

**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

**January 2004****Summary Report**

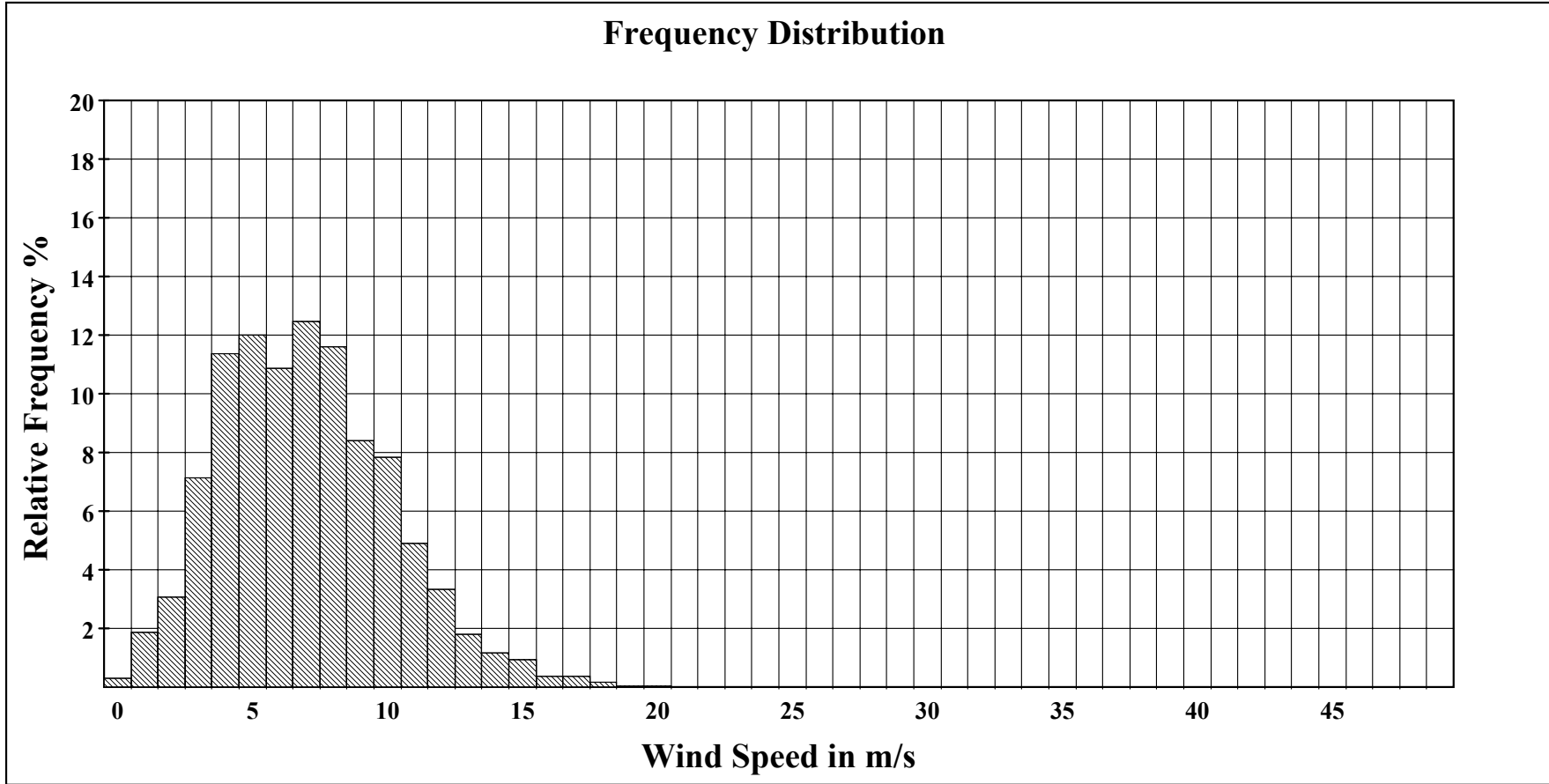
SITE 1080  
 WCROC

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	6.93	7.16	6.59	6.91	6.42	6.54	218.73	221.38	-12.66	982.43		
Average for All Data	6.93	7.16	6.59	6.91	6.42	6.54	218.73	221.38	-12.66	982.43		
Min Interval Average	0.4	0.4	0.4	0.4	0.4	0.4			-32	961.2		
Date of Min Interval	1/2/2004	1/1/2004	1/1/2004	1/1/2004	1/1/2004	1/1/2004			1/30/2004	1/2/2004		
Time of Min Interval	1:00:00 AM	9:10:00 PM	9:00:00 PM	9:00:00 PM	8:50:00 PM	8:50:00 PM			7:40:00 AM	1:10:00 PM		
Max Interval Average	19.8	20.2	18.7	19.4	18	18.5			6.2	995.4		
Date of Max Interval	1/14/2004	1/14/2004	1/14/2004	1/14/2004	1/14/2004	1/14/2004			1/2/2004	1/5/2004		
Time of Max Interval	5:10:00 AM	5:10:00 AM	5:10:00 AM	5:10:00 AM	5:10:00 AM	5:10:00 AM			2:50:00 PM	10:10:00 AM		
Average Interval SD	0.83	0.78	0.82	0.79	0.82	0.81	5.91	6.35	0.03	0.01		
Min Sample	0.4	0.4	0.4	0.4	0.4	0.4			-32.2	961		
Date of Min Sample	1/2/2004	1/2/2004	1/2/2004	1/2/2004	1/2/2004	1/2/2004			1/30/2004	1/2/2004		
Time of Min Sample	12:00:00 AM	12:10:00 AM	12:10:00 AM	12:10:00 AM	12:40:00 AM	12:40:00 AM			7:40:00 AM	1:00:00 PM		
Max Sample	26	26	24.8	26.3	23.7	24.8			6.2	995.6		
Date of Max Sample	1/21/2004	1/21/2004	1/21/2004	1/21/2004	1/14/2004	1/14/2004			1/2/2004	1/5/2004		
Time of Max Sample	8:50:00 AM	8:50:00 AM	8:50:00 AM	8:50:00 AM	5:10:00 AM	5:10:00 AM			2:40:00 PM	8:40:00 AM		
Average Interval TI	0.13	0.12	0.13	0.12	0.13	0.13						
Wind Speed Direction							NW	NW				

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

**January 2004**  
**Frequency Distribution, 50 m, Ch 1**  
 SITE 1080  
 WCROC



**Site Information:**

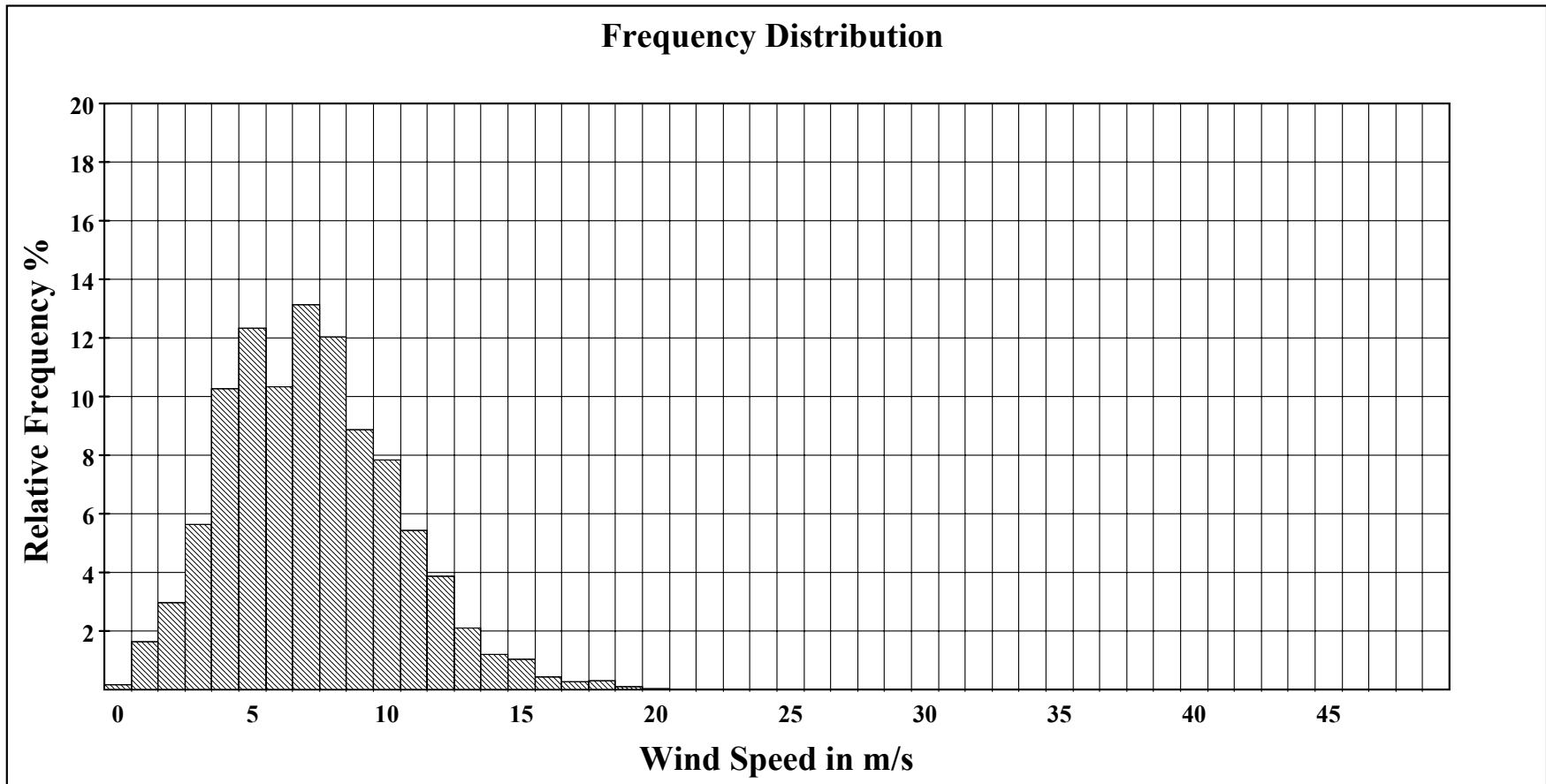
Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 2:**

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

**January 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:**

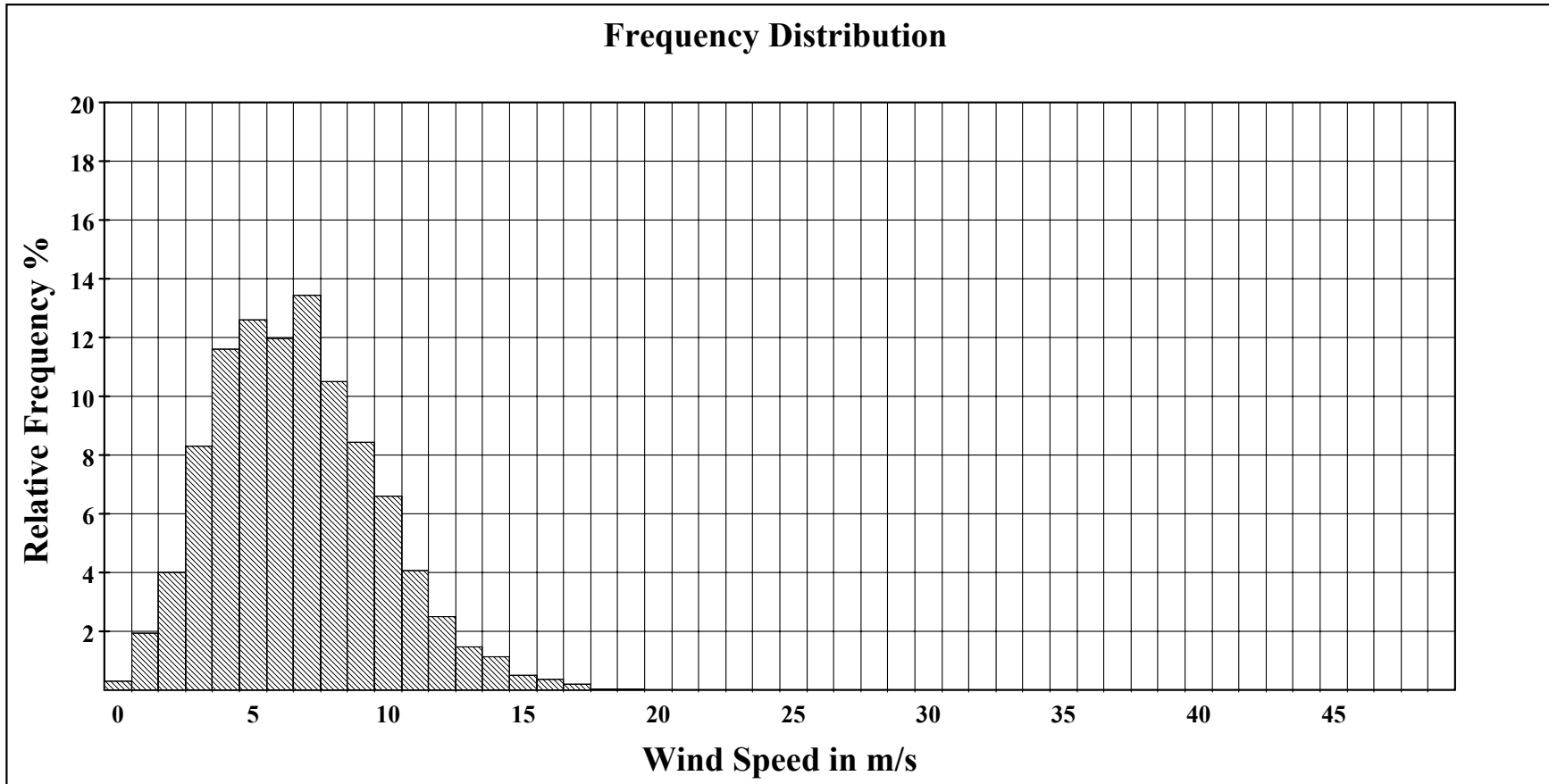
NRG #40 Anem. m/s  
 Height: 40 m  
 Serial #: SN:

**January 2004**

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

SITE 1080

WCROC



**Site Information:**

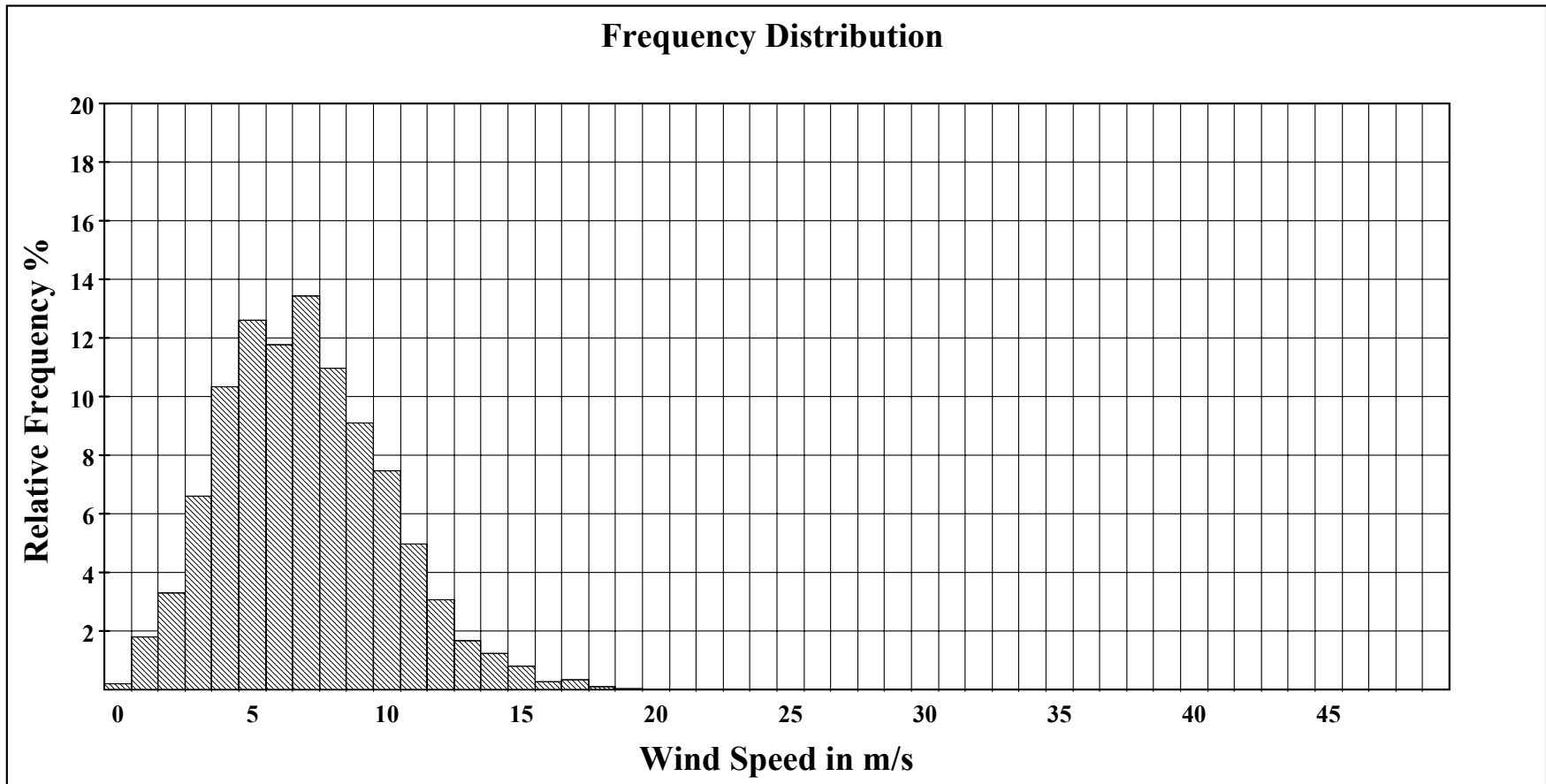
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 4:**

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

**January 2004**

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



**Site Information:**

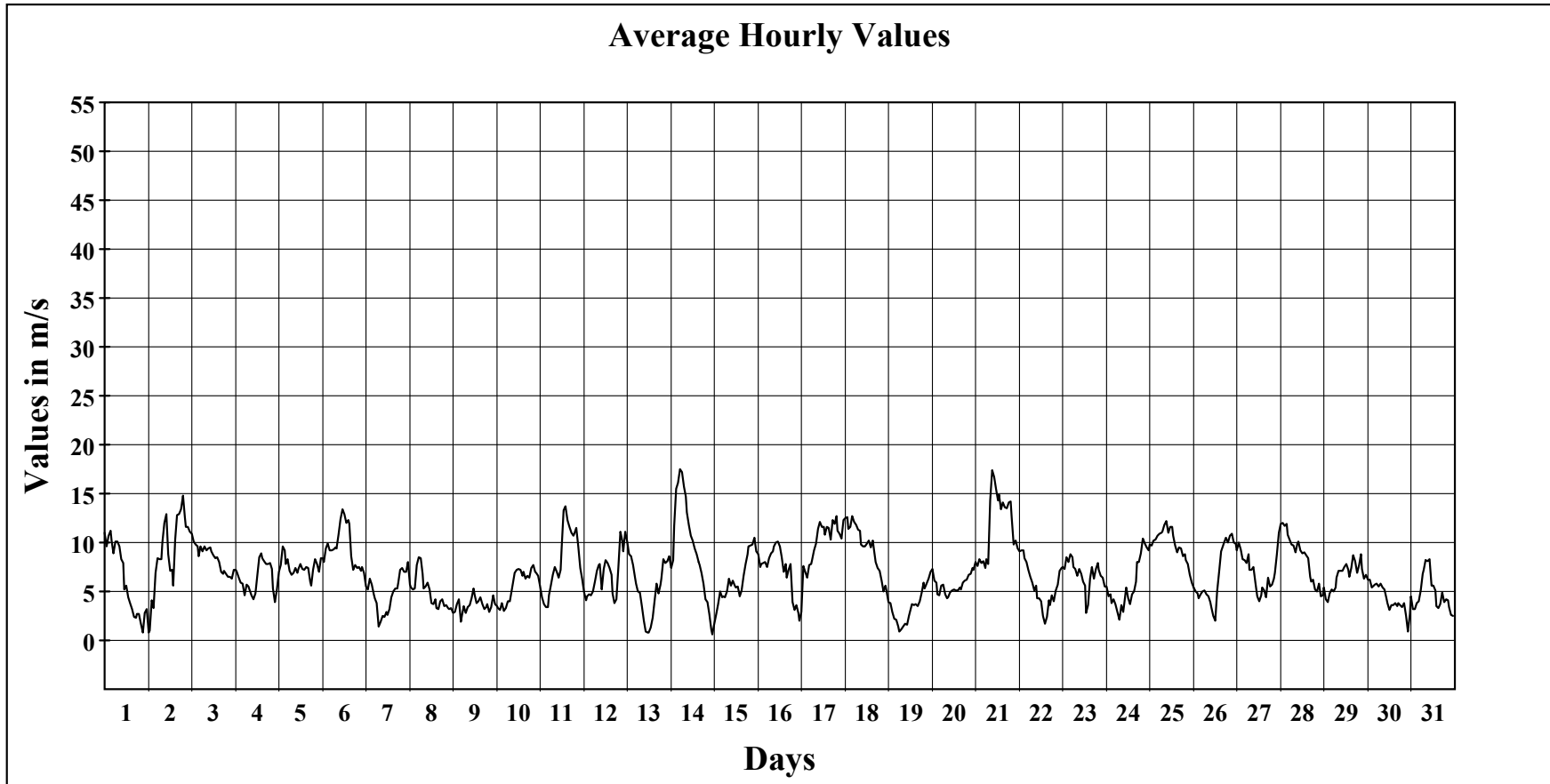
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 1:**

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

**January 2004**

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



**Average Value: 6.9**

**Site Information:**

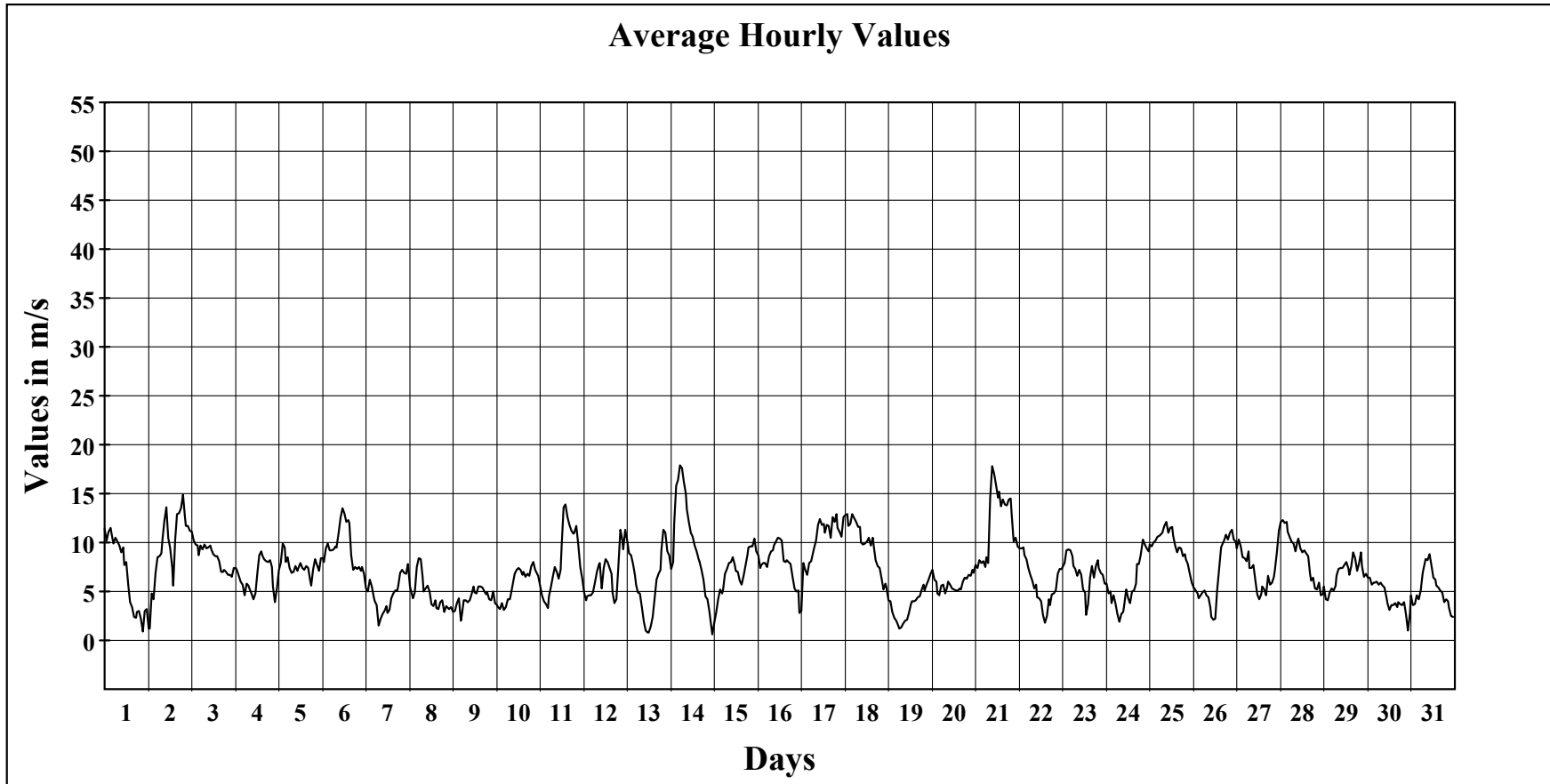
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 2:**

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

**January 2004**

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



**Average Value: 7.2**

**Site Information:**

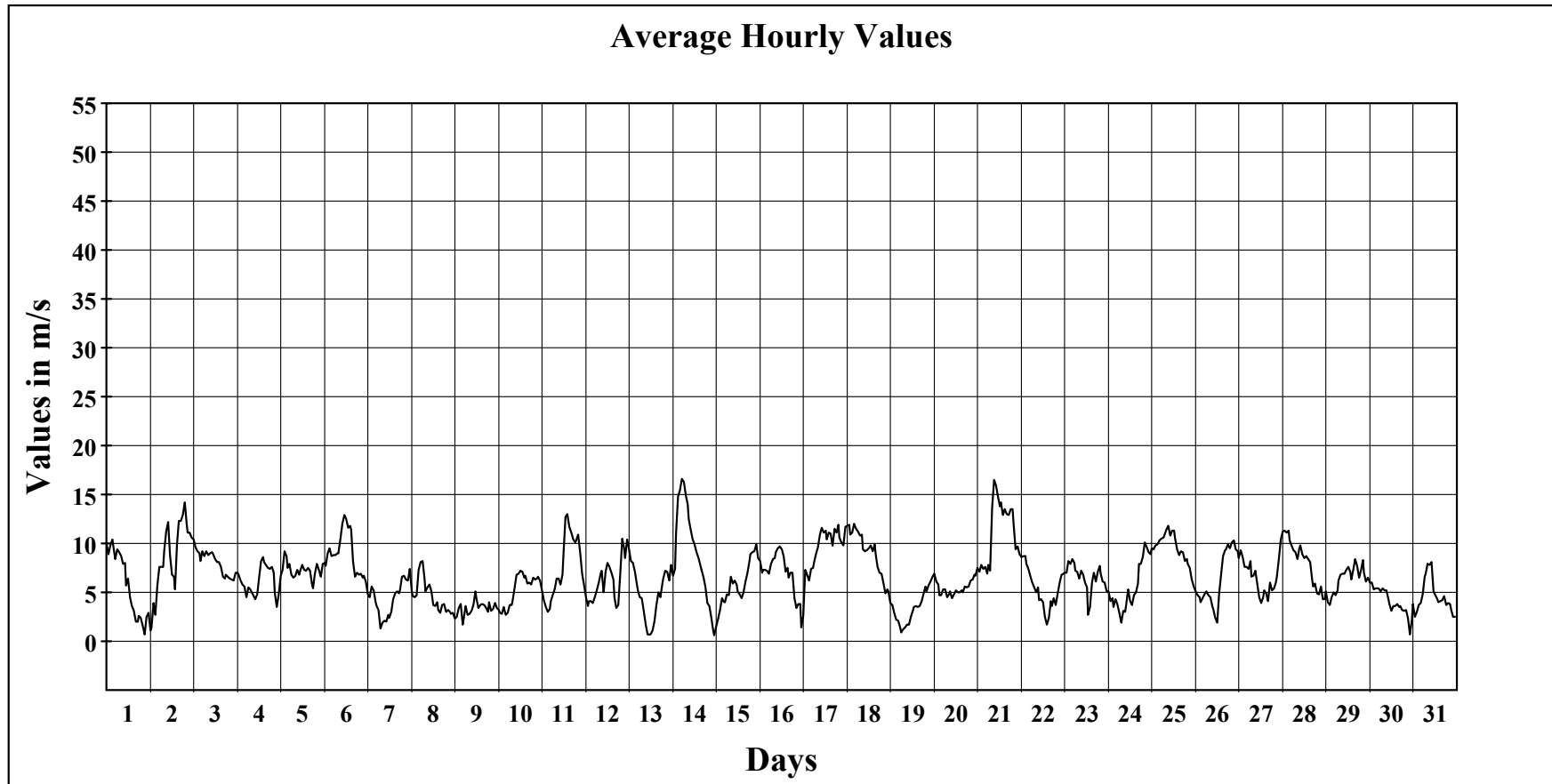
Project: Wind Hybrid Project  
Location: Morris, MN  
Elevation: 350 m

**Sensor on channel 3:**

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

**January 2004****Hourly Averages Graph, 40m, Ch 3**

SITE 1080  
WCROC



**Average Value: 6.6**



**Site Information:**

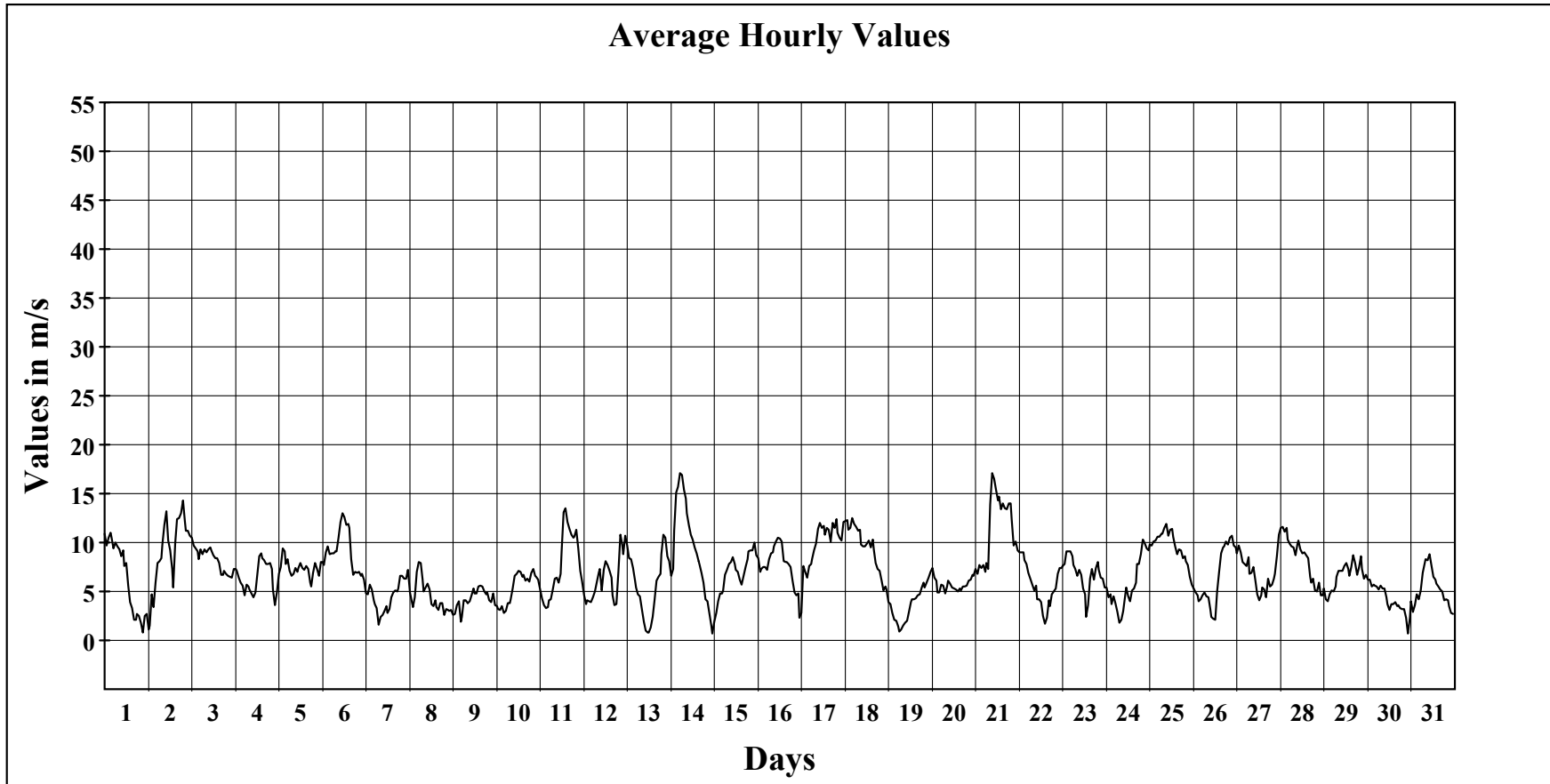
Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 4:**

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

**January 2004**

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



**Average Value: 6.9**

**Site Information:**

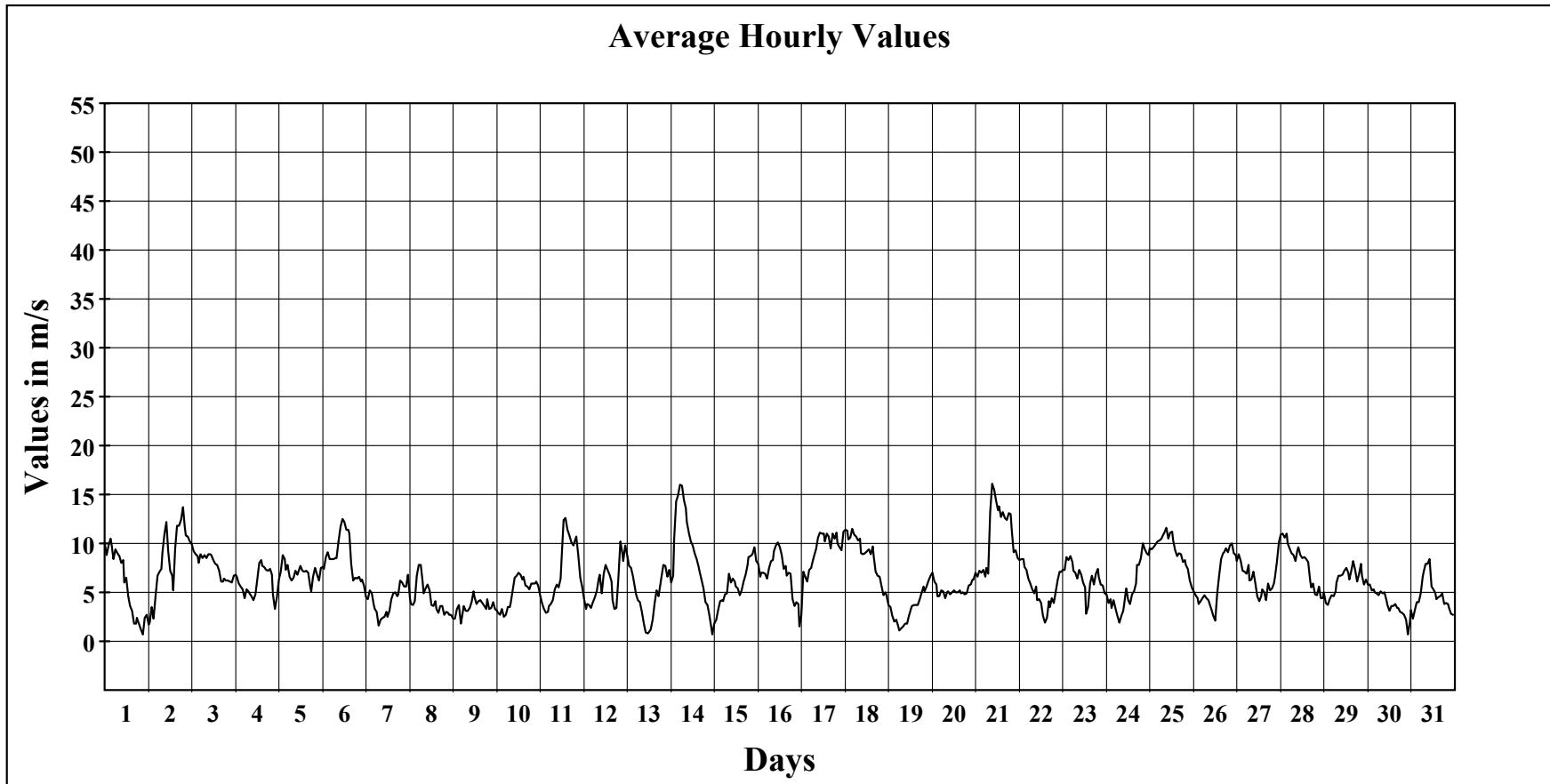
Project: Wind Hybrid Project  
 Location: Morris, MN  
 Elevation: 350 m

**Sensor on channel 5:**

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

**January 2004**

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



**Average Value: 6.4**

**Site Information:**

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

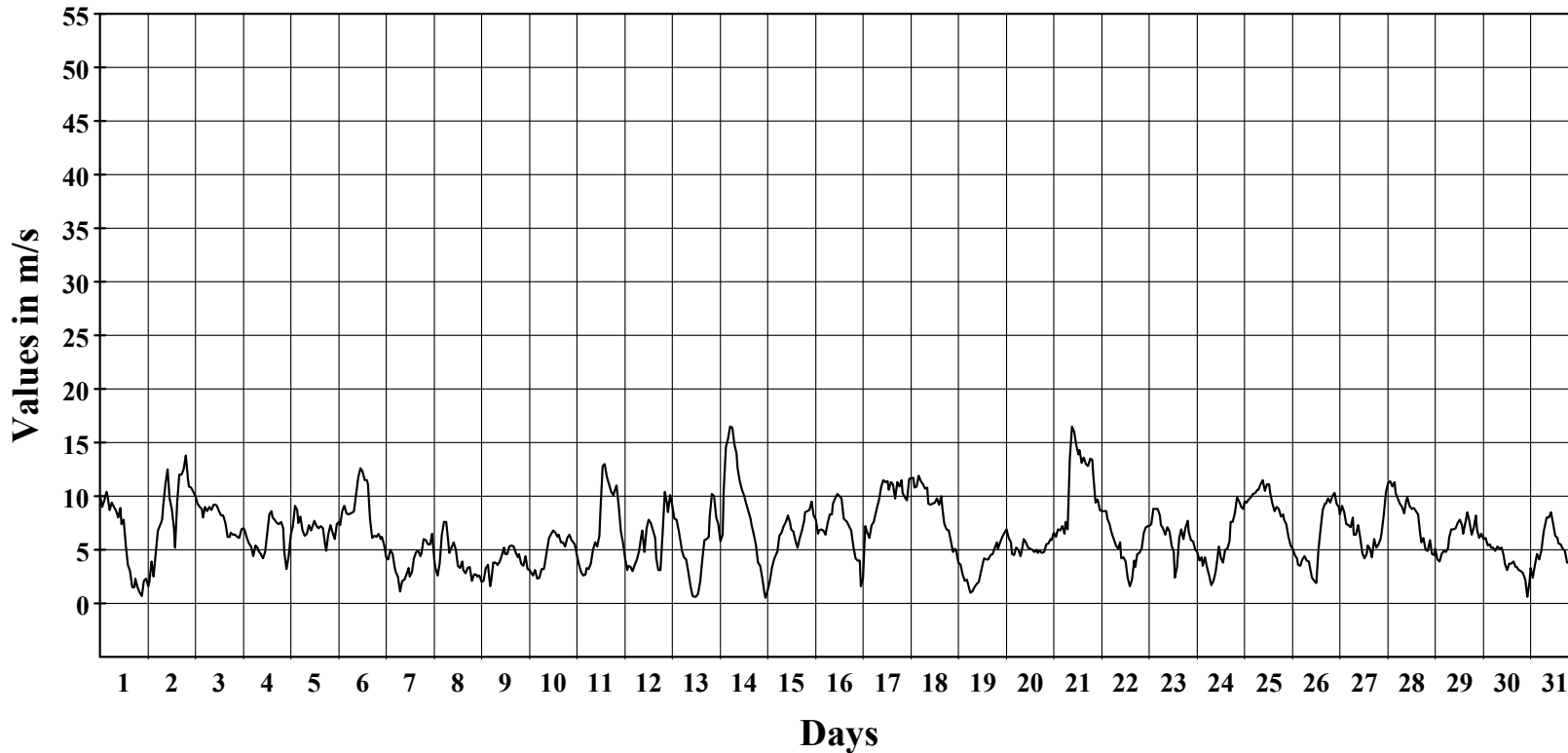
**Sensor on channel 6:**

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

**January 2004**

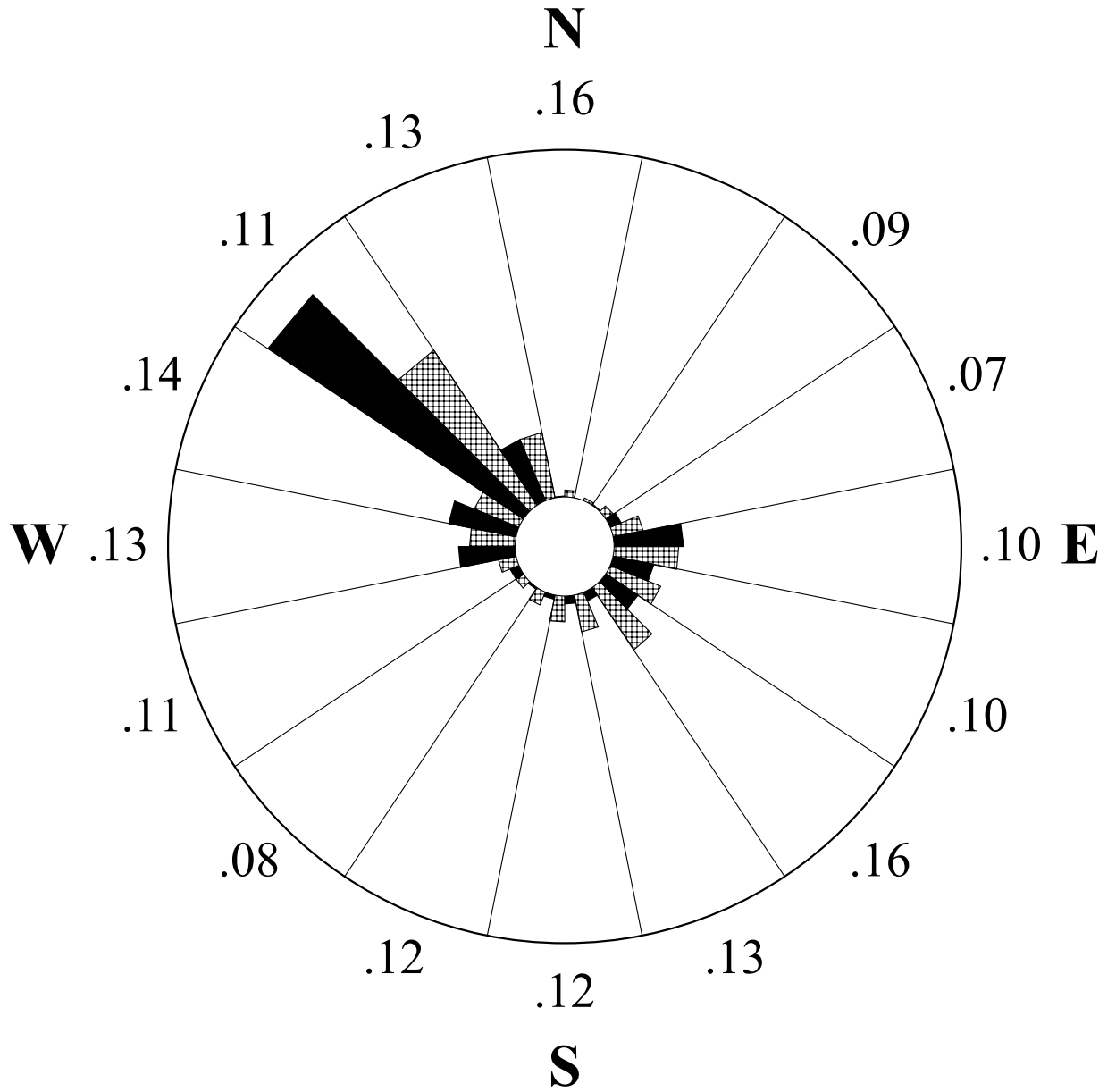
**Hourly Averages Graph, 30m, Ch 6**  
SITE 1080  
WCROC



**Average Hourly Values**



**Average Value: 6.5**





<p><b>January 2004</b></p> <p><b>Wind Rose, 40 m, Ch 3, 8</b></p> <p>SITE 1080</p> <p>WCROC</p>	
<p><b>Site Information:</b></p> <p>Project: Wind Hybrid Project</p> <p>Location: Morris, MN</p> <p>Elevation: 350 m</p>	
<p><b>Anemometer on channel 3:</b></p> <p>NRG #40 Anem. m/s</p> <p>Height: 40 m</p> <p>Serial #: SN:</p>	
<p><b>Vane on channel 8:</b></p> <p>#200P Wind Vane</p> <p>Height: 40 m</p> <p>Serial #: SN:</p>	
<p>Outer Numbers are Average TIs for speeds greater than 4.5 m/s</p> <p>Inner Circle = 0%</p> <p>Outer Circle = 50%</p>	
	Percent of Total Wind Energy
	Percent of Total Time