

**Site Information:**

Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor Information:**

1 NRG #40 Anem. m/s  
 2 NRG #40 Anem. m/s  
 3 NRG #40 Anem. m/s  
 4 NRG #40 Anem. m/s  
 5 NRG #40 Anem. m/s  
 6 NRG #40 Anem. m/s  
 7 #200P Wind Vane  
 8 #200P Wind Vane  
 9 NRG #110S Temp C  
 10 BP-20 Barom. mb  
 11 No SCM Installed  
 12 No SCM Installed

**October 2003**

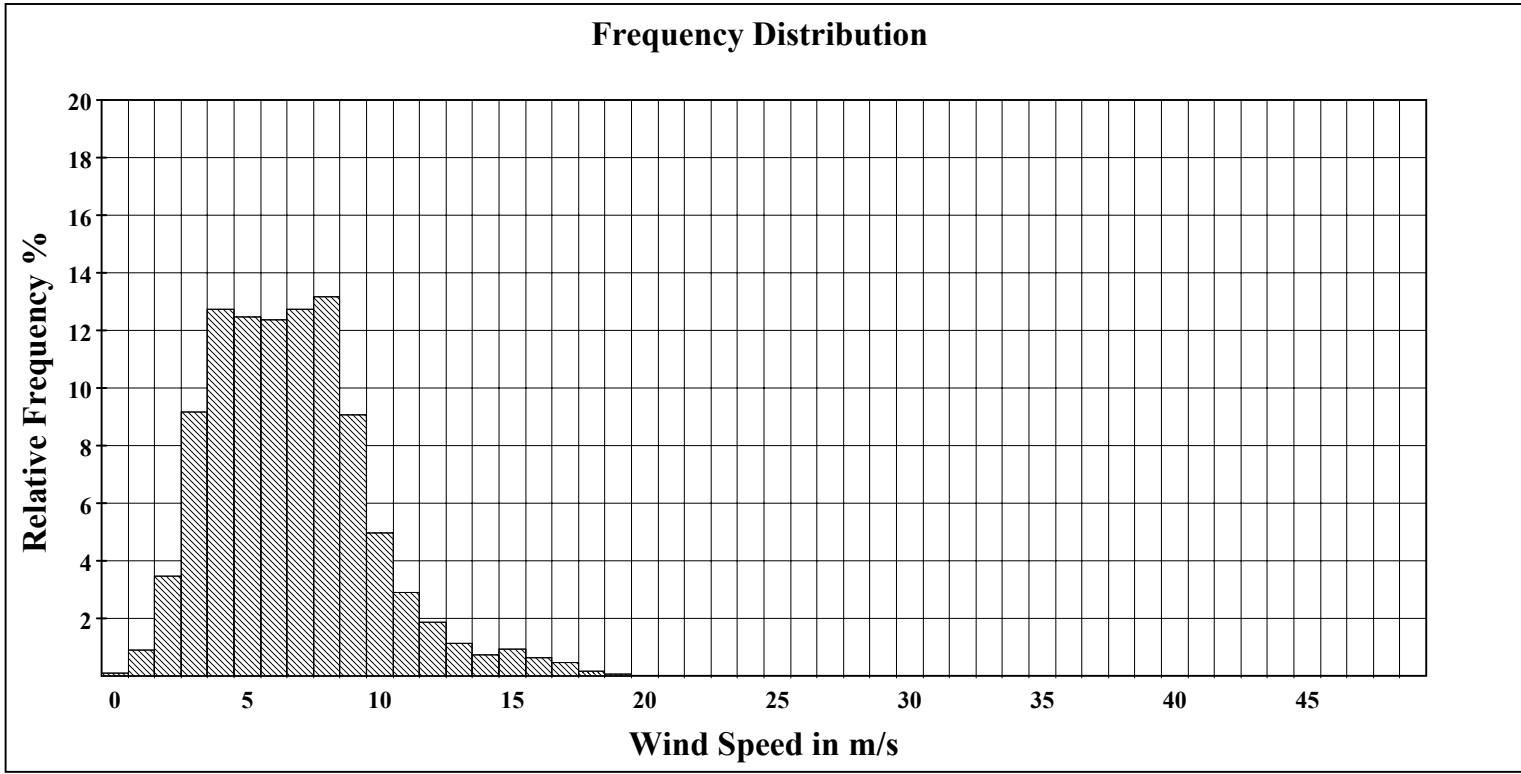
**Summary Report**  
 SITE 1080  
 WCROC

Channel	1	2	3	4	5	6	7	8	9	10		
Height	50 m	50 m	40 m	40 m	30 m	30 m	50 m	40 m	2 m	2 m	-----	-----
Units	m/s	m/s	m/s	m/s	m/s	m/s	deg	deg	C	mb	-----	-----
Intervals with Valid Data	4464	4464	4431	4464	4464	4464	4464	4464	4464	4464		
Average Filtered Data	6.6	6.77	5.92	6.32	5.62	5.79	221.84	222.32	10.82	976.72		
Average for All Data	6.6	6.77	5.88	6.32	5.62	5.79	221.84	222.32	10.82	976.72		
Min Interval Average	0.4	0.4	0.4	0.4	0.4	0.4			-3.5	956.2		
Date of Min Interval	10/16/2003	10/16/2003	10/4/2003	10/4/2003	10/4/2003	10/4/2003			10/26/2003	10/27/2003		
Time of Min Interval	10:30:00 PM	10:30:00 PM	7:20:00 AM	7:20:00 AM	7:10:00 AM	7:10:00 AM			4:20:00 AM	7:30:00 PM		
Max Interval Average	18.9	19.1	18.1	18.5	17.4	17.8			32.8	993.8		
Date of Max Interval	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003			10/7/2003	10/1/2003		
Time of Max Interval	5:50:00 AM	5:50:00 AM	6:30:00 AM	6:30:00 AM	5:50:00 AM	5:50:00 AM			1:50:00 PM	9:00:00 AM		
Average Interval SD	0.76	0.73	0.78	0.74	0.75	0.74	5.97	6.47	0.04	0		
Min Sample	0.4	0.4	0.4	0.4	0.4	0.4			-3.7	956		
Date of Min Sample	10/1/2003	10/1/2003	10/1/2003	10/1/2003	10/1/2003	10/1/2003			10/26/2003	10/27/2003		
Time of Min Sample	10:20:00 AM	10:20:00 AM	2:00:00 PM	2:00:00 PM	7:50:00 AM	7:50:00 AM			4:20:00 AM	7:10:00 PM		
Max Sample	24.8	25.2	24	24.4	23.3	24			33.4	994.7		
Date of Max Sample	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003	10/28/2003			10/7/2003	10/1/2003		
Time of Max Sample	5:50:00 AM	5:50:00 AM	5:50:00 AM	6:00:00 AM	6:00:00 AM	6:10:00 AM			1:50:00 PM	9:50:00 AM		
Average Interval TI	0.12	0.11	0.14	0.12	0.14	0.14						
Wind Speed Direction							NW	NW				

**Site Information:**  
 Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 1:**  
 NRG #40 Anem. m/s  
 Height: 50 m  
 Serial #: SN:

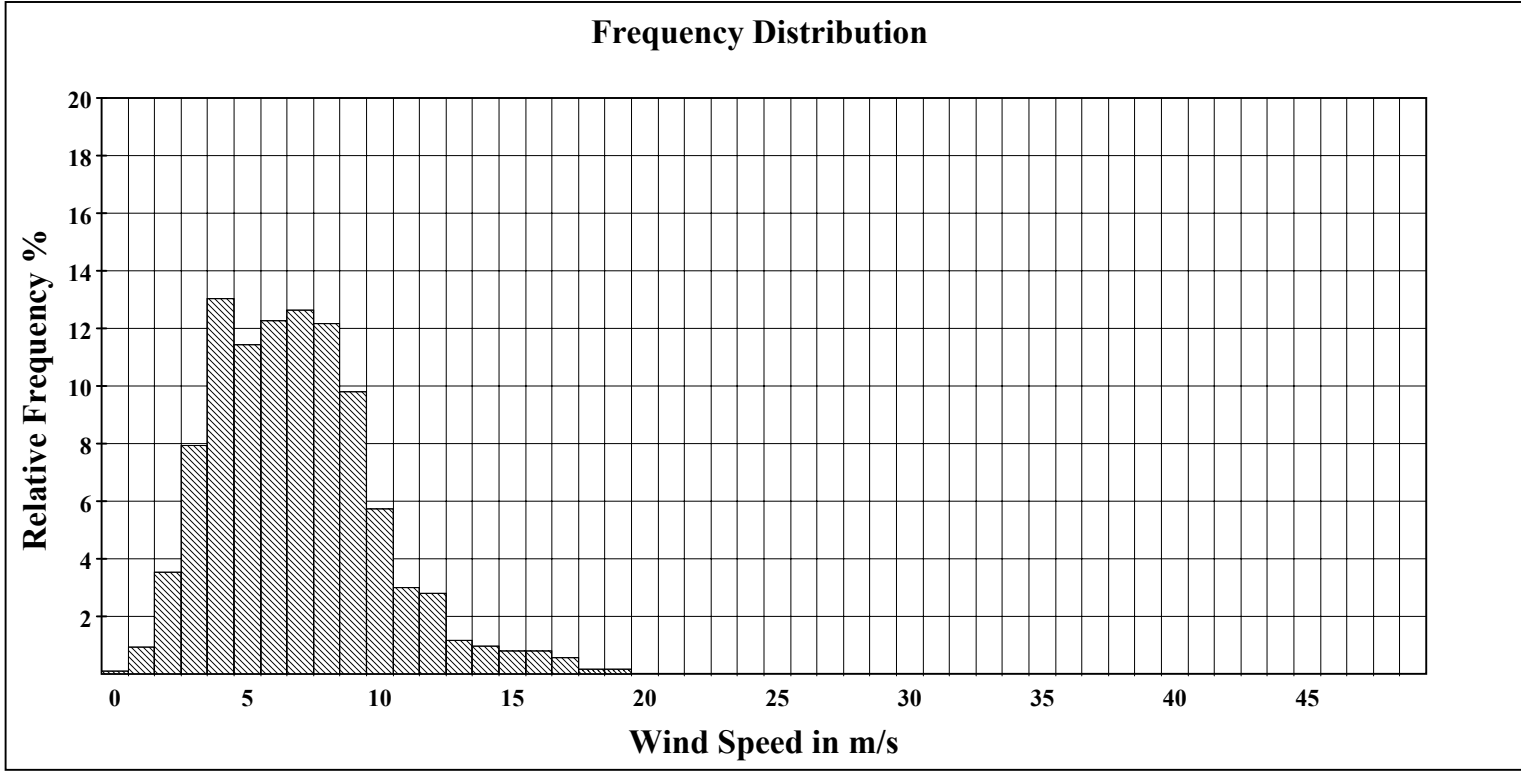
**October 2003**  
**Frequency Distribution, 50 m, Ch 1**  
 SITE 1080  
 WCROC



**Site Information:**  
 Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 2:**  
 NRG #40 Anem. m/s  
 Height: 50 m  
 Serial #: SN:

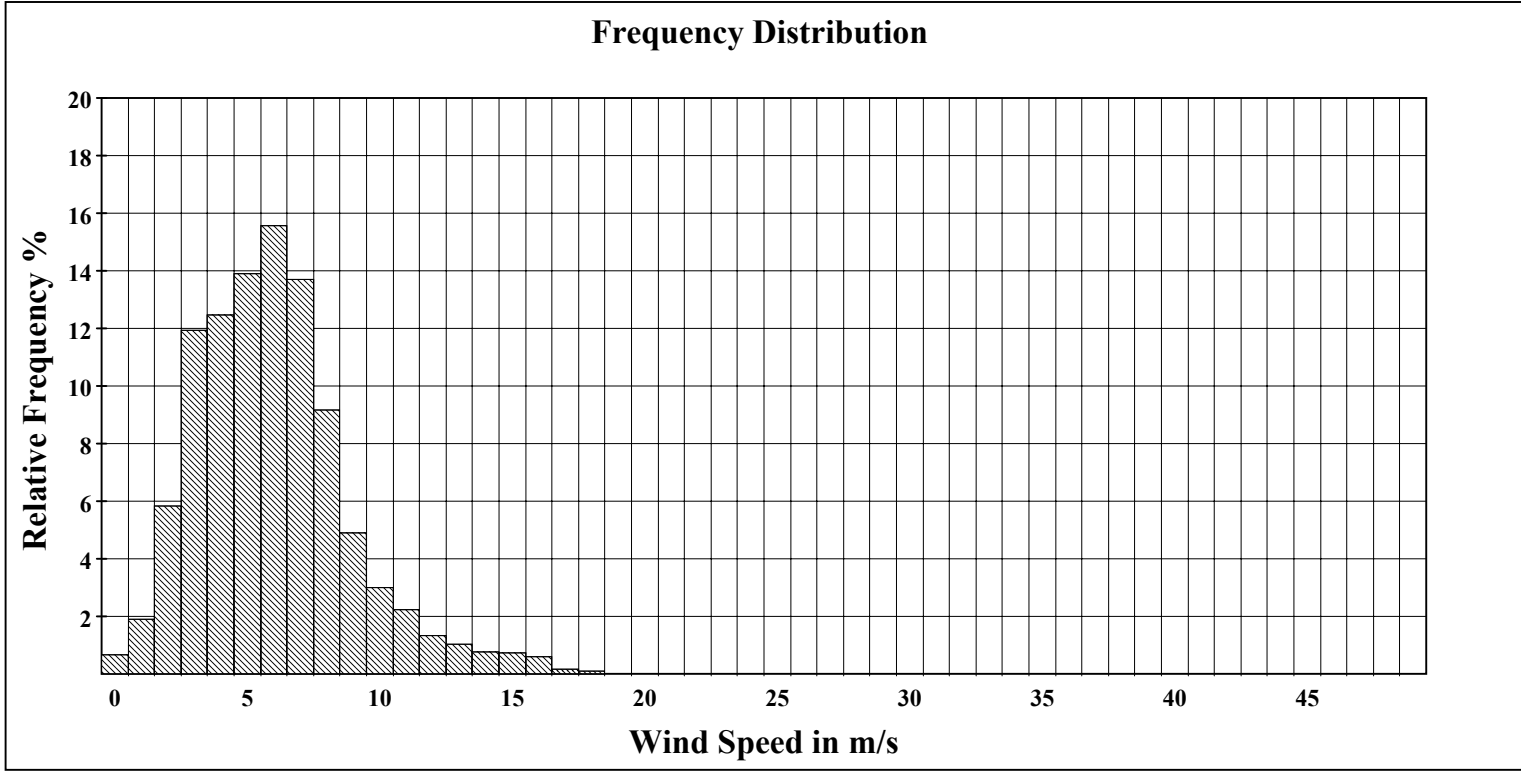
**October 2003**  
**Frequency Distribution, 50m, Ch 2**  
 SITE 1080  
 WCROC



**Site Information:**  
 Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 3:**  
 NRG #40 Anem. m/s  
 Height: 40 m  
 Serial #: SN:

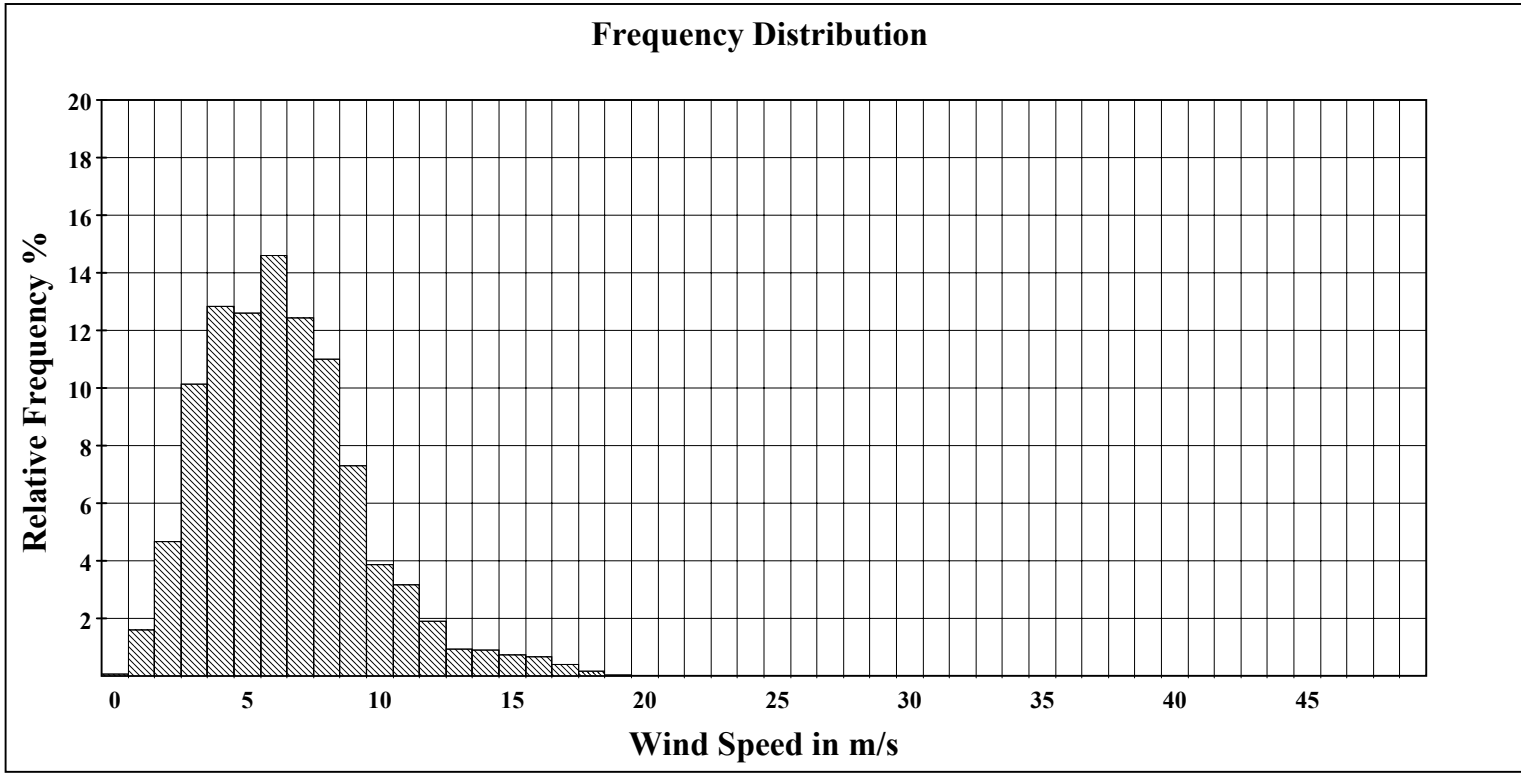
**October 2003**  
**Frequency Distribution, 40m, Ch 3**  
 SITE 1080  
 WCROC



**Site Information:**  
 Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 4:**  
 NRG #40 Anem. m/s  
 Height: 40 m  
 Serial #: SN:

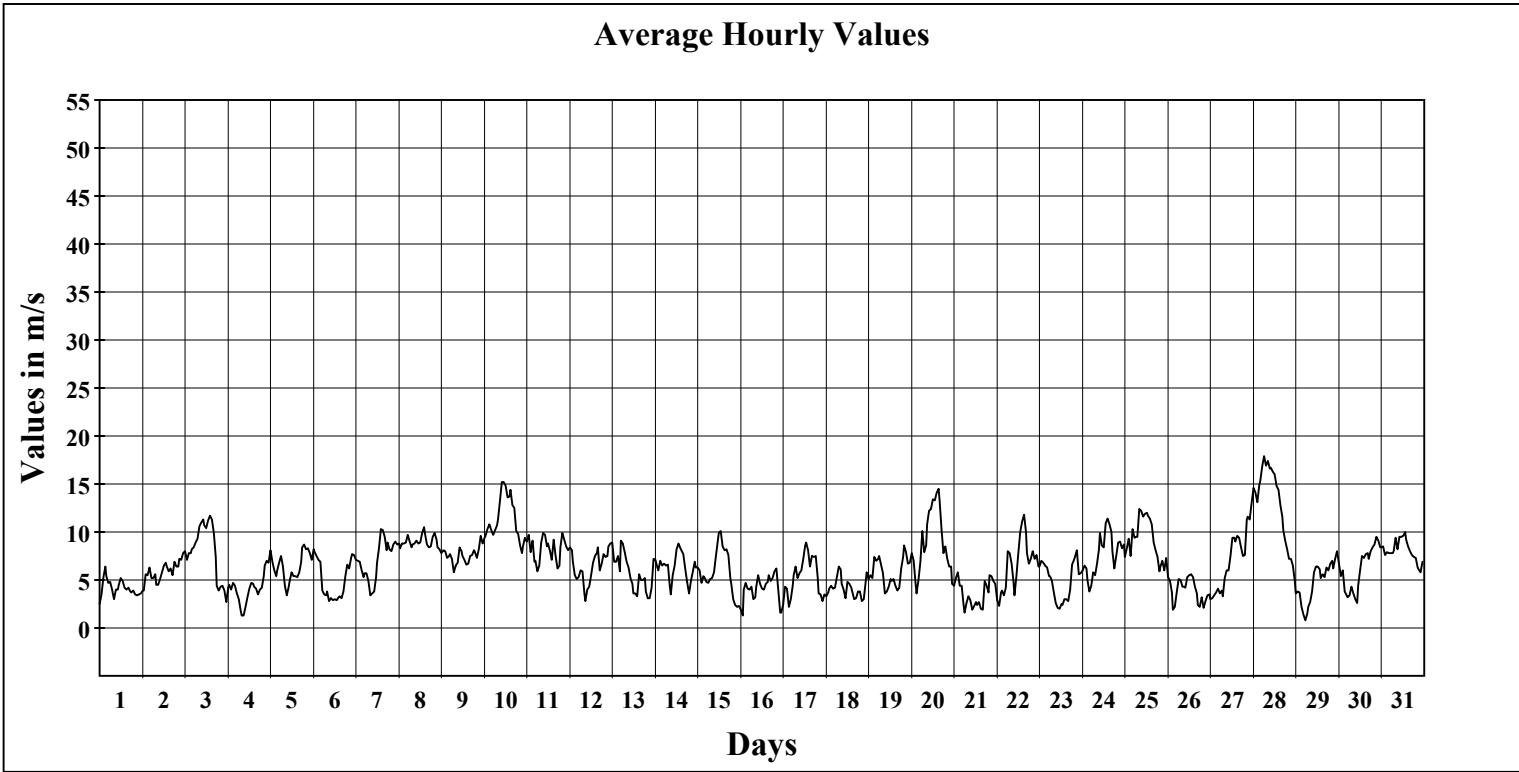
**October 2003**  
**Frequency Distribution, 40m, Ch 4**  
 SITE 1080  
 WCROC



**Site Information:**  
 Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 1:**  
 NRG #40 Anem. m/s  
 Height: 50 m  
 Serial #: SN:

**October 2003**  
**Hourly Averages Graph, 50m, Ch 1**  
 SITE 1080  
 WCROC



**Average Value: 6.6**

**Site Information:**

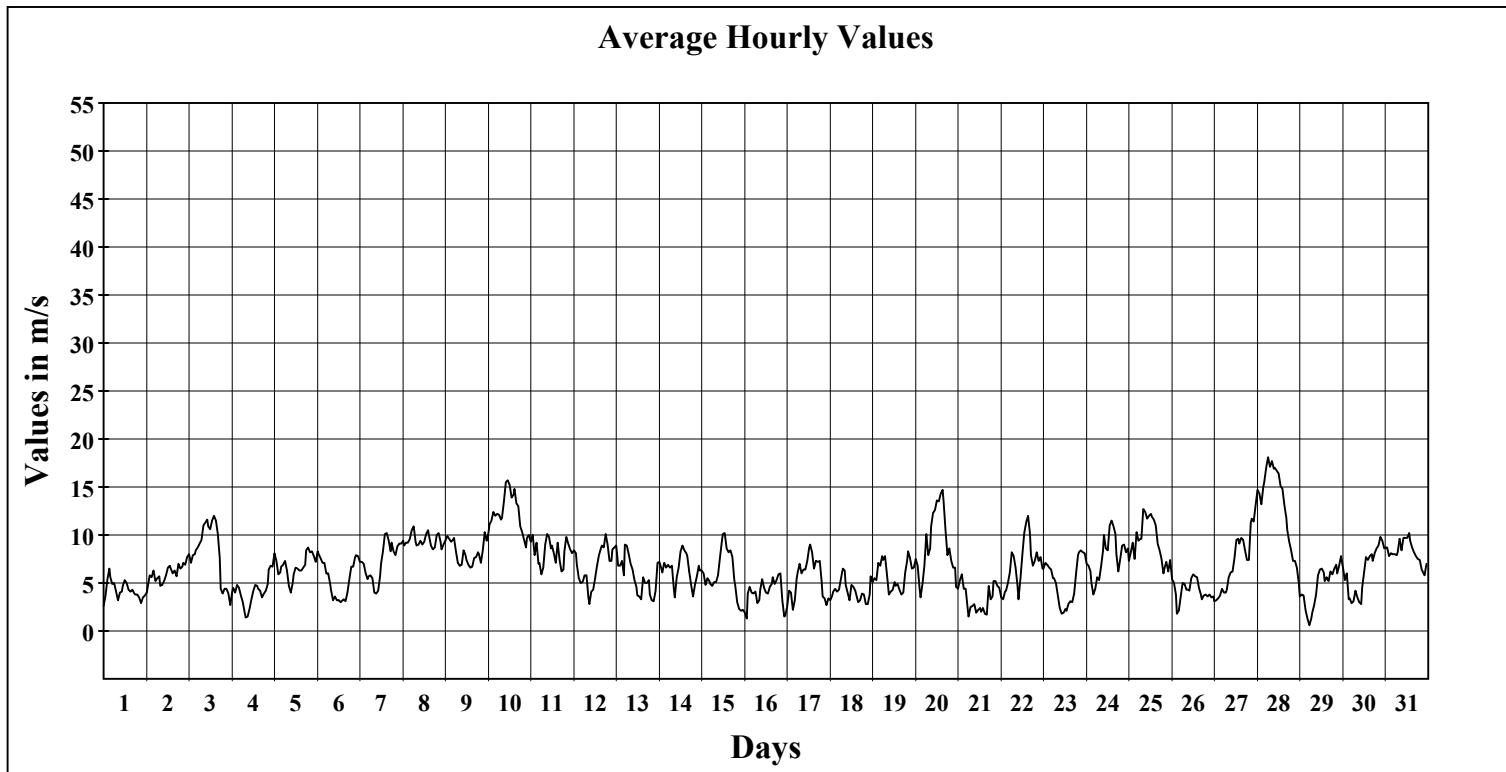
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 2:**

NRG #40 Anem. m/s  
Height: 50 m  
Serial #: SN:

**October 2003****Hourly Averages Graph, 50m, Ch 2**

SITE 1080  
WCROC

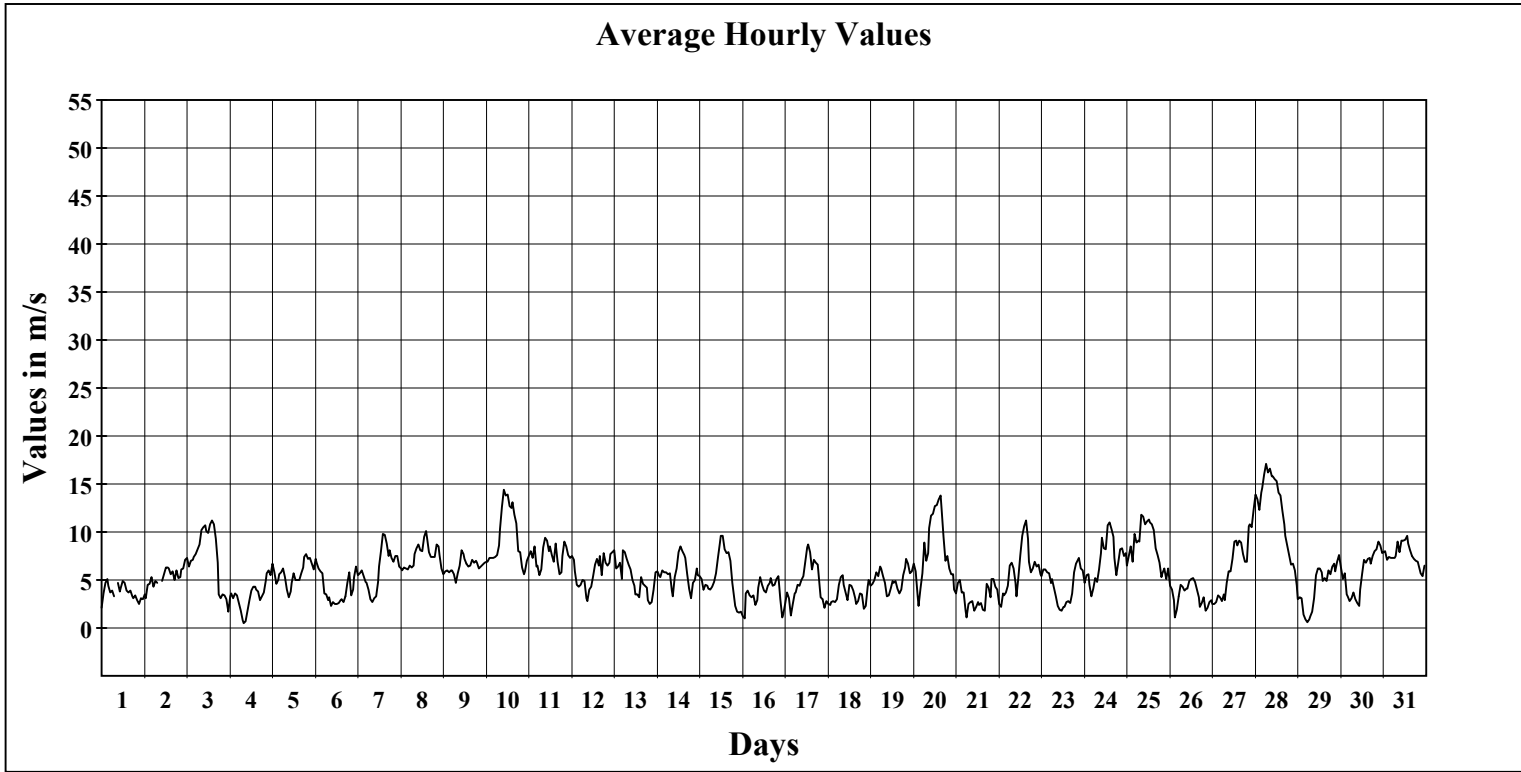


**Average Value: 6.8**

**Site Information:**  
 Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 3:**  
 NRG #40 Anem. m/s  
 Height: 40 m  
 Serial #: SN:

**October 2003**  
**Hourly Averages Graph, 40m, Ch 3**  
 SITE 1080  
 WCROC



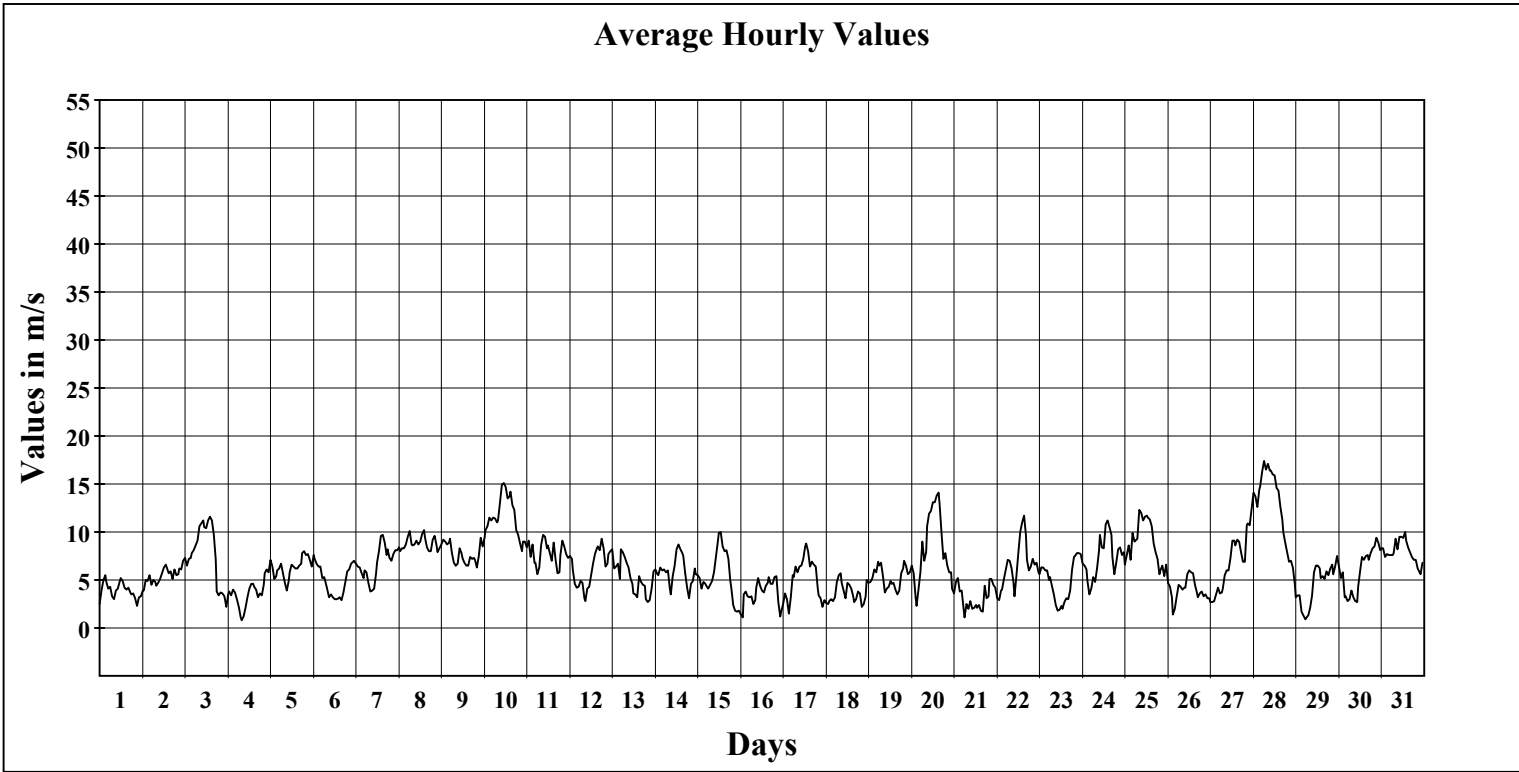
**Average Value: 5.9**



**Site Information:**  
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 4:**  
NRG #40 Anem. m/s  
Height: 40 m  
Serial #: SN:

**October 2003**  
**Hourly Averages Graph, 40m, Ch 4**  
SITE 1080  
WCROC

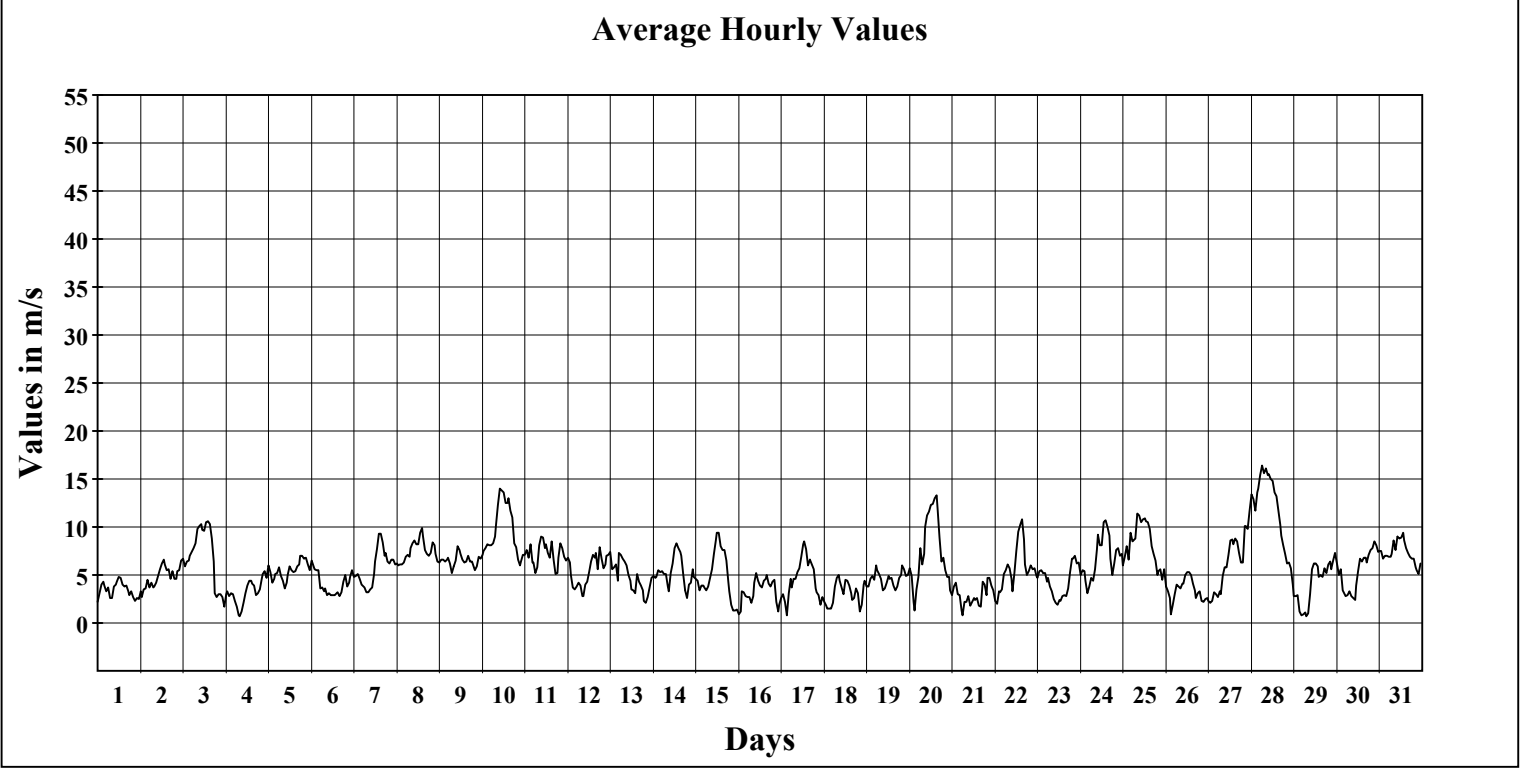


**Average Value: 6.3**

**Site Information:**  
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 5:**  
NRG #40 Anem. m/s  
Height: 30 m  
Serial #: SN:

**October 2003**  
**Hourly Averages Graph, 30m, Ch 5**  
SITE 1080  
WCROC

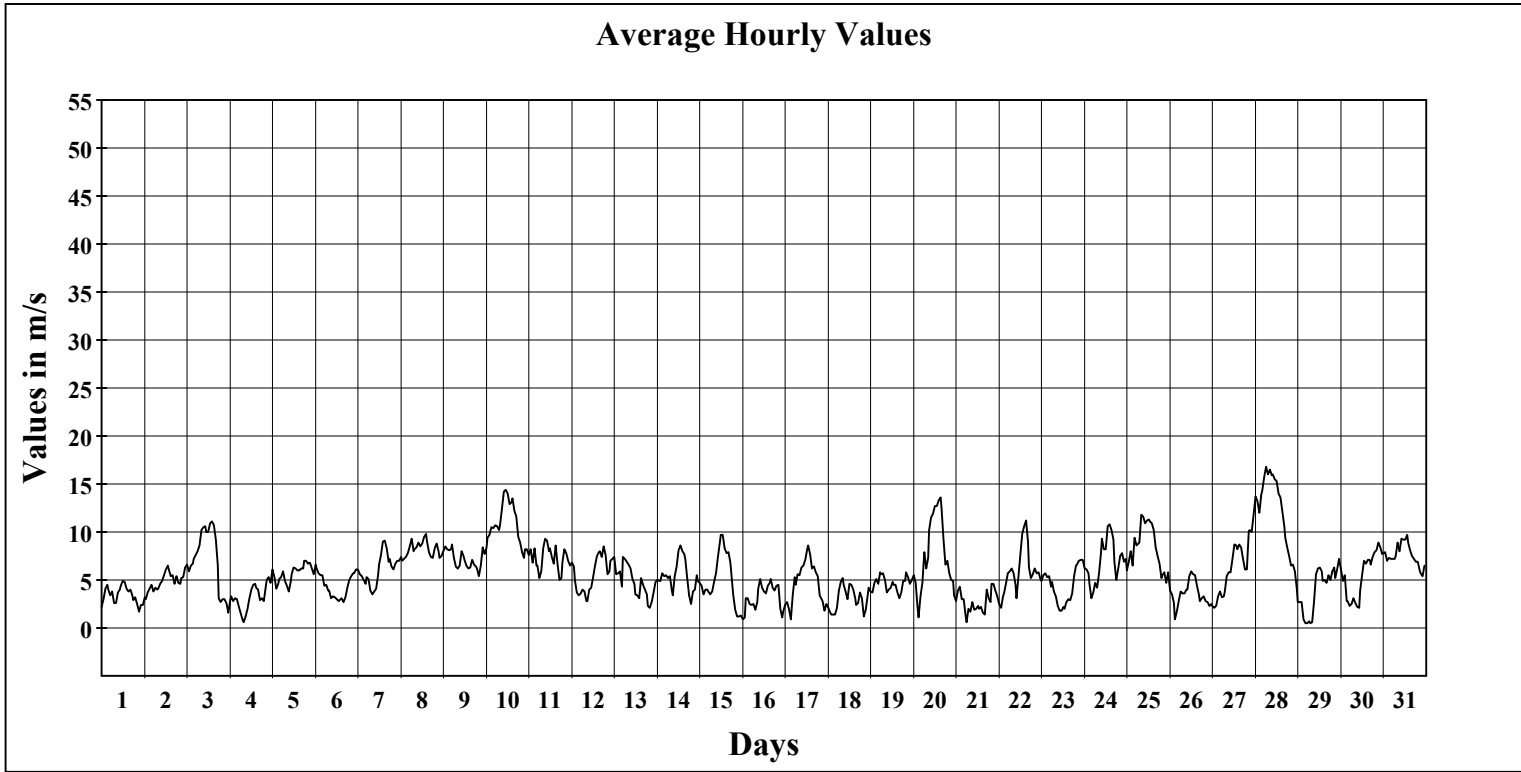


**Average Value: 5.6**

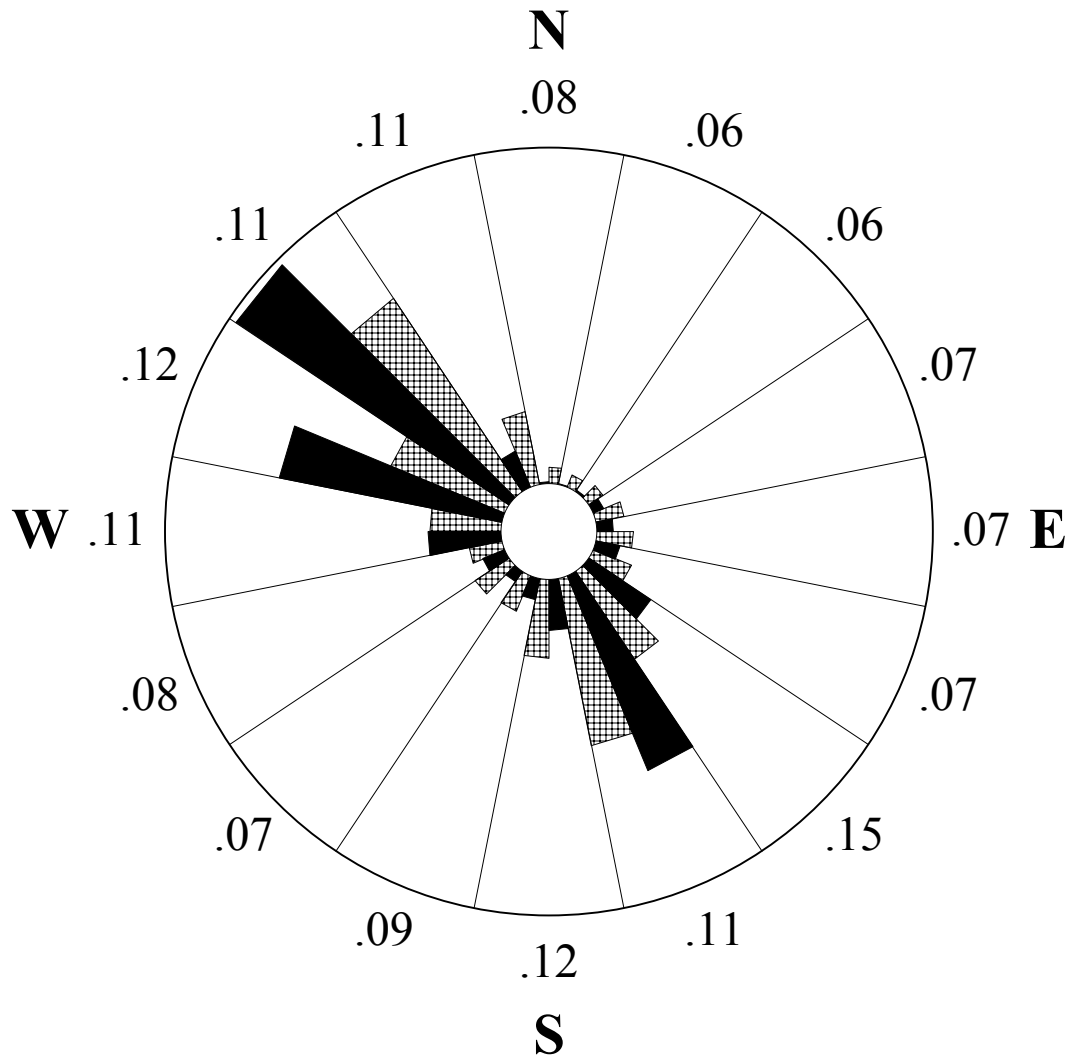
**Site Information:**  
 Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m



**Sensor on channel 6:**  
 NRG #40 Anem. m/s  
 Height: 30 m  
 Serial #: SN:

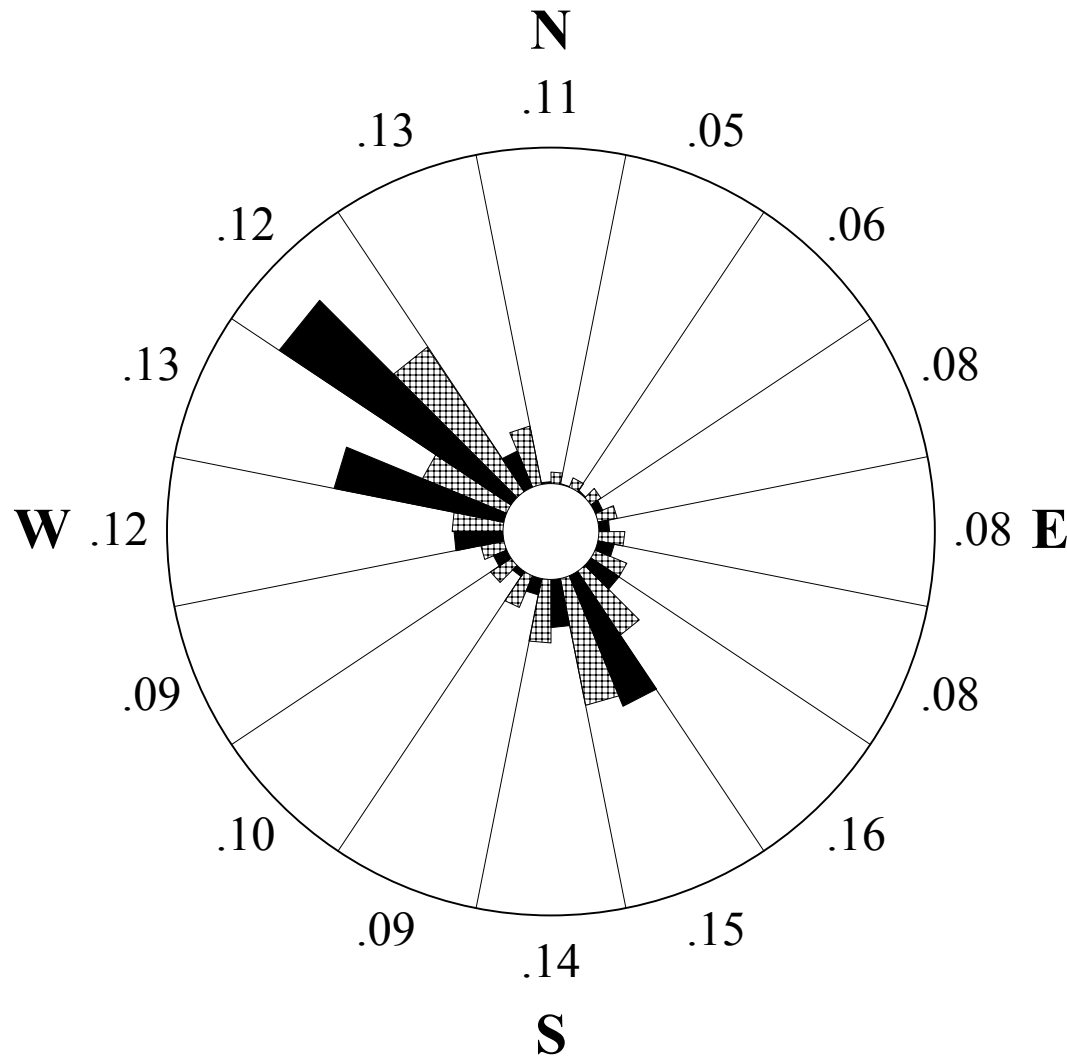
**October 2003**  
**Hourly Averages Graph, 30m, Ch 6**  
 SITE 1080  
 WCROC





**Average Value: 5.8**



<b>October 2003</b>	
<b>Wind Rose, 50m, Ch 1, 7</b>	
SITE 1080 WCROC	
<b>Site Information:</b>	
Project:	Wind Hybrid Project
Location:	Morris, MN
Elevation:	350 m
<b>Anemometer on channel 1:</b>	
NRG #40 Anem. m/s	
Height:	50 m
Serial #:	SN:
<b>Vane on channel 7:</b>	
#200P Wind Vane	
Height:	50 m
Serial #:	SN:
Outer Numbers are Average TIs for speeds greater than 4.5 m/s	
Inner Circle = 0%	
Outer Circle = 30%	
	Percent of Total Wind Energy
	Percent of Total Time



<b>October 2003</b>	
<b>Wind Rose, 40 m, Ch 3, 8</b>	
SITE 1080	
WCROC	
<b>Site Information:</b>	
Project:	Wind Hybrid Project
Location:	Morris, MN
Elevation:	350 m
<b>Anemometer on channel 3:</b>	
NRG #40 Anem. m/s	
Height:	40 m
Serial #:	SN:
<b>Vane on channel 8:</b>	
#200P Wind Vane	
Height:	40 m
Serial #:	SN:
Outer Numbers are Average TIs for speeds greater than 4.5 m/s	
Inner Circle = 0%	
Outer Circle = 40%	
	Percent of Total Wind Energy
	Percent of Total Time