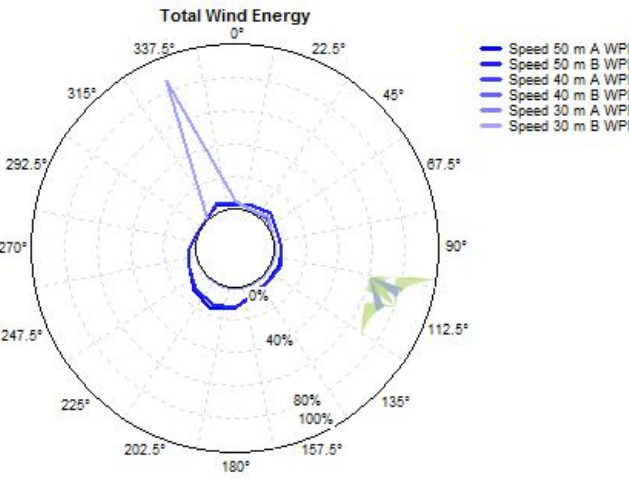
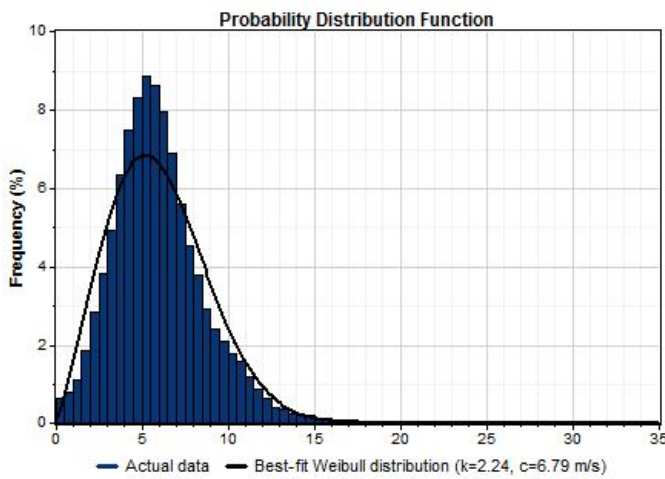
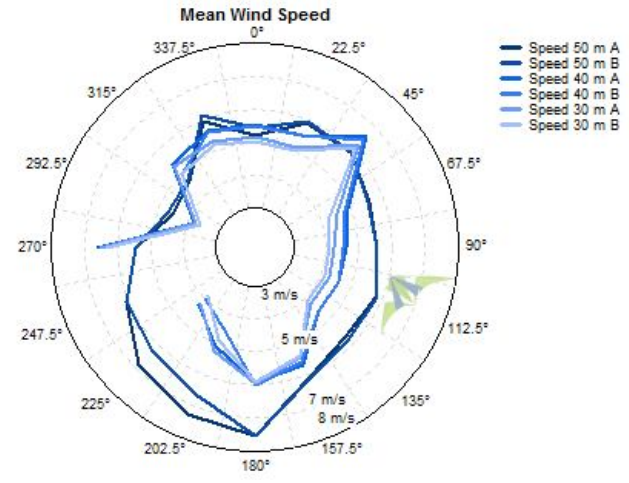
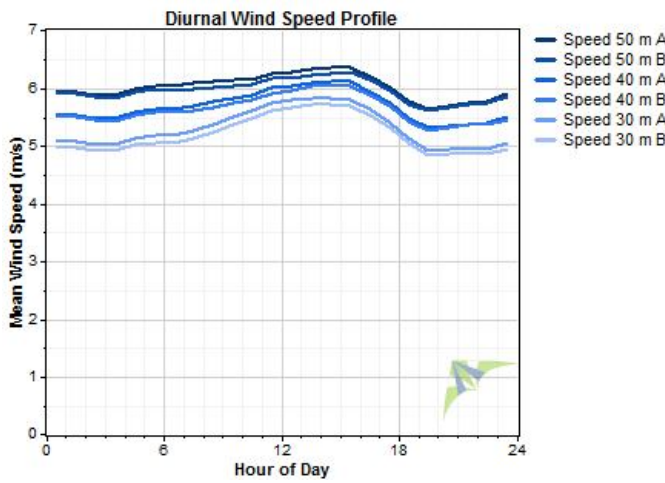
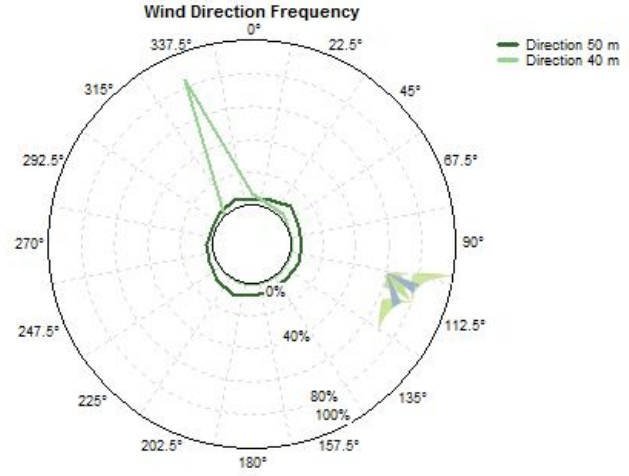
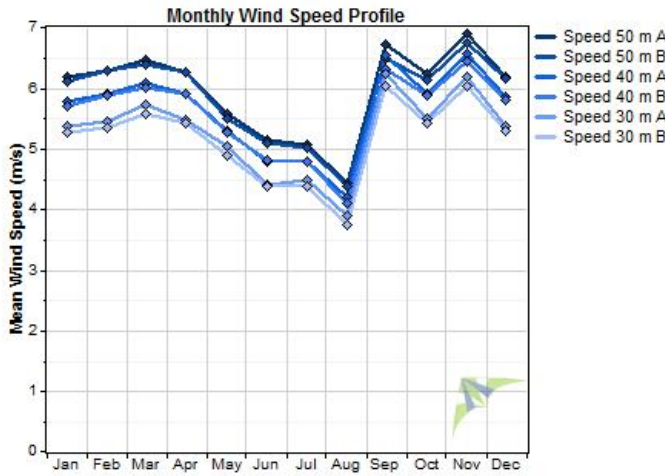
Data Set Properties

Report Created: 9/23/2016 10:30 using Windographer 3.3.11
 Filter Settings: <Unflagged data>

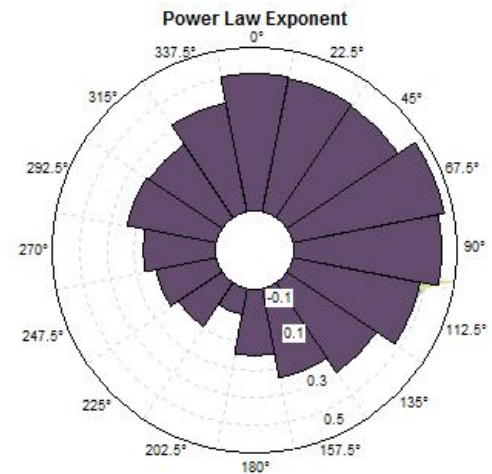
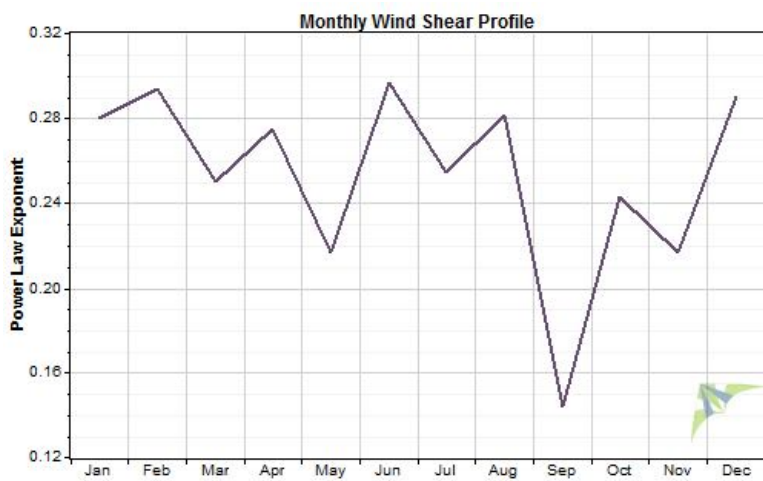
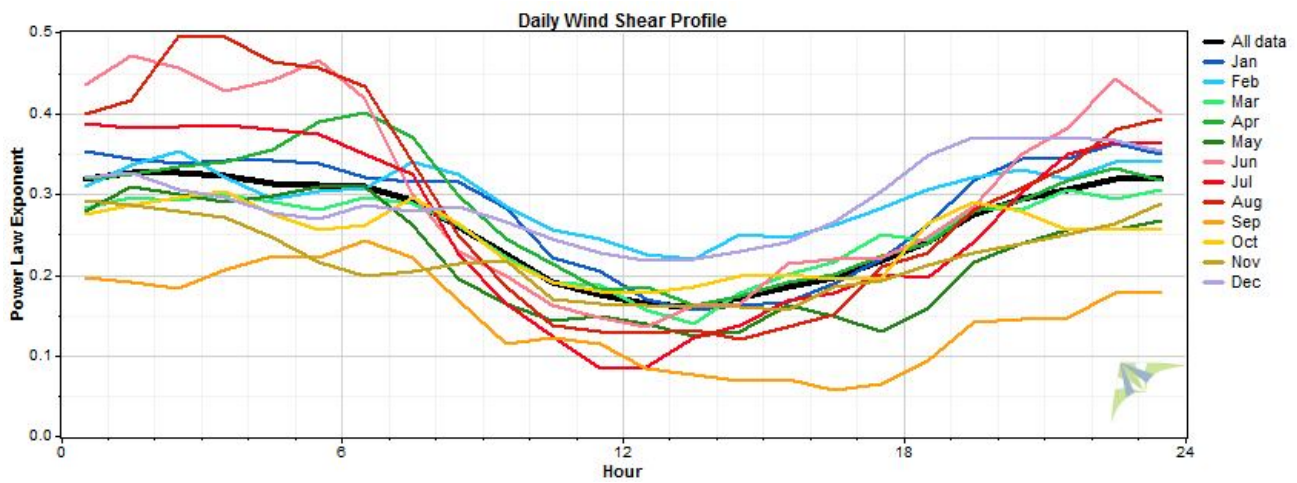
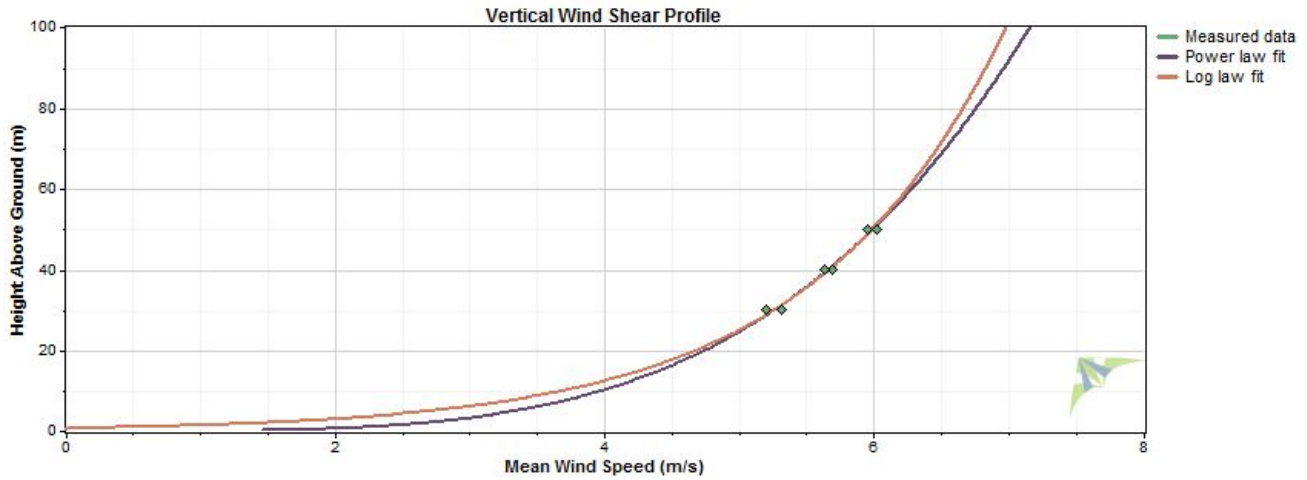
Variable	Value
Latitude	S 0.000000
Longitude	W 0.000000
Elevation	0 m
Start date	6/19/2009 17:50
End date	5/5/2011 09:00
Duration	22 months
Length of time step	10 minutes
Calm threshold	0 m/s
Mean temperature	15.9 °C
Mean pressure	101.3 kPa
Mean air density	1.222 kg/m ³
Power density at 50m	218 W/m ²
Wind power class	2 (Marginal)
Power law exponent	0.257
Surface roughness	0.779 m
Roughness class	3.71



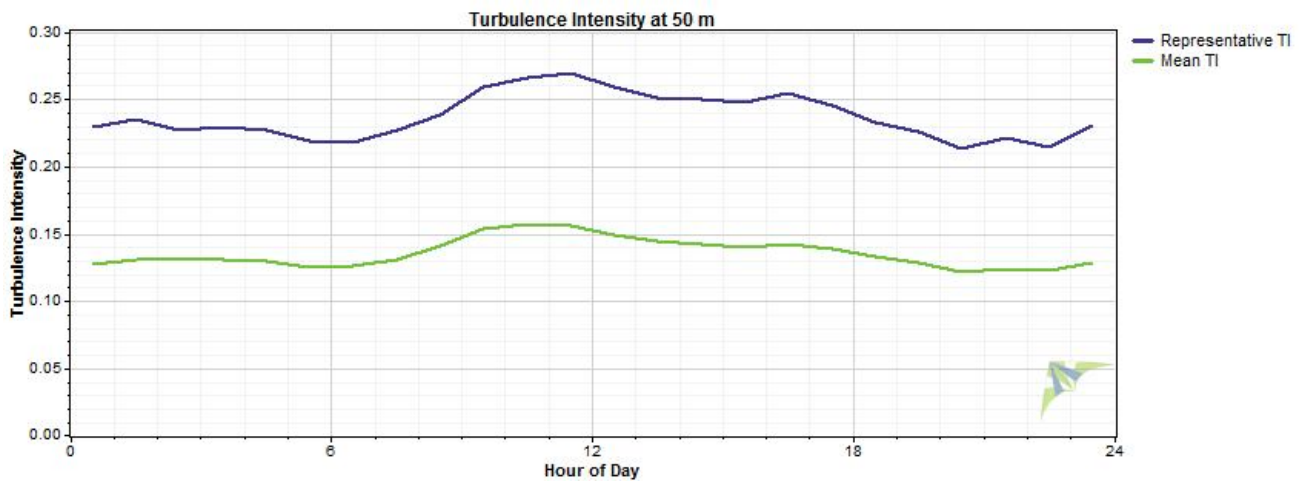
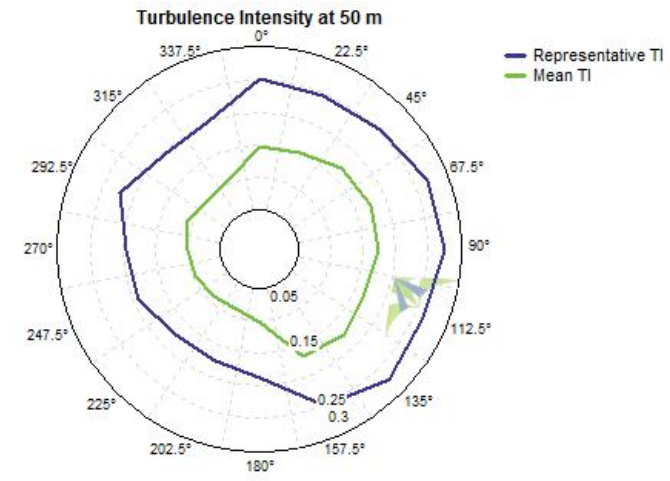
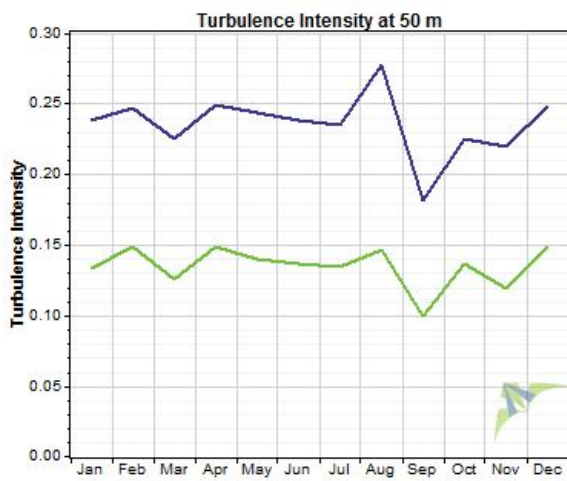
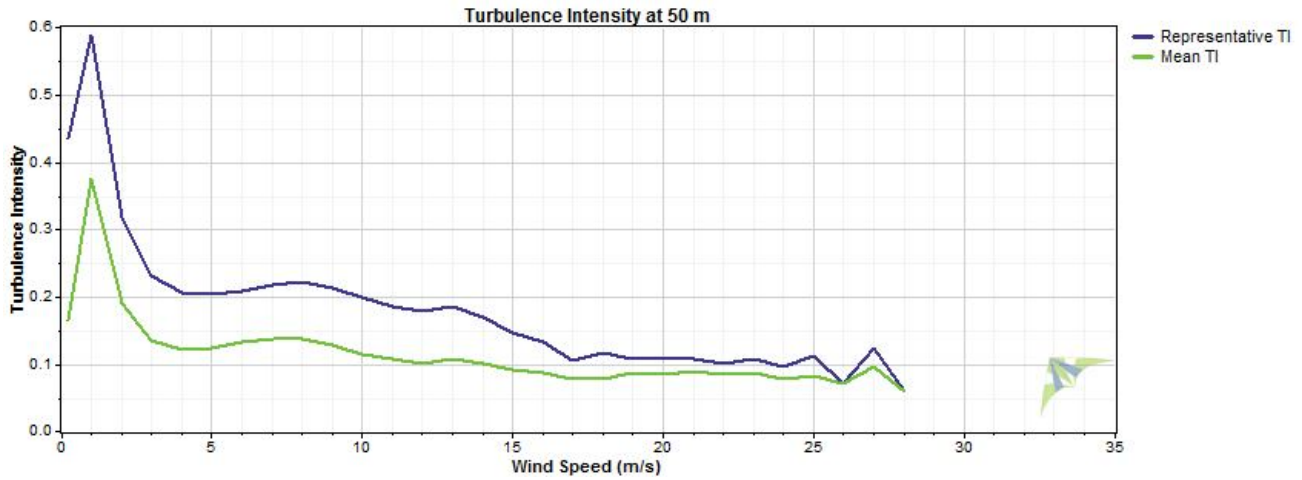
Wind Speed and Direction



Wind Shear



Turbulence Intensity



Environmental Summary

	Mean	Min	Max
Temperature (°C)	15.9	-86.4	40.5
Pressure (kPa)			
Air Density (kg/m ³)	1.22	1.12	1.89

Wind Speed Sensor Summary

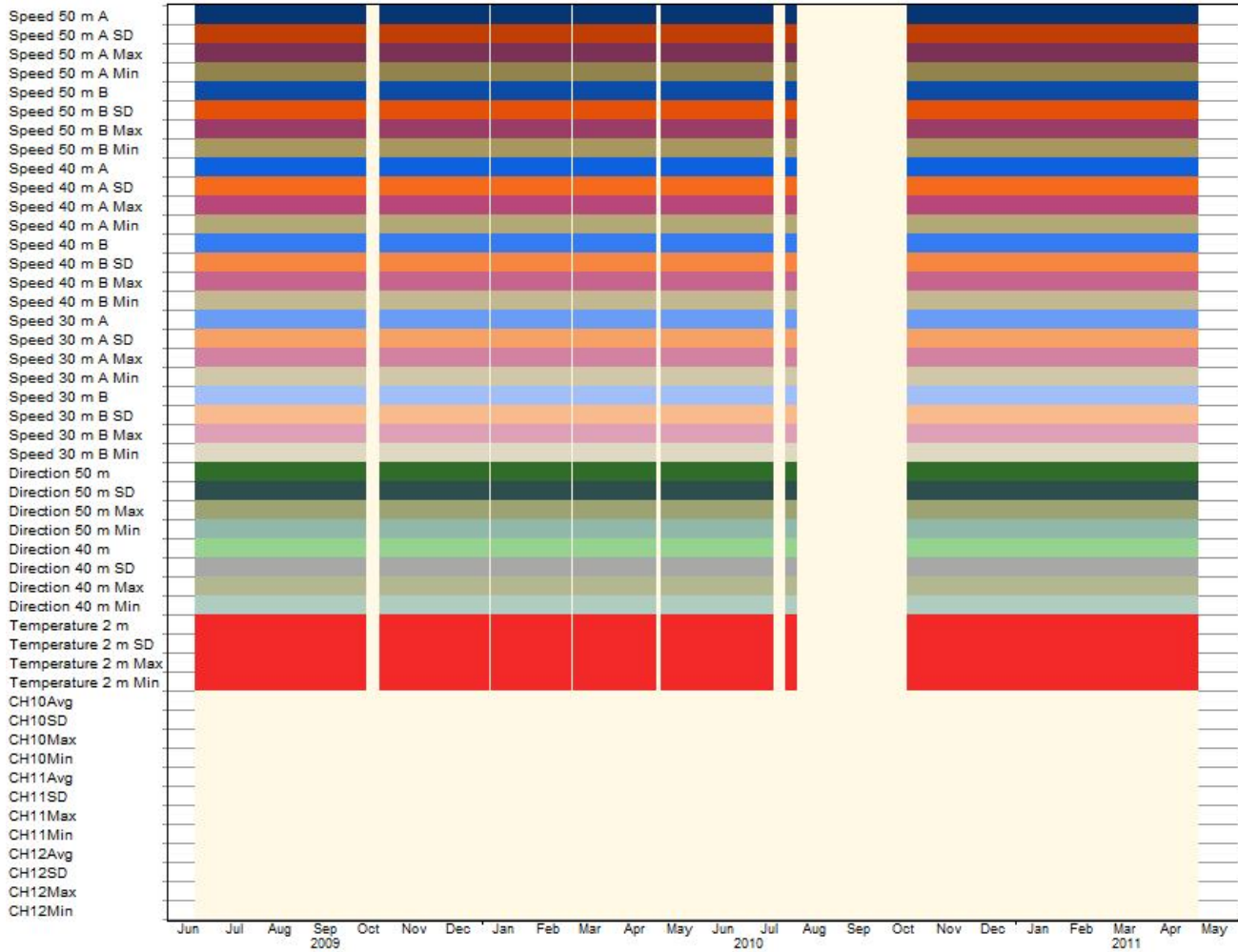
Wind Speed Sensor Summary					
Variable	Speed 50 m A	Speed 50 m B	Speed 40 m A	Speed 40 m B	Speed 30 m A
Measurement height (m)	50	50	40	40	30
Mean wind speed (m/s)	6.021	5.956	5.689	5.630	5.308
MoMM wind speed (m/s)	5.948	5.876	5.629	5.565	5.258
Median wind speed (m/s)	5.677	5.627	5.292	5.248	4.814
Min wind speed (m/s)	0.350	0.350	0.350	0.350	0.350
Max wind speed (m/s)	30.833	25.097	29.739	27.082	28.877
Weibull k	2.237	2.275	2.188	2.193	2.094
Weibull c (m/s)	6.786	6.710	6.416	6.347	5.993
Mean power density (W/m ²)	236	224	205	196	176
MoMM power density (W/m ²)	225	212	196	187	169
Mean energy content (kWh/m ² /yr)	2,067	1,959	1,794	1,719	1,540
MoMM energy content (kWh/m ² /yr)	1,969	1,857	1,714	1,638	1,478
Energy pattern factor	1.763	1.725	1.814	1.792	1.916
Frequency of calms (%)	0.00	0.00	0.00	0.00	0.00
Possible data points	98,587	98,587	98,587	98,587	98,587
Valid data points	84,637	84,637	84,637	84,637	84,637
Missing data points	13,950	13,950	13,950	13,950	13,950
Data recovery rate (%)	85.85	85.85	85.85	85.85	85.85
Variable	Speed 30 m B				
Measurement height (m)	30				
Mean wind speed (m/s)	5.197				
MoMM wind speed (m/s)	5.144				
Median wind speed (m/s)	4.745				
Min wind speed (m/s)	0.350				
Max wind speed (m/s)	27.778				
Weibull k	2.097				
Weibull c (m/s)	5.865				
Mean power density (W/m ²)	163				
MoMM power density (W/m ²)	156				
Mean energy content (kWh/m ² /yr)	1,428				
MoMM energy content (kWh/m ² /yr)	1,369				
Energy pattern factor	1.893				
Frequency of calms (%)	0.00				
Possible data points	98,587				
Valid data points	84,637				
Missing data points	13,950				
Data recovery rate (%)	85.85				

Flag Statistics

	Data Column	Time Steps Flagged As <Unflagged data>
1	Speed 50 m A	84,637
2	Speed 50 m A SD	84,637
3	Speed 50 m A Max	84,637
4	Speed 50 m A Min	84,637
5	Speed 50 m B	84,637
6	Speed 50 m B SD	84,637
7	Speed 50 m B Max	84,637
8	Speed 50 m B Min	84,637
9	Speed 40 m A	84,637
10	Speed 40 m A SD	84,637
11	Speed 40 m A Max	84,637
12	Speed 40 m A Min	84,637
13	Speed 40 m B	84,637
14	Speed 40 m B SD	84,637
15	Speed 40 m B Max	84,637
16	Speed 40 m B Min	84,637
17	Speed 30 m A	84,637
18	Speed 30 m A SD	84,637
19	Speed 30 m A Max	84,637
20	Speed 30 m A Min	84,637
21	Speed 30 m B	84,637
22	Speed 30 m B SD	84,637
23	Speed 30 m B Max	84,637
24	Speed 30 m B Min	84,637
25	Direction 50 m	84,637
26	Direction 50 m SD	84,637
27	Direction 50 m Max	84,637
28	Direction 50 m Min	84,637
29	Direction 40 m	84,637
30	Direction 40 m SD	84,637
31	Direction 40 m Max	84,637
32	Direction 40 m Min	84,637
33	Temperature 2 m	84,637
34	Temperature 2 m SD	84,637
35	Temperature 2 m Max	84,637
36	Temperature 2 m Min	84,637
37	CH10Avg	0
38	CH10SD	0
39	CH10Max	0
40	CH10Min	0
41	CH11Avg	0
42	CH11SD	0
43	CH11Max	0
44	CH11Min	0
45	CH12Avg	0
46	CH12SD	0
47	CH12Max	0
48	CH12Min	0
49	Air Density	98,587
50	Speed 50 m A TI	84,637
51	Speed 50 m B TI	84,637
52	Speed 40 m A TI	84,637

	Data Column	Time Steps Flagged As <Unflagged data>
53	Speed 40 m B TI	84,637
54	Speed 30 m A TI	84,637
55	Speed 30 m B TI	84,637
56	Speed 50 m A WPD	84,637
57	Speed 50 m B WPD	84,637
58	Speed 40 m A WPD	84,637
59	Speed 40 m B WPD	84,637
60	Speed 30 m A WPD	84,637
61	Speed 30 m B WPD	84,637

Data Coverage



Data Column Properties

#	Label	Units	Height	Possible Data Points	Valid Data Points	Recovery Rate (%)	Mean	Min	Max	Std. Dev
1	Speed 50 m A	m/s	50 m	98,587	84,637	85.85	6.021	0.350	30.833	2.796
2	Speed 50 m A SD	m/s	50 m	98,587	84,637	85.85	0.767	0.000	5.860	0.500
3	Speed 50 m A Max	m/s	50 m	98,587	84,637	85.85	7.930	0.350	35.537	3.656
4	Speed 50 m A Min	m/s	50 m	98,587	84,637	85.85	4.058	0.350	24.047	2.258
5	Speed 50 m B	m/s	50 m	98,587	84,637	85.85	5.956	0.350	25.097	2.722
6	Speed 50 m B SD	m/s	50 m	98,587	84,637	85.85	0.781	0.000	5.860	0.496
7	Speed 50 m B Max	m/s	50 m	98,587	84,637	85.85	7.904	0.350	32.442	3.631
8	Speed 50 m B Min	m/s	50 m	98,587	84,637	85.85	3.953	0.350	21.386	2.122
9	Speed 40 m A	m/s	40 m	98,587	84,637	85.85	5.689	0.350	29.739	2.705
10	Speed 40 m A SD	m/s	40 m	98,587	84,637	85.85	0.780	0.000	5.860	0.504
11	Speed 40 m A Max	m/s	40 m	98,587	84,637	85.85	7.664	0.350	35.537	3.573
12	Speed 40 m A Min	m/s	40 m	98,587	84,637	85.85	3.725	0.350	22.920	2.214
13	Speed 40 m B	m/s	40 m	98,587	84,637	85.85	5.630	0.350	27.082	2.672
14	Speed 40 m B SD	m/s	40 m	98,587	84,637	85.85	0.790	0.000	5.860	0.494
15	Speed 40 m B Max	m/s	40 m	98,587	84,637	85.85	7.625	0.350	33.592	3.572
16	Speed 40 m B Min	m/s	40 m	98,587	84,637	85.85	3.623	0.350	22.139	2.116
17	Speed 30 m A	m/s	30 m	98,587	84,637	85.85	5.308	0.350	28.877	2.651
18	Speed 30 m A SD	m/s	30 m	98,587	84,637	85.85	0.801	0.000	5.860	0.494
19	Speed 30 m A Max	m/s	30 m	98,587	84,637	85.85	7.354	0.350	34.045	3.515
20	Speed 30 m A Min	m/s	30 m	98,587	84,637	85.85	3.315	0.350	21.386	2.157
21	Speed 30 m B	m/s	30 m	98,587	84,637	85.85	5.197	0.350	27.778	2.586
22	Speed 30 m B SD	m/s	30 m	98,587	84,637	85.85	0.797	0.000	5.860	0.486
23	Speed 30 m B Max	m/s	30 m	98,587	84,637	85.85	7.242	0.350	33.234	3.475
24	Speed 30 m B Min	m/s	30 m	98,587	84,637	85.85	3.210	0.350	20.991	2.063
25	Direction 50 m	°	50 m	98,587	84,637	85.85	142.5	0.0	359.9	100.0
26	Direction 50 m SD	°	50 m	98,587	84,637	85.85	8.2	0.0	121.7	5.9
27	Direction 50 m Max	°	50 m	98,587	84,637	85.85	164.6	0.0	359.7	98.4
28	Direction 50 m Min	°	50 m	98,587	84,637	85.85	169.9	0.0	170.0	3.6
29	Direction 40 m	°	40 m	98,587	84,637	85.85	338.9	0.0	360.0	94.0
30	Direction 40 m SD	°	40 m	98,587	84,637	85.85	1.8	0.0	121.7	5.0
31	Direction 40 m Max	°	40 m	98,587	84,637	85.85	302.1	0.0	359.9	90.3
32	Direction 40 m Min	°	40 m	98,587	84,637	85.85	329.9	0.0	330.0	6.9
33	Temperature 2 m	°C	2 m	98,587	84,637	85.85	15.9	-86.4	40.5	9.8
34	Temperature 2 m SD	°C	2 m	98,587	84,637	85.85	0.1	0.0	47.8	0.5
35	Temperature 2 m Max	°C	2 m	98,587	84,637	85.85	16.5	-86.4	54.9	10.2
36	Temperature 2 m Min	°C	2 m	98,587	84,637	85.85	15.7	-86.4	40.4	9.8
37	CH10Avg			98,587	0	0.00				
38	CH10SD			98,587	0	0.00				
39	CH10Max			98,587	0	0.00				
40	CH10Min			98,587	0	0.00				
41	CH11Avg			98,587	0	0.00				
42	CH11SD			98,587	0	0.00				
43	CH11Max			98,587	0	0.00				
44	CH11Min			98,587	0	0.00				
45	CH12Avg			98,587	0	0.00				
46	CH12SD			98,587	0	0.00				
47	CH12Max			98,587	0	0.00				
48	CH12Min			98,587	0	0.00				
49	Air Density	kg/m³		98,587	98,587	100.00	1.222	1.125	1.889	0.039
50	Speed 50 m A TI			98,587	84,637	85.85	0.14	0.00	1.14	0.08
51	Speed 50 m B TI			98,587	84,637	85.85	0.14	0.00	1.23	0.08
52	Speed 40 m A TI			98,587	84,637	85.85	0.15	0.00	1.77	0.09

#	Label	Units	Height	Possible Data Points	Valid Data Points	Recovery Rate (%)	Mean	Min	Max	Std. Dev
53	Speed 40 m B TI			98,587	84,637	85.85	0.15	0.00	1.25	0.09
54	Speed 30 m A TI			98,587	84,637	85.85	0.16	0.00	1.25	0.09
55	Speed 30 m B TI			98,587	84,637	85.85	0.17	0.00	1.30	0.09
56	Speed 50 m A WPD	W/m ²		98,587	84,637	85.85	236	0	17,902	469
57	Speed 50 m B WPD	W/m ²		98,587	84,637	85.85	224	0	9,769	410
58	Speed 40 m A WPD	W/m ²		98,587	84,637	85.85	205	0	16,063	429
59	Speed 40 m B WPD	W/m ²		98,587	84,637	85.85	196	0	12,131	378
60	Speed 30 m A WPD	W/m ²		98,587	84,637	85.85	176	0	14,706	393
61	Speed 30 m B WPD	W/m ²		98,587	84,637	85.85	163	0	13,091	342