

**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

**July 2004****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	4464	4464	4464	4464	4464	4464	4464	4464		
Average Filtered Data	4.72	4.86	4.28	4.6	4.08	4.16	116.83	118.64	22.11	978.65		
Average for All Data	4.72	4.86	4.28	4.6	4.08	4.16	116.83	118.64	22.11	978.65		
Min Interval Average	0.4	0.4	0.4	0.4	0.4	0.4			11.2	968		
Date of Min Interval	7/3/2004	7/3/2004	7/3/2004	7/3/2004	7/3/2004	7/3/2004			7/23/2004	7/21/2004		
Time of Min Interval	6:30:00 PM	6:30:00 PM	5:10:00 AM	6:30:00 PM	5:00:00 AM	4:50:00 AM			5:00:00 AM	1:50:00 AM		
Max Interval Average	14.3	14.2	13.5	13.8	12.8	12.9			36	993.8		
Date of Max Interval	7/11/2004	7/11/2004	7/11/2004	7/11/2004	7/11/2004	7/11/2004			7/21/2004	7/24/2004		
Time of Max Interval	12:50:00 AM	12:50:00 AM	12:50:00 AM	12:50:00 AM	12:50:00 AM	12:50:00 AM			3:20:00 PM	10:10:00 AM		
Average Interval SD	0.66	0.62	0.67	0.63	0.66	0.65	8.68	9.24	0.05	0.01		
Min Sample	0.4	0.4	0.4	0.4	0.4	0.4			10.6	967.8		
Date of Min Sample	7/1/2004	7/2/2004	7/1/2004	7/1/2004	7/1/2004	7/1/2004			7/23/2004	7/21/2004		
Time of Min Sample	1:30:00 AM	2:00:00 PM	1:20:00 AM	1:30:00 AM	1:30:00 AM	1:30:00 AM			5:10:00 AM	1:50:00 AM		
Max Sample	19.9	20.2	19.1	19.9	19.1	18.7			36	993.8		
Date of Max Sample	7/11/2004	7/11/2004	7/11/2004	7/11/2004	7/11/2004	7/11/2004			7/21/2004	7/24/2004		
Time of Max Sample	12:50:00 AM	12:50:00 AM	12:50:00 AM	12:50:00 AM	12:50:00 AM	12:40:00 AM			3:10:00 PM	7:20:00 AM		
Average Interval TI	0.17	0.16	0.2	0.17	0.2	0.2						
Wind Speed Direction							SSE	SSE				

**Site Information:**

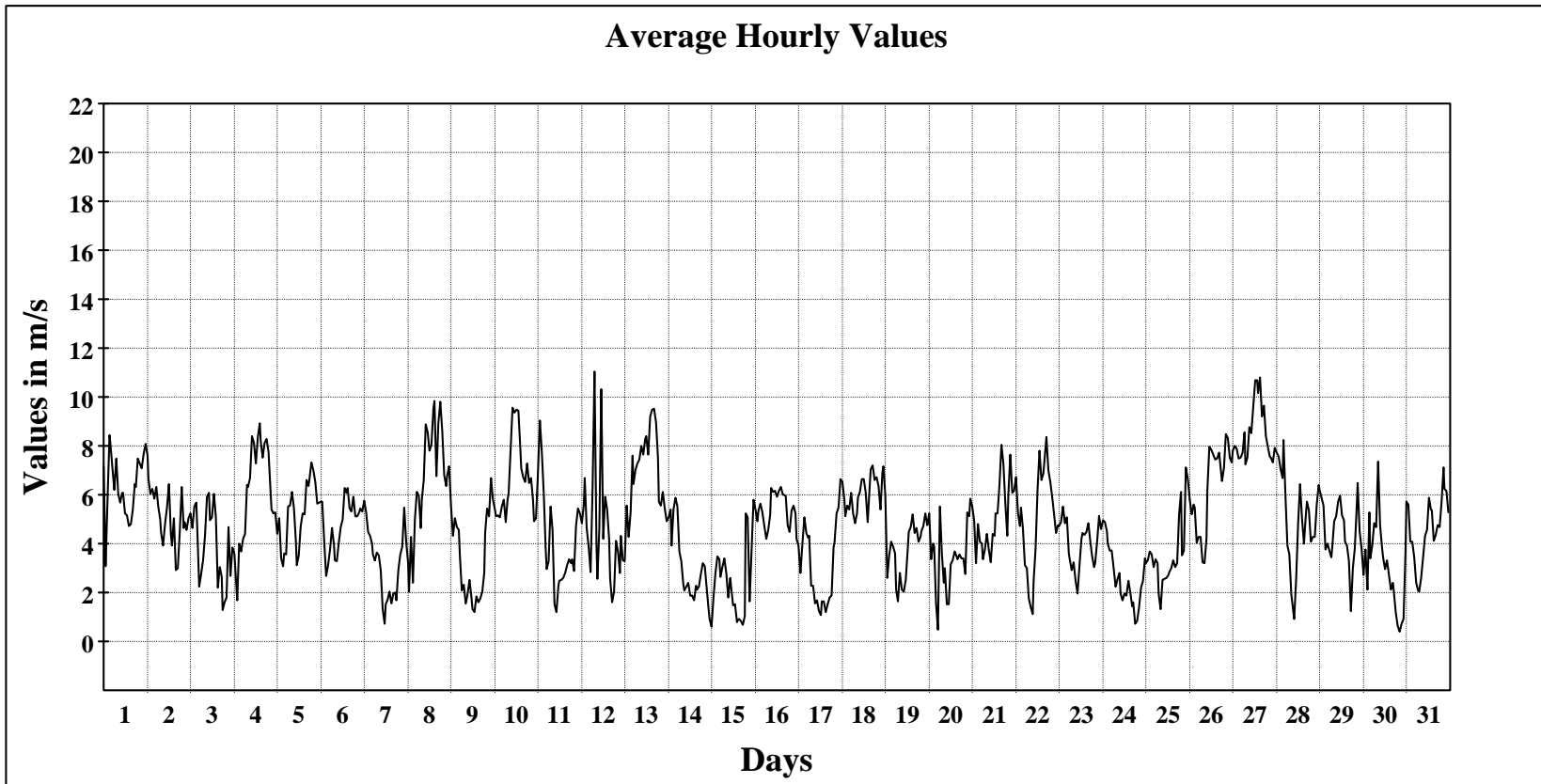
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 1:**

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

**July 2004**

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



**Average Value: 4.7**

**Site Information:**

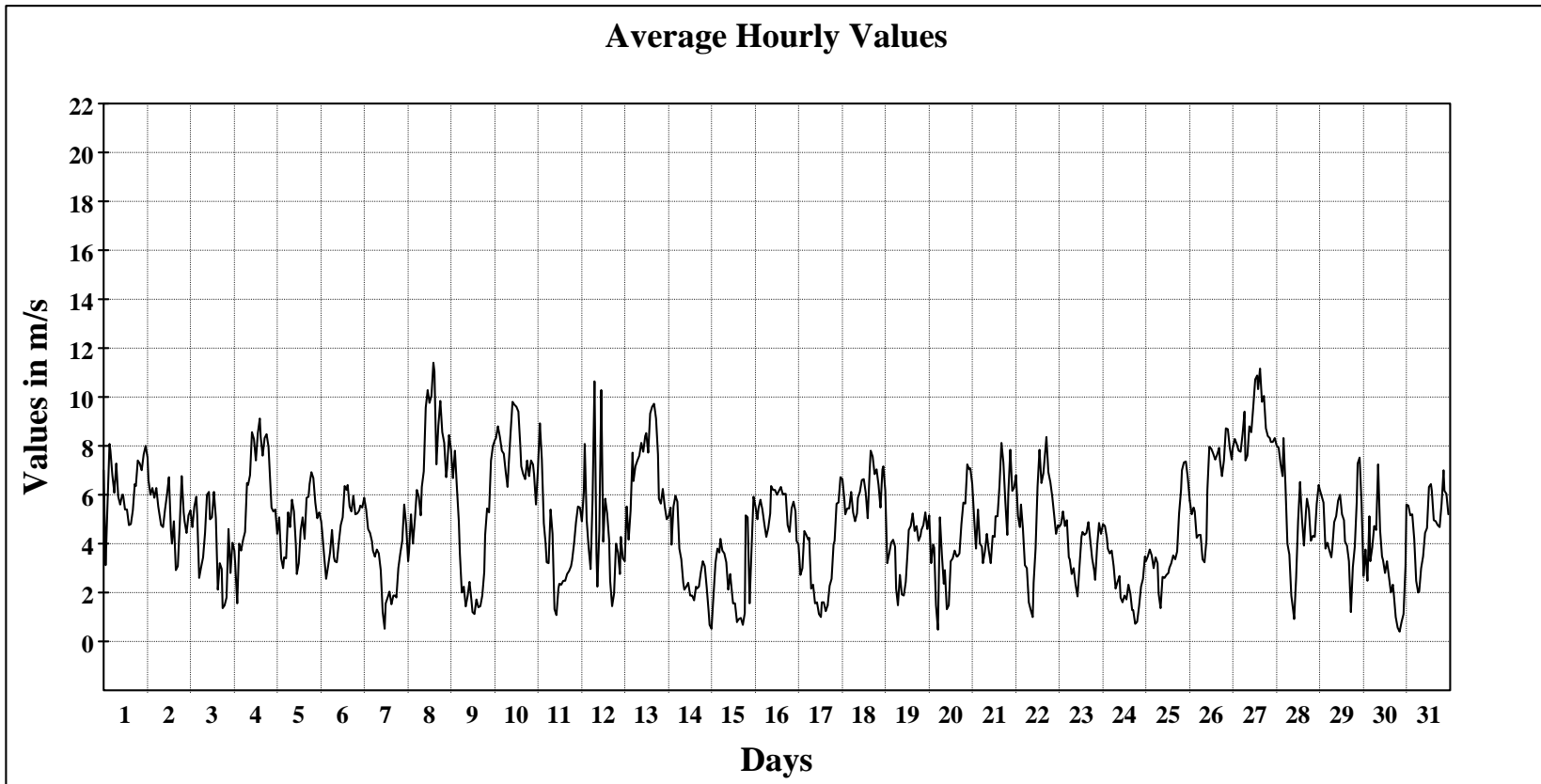
Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 2:**

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

**July 2004**

**Hourly Averages Graph, 50m, Ch 2**  
 SITE 1080  
 WCROC



**Average Value: 4.9**

**Site Information:**

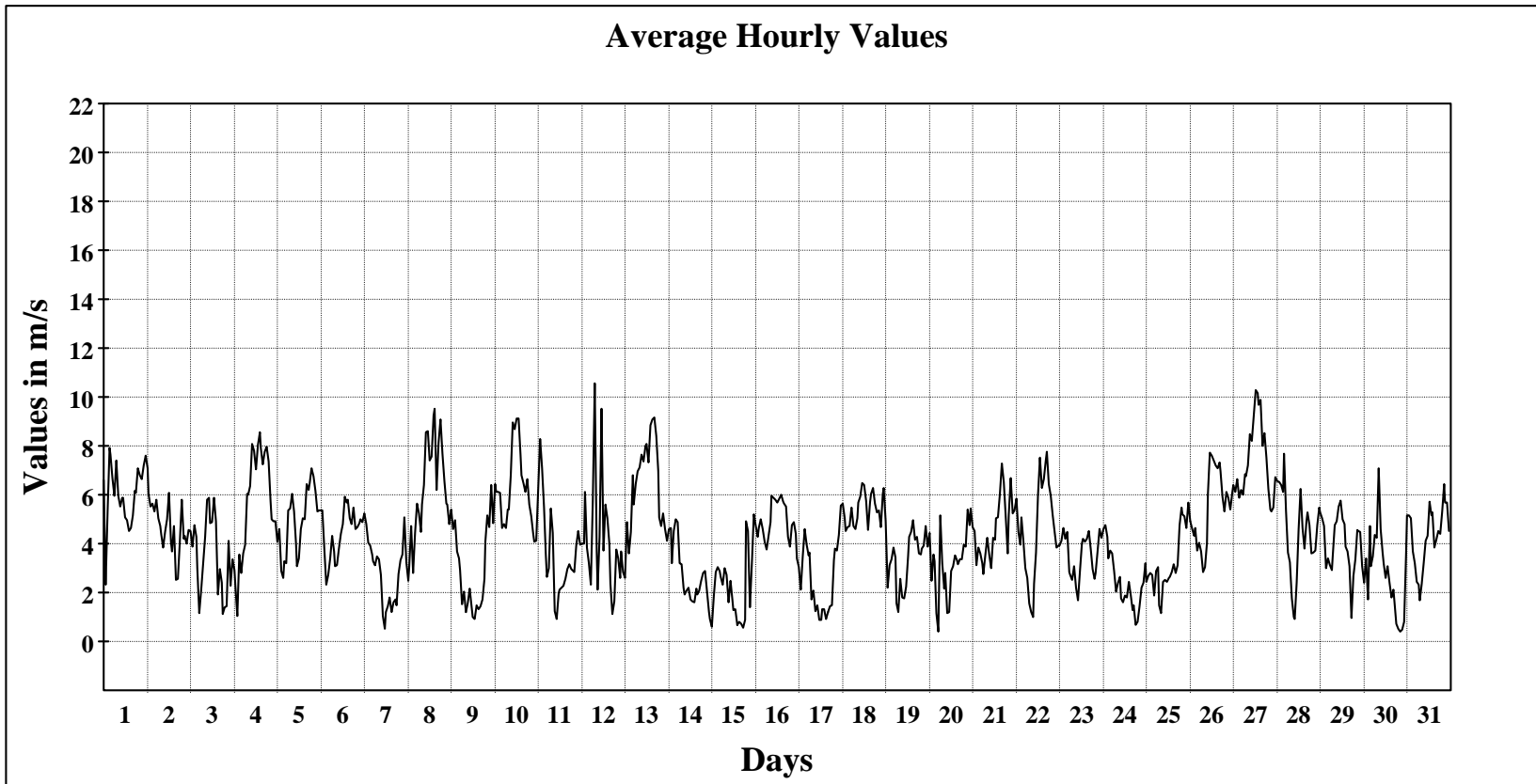
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 3:**

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

**July 2004**

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



**Average Value: 4.3**

**Site Information:**

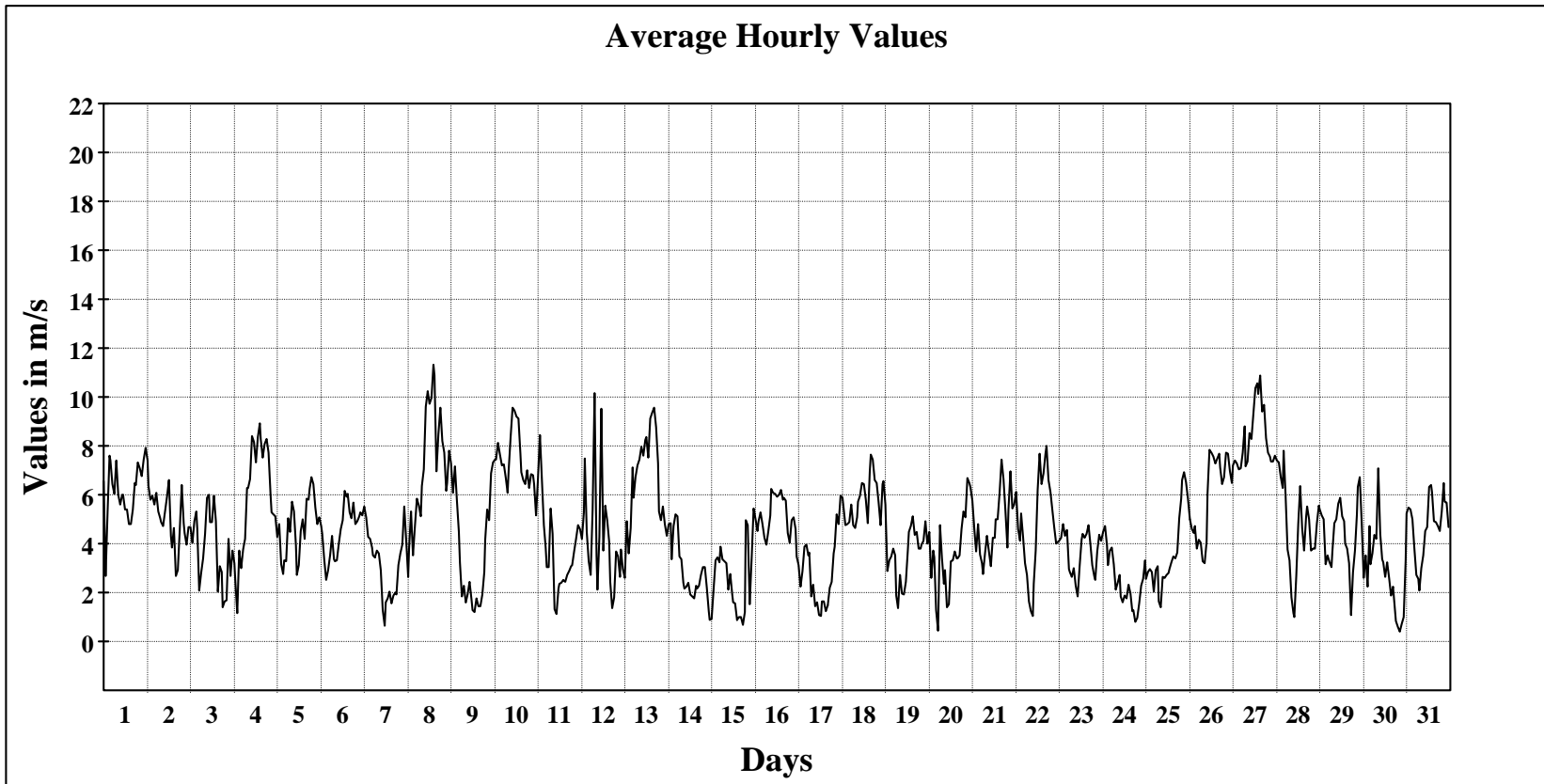
Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 4:**

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

**July 2004**

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



**Average Value: 4.6**

**Site Information:**

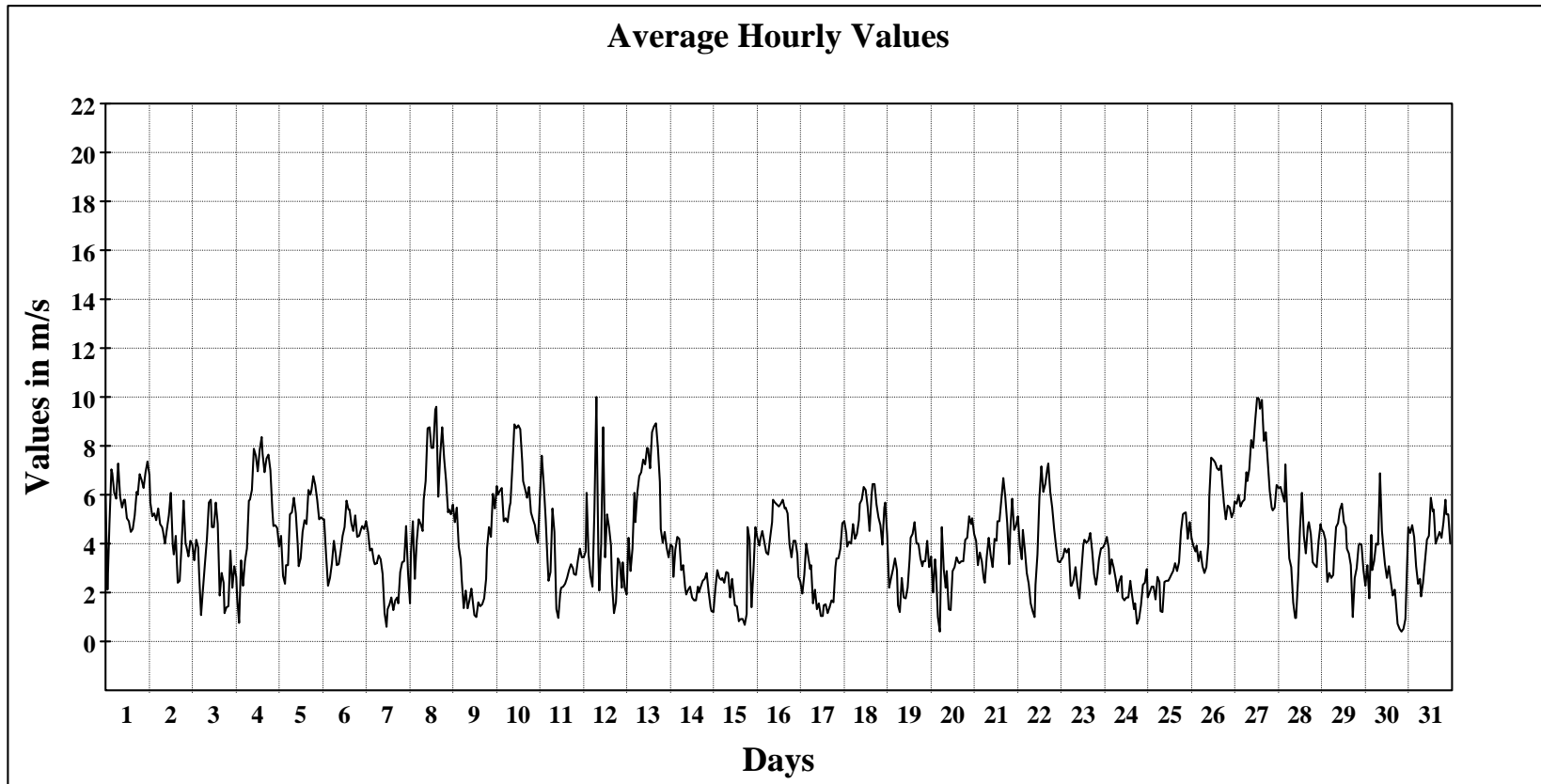
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 5:**

NRG #40 Anem. m/s  
Height: 30 m  
Serial #: SN:

**July 2004****Hourly Averages Graph, 30m, Ch 5**

SITE 1080  
WCROC



Average Value: 4.1

**Site Information:**

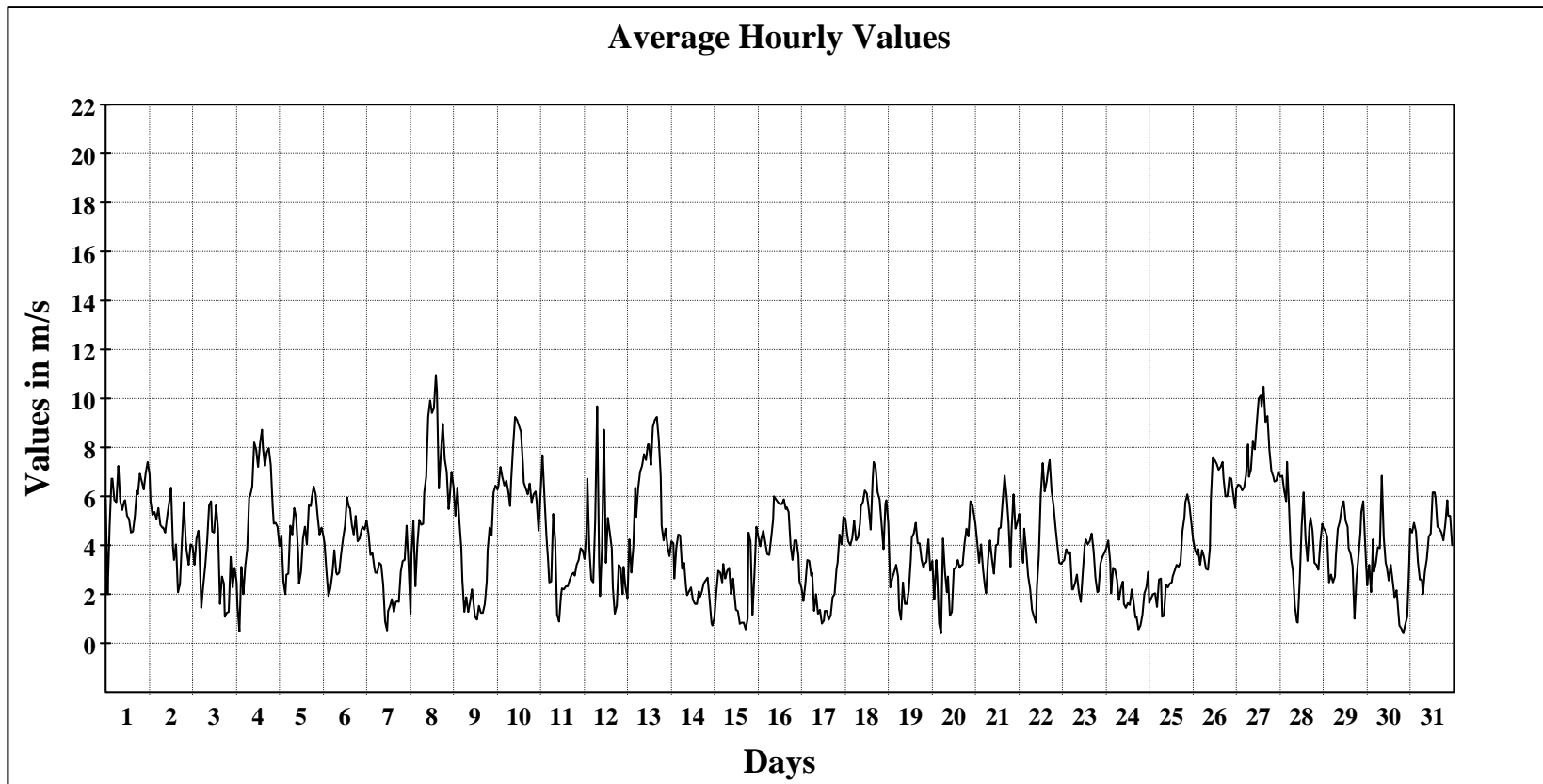
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 6:**

NRG #40 Anem. m/s  
Height: 30 m  
Serial #: SN:

**July 2004****Hourly Averages Graph, 30m, Ch 6**

SITE 1080  
WCROC



Average Value: 4.2

**Site Information:**

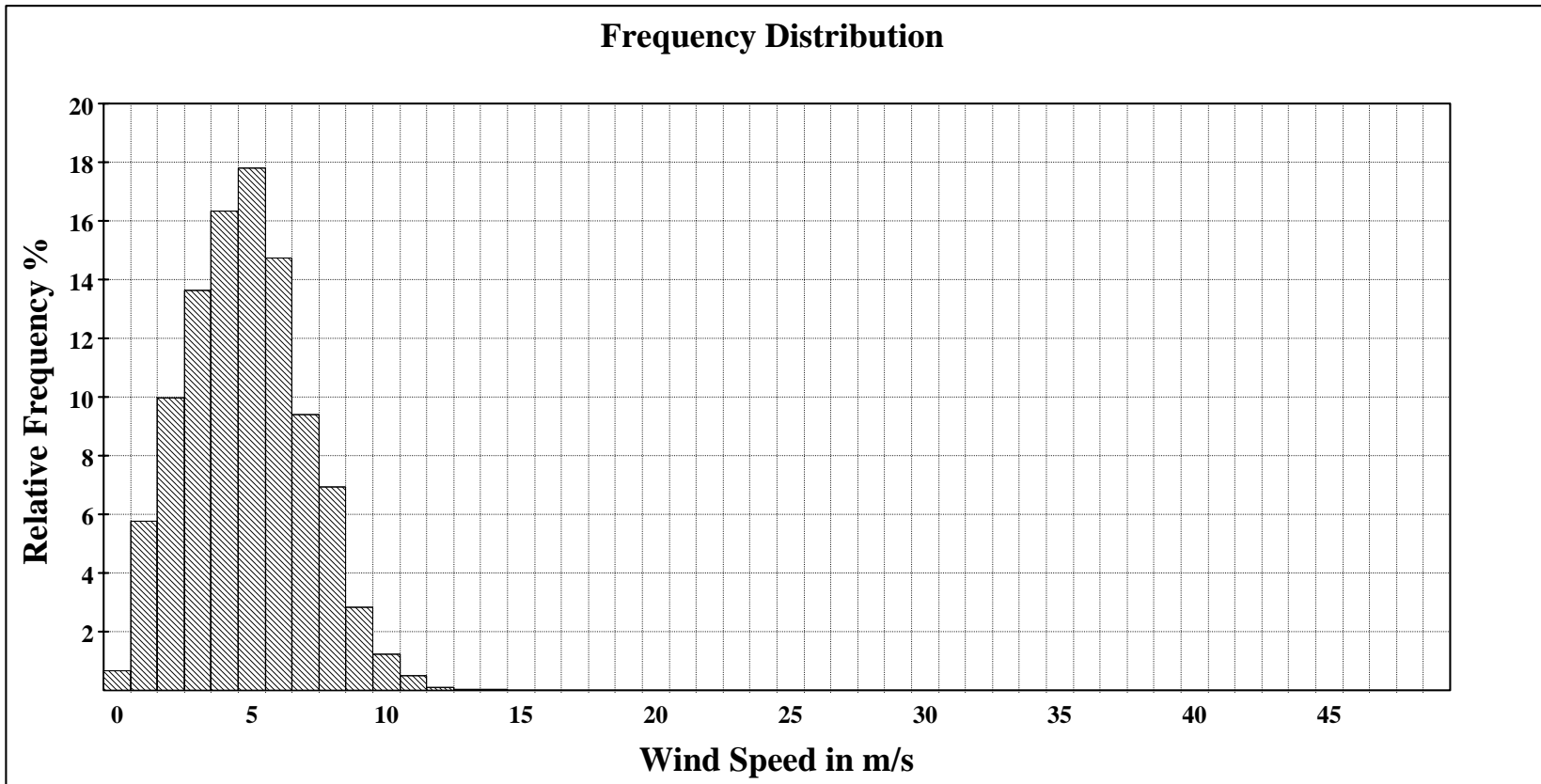
Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 1:**

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

**July 2004**

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





**Site Information:**

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

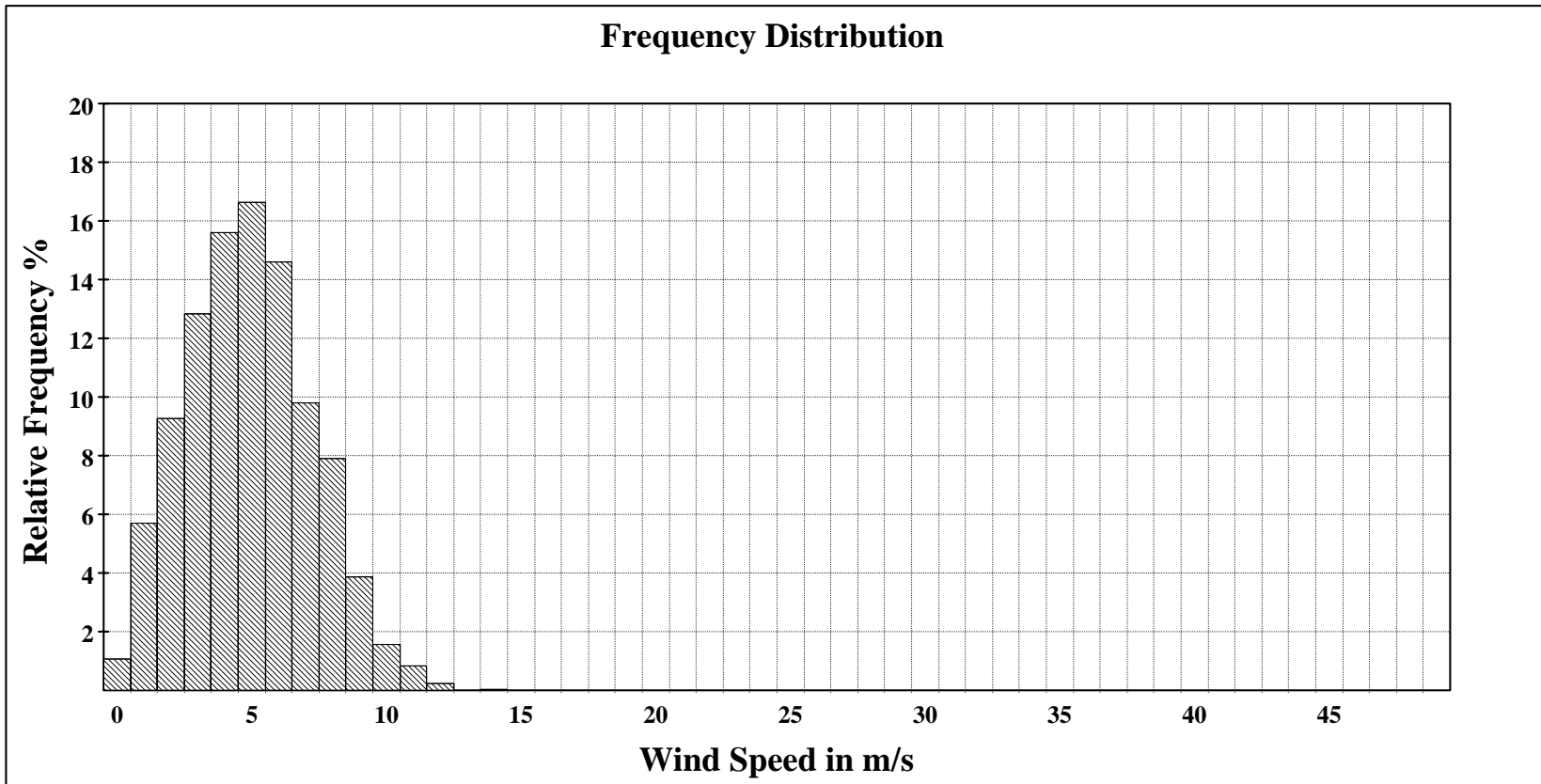
**Sensor on channel 2:**

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

**July 2004**

**Frequency Distribution, 50m, Ch 2**

SITE 1080  
 WCROC



**Site Information:**

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

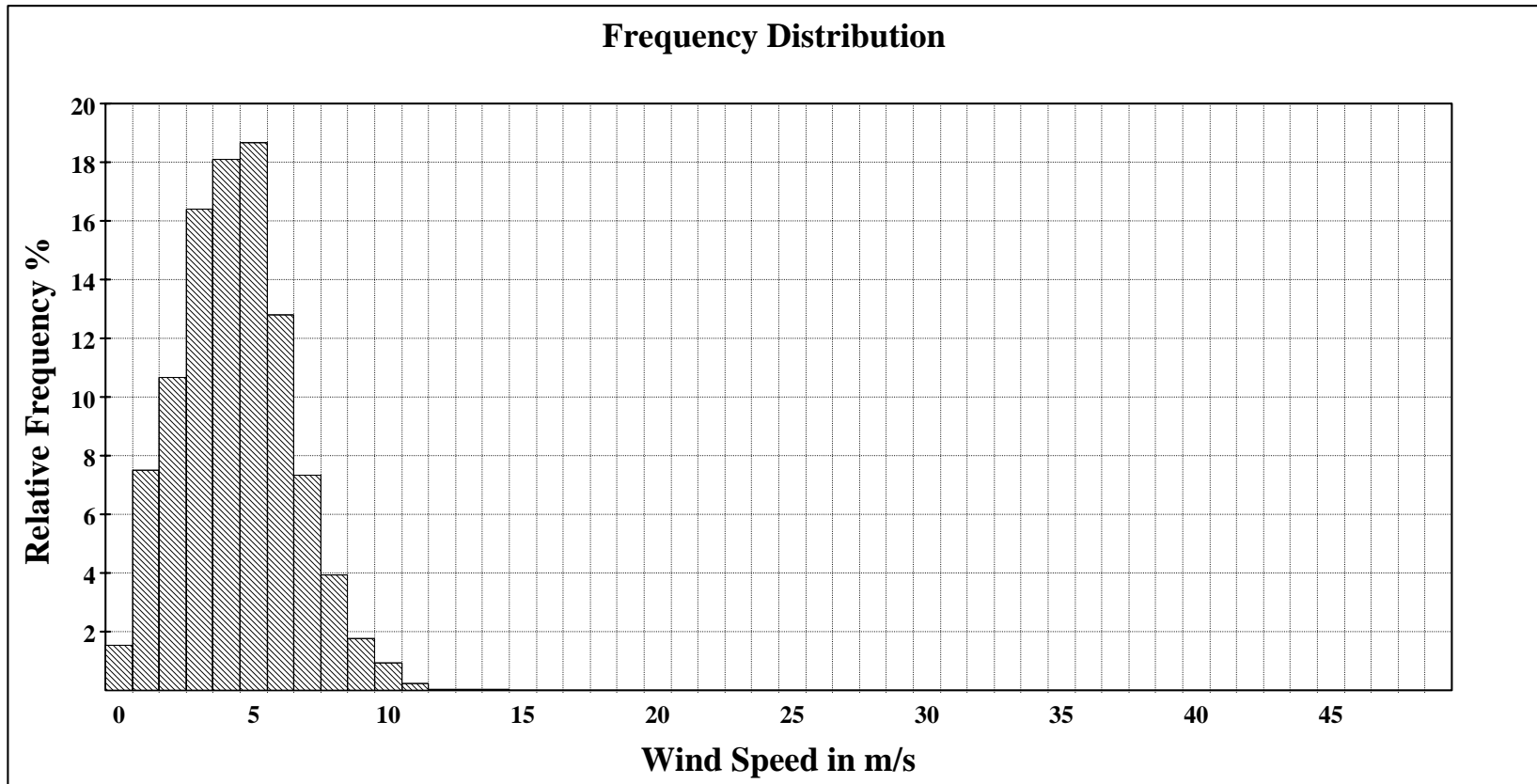
**Sensor on channel 3:**

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

**July 2004**

**Frequency Distribution, 40m, Ch 3**

SITE 1080  
 WCROC



**Site Information:**

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

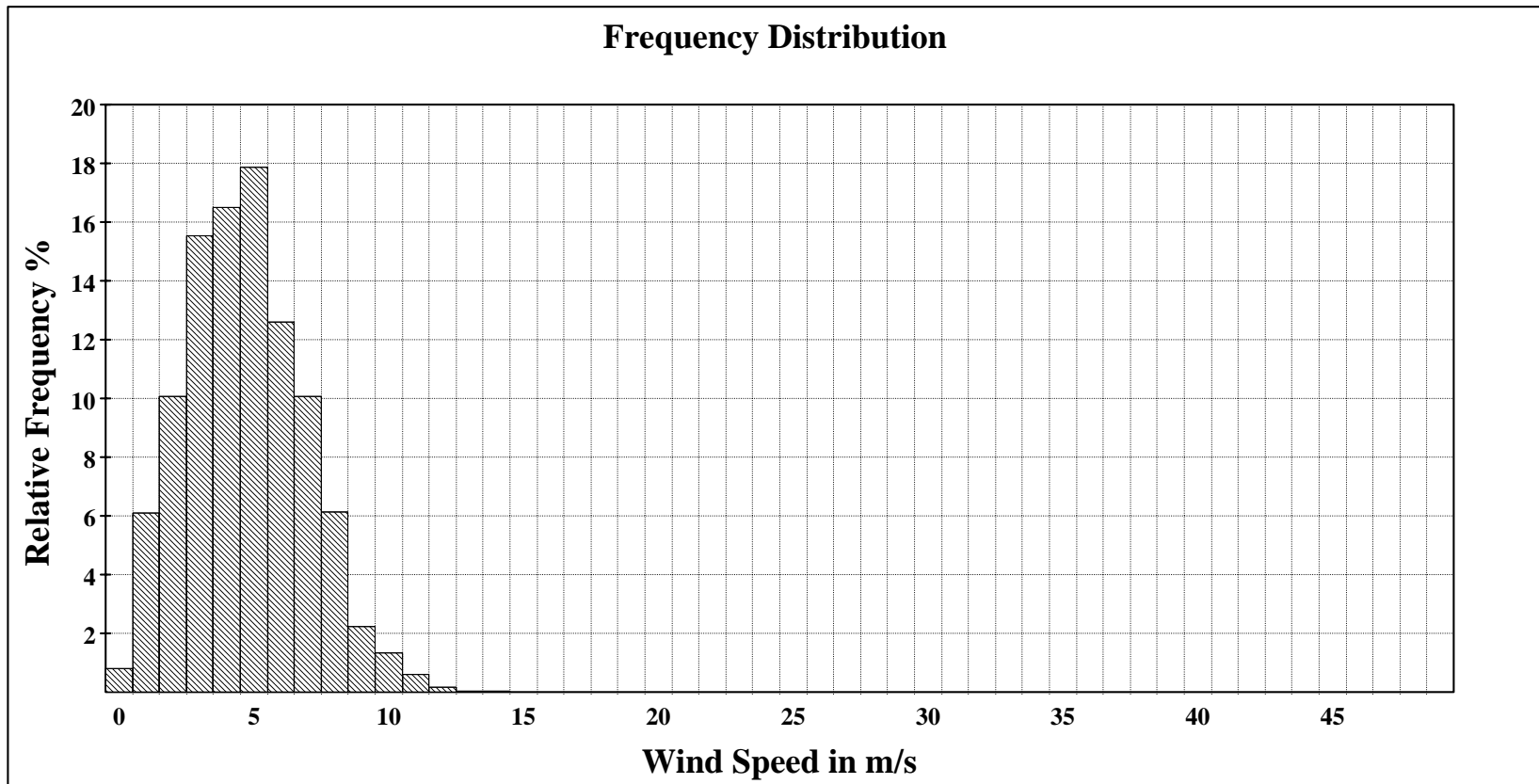
**Sensor on channel 4:**

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

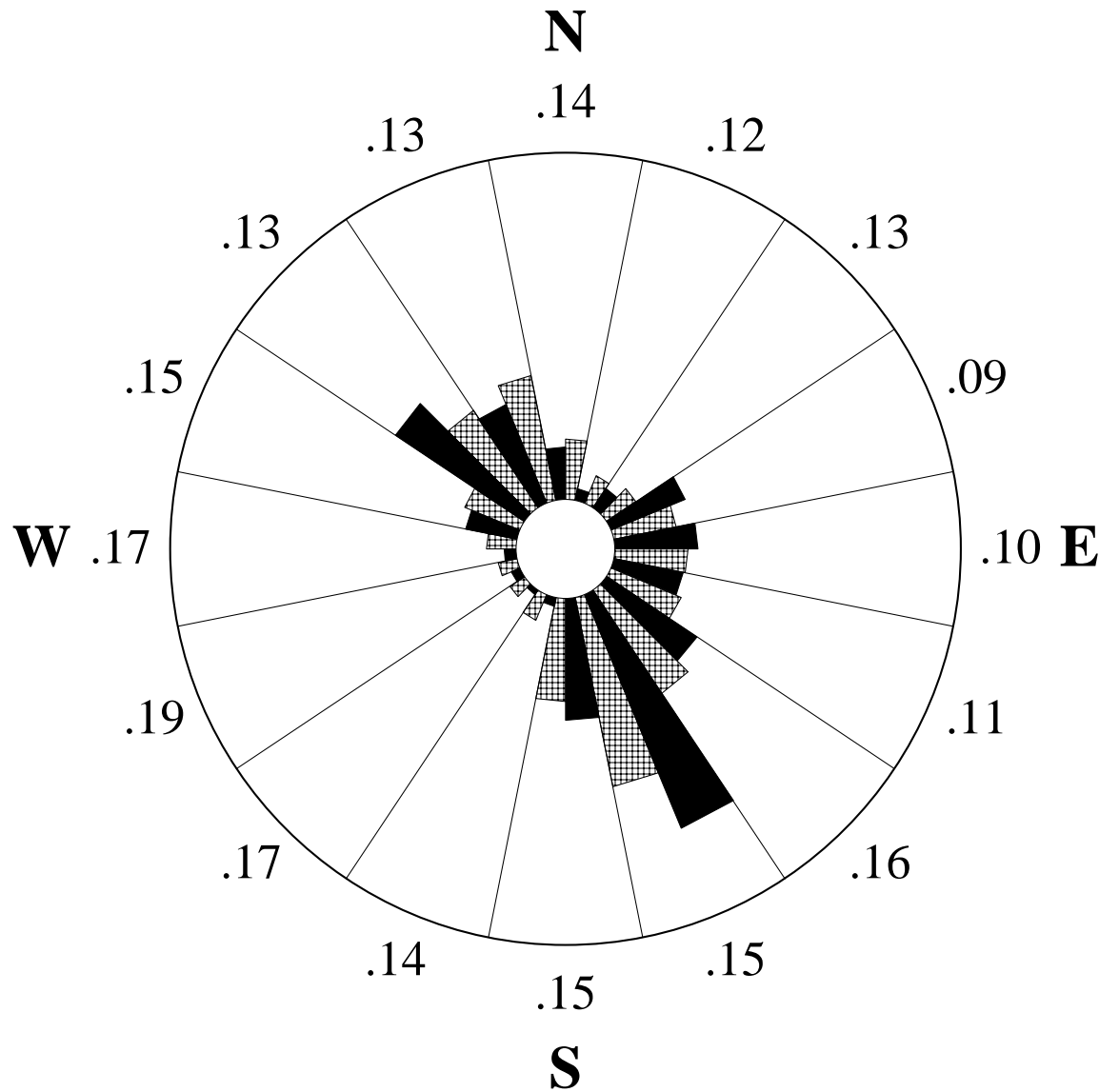
**July 2004**



**Frequency Distribution, 40m, Ch 4**

SITE 1080  
 WCROC







<b>July 2004</b>	
Wind Rose, 40 m, Ch 3, 8	
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 = 30%	
	Percent of Total Wind Energy
	Percent of Total Time