

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

September 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	4320	4320	0	4320	4320	4320	4320	4320	4320	4320		
Average Filtered Data	6.48	6.85	*	6.41	5.64	5.9	218.94	220.3	15.99	977.9		
Average for All Data	6.48	6.85	4.48	6.41	5.64	5.9	218.94	220.3	15.99	977.9		
Min Interval Average	0.4	0.4		0.4	0.4	0.4			-1.6	963.8		
Date of Min Interval	9/4/2003	9/11/2003		9/11/2003	9/11/2003	9/11/2003			9/30/2003	9/26/2003		
Time of Min Interval	8:00:00 AM	12:50:00 PM		12:50:00 PM	12:50:00 PM	10:20:00 AM			4:30:00 AM	4:40:00 AM		
Max Interval Average	15.6	15.8		15.3	14.5	14.8			33.9	990.3		
Date of Max Interval	9/24/2003	9/24/2003		9/24/2003	9/24/2003	9/24/2003			9/7/2003	9/30/2003		
Time of Max Interval	8:40:00 AM	8:40:00 AM		8:50:00 AM	8:50:00 AM	8:50:00 AM			1:50:00 PM	8:40:00 AM		
Average Interval SD	0.88	0.82	*	0.82	0.85	0.83	7.16	7.5	0.05	0		
Min Sample	0.4	0.4		0.4	0.4	0.4			-1.9	963.5		
Date of Min Sample	9/11/2003	9/11/2003		9/11/2003	9/11/2003	9/11/2003			9/30/2003	9/26/2003		
Time of Min Sample	9:50:00 AM	7:50:00 AM		7:50:00 AM	7:50:00 AM	7:50:00 AM			4:50:00 AM	4:30:00 AM		
Max Sample	22.6	22.6		21.4	21	21.4			34.4	990.1		
Date of Max Sample	9/24/2003	9/24/2003		9/24/2003	9/24/2003	9/24/2003			9/7/2003	9/30/2003		
Time of Max Sample	5:30:00 PM	5:30:00 PM		8:40:00 AM	8:40:00 AM	8:40:00 AM			2:10:00 PM	7:50:00 AM		
Average Interval TI	0.14	0.13	*	0.14	0.16	0.15						
Wind Speed Direction							SE	SE				

Site Information:

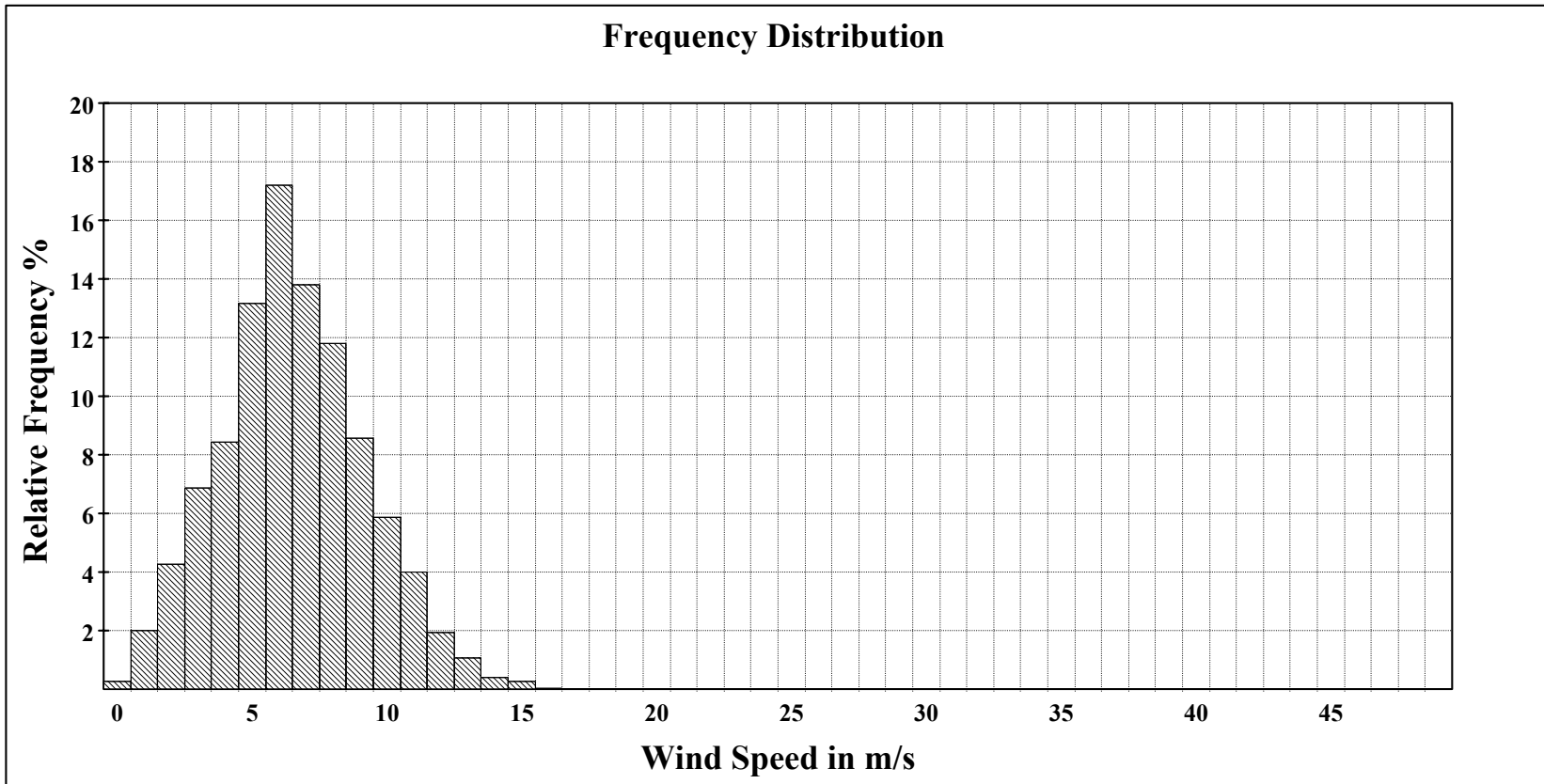
Project: Wind Hybrid Project
 Location: Morris, MN
 Elevation: 350 m

Sensor on channel 1:

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

September 2003

Frequency Distribution, 50 m, Ch 1
 SITE 1080
 WCROC



Site Information:

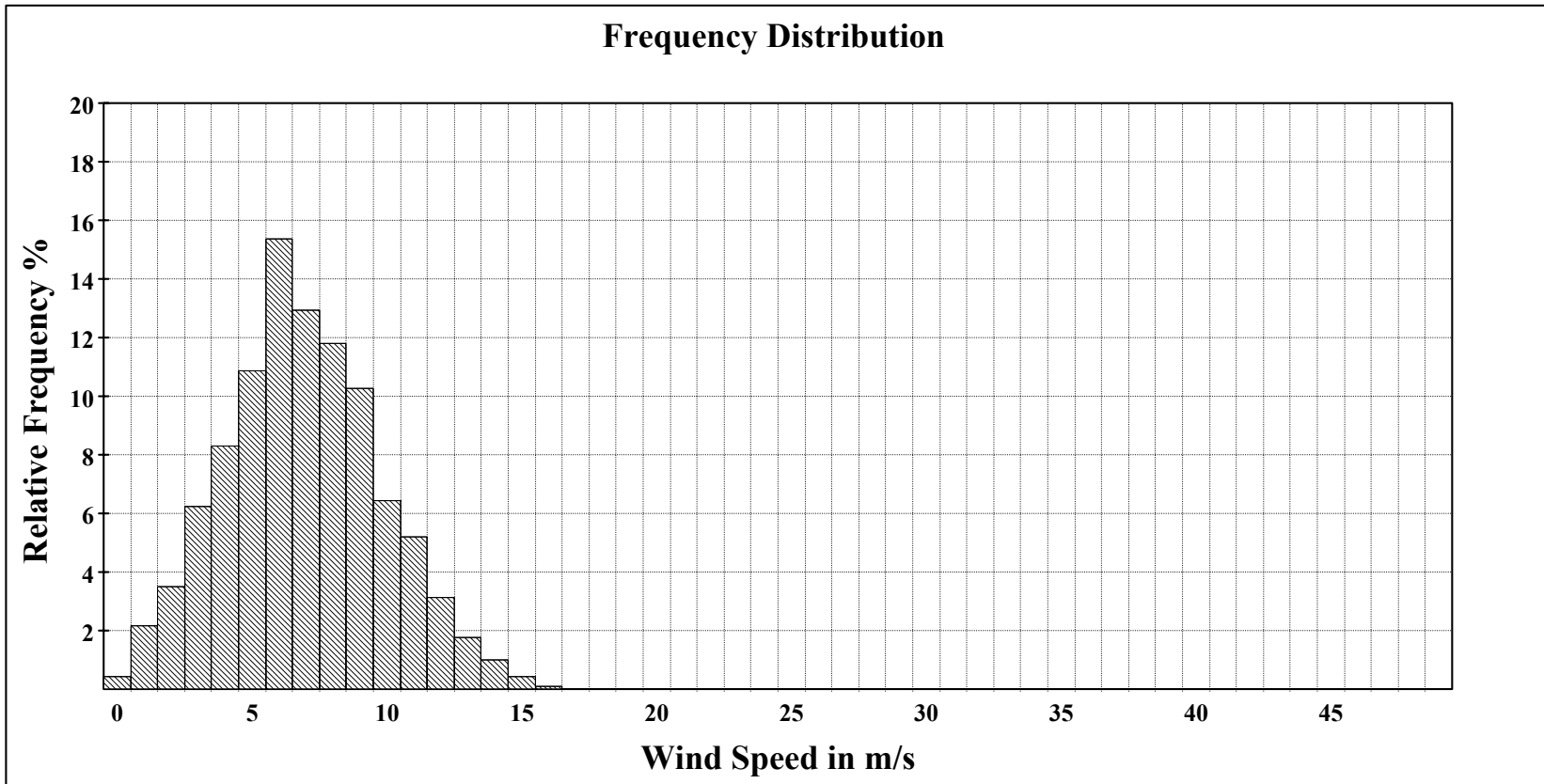
Project: Wind Hybrid Project
 Location: Morris, MN
 Elevation: 350 m

Sensor on channel 2:

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

September 2003

Frequency Distribution, 50m, Ch 2
 SITE 1080
 WCROC



Site Information:

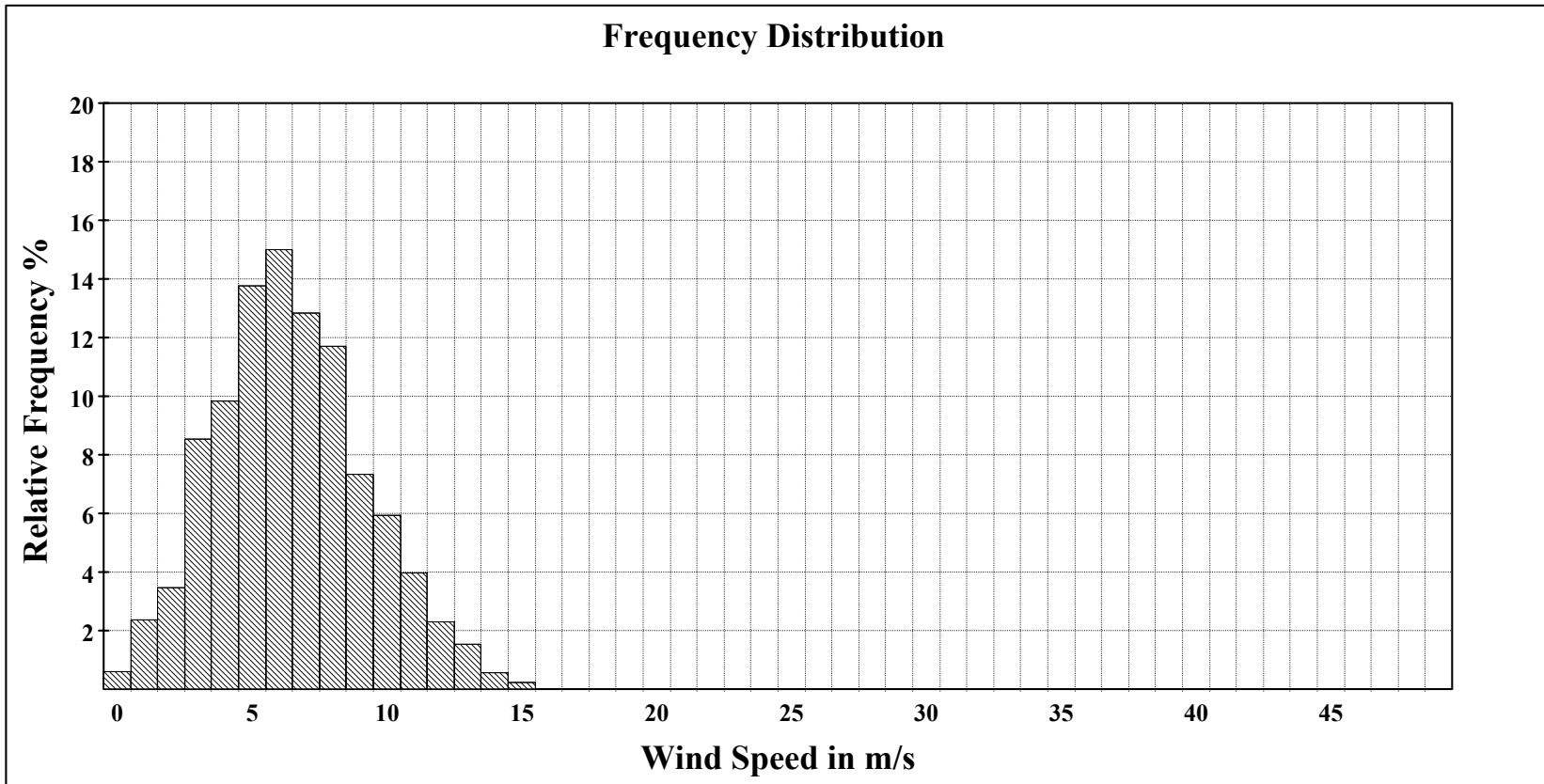
Project: Wind Hybrid Project
 Location: Morris, MN
 Elevation: 350 m

Sensor on channel 4:

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

September 2003

Frequency Distribution, 40m, Ch 4
 SITE 1080
 WCROC



Site Information:

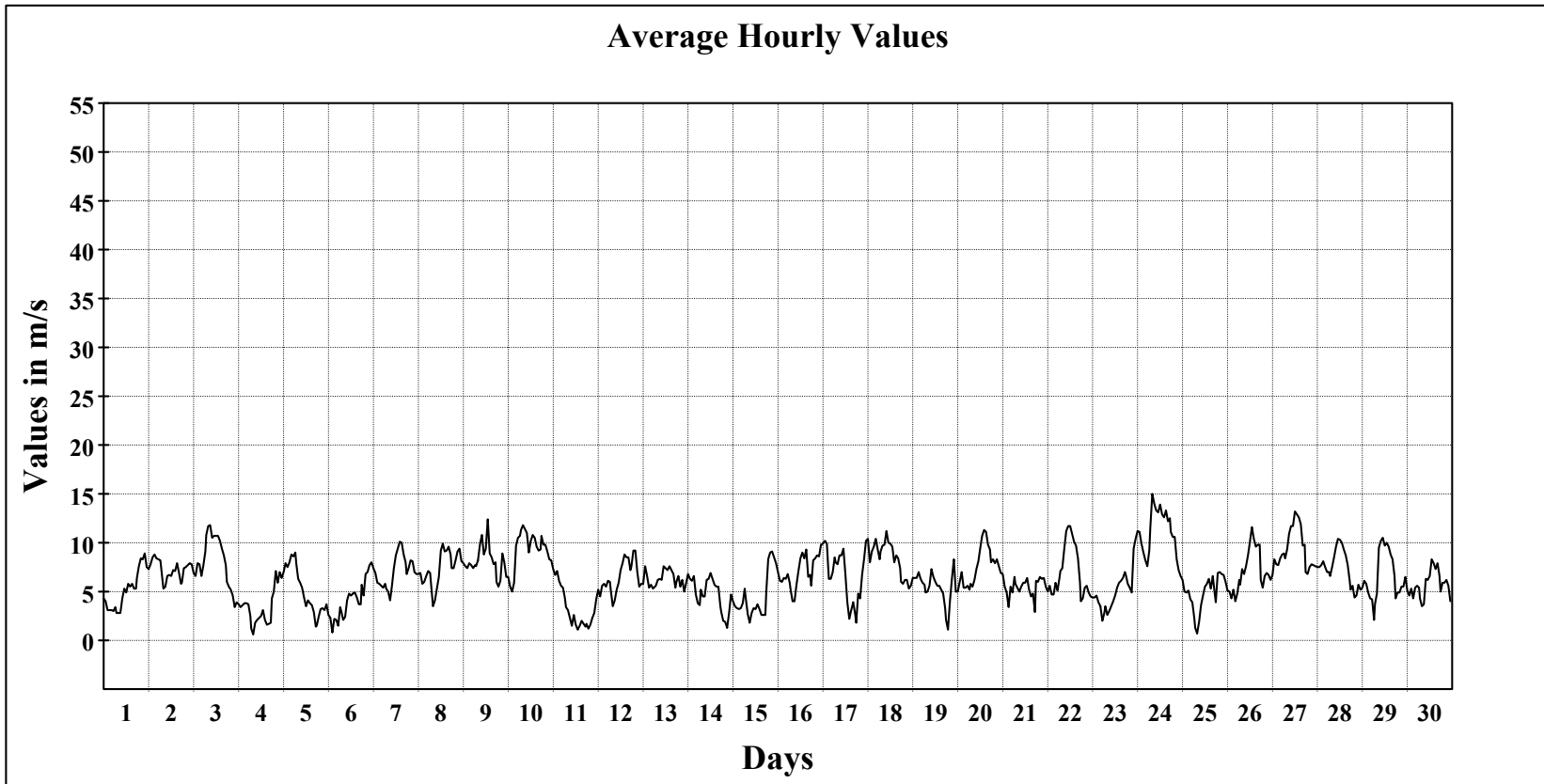
Project: Wind Hybrid Project
 Location: Morris, MN
 Elevation: 350 m

Sensor on channel 1:

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

September 2003

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



Average Value: 6.5

Site Information:

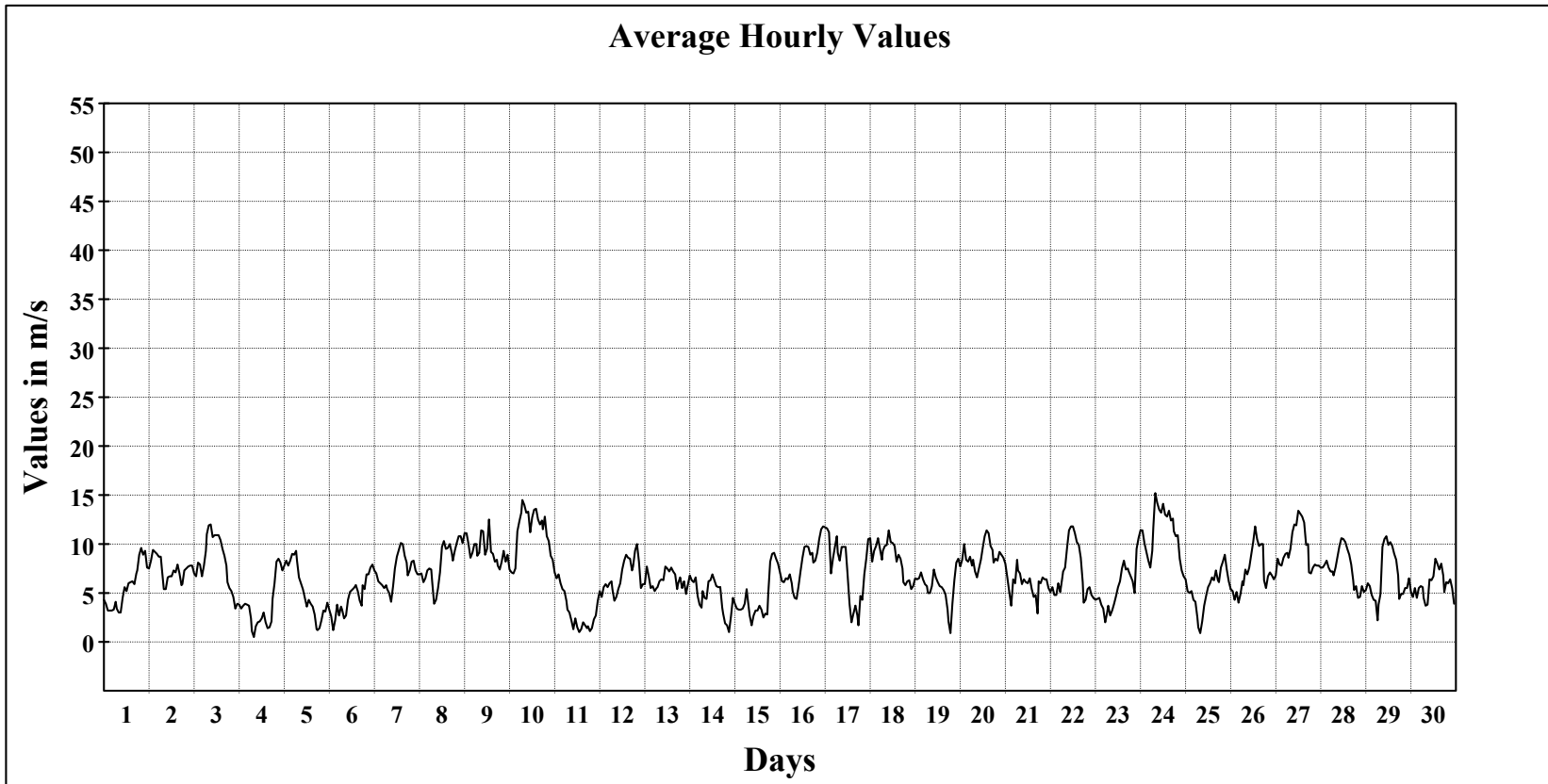
Project: Wind Hybrid Project
 Location: Morris, MN
 Elevation: 350 m

Sensor on channel 2:

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

September 2003

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



Average Value: 6.9

Site Information:

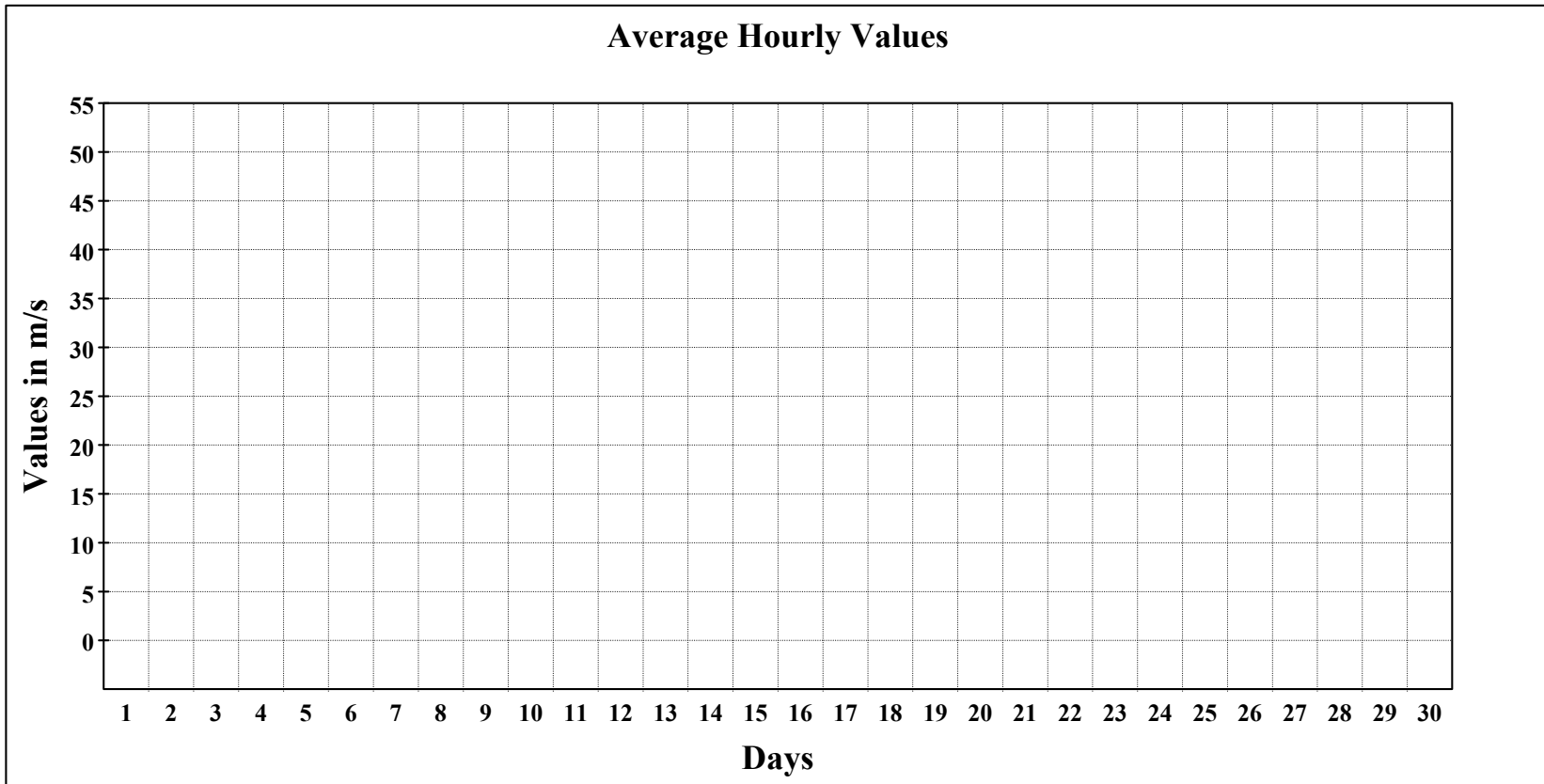
Project: Wind Hybrid Project
Location: Morris, MN
Elevation: 350 m

Sensor on channel 3:

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

September 2003

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



Average Value: 0.0

Site Information:

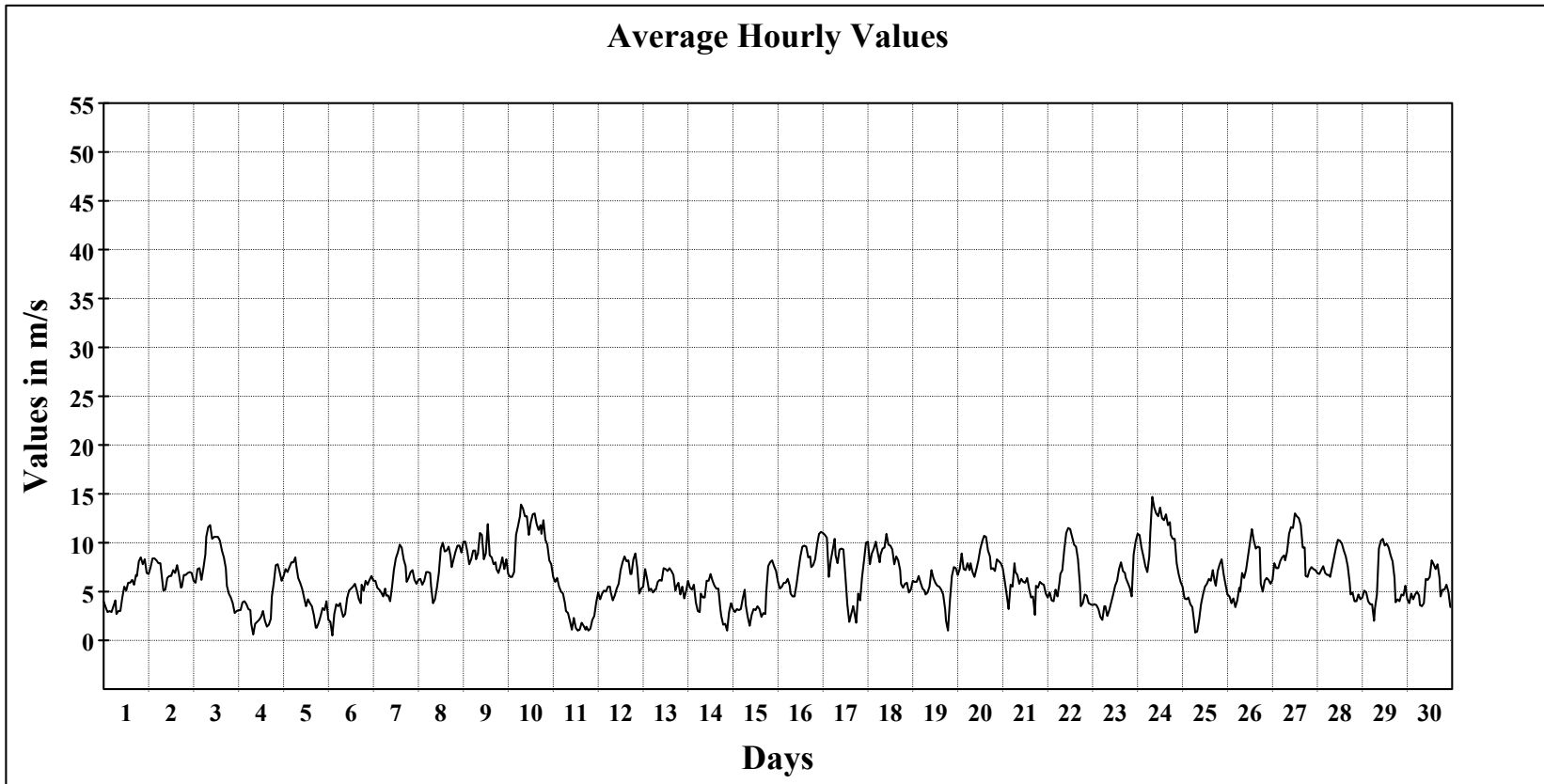
Project: Wind Hybrid Project
 Location: Morris, MN
 Elevation: 350 m

Sensor on channel 4:

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

September 2003

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



Average Value: 6.4

Site Information:

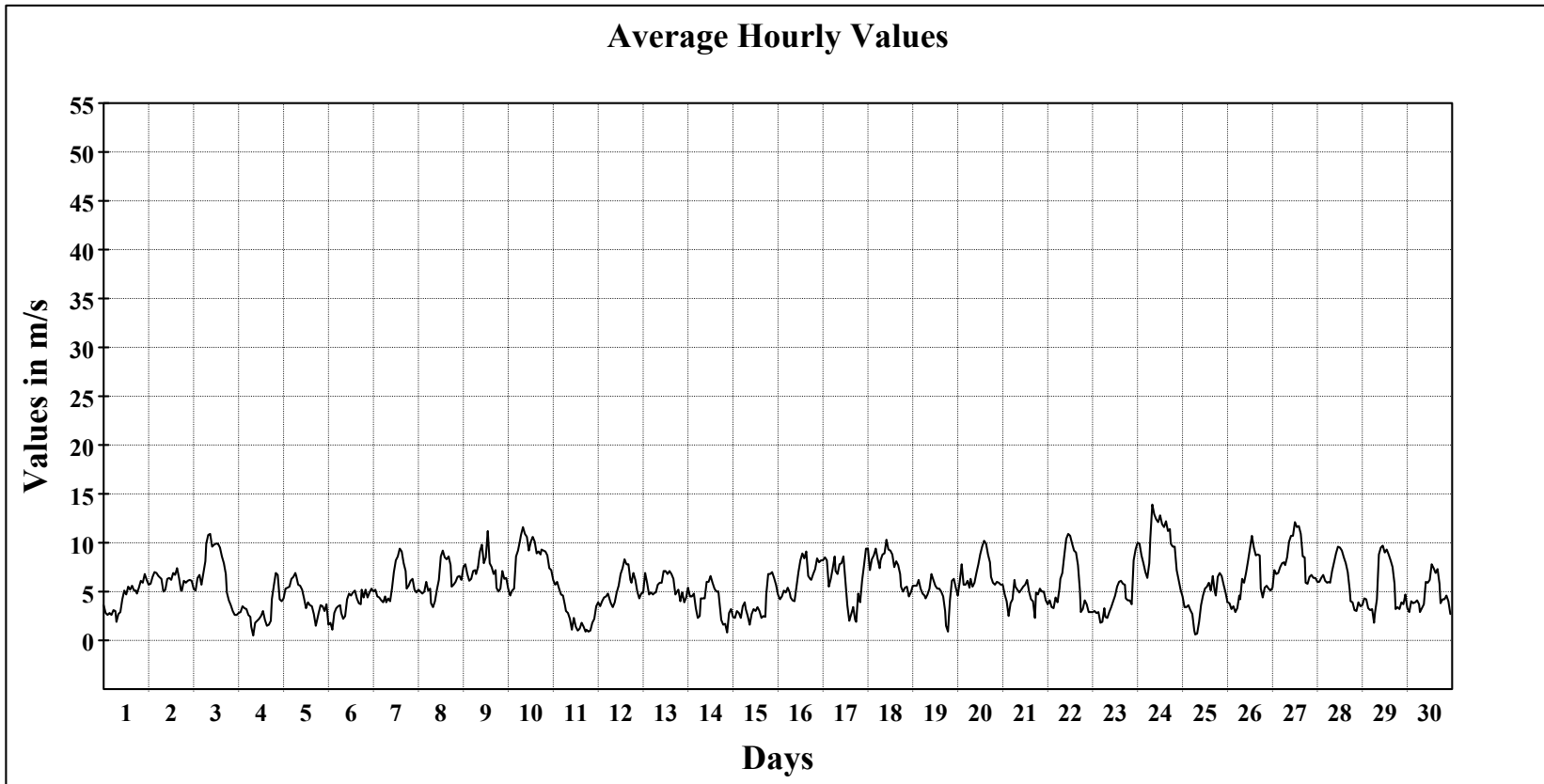
Project: Wind Hybrid Project
Location: Morris, MN
Elevation: 350 m

Sensor on channel 5:

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

September 2003

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



Average Value: 5.6

Site Information:

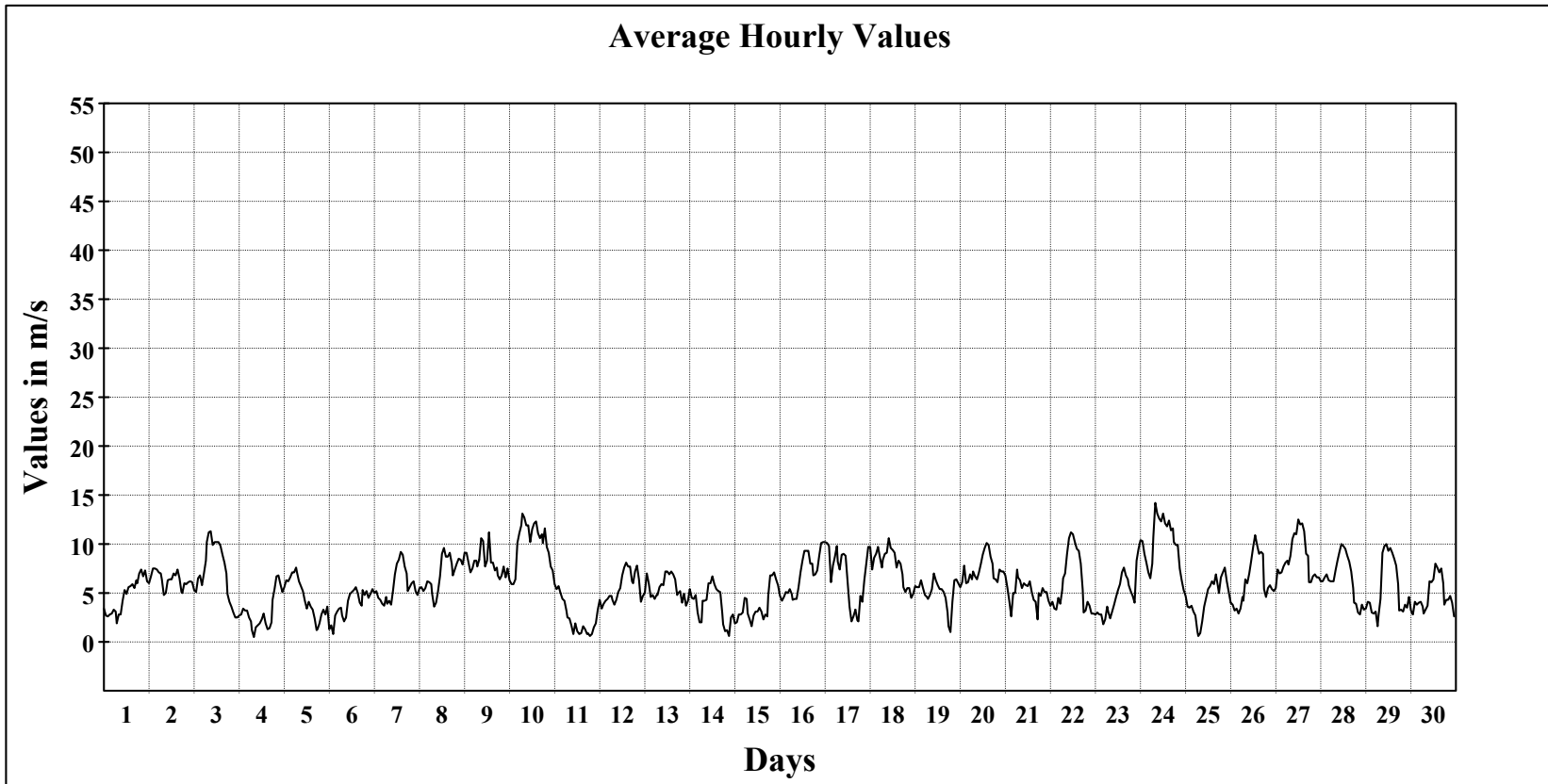
Project: Wind Hybrid Project
 Location: Morris, MN
 Elevation: 350 m

Sensor on channel 6:

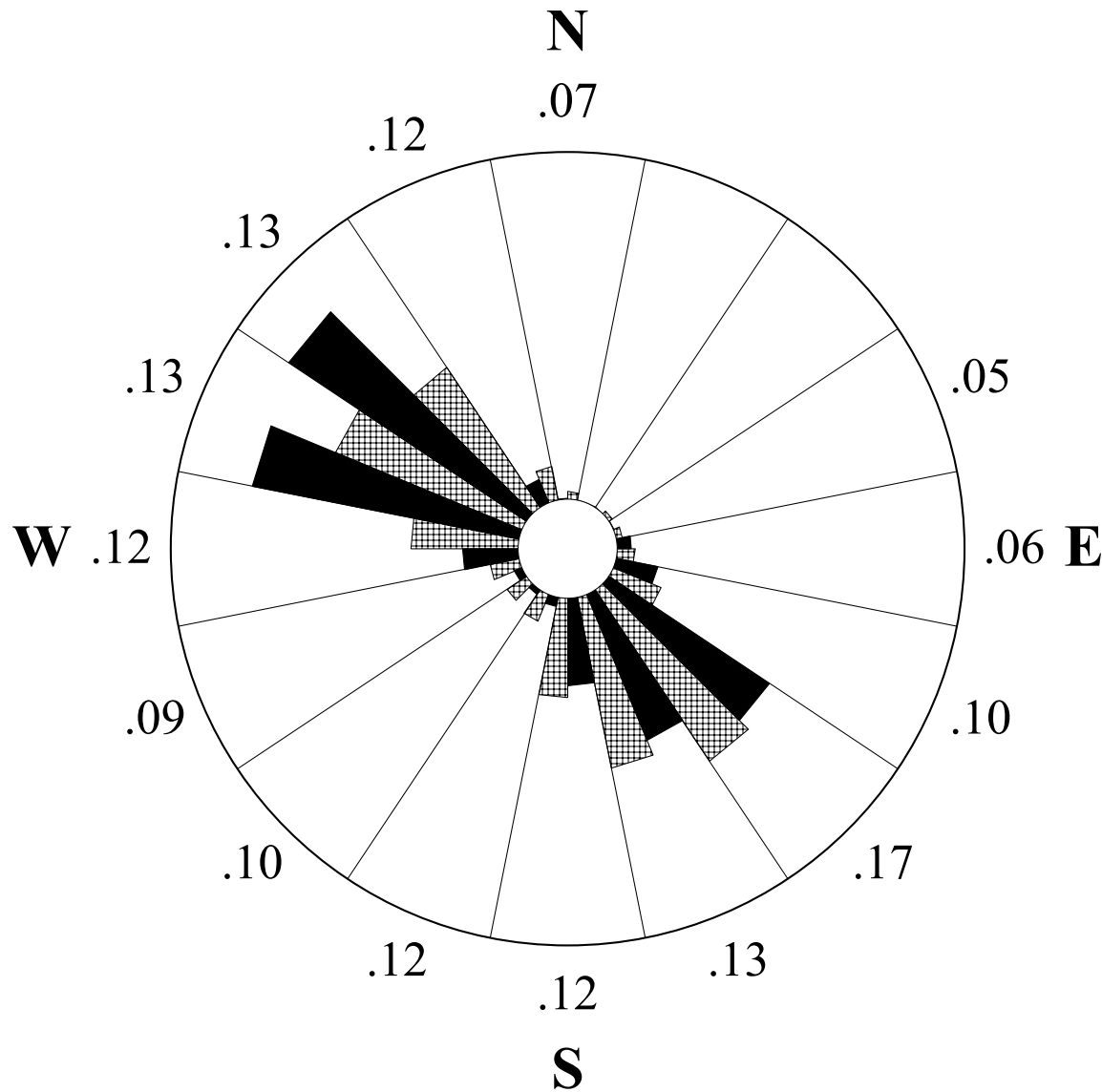
NRG #40 Anem. m/s
 Height: 30 m
 Serial #: SN:

September 2003

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



Average Value: 5.9



September 2003
Wind Rose, 50m, Ch 1, 7
 SITE 1080
 WCROC

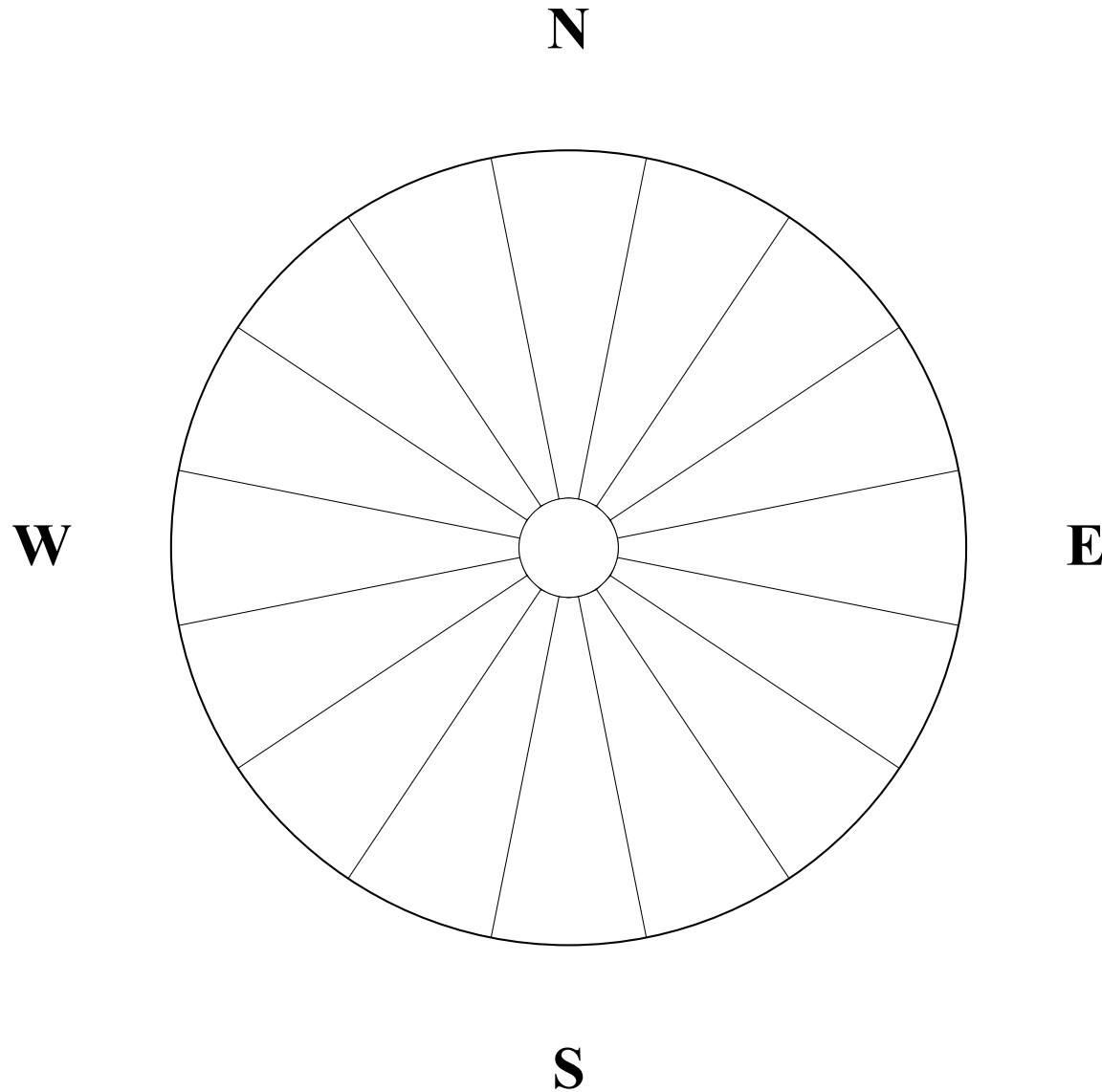
Site Information:
 Project: Wind Hybrid Project
 Location: Morris, MN
 Elevation: 350 m



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

Vane on channel 7:
 #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



<p>September 2003</p> <p>Wind Rose, 40 m, Ch 3, 8</p> <p>SITE 1080</p> <p>WCROC</p>	
<p>Site Information:</p> <p>Project: Wind Hybrid Project</p> <p>Location: Morris, MN</p> <p>Elevation: 350 m</p>	
<p>Anemometer on channel 3:</p> <p>NRG #40 Anem. m/s</p> <p>Height: 40 m</p> <p>Serial #: SN:</p>	
<p>Vane on channel 8:</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 = 10%</p>	
	Percent of Total Wind Energy
	Percent of Total Time