Agricultural Science Center at Clovis
College of Agricultural, Consumer and Environmental Sciences

New Mexico State University
Agricultural Science Center at Clovis, NM
Wind Monitoring Project

MONTHLY WIND PERFORMANCE REPORT
August 2012

Site Location: Clovis, New Mexico
Latitude: 34.606075 ° N
Longitude: -103.301602 ° W
Altitude: 1363 meters

New Mexico State University
Agricultural Science Center at Clovis

Wind Monitoring Project
Monthly Performance Report
August 2012

Prepared for:

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50 Meter Tower

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Executive Summary

This report provides the monthly wind performance summary for **August 2012** of the 50m Wind Met-Tower at the New Mexico State University Agricultural Science Center at Clovis. The site is located at the Center's facility area which has flat agricultural landscape that includes grass, crops, and bare soil. The wind met-tower is installed at coordinates 34.606075° N and -103.301602° W at an altitude of 1363 meters.

Wind speed and direction monitoring are conducted at three heights: 50 m, 40 m, and 30 m. The **average wind speed** for the month of **August** at the highest level (50m height) was found to be **5.90 m/s** with **average temperatures** around **25.7° C,** while the predominant **wind direction** was from the **South.**

Based on the average wind speed results, an approximation of energy production is conducted using a GE1.5 MW wind turbine for the sole purpose of estimating how much energy the site would yield if a turbine were to be installed. Any other turbine size and manufacturer could have been selected depending on preference and appropriateness. The **estimated energy production** for the month of **August** was approximately **337,147 kWh**. Power output was approximated based on the manufacturer's turbine power curve at 65 m hub height.

Graphs and figures in this report are for **31-**day periods from **August 1-31, 2012.**

Wind Monitoring Method description

The NRG Symphonie data logger is an internet ready, ultra-low power microprocessor-controlled data logging system specifically designed for the wind energy industry. The Symphonie logger has a fixed averaging interval of 10 minutes. Each of the 12 channels' averages, standard deviations, minimum and maximum values are calculated from continuous 2 second data samples. Data intervals are calculated every 10 minutes, time stamped with the beginning time of each interval and written to the MultiMedia Card (MMC) at the top of each hour. Symphonie Data Retriever (SDR) software is then used to process raw data files stored on the computer from an MMC.

Date of receipt of the raw data:

August 31, 2012

Dates of the performance of the monitoring:

August 1-31, 2012

Test description page(s):

Description of wind monitoring items: The 50-m met tower has four "1900 NRG #40C Calibrated Anemometers;" at 50, 40, and 30 meters; two "1904 NRG #200P Wind Direction Vane 10K" at 50 and 40 meters, as well as one "1906-NRG #110S Temperature Sensor with Radiation Shield". Data Symphonie NRG Logger.
Mnfg: NGR Systems Models: Anemometers: 1900-NRG #40 Wind Direction Vane: 1904-NRG #200P Temperature Sensor: 1906-NRG #110S Data logger: Symphonie NRG Logger
Conditions of the wind monitoring items: ***Working as specified***
Monitoring dates: August 1-31, 2012
Location of Monitoring: The place is an open space of about 2 acres located approximately 200 yards to the south from the Agricultural Science Center at Clovis's main building complex. There are obstacles (buildings, trees, etc) which can affect both, wind speed or wind direction sampling.
Monitoring Plan Description: The Symphonie logger has a fixed averaging interval of 10 minutes. Each of the 12 channels' averages, standard deviations, minimum and maximum values are calculated from continuous 2 second data samples. Data intervals are calculated every 10 minutes, time stamped with the beginning time of each interval and written to the MultiMedia Card (MMC) at the top of each hour.

This wind monitoring report shall not be reproduced except in full, without written approval of New Mexico State University Agricultural Science Center at Clovis

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor Information:

1 wind speed 1 50m, m/
2 wind speed 2 50m, m/
3 wind speed 3 40m m/s
4 windspeed 4 30m, m/s
5 No Sensor
6 No Sensor
7 #200P Wind Vane
8 #200P Wind Vane
9 NRG 110S Temp, C
10 No Sensor
11 No Sensor
12 No Sensor

August 2012

Summary Report

SITE 0001

NMSU ASC at Clovis

Channel	1	2	3	4			7	8	9			
Height	50 m	50m	40m	30 m			50 m	40 m	3 m			
Units	m/s	m/s	m/s	m/s			deg	deg	C			
Intervals with Valid Data	4464	4464	4464	4464			4464	4464	4464			
Average Filtered Data	5.92	5.93	5.64	5.41			166.05	165.58	25.69			
Average for All Data	5.92	5.93	5.64	5.41			166.05	165.58	25.69			
Min Interval Average	0.4	0.4	0.4	0.4					12.5			
Date of Min Interval	8/19/2012	8/19/2012	8/18/2012	8/18/2012					8/30/2012			
Time of Min Interval	7:00:00 AM	7:00:00 AM	1:50:00 AM	2:10:00 AM					2:30:00 AM			
Max Interval Average	18.9	18.9	19	18.4					40.8			
Date of Max Interval	8/7/2012	8/7/2012	8/7/2012	8/7/2012					8/2/2012			
Time of Max Interval	6:10:00 PM	6:10:00 PM	6:10:00 PM	6:10:00 PM					1:40:00 PM			
Average Interval SD	0.76	0.75	0.78	0.78			10.11	10.61	0.08			
Min Sample	0.4	0.4	0.4	0.4					12.4			
Date of Min Sample	8/1/2012	8/1/2012	8/1/2012	8/1/2012					8/30/2012			
Time of Min Sample	10:10:00 AM	10:10:00 AM	10:10:00 AM	10:10:00 AM					2:20:00 AM			
Max Sample	26.1	26.1	25.3	26.1					41.3			
Date of Max Sample	8/15/2012	8/15/2012	8/15/2012	8/15/2012					8/2/2012			
Time of Max Sample	7:00:00 PM	7:00:00 PM	7:00:00 PM	7:00:00 PM					1:40:00 PM			
Average Interval TI	0.16	0.16	0.17	0.17								
Wind Speed Direction							S	SSW				

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 1:

wind speed 1 50m, m/

Height: 50 m

Serial #: 51179

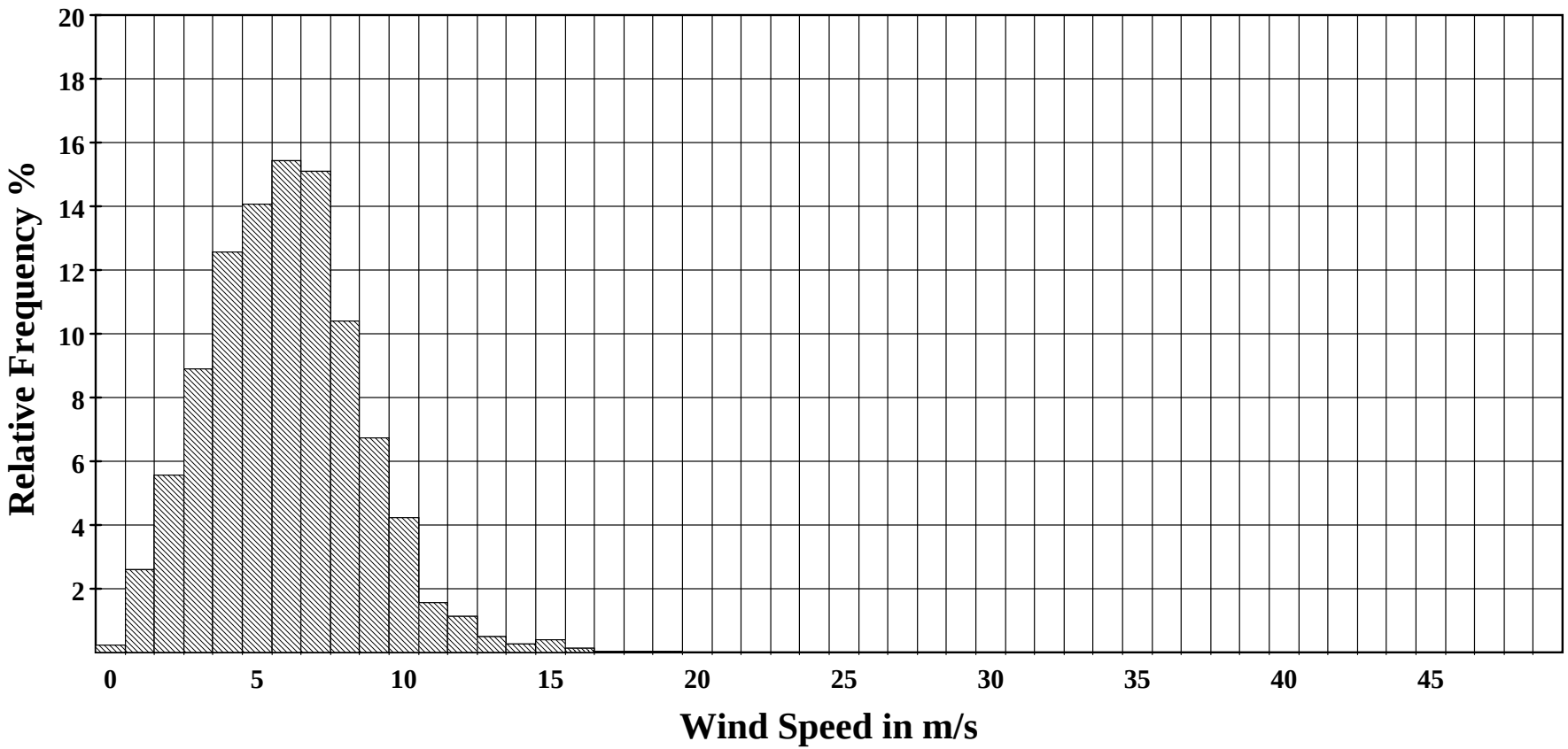
August 2012

Frequency Distribution Ch 1

SITE 0001

NMSU ASC at Clovis

Frequency Distribution



Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 1:

wind speed 1 50m, m/

Height: 50 m

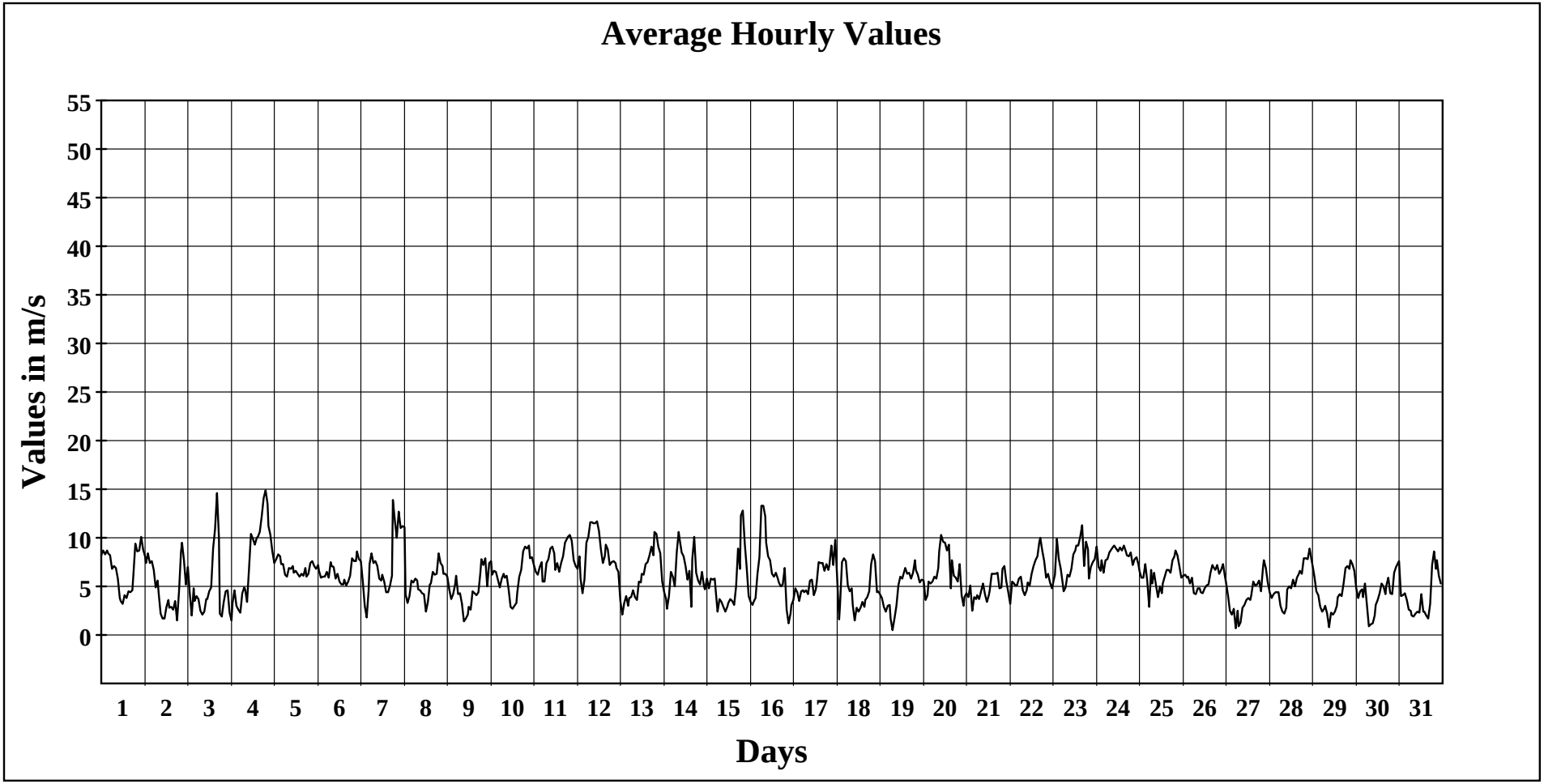
Serial #: 51179

August 2012

Hourly Averages Graph Ch 1

SITE 0001

NMSU ASC at Clovis



Average Value: 5.9

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 1:

wind speed 1 50m, m/

Height: 50 m Units: m/s

Serial #: 51179

August 2012

Hourly Averages Table Ch 1

SITE 0001

NMSU ASC at Clovis

Day	Hour 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG
1	8.2	8.7	8.3	8.7	8.4	8.2	6.8	7.1	6.9	5.8	3.8	3.5	3.2	4.1	3.8	4.5	4.4	4.6	6.3	9.4	8.6	8.7	10.1	8.8	6.7
2	8.1	7.4	8.4	7.4	7.6	6.7	4.9	5.6	4.3	2.2	1.7	1.7	2.9	3.6	2.8	2.9	2.6	3.5	1.5	4.5	8.5	9.5	7.7	5.2	5.0
3	7.0	4.3	2.0	4.8	3.5	4.0	3.7	2.5	2.1	2.4	3.7	3.7	4.5	4.9	8.9	10.9	14.6	10.0	2.2	1.9	3.4	4.5	4.6	2.3	4.9
4	1.5	3.3	4.6	3.0	2.6	2.3	4.3	4.9	4.7	3.4	6.8	10.4	9.9	9.3	10.0	10.1	10.6	12.2	14.1	14.9	13.5	11.2	10.3	8.6	7.8
5	7.4	7.8	8.3	8.1	7.3	7.3	6.2	6.0	6.9	6.8	7.1	6.4	6.6	6.3	6.0	6.3	6.1	6.9	6.0	6.3	7.4	7.6	7.1	6.8	6.9
6	7.2	6.6	5.9	6.0	6.0	6.5	5.9	7.5	7.1	7.0	5.8	6.3	5.5	5.2	5.2	5.7	5.1	5.5	6.1	7.9	7.6	7.6	8.6	7.8	6.5
7	7.6	5.5	3.0	1.8	4.6	7.3	8.4	7.4	7.6	7.1	5.8	5.6	6.2	5.5	4.4	4.4	5.1	6.1	13.9	11.8	10.0	12.7	11.0	11.2	7.2
8	11.1	4.2	3.3	4.0	5.6	5.4	5.8	5.6	4.7	4.6	4.3	4.2	2.4	3.4	5.2	5.3	6.5	6.3	6.3	8.4	7.4	7.1	6.3	6.3	5.6
9	6.0	4.7	3.7	4.3	5.2	6.1	4.2	4.3	3.2	1.4	1.7	2.1	2.9	2.6	4.5	4.3	4.1	4.4	6.4	7.8	7.2	7.9	5.0	7.4	4.7
10	7.6	6.2	6.6	6.5	5.7	4.9	5.8	6.3	5.9	6.1	4.7	2.9	2.7	3.0	3.3	4.4	6.0	6.7	8.6	9.1	8.9	9.2	7.9	8.0	6.1
11	7.2	6.5	6.2	7.0	7.5	5.5	5.5	7.4	7.8	8.9	9.1	8.4	6.7	7.4	6.5	7.4	8.1	9.5	9.9	10.1	10.3	9.7	7.7	7.1	7.8
12	6.8	8.1	5.8	4.3	5.7	9.5	10.1	11.6	11.6	11.5	11.5	11.7	10.7	8.8	7.4	8.1	9.3	8.8	7.2	7.5	7.6	7.4	6.9	6.5	8.5
13	3.5	2.1	3.3	4.0	3.0	3.8	3.9	4.6	3.9	3.6	5.5	5.4	6.3	6.2	7.3	7.5	8.2	9.1	8.2	10.6	10.4	9.1	8.4	5.5	6.0
14	4.4	3.7	2.7	4.0	6.5	6.0	5.0	8.5	10.6	9.8	8.5	8.1	7.1	5.7	6.6	2.9	7.8	10.1	6.4	5.6	5.2	6.5	5.0	4.7	6.3
15	5.8	4.8	5.8	5.7	5.8	4.7	2.4	3.7	3.4	2.9	2.4	2.9	3.3	3.7	3.5	3.1	5.0	8.9	6.8	12.3	12.8	9.4	6.9	4.0	5.4
16	3.4	3.1	3.4	3.8	6.3	8.0	13.3	13.3	12.2	9.5	8.1	7.7	6.3	6.0	6.4	5.8	5.4	5.0	5.2	6.9	2.6	1.2	2.2	3.1	6.2
17	3.6	4.8	4.4	3.5	4.5	4.6	4.4	4.6	4.2	5.6	5.7	4.1	4.7	5.4	7.5	7.4	7.4	6.6	7.3	6.7	7.2	9.2	7.2	9.8	5.9
18	5.8	1.6	3.1	7.5	7.9	7.6	5.1	4.5	4.8	3.1	1.5	2.8	2.4	2.8	3.4	2.9	3.6	3.9	4.5	7.3	8.3	7.6	4.4	4.5	4.6
19	4.2	3.8	2.9	2.4	3.0	3.1	1.7	0.5	1.7	3.0	5.1	6.0	5.8	6.2	6.9	6.3	6.4	5.8	6.4	7.7	6.7	6.2	5.4	5.7	4.7
20	5.6	3.6	4.1	5.5	5.3	5.5	6.0	5.8	6.9	8.6	10.3	9.6	9.5	8.7	9.3	4.8	7.7	6.1	5.9	5.5	7.3	4.1	3.0	3.9	6.4
21	4.3	3.9	5.1	2.5	3.9	3.7	4.1	3.7	4.5	5.3	4.2	3.4	4.1	4.6	6.3	6.3	6.3	6.4	4.8	4.9	6.8	7.1	5.5	4.4	4.8
22	3.2	5.5	5.3	5.1	5.1	5.8	6.0	4.6	4.1	4.6	5.4	5.1	6.3	7.1	7.7	8.1	9.6	10.0	8.7	7.6	5.9	6.3	5.4	4.8	6.1
23	5.3	6.2	9.9	7.8	6.8	5.3	4.5	4.9	6.2	6.0	6.8	8.3	8.7	9.2	9.2	10.1	11.3	7.1	9.6	8.8	5.8	7.0	7.5	7.8	7.5
24	9.1	7.0	6.6	7.7	6.4	7.7	7.8	8.5	8.8	9.1	9.2	8.9	8.6	9.0	8.7	9.2	8.6	8.2	8.1	8.5	7.2	7.8	8.0	7.2	8.2
25	6.6	5.9	5.9	7.3	5.6	2.9	6.7	5.3	6.4	5.1	3.9	5.0	4.3	5.3	6.0	6.7	6.7	6.4	7.7	8.1	8.7	8.2	7.1	5.9	6.1
26	6.1	6.2	5.9	6.0	5.3	5.9	4.3	4.2	4.8	4.8	4.4	4.3	4.8	5.1	5.2	6.4	7.2	7.0	6.7	7.2	6.3	6.7	7.3	6.0	5.7
27	5.4	4.1	2.5	2.1	2.7	0.7	2.5	0.9	1.3	2.8	3.1	3.6	3.8	3.6	4.1	5.5	5.1	5.2	5.6	4.5	6.9	7.7	6.9	5.4	4.0
28	4.4	3.8	4.2	4.4	4.4	4.4	3.0	2.4	2.2	2.8	4.7	5.0	4.8	5.7	5.0	5.9	6.3	6.6	6.3	7.9	7.9	7.8	8.9	7.7	5.3
29	7.3	6.0	4.5	4.1	2.9	2.4	2.7	3.0	2.2	0.8	2.3	2.1	2.4	3.0	3.9	4.2	4.0	5.3	6.9	7.1	6.8	7.7	7.3	6.6	4.4
30	4.8	3.8	4.5	4.7	3.9	5.3	3.1	0.9	1.1	1.2	2.0	3.1	3.6	4.3	5.3	5.0	4.2	5.1	5.9	4.3	4.2	6.4	7.0	7.4	4.2
31	7.6	4.0	4.1	4.3	3.6	2.6	2.5	2.0	1.9	2.2	2.4	2.3	4.2	2.4	2.4	2.0	1.7	3.2	7.2	8.6	6.8	7.7	6.1	5.3	4.1
AVG	6.0	5.1	5.0	5.1	5.3	5.3	5.2	5.2	5.3	5.1	5.2	5.3	5.3	5.4	5.9	6.0	6.6	6.8	7.0	7.7	7.6	7.6	6.9	6.3	5.9

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 2:

wind speed 2 50m, m/

Height: 50m

Serial #: 51163

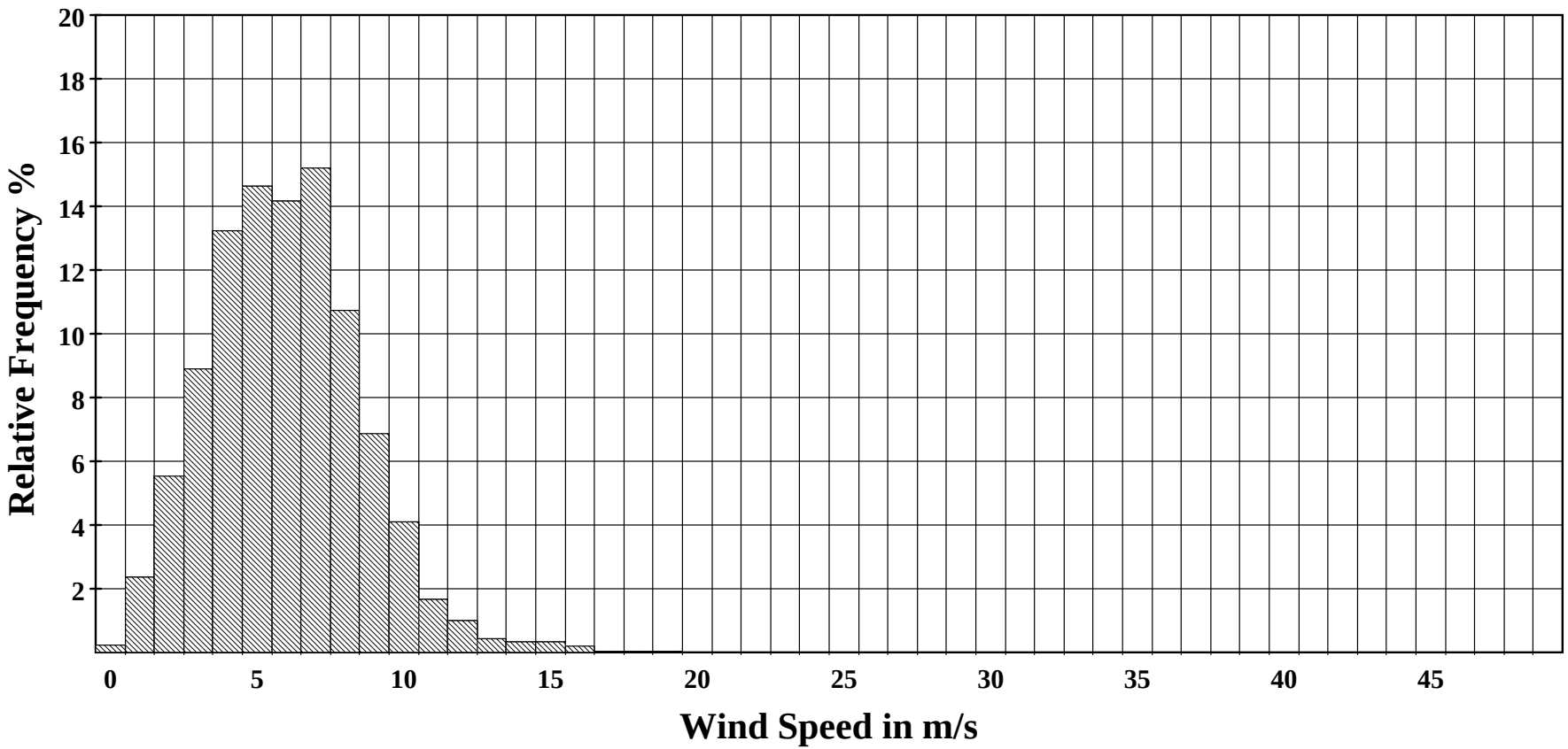
August 2012

Frequency Distribution Ch 2

SITE 0001

NMSU ASC at Clovis

Frequency Distribution



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NRG Systems SDR Version 6.10

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Project: wind monitoring

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Elevation: 1365 m

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wind speed 2 50m, m/

Height: 50m

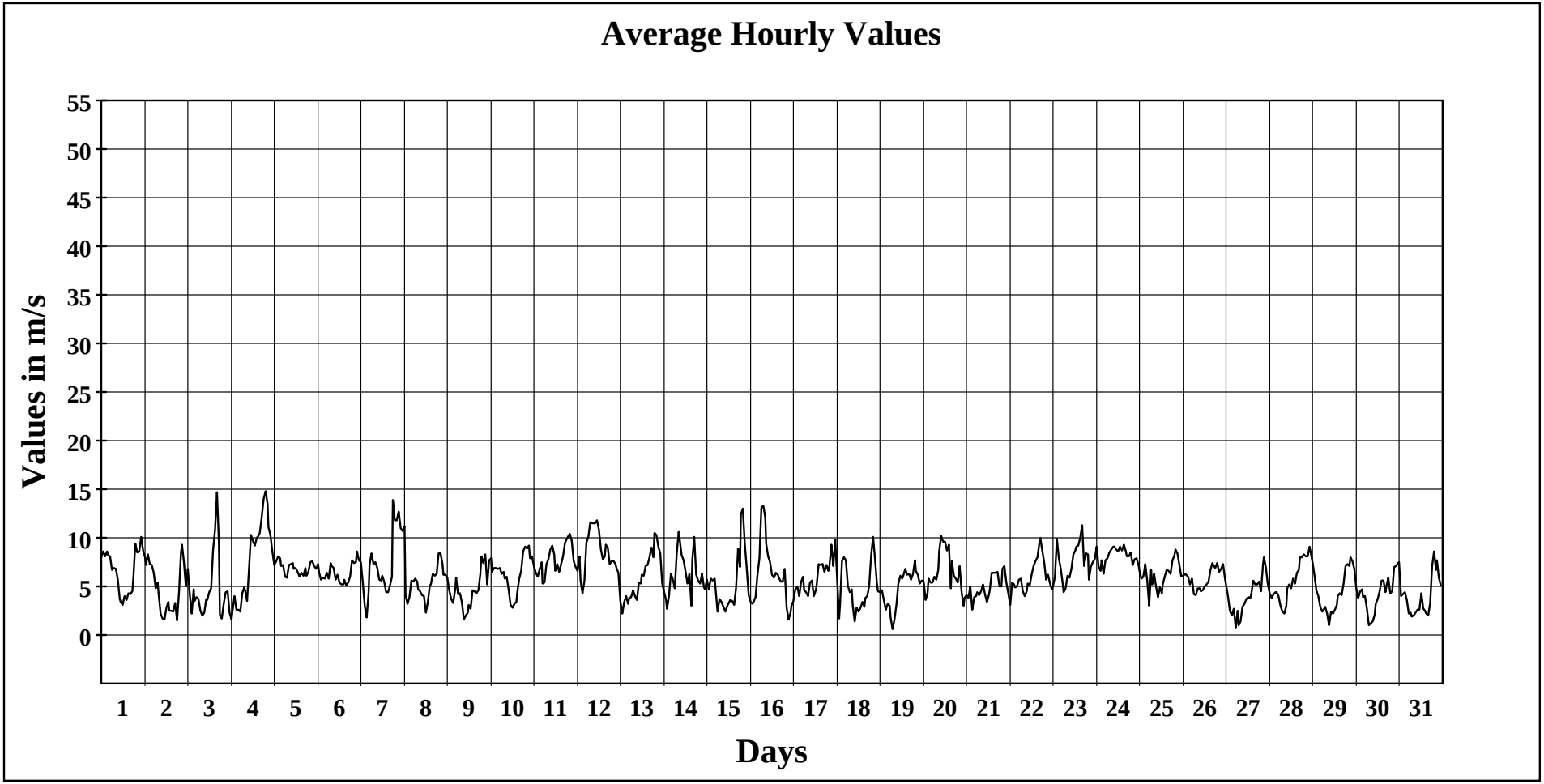
Serial #: 51163

August 2012

Hourly Averages Graph Ch 2

SITE 0001

NMSU ASC at Clovis



Average Value: 5.9

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**

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Elevation: 1365 m

Sensor on channel 2:

wind speed 2 50m, m/

Height: 50m Units: m/s

Serial #: 51163

August 2012

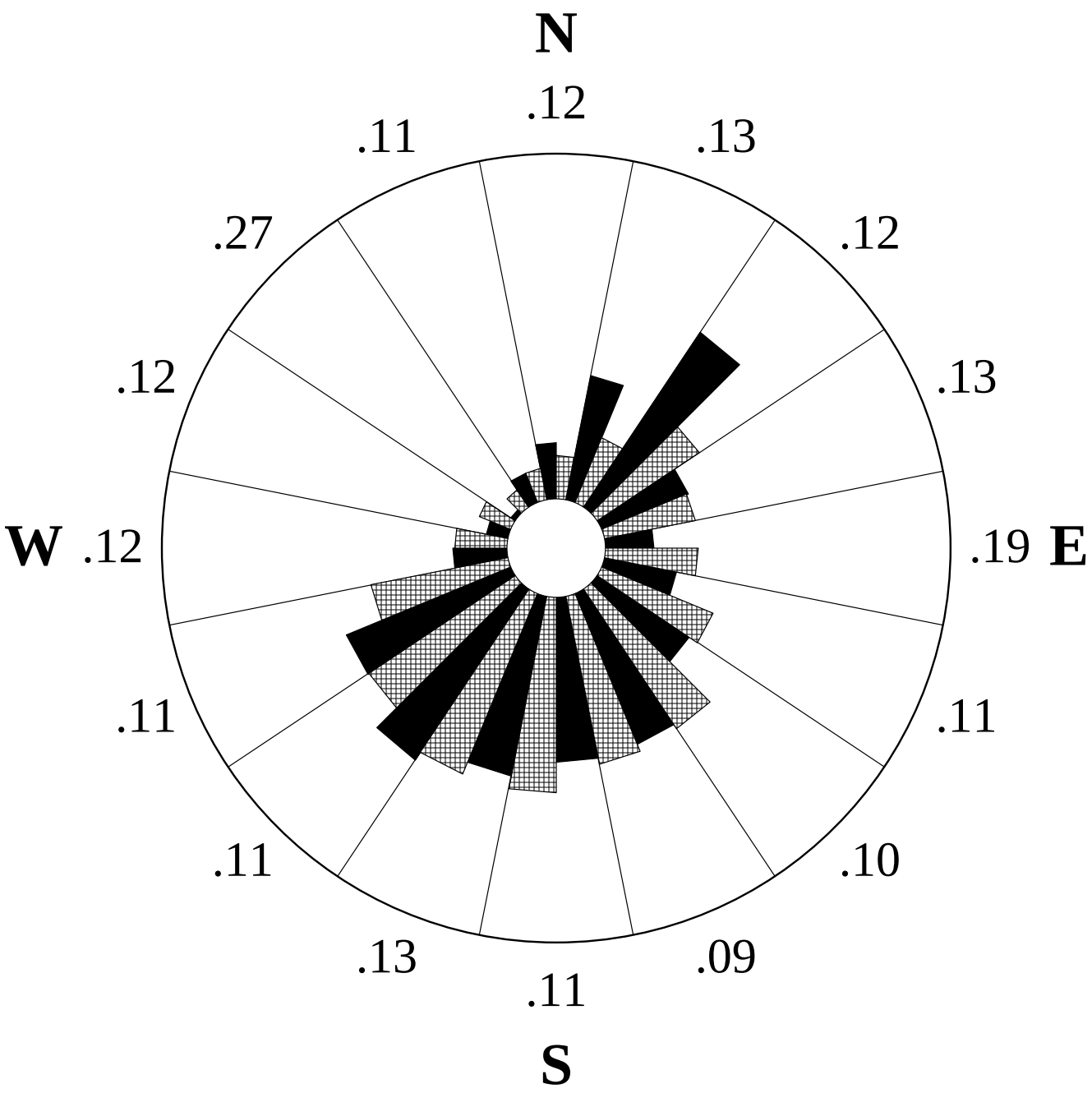
Hourly Averages Table Ch 2

SITE 0001

NMSU ASC at Clovis

Day	Hour 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG
1	8.0	8.6	8.1	8.6	8.2	8.1	6.7	6.9	6.8	5.7	3.7	3.4	3.1	4.0	3.6	4.3	4.2	4.5	5.9	9.4	8.5	8.6	10.1	8.7	6.6
2	8.0	7.2	8.3	7.3	7.2	6.4	4.8	5.4	4.2	2.2	1.7	1.6	2.8	3.4	2.5	2.5	2.4	3.3	1.5	4.4	8.4	9.3	7.5	5.0	4.9
3	6.8	4.2	2.3	4.7	3.5	3.9	3.7	2.5	2.0	2.3	3.7	3.6	4.4	4.8	8.8	10.8	14.7	9.4	2.1	1.7	3.2	4.4	4.5	2.3	4.8
4	1.6	2.5	4.0	2.6	2.6	2.4	4.3	4.9	4.6	3.5	6.8	10.3	9.7	9.2	10.0	10.1	10.5	12.1	14.0	14.8	13.5	11.1	10.3	8.6	7.7
5	7.3	7.6	8.1	7.9	7.1	7.2	6.0	5.9	7.2	7.3	7.4	6.8	6.9	6.5	6.0	6.4	6.1	6.9	6.1	6.5	7.5	7.6	7.1	6.8	6.9
6	7.3	6.5	5.7	5.9	5.8	6.4	5.8	7.4	7.1	6.9	5.7	6.2	5.4	5.2	5.2	5.7	5.1	5.4	6.0	7.7	7.4	7.5	8.6	7.7	6.4
7	7.5	5.4	3.0	1.8	4.4	7.2	8.4	7.3	7.5	6.9	5.7	5.6	6.1	5.5	4.4	4.4	5.1	6.0	13.9	11.8	11.8	12.7	11.0	10.7	7.3
8	11.2	4.1	3.2	3.9	5.6	5.5	5.8	5.5	4.7	4.5	4.1	4.0	2.3	3.4	5.1	5.2	6.3	6.1	6.3	8.4	8.4	7.3	6.2	6.2	5.6
9	5.9	4.6	3.7	3.3	4.6	5.9	4.2	4.3	3.3	1.6	2.0	2.3	3.1	2.7	4.6	4.5	4.3	4.6	6.3	8.1	7.4	8.3	5.2	7.7	4.7
10	7.9	6.5	6.9	6.9	6.8	6.9	6.3	6.5	5.8	6.0	4.7	3.1	2.8	3.2	3.4	4.4	5.8	6.6	8.6	9.1	8.9	9.2	7.9	8.1	6.3
11	7.1	6.4	6.0	6.8	7.5	5.3	5.4	7.3	7.8	8.8	9.2	8.3	6.6	7.3	6.5	7.3	8.1	9.5	9.9	10.1	10.4	9.7	7.6	7.0	7.7
12	6.6	8.1	5.6	4.3	5.6	9.5	10.1	11.6	11.5	11.5	11.5	11.8	10.8	8.8	7.8	8.1	9.3	9.0	7.3	7.6	7.6	7.3	6.9	6.4	8.5
13	3.5	2.2	3.4	4.0	3.2	3.8	3.9	4.6	4.0	3.6	5.4	5.3	6.2	6.1	7.1	7.2	8.0	9.0	8.0	10.5	10.3	9.1	8.4	5.3	5.9
14	4.4	3.6	2.7	4.0	6.3	5.7	4.8	8.4	10.6	9.8	8.2	7.7	6.5	5.3	6.3	3.0	7.7	10.1	6.2	5.6	5.3	6.3	4.9	4.7	6.2
15	5.7	4.7	5.8	5.6	5.8	4.7	2.4	3.7	3.4	2.9	2.4	3.0	3.2	3.6	3.5	3.1	4.9	8.9	7.0	12.4	13.0	9.4	6.9	4.1	5.4
16	3.4	3.2	3.4	3.9	6.2	7.9	13.1	13.3	12.1	9.4	8.1	7.5	6.2	5.9	6.4	6.2	5.9	5.5	5.5	6.8	2.8	1.6	2.3	3.0	6.2
17	3.5	4.7	5.0	4.0	5.5	6.0	4.6	4.4	4.0	5.4	5.6	4.0	4.6	5.2	7.3	7.3	7.3	6.5	7.2	6.6	7.1	9.3	7.1	9.8	5.9
18	5.7	1.7	3.1	7.6	8.0	7.7	5.1	4.4	4.7	3.0	1.4	2.8	2.4	2.8	3.4	2.9	3.8	4.0	5.1	8.2	10.1	7.8	5.2	4.5	4.8
19	4.4	4.6	3.6	2.6	3.2	3.0	1.8	0.6	1.6	3.1	5.3	6.1	5.8	6.1	6.8	6.2	6.3	5.7	6.3	7.7	6.6	6.2	5.3	5.6	4.8
20	5.5	3.6	4.3	5.8	5.4	5.4	6.0	5.7	6.7	8.6	10.2	9.6	9.6	8.7	9.3	4.8	7.6	6.1	5.8	5.4	7.1	4.4	3.0	3.8	6.4
21	4.1	3.8	5.0	2.6	3.9	4.0	4.4	4.1	4.5	5.2	4.2	3.4	4.1	4.6	6.4	6.4	6.4	6.5	5.0	5.0	6.8	7.1	5.4	4.3	4.9
22	3.1	5.4	5.2	4.9	5.0	5.7	5.8	4.5	4.0	4.5	5.3	5.1	6.2	7.1	7.6	8.0	9.5	10.0	8.7	7.5	5.7	6.2	5.3	4.7	6.0
23	5.0	6.0	9.9	7.9	6.8	5.3	4.4	4.8	6.1	5.9	6.8	8.3	8.7	9.1	9.2	10.0	11.3	7.1	8.4	8.3	5.7	7.0	7.5	7.8	7.4
24	9.1	7.0	6.6	7.7	6.3	7.7	7.9	8.5	8.8	9.1	9.1	8.8	8.6	9.1	8.7	9.3	8.6	8.1	8.1	8.5	7.2	7.8	7.9	7.2	8.1
25	6.6	5.8	6.0	7.3	5.6	3.0	6.7	5.2	6.3	5.0	3.9	4.9	4.3	5.3	6.0	6.7	6.6	6.3	7.7	8.2	8.8	8.4	7.2	6.0	6.1
26	6.1	6.3	6.1	6.0	5.2	5.8	4.2	4.1	4.8	4.8	4.5	4.6	5.0	5.2	5.5	6.7	7.4	7.2	6.9	7.4	6.5	6.8	7.3	5.8	5.8
27	5.2	4.0	2.5	2.0	2.7	0.7	2.5	1.0	1.4	2.9	3.2	3.7	3.9	3.8	4.2	5.6	5.2	5.2	5.5	4.5	7.2	8.0	7.0	5.3	4.1
28	4.3	3.8	4.2	4.4	4.4	4.0	3.0	2.4	2.3	3.0	4.8	5.2	4.8	5.8	5.3	6.4	6.7	8.0	8.0	8.3	8.1	8.1	9.1	8.0	5.5
29	7.5	6.2	4.6	4.0	2.9	2.4	2.7	2.9	2.2	1.0	2.4	2.2	2.6	3.1	4.0	4.3	4.1	5.3	7.1	7.3	7.1	8.0	7.6	6.8	4.5
30	4.8	3.8	4.5	4.7	3.9	4.0	2.7	1.0	1.2	1.4	2.1	3.2	3.7	4.5	5.6	5.6	4.4	5.0	5.9	4.3	4.5	7.0	7.1	7.4	4.3
31	7.5	4.0	4.2	4.4	3.6	2.2	2.3	1.9	2.0	2.3	2.6	2.6	4.3	2.7	2.6	2.2	2.0	3.3	7.1	8.6	6.7	7.7	5.9	5.1	4.1
AVG	6.0	5.0	5.0	5.1	5.3	5.3	5.1	5.2	5.3	5.1	5.2	5.3	5.3	5.4	5.9	6.0	6.6	6.8	7.0	7.8	7.7	7.7	6.9	6.3	5.9

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**



August 2012

Wind Rose Ch 1, 7

SITE 0001

NMSU ASC at Clovis

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Anemometer on channel 1:

wind speed 1 50m, m/

Height: 50 m

Serial #: 51179

Vane on channel 7:

#200P Wind Vane

Height: 50 m

Serial #:

Outer Numbers are Average TIs for speeds greater than 4.5 m/s

Inner Circle = 0%

Outer Circle = 20%

Percent of Total Wind Energy

Percent of Total Time

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 3:

wind speed 3 40m m/s

Height: 40m

Serial #: 51187

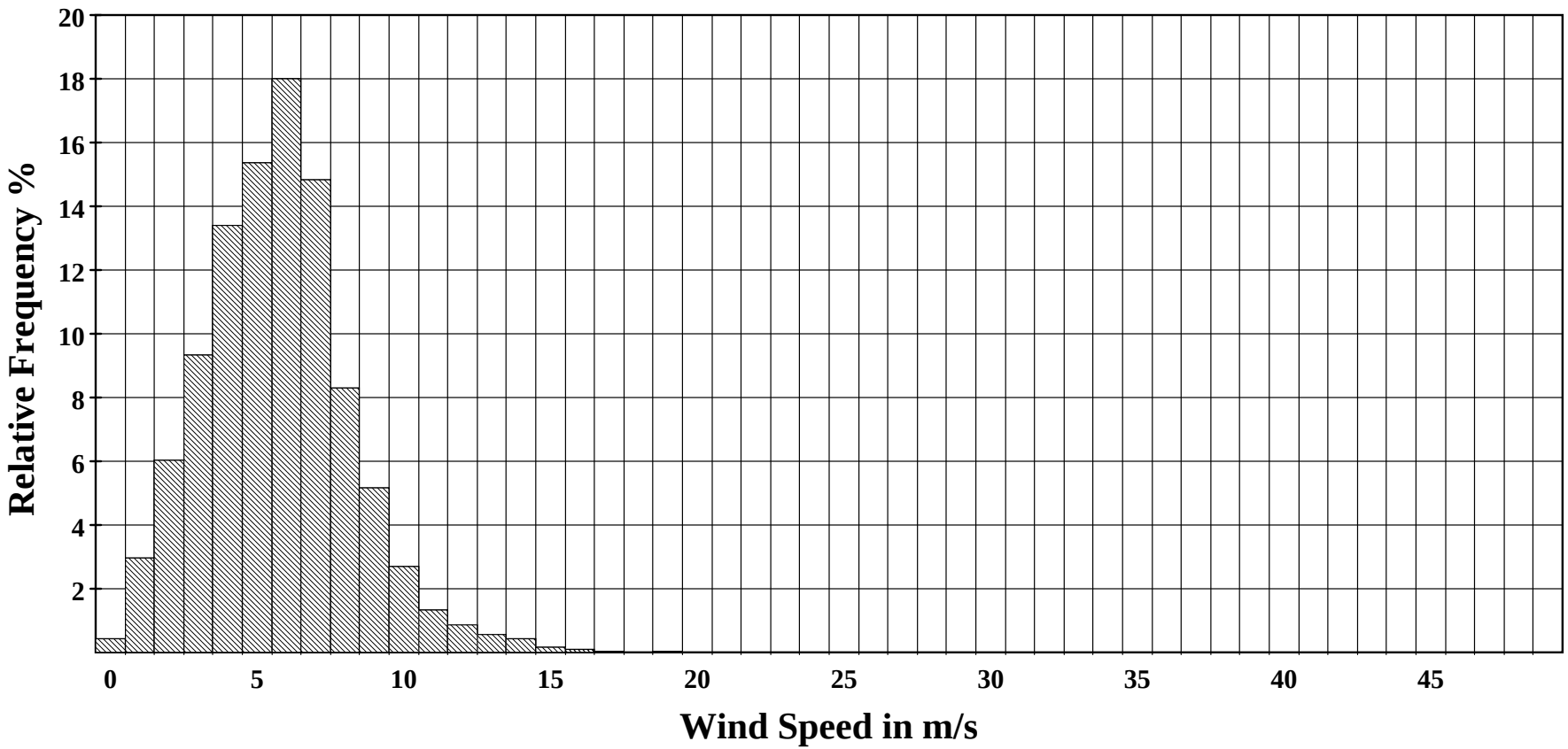
August 2012

Frequency Distribution Ch 3

SITE 0001

NMSU ASC at Clovis

Frequency Distribution



Generated Thursday, September 13, 2012

Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100

NRG Systems SDR Version 6.10

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 3:

wind speed 3 40m m/s

Height: 40m

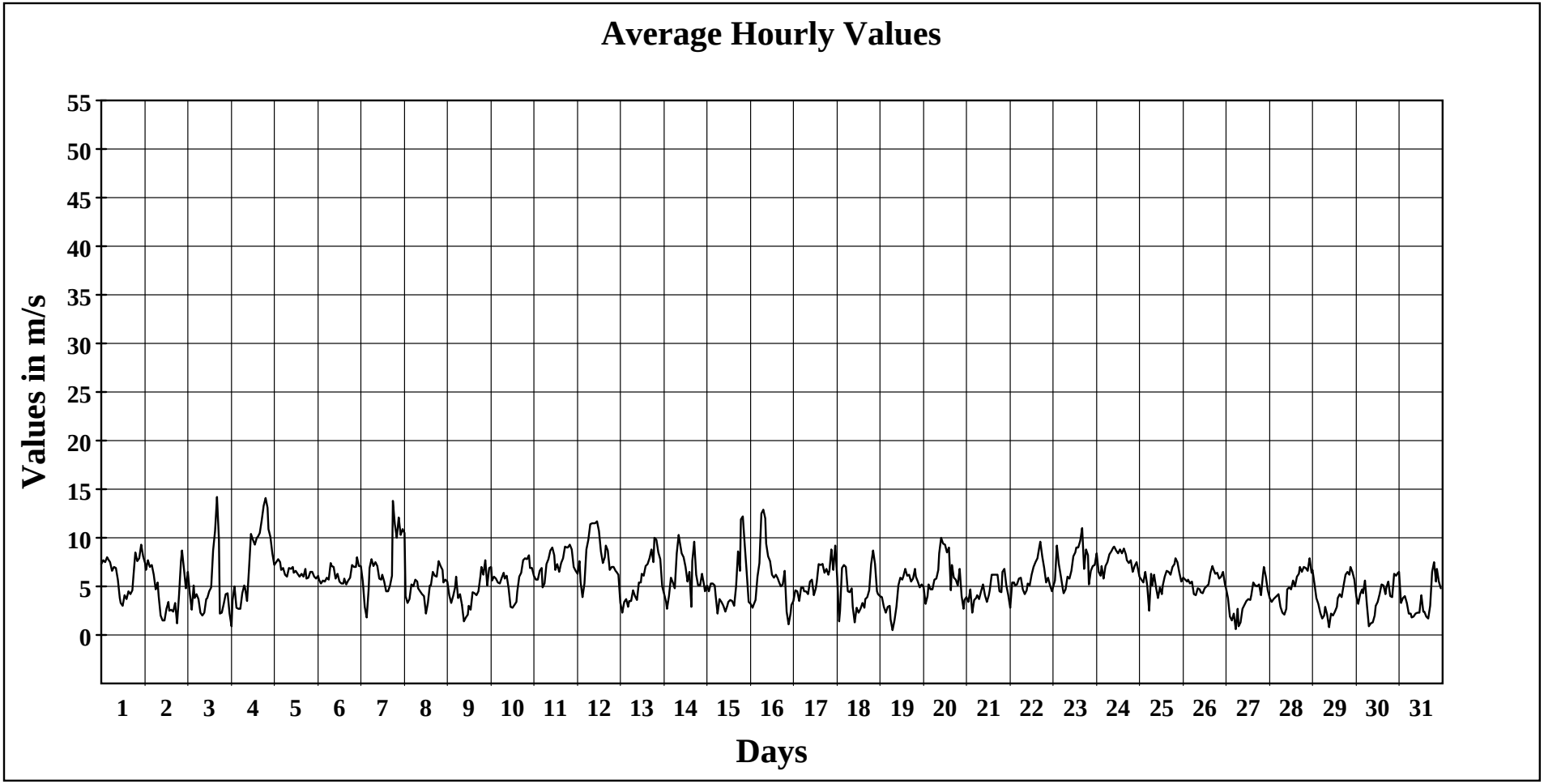
Serial #: 51187

August 2012

Hourly Averages Graph Ch 3

SITE 0001

NMSU ASC at Clovis



Average Value: 5.6

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 3:

wind speed 3 40m m/s

Height: 40m Units: m/s

Serial #: 51187

August 2012

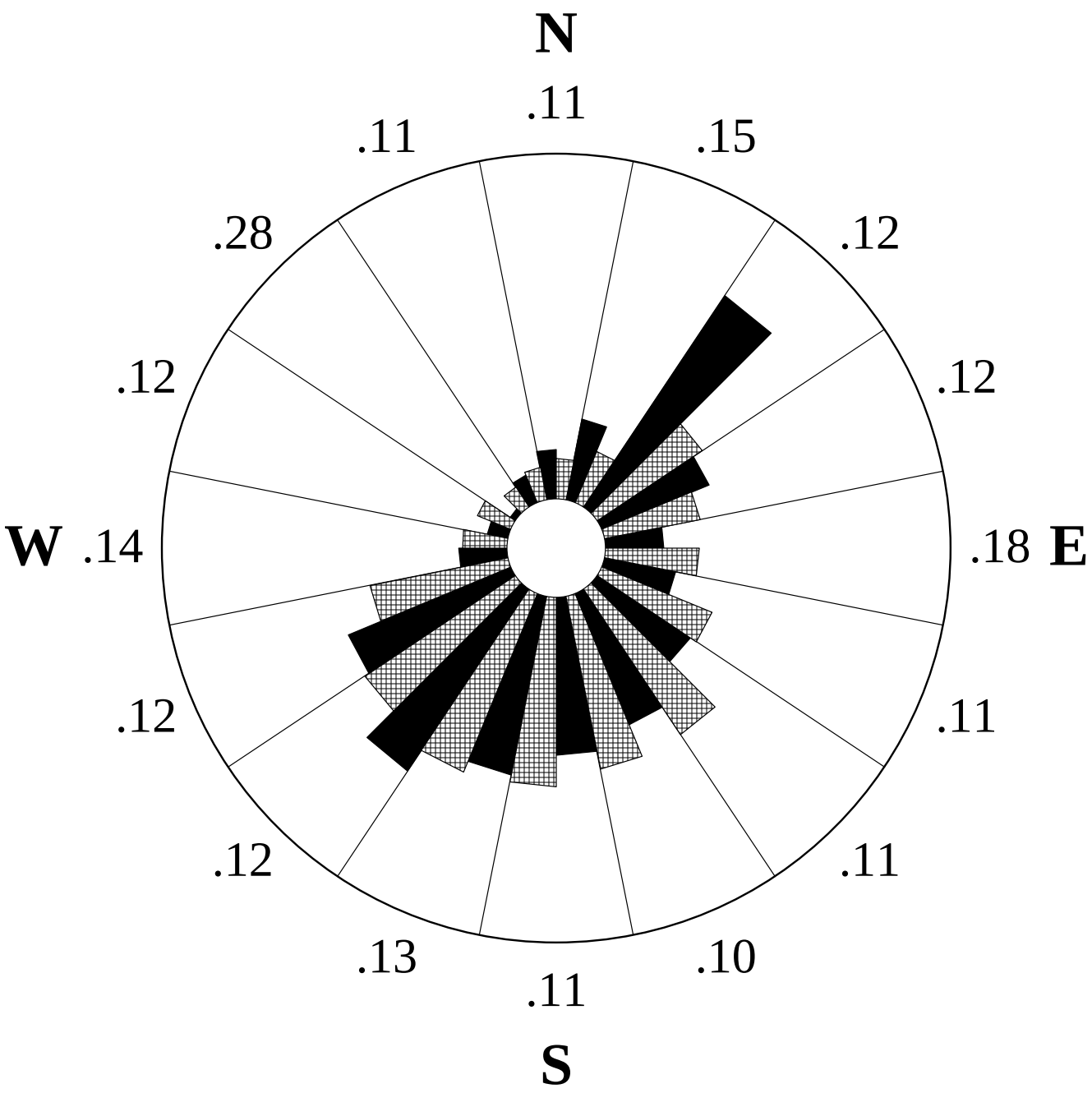
Hourly Averages Table Ch 3

SITE 0001

NMSU ASC at Clovis

Day	Hour 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG
1	7.3	7.7	7.5	8.0	7.8	7.5	6.6	7.0	6.9	5.7	3.8	3.3	3.0	4.1	3.7	4.5	4.2	4.6	6.0	8.5	7.6	7.9	9.3	8.1	6.3
2	7.4	6.7	7.7	7.0	7.2	6.2	4.7	5.4	4.0	2.0	1.5	1.5	2.7	3.4	2.5	2.6	2.4	3.3	1.2	4.1	7.6	8.7	6.8	4.8	4.6
3	6.5	4.3	2.6	5.1	3.8	4.2	3.7	2.3	2.0	2.3	3.7	3.8	4.5	4.9	8.7	10.7	14.2	9.8	2.2	2.3	3.2	4.2	4.3	2.2	4.8
4	0.9	3.6	5.0	2.8	2.7	2.7	4.3	5.1	4.8	3.5	6.8	10.4	9.8	9.3	10.0	10.1	10.5	11.8	13.3	14.1	13.1	10.9	10.1	8.4	7.7
5	7.2	7.5	7.8	7.5	6.7	6.9	6.2	6.0	6.9	6.8	7.0	6.4	6.6	6.3	6.0	6.3	6.0	6.8	5.8	5.9	6.5	6.5	6.0	5.8	6.6
6	6.1	5.7	5.3	5.6	5.5	5.9	5.7	7.4	7.1	7.0	5.8	6.3	5.5	5.3	5.3	5.8	5.2	5.6	5.9	7.2	7.0	7.0	8.0	7.1	6.2
7	7.1	5.5	2.9	1.8	4.7	6.9	7.8	7.1	7.5	7.1	5.8	5.7	6.2	5.5	4.5	4.5	5.1	6.1	13.8	11.4	10.0	12.1	10.3	10.9	7.1
8	10.5	4.0	3.3	3.7	5.2	5.0	5.7	5.5	4.8	4.5	4.2	4.0	2.2	3.3	5.1	5.1	6.5	6.1	6.0	7.6	7.1	6.7	5.4	5.7	5.3
9	5.5	4.1	3.3	4.0	4.9	6.0	3.8	4.2	3.1	1.4	1.8	2.1	3.0	2.6	4.4	4.3	4.1	4.5	6.0	7.0	6.2	7.7	5.1	6.9	4.4
10	7.0	5.6	6.0	5.8	5.4	5.3	5.9	6.4	5.8	6.1	4.8	2.9	2.8	3.1	3.4	4.5	6.0	6.4	7.7	7.9	7.8	8.2	6.9	6.9	5.8
11	6.1	5.7	5.7	6.6	6.9	4.9	5.3	7.3	7.8	8.7	9.0	8.2	6.7	7.3	6.5	7.4	7.9	9.1	9.0	9.0	9.3	8.8	7.0	6.6	7.4
12	6.3	7.6	5.5	3.9	5.3	8.8	9.8	11.4	11.5	11.5	11.5	11.7	10.7	8.6	7.4	8.0	9.2	8.7	6.7	7.0	7.0	6.6	6.5	6.2	8.2
13	3.3	2.3	3.4	3.7	2.9	3.5	3.5	4.6	4.0	3.6	5.4	5.4	6.3	6.1	7.1	7.3	7.9	8.8	7.5	10.0	9.8	8.5	7.8	5.0	5.7
14	4.2	3.4	2.7	4.0	5.9	5.4	4.8	8.4	10.3	9.6	8.4	8.0	7.0	5.5	6.5	2.9	7.6	9.6	6.2	5.1	5.1	6.3	5.2	4.5	6.1
15	5.1	4.5	5.3	5.3	5.1	4.1	2.2	3.7	3.4	3.0	2.4	3.0	3.4	3.6	3.5	3.0	5.0	8.6	6.6	11.9	12.2	9.2	6.4	3.4	5.2
16	3.2	2.8	3.1	3.6	6.0	7.4	12.5	12.9	12.0	9.4	8.1	7.6	6.2	5.9	6.3	5.8	5.5	5.0	5.2	6.6	2.4	1.1	2.2	3.1	6.0
17	3.5	4.6	4.5	3.5	4.9	4.9	4.5	4.5	4.2	5.5	5.7	4.1	4.8	5.4	7.3	7.2	7.3	6.4	6.8	6.2	6.6	8.8	6.7	9.3	5.7
18	5.9	1.4	2.5	6.9	7.2	7.0	4.5	4.4	4.8	2.9	1.3	2.8	2.3	2.7	3.3	2.8	3.7	3.9	4.6	7.3	8.7	7.3	4.5	4.2	4.5
19	4.0	3.9	2.9	2.3	2.9	3.0	1.6	0.5	1.5	2.9	5.1	5.9	5.7	6.0	6.8	6.1	6.2	5.5	5.8	6.8	6.0	5.5	4.9	5.2	4.4
20	4.9	3.2	4.0	5.2	4.7	4.7	5.7	5.8	6.7	8.4	10.0	9.4	9.3	8.5	9.0	4.6	7.2	5.9	5.7	5.1	6.8	4.0	2.7	3.6	6.1
21	3.9	3.4	4.7	2.3	3.6	3.8	4.1	3.7	4.5	5.2	4.1	3.4	4.1	4.6	6.2	6.2	6.3	6.2	4.5	4.4	6.5	6.8	5.1	4.1	4.7
22	2.8	5.4	5.4	5.1	5.2	5.8	5.9	4.7	4.2	4.6	5.3	5.1	6.2	7.0	7.5	7.9	9.1	9.6	8.1	6.9	5.4	5.9	5.1	4.5	5.9
23	4.9	5.6	9.2	7.3	6.1	4.8	4.3	4.7	6.0	5.8	6.6	8.1	8.5	9.0	9.0	9.7	11.0	6.8	8.8	8.2	5.2	6.6	7.1	7.2	7.1
24	8.4	6.5	6.1	7.1	5.8	7.1	7.5	8.3	8.6	9.0	9.1	8.7	8.4	8.8	8.4	8.9	8.3	7.7	7.4	7.7	6.5	7.1	7.5	6.5	7.7
25	6.0	5.7	5.4	6.5	5.1	2.5	6.3	5.1	6.2	4.9	3.8	4.9	4.3	5.1	6.0	6.6	6.5	6.2	7.0	7.3	7.9	7.5	6.4	5.5	5.8
26	5.9	5.7	5.5	5.7	5.3	5.5	4.2	4.1	4.8	4.7	4.4	4.3	4.8	5.0	5.2	6.4	7.1	6.8	6.3	6.4	5.8	6.0	6.5	5.2	5.5
27	4.8	3.8	1.9	1.5	2.2	0.6	2.7	0.9	1.3	2.7	3.1	3.5	3.7	3.6	4.1	5.4	5.1	5.0	5.2	4.1	6.2	7.0	6.0	4.6	3.7
28	3.8	3.4	3.7	3.9	4.0	4.2	2.9	2.3	2.1	2.7	4.7	4.9	4.7	5.6	5.0	6.0	6.3	7.0	6.5	7.0	6.9	6.6	7.9	6.4	4.9
29	6.7	5.3	3.8	3.2	2.3	1.7	2.0	2.9	2.1	0.8	2.2	2.0	2.4	2.9	3.8	4.2	3.9	5.1	6.2	6.5	6.2	7.0	6.5	5.7	4.0
30	4.0	3.2	4.2	4.7	4.3	5.6	3.1	0.9	1.2	1.3	2.0	3.0	3.4	4.2	5.2	5.1	4.2	4.9	5.5	4.0	3.9	6.3	6.1	6.4	4.0
31	6.5	3.3	3.8	4.0	3.3	2.2	2.2	1.8	1.9	2.2	2.3	2.3	4.1	2.4	2.4	1.9	1.7	3.0	6.5	7.5	5.5	6.8	5.5	4.8	3.7
AVG	5.5	4.7	4.7	4.8	4.9	5.0	5.0	5.1	5.2	5.0	5.2	5.3	5.3	5.4	5.8	5.9	6.5	6.6	6.6	7.1	7.0	7.1	6.3	5.8	5.6

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**



August 2012

Wind Rose Ch 3, 8

SITE 0001

NMSU ASC at Clovis

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Anemometer on channel 3:

wind speed 3 40m m/s

Height: 40m

Serial #: 51187

Vane on channel 8:

#200P Wind Vane

Height: 40 m

Serial #:

Outer Numbers are Average TIs for speeds greater than 4.5 m/s

Inner Circle = 0%

Outer Circle = 20%

Percent of Total Wind Energy

Percent of Total Time

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 4:

windspeed 4 30m, m/s

Height: 30 m

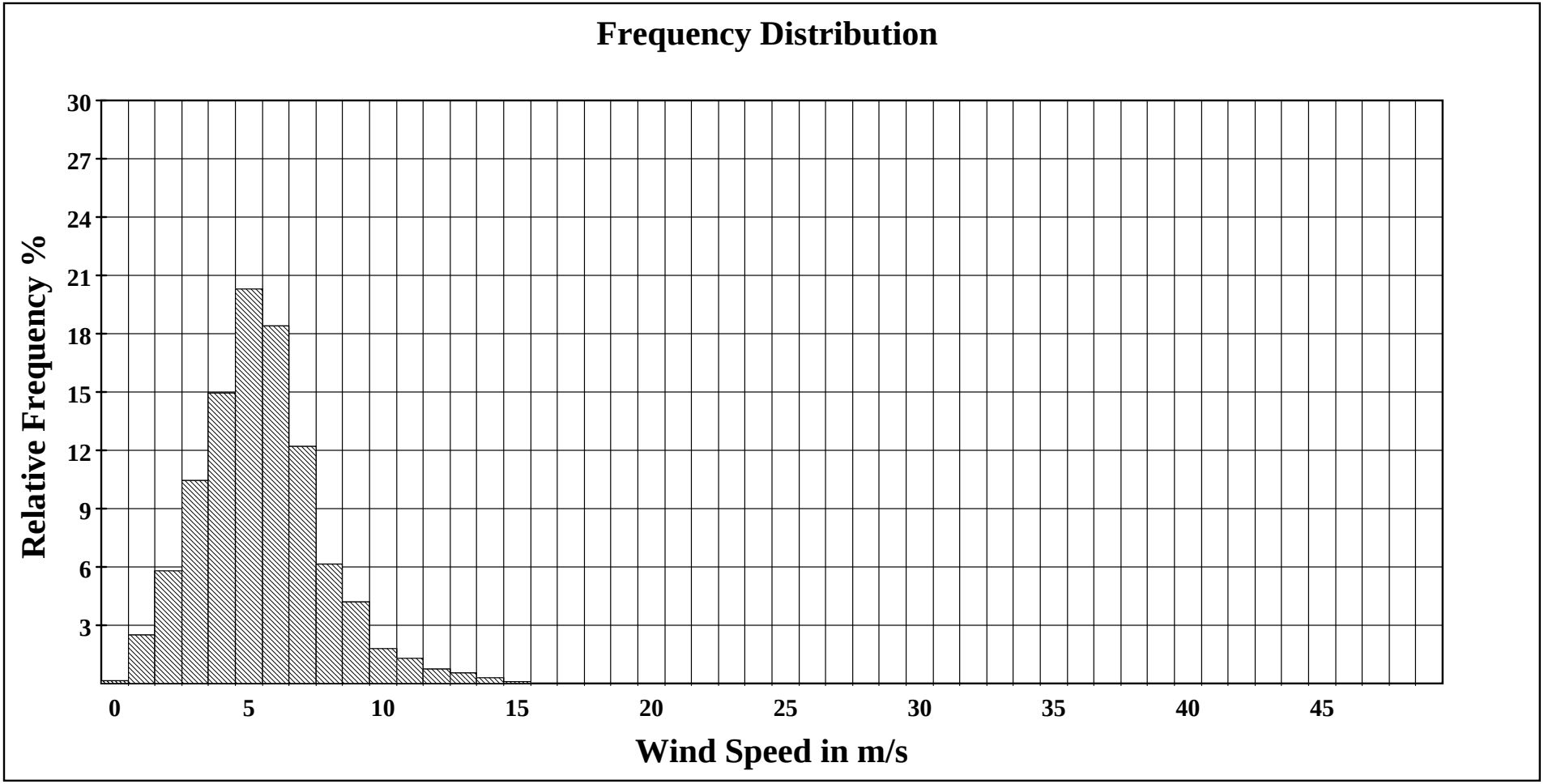
Serial #: 51180

August 2012

Frequency Distribution Ch 4

SITE 0001

NMSU ASC at Clovis



Generated Thursday, September 13, 2012

Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100

NRG Systems SDR Version 6.10

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 4:

windspeed 4 30m, m/s

Height: 30 m

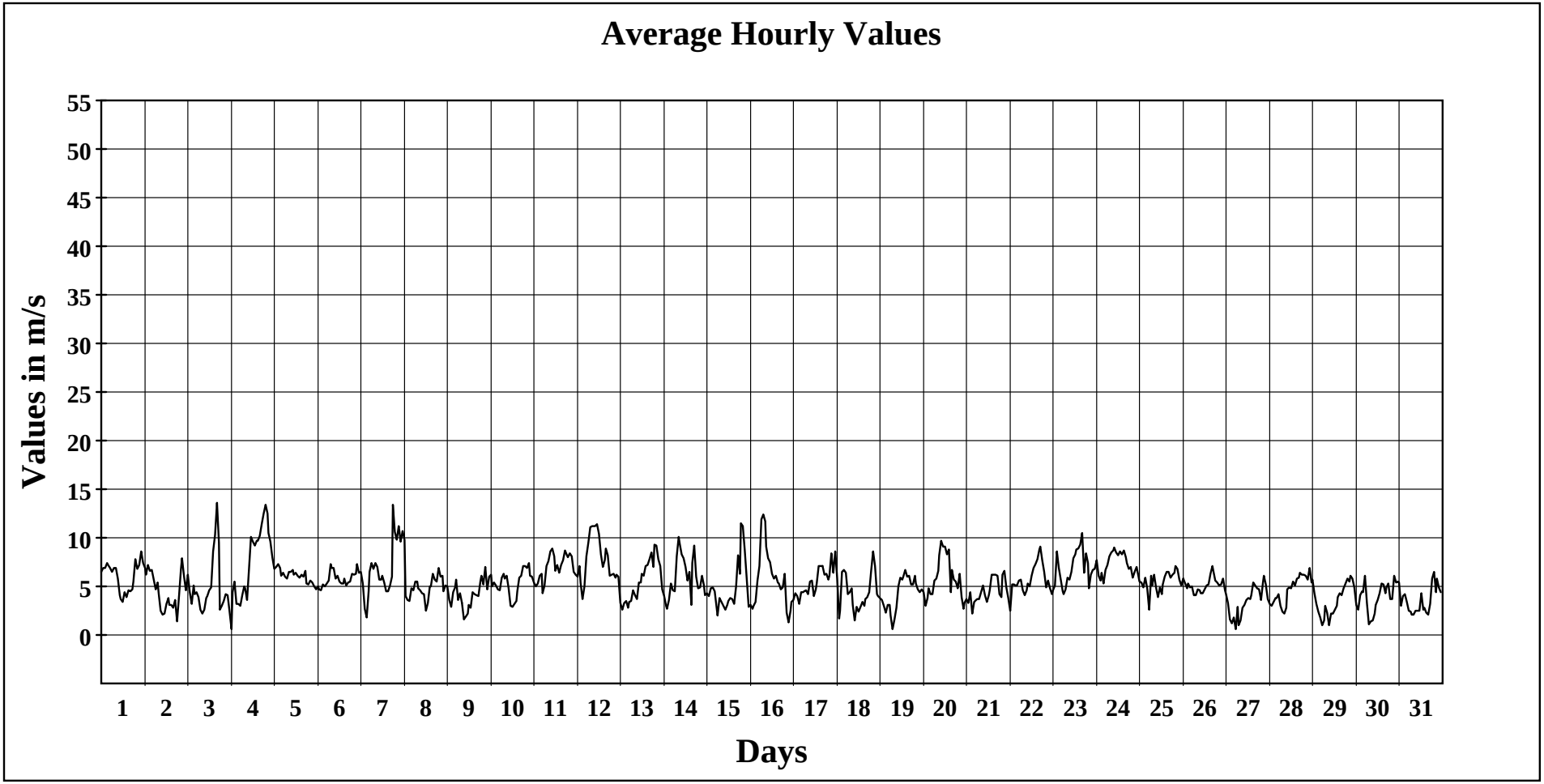
Serial #: 51180

August 2012

Hourly Averages Graph Ch 4

SITE 0001

NMSU ASC at Clovis



Average Value: 5.4

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 4:

windspeed 4 30m, m/s

Height: 30 m Units: m/s

Serial #: 51180

August 2012

Hourly Averages Table Ch 4

SITE 0001

NMSU ASC at Clovis

Day	Hour 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG
1	6.5	6.9	6.9	7.4	7.2	6.9	6.5	6.9	6.9	5.8	4.1	3.7	3.4	4.4	3.9	4.6	4.5	4.7	5.5	7.8	6.8	7.2	8.6	7.4	6.0
2	6.9	6.2	7.2	6.6	6.7	5.7	4.7	5.4	4.3	2.5	2.1	2.2	3.2	3.8	3.1	3.1	2.8	3.6	1.4	4.0	6.8	7.9	6.1	4.6	4.6
3	6.2	4.4	3.2	5.1	4.2	4.4	3.9	2.6	2.2	2.6	3.8	4.0	4.6	4.9	8.6	10.3	13.6	9.5	2.6	3.0	3.5	4.2	4.1	2.4	4.9
4	0.6	4.4	5.5	3.2	3.2	3.0	4.1	5.0	4.8	3.6	6.8	10.1	9.6	9.2	9.7	9.7	10.2	11.4	12.5	13.4	12.5	10.5	9.6	8.0	7.5
5	6.8	7.0	7.3	6.9	6.1	6.4	6.0	5.8	6.5	6.5	6.7	6.2	6.4	6.1	5.9	6.2	6.0	6.6	5.3	5.2	5.6	5.4	5.0	4.7	6.1
6	5.0	4.7	4.6	5.2	5.0	5.3	5.6	7.3	6.9	6.9	5.8	6.1	5.5	5.3	5.3	5.8	5.1	5.4	5.5	6.3	6.2	6.3	7.3	6.4	5.8
7	6.5	5.3	2.7	1.8	4.5	6.5	7.4	6.8	7.4	7.0	5.7	5.7	6.1	5.4	4.5	4.5	5.1	6.0	13.4	10.6	9.8	11.2	9.6	10.7	6.8
8	9.8	4.0	3.6	3.5	4.8	4.6	5.5	5.5	4.8	4.6	4.3	4.2	2.5	3.3	5.0	5.0	6.3	5.7	5.5	6.9	6.0	6.1	4.5	5.1	5.0
9	5.0	3.6	2.9	4.4	4.9	5.7	3.6	4.3	3.3	1.6	1.9	2.2	3.1	2.8	4.4	4.2	4.1	4.0	5.5	6.1	5.2	7.0	4.7	6.0	4.2
10	6.2	5.0	5.4	5.1	4.7	4.6	5.9	6.3	5.8	6.1	4.8	3.0	2.9	3.3	3.5	4.5	5.9	6.1	7.1	7.1	6.9	7.4	6.1	6.0	5.4
11	5.4	5.0	5.3	6.1	6.3	4.3	5.1	7.1	7.6	8.6	8.9	8.1	6.6	7.2	6.4	7.2	7.7	8.7	8.2	8.0	8.4	8.1	6.5	6.3	7.0
12	6.0	7.1	5.4	3.7	5.0	8.1	9.5	11.1	11.2	11.2	11.3	11.4	10.4	8.3	7.0	7.7	8.9	8.2	6.1	6.2	6.3	5.9	6.2	6.0	7.8
13	3.3	2.6	3.3	3.5	2.8	3.4	3.5	4.6	4.1	3.7	5.4	5.4	6.3	6.1	7.1	7.2	7.8	8.5	7.0	9.3	9.2	7.8	7.1	4.7	5.6
14	4.0	3.0	2.7	3.6	5.3	4.6	4.5	8.1	10.1	9.4	8.3	7.9	7.0	5.6	6.5	3.1	7.4	9.2	6.0	4.8	4.9	6.1	5.1	4.1	5.9
15	4.3	4.0	4.8	4.9	4.5	3.7	2.0	3.8	3.4	3.0	2.6	3.1	3.5	3.8	3.7	3.2	5.0	8.2	6.3	11.5	11.2	8.7	5.8	2.9	4.9
16	3.1	2.7	3.0	3.4	5.6	7.1	11.9	12.4	11.7	9.1	7.9	7.5	6.3	5.8	6.1	5.4	5.3	4.7	4.9	6.3	2.3	1.3	2.5	3.4	5.8
17	3.6	4.3	4.0	3.2	4.4	4.4	4.5	4.6	4.2	5.5	5.6	4.0	4.7	5.3	7.1	7.1	7.1	6.2	6.3	5.7	6.1	8.4	6.4	8.6	5.5
18	5.8	1.7	2.5	6.5	6.7	6.4	4.2	4.4	4.8	3.1	1.5	2.9	2.4	2.9	3.4	3.0	3.7	3.9	4.4	6.6	8.6	7.1	4.2	4.0	4.4
19	3.8	3.6	3.0	2.3	3.1	3.1	2.0	0.6	1.6	2.8	5.0	5.9	5.7	6.0	6.7	6.0	6.1	5.2	5.2	6.1	5.3	4.7	4.4	4.7	4.3
20	4.4	3.0	3.8	4.8	4.2	4.2	5.6	5.8	6.6	8.2	9.7	9.1	9.1	8.3	8.8	4.4	6.7	5.7	5.5	4.8	6.3	3.9	2.7	3.3	5.8
21	3.7	3.3	4.4	2.2	3.4	3.6	3.7	3.7	4.4	5.1	4.1	3.4	4.1	4.6	6.2	6.2	6.2	6.1	4.2	3.9	6.2	6.6	4.9	3.8	4.5
22	2.5	5.2	5.2	5.1	5.1	5.6	5.7	4.6	4.1	4.6	5.3	5.0	6.1	6.9	7.3	7.8	8.8	9.1	7.7	6.5	4.9	5.6	4.8	4.2	5.7
23	4.6	5.1	8.6	6.9	5.7	4.5	4.2	4.7	5.9	5.7	6.5	7.9	8.3	8.8	8.9	9.3	10.5	6.4	8.4	7.4	4.8	6.2	6.7	6.8	6.8
24	7.7	6.1	5.6	6.4	5.3	6.7	7.2	8.1	8.5	8.7	9.0	8.5	8.2	8.6	8.3	8.7	8.0	7.4	6.8	7.0	5.9	6.5	7.0	6.0	7.3
25	5.5	5.4	4.9	5.9	4.8	2.6	6.1	5.1	6.3	4.9	3.9	4.9	4.2	5.2	6.0	6.5	6.5	5.9	6.2	6.4	7.1	6.8	5.7	5.1	5.5
26	5.8	5.3	4.8	5.3	4.9	5.0	4.1	4.1	4.7	4.6	4.3	4.3	4.7	5.1	5.2	6.3	7.1	6.6	5.6	5.4	5.1	5.2	5.8	4.6	5.2
27	4.2	3.3	1.6	1.2	1.8	0.6	2.9	1.0	1.5	2.8	3.1	3.6	3.8	3.7	4.1	5.4	5.1	4.8	4.7	3.6	5.4	6.1	5.2	3.7	3.5
28	3.2	3.0	3.4	3.8	3.8	4.2	3.0	2.4	2.2	2.8	4.7	4.9	4.8	5.5	5.1	5.8	5.9	6.4	6.2	6.2	6.1	5.7	6.9	5.4	4.6
29	5.7	4.3	3.2	2.4	1.8	1.0	1.5	3.0	2.3	1.0	2.2	2.2	2.6	3.0	3.9	4.3	4.1	4.8	5.3	5.8	5.5	6.1	5.8	4.9	3.6
30	3.1	2.6	4.1	4.5	4.4	6.1	3.3	1.1	1.4	1.5	2.2	3.1	3.6	4.3	5.3	5.2	4.3	4.9	5.3	3.7	3.7	6.1	5.4	5.5	3.9
31	5.4	3.0	4.0	4.2	3.4	2.5	2.4	2.1	2.1	2.5	2.5	2.5	4.3	2.6	2.8	2.3	2.1	3.2	5.8	6.5	4.4	5.8	4.9	4.4	3.6
AVG	5.0	4.4	4.4	4.5	4.6	4.7	4.8	5.1	5.2	5.0	5.2	5.3	5.3	5.4	5.8	5.8	6.4	6.4	6.1	6.5	6.4	6.5	5.8	5.3	5.4

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 9:

NRG 110S Temp, C

Height: 3 m

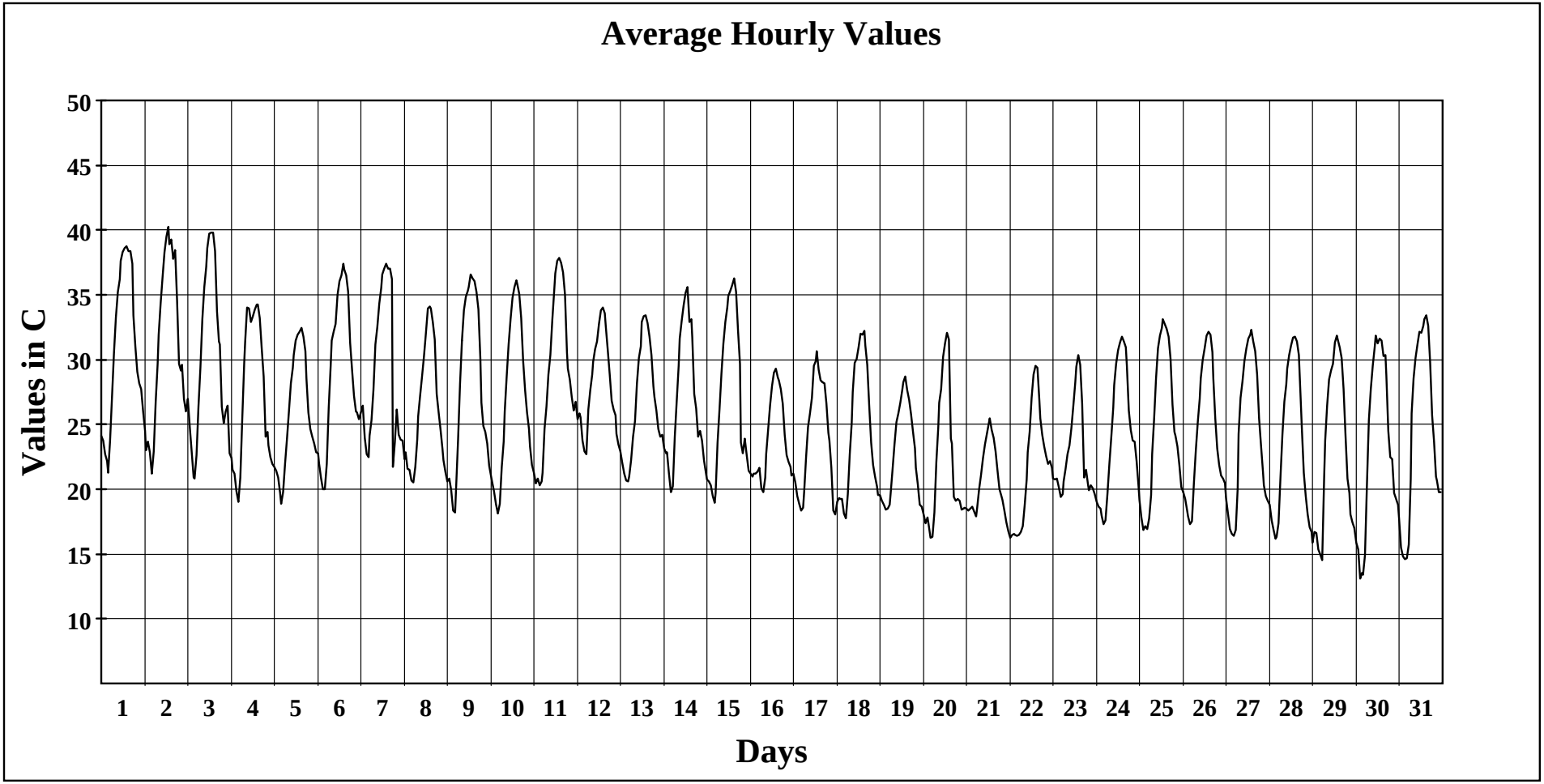
Serial #:

August 2012

Hourly Averages Graph Ch 9

SITE 0001

NMSU ASC at Clovis



Average Value: 25.7

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

Sensor on channel 9:

NRG 110S Temp, C

Height: 3 m Units: C

Serial #:

August 2012

Hourly Averages Table Ch 9

SITE 0001

NMSU ASC at Clovis

Day	Hour 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	AVG
1	24.1	23.7	22.7	22.2	21.3	23.8	27.1	30.5	33.3	35.2	36.2	37.6	38.3	38.6	38.7	38.4	38.4	37.4	33.4	31.0	29.1	28.2	27.7	26.0	31.0
2	24.5	23.0	23.7	22.8	21.2	22.9	26.7	29.7	32.0	34.3	36.3	38.3	39.5	40.2	38.9	39.3	37.8	38.4	34.6	29.7	29.2	29.6	27.0	26.0	31.1
3	27.0	24.8	22.8	20.9	20.8	22.6	26.4	29.4	33.1	35.6	37.2	38.6	39.7	39.8	39.8	38.4	33.7	31.4	31.2	26.4	25.1	26.0	26.4	22.8	30.0
4	22.4	21.5	21.2	19.9	19.0	20.9	25.5	29.7	31.3	34.0	34.0	32.9	33.4	33.8	34.2	34.2	33.2	30.9	28.7	24.0	24.4	23.4	22.5	21.9	27.4
5	21.8	21.4	20.9	19.7	18.9	19.8	22.0	23.9	26.0	28.1	29.3	30.4	31.5	31.9	32.1	32.4	31.8	30.7	28.5	25.9	24.6	24.0	23.5	22.8	25.9
6	22.8	22.0	20.9	20.0	20.0	22.0	26.3	29.5	31.5	32.2	32.7	35.0	36.1	36.5	37.4	37.0	36.5	35.2	31.4	29.3	27.2	26.0	25.9	25.4	29.1
7	26.0	26.5	24.0	22.7	22.4	24.1	25.3	27.7	31.2	32.5	34.3	35.6	36.6	37.0	37.4	37.0	37.0	36.2	21.7	23.6	26.2	24.2	23.8	23.7	29.0
8	22.3	22.8	21.6	21.5	20.6	20.5	21.7	23.8	25.6	27.2	28.7	30.3	32.1	33.9	34.1	33.9	32.9	31.5	27.3	25.9	24.6	23.0	22.2	21.4	26.2
9	20.6	20.8	19.9	18.4	18.2	20.1	23.8	28.1	31.5	33.8	34.8	35.3	35.6	36.6	36.3	36.1	35.2	33.9	30.1	26.7	24.9	24.4	23.5	21.8	27.9
10	21.0	20.6	19.9	18.9	18.1	18.9	21.7	23.7	26.0	28.7	31.2	33.2	34.8	35.6	36.1	35.8	35.1	33.2	29.9	27.6	25.9	24.6	23.3	21.9	26.9
11	21.3	20.4	20.8	20.3	20.6	21.3	24.7	26.4	28.9	30.3	33.1	35.4	36.6	37.6	37.9	37.5	36.7	35.0	30.6	29.3	28.5	27.1	26.1	26.8	28.9
12	25.4	25.9	25.5	23.8	22.9	22.7	26.1	27.7	28.8	29.8	30.8	31.4	32.7	33.8	34.0	33.6	32.5	30.7	28.9	26.8	26.2	25.7	24.3	23.4	28.1
13	22.9	22.0	21.2	20.7	20.6	21.0	22.3	24.0	25.3	28.1	30.2	31.0	32.9	33.4	33.4	32.8	31.8	30.3	27.9	27.1	26.1	24.6	24.0	24.2	26.6
14	23.2	22.8	22.9	21.2	19.8	20.2	24.0	26.8	29.5	31.7	33.0	34.2	35.1	35.6	32.9	33.1	31.7	27.3	26.2	24.1	24.5	23.8	22.3	21.8	27.0
15	20.7	20.6	20.3	19.5	19.0	19.7	23.6	26.2	28.9	31.2	32.9	34.0	34.9	35.3	35.8	36.2	35.2	32.2	29.7	23.6	22.8	23.9	22.6	21.4	27.1
16	21.2	21.0	21.2	21.2	21.3	21.6	20.0	19.8	20.9	22.7	24.5	26.4	27.9	29.0	29.3	28.6	28.4	27.7	26.6	24.2	22.6	22.1	21.8	21.0	23.8
17	21.2	20.5	19.5	18.9	18.4	18.6	19.8	22.4	24.8	25.9	27.1	29.5	29.9	30.6	29.2	28.4	28.3	28.2	26.6	24.4	23.8	21.7	18.4	18.0	23.9
18	19.0	19.3	19.2	19.2	18.1	17.7	19.7	22.7	25.1	27.5	29.7	30.1	31.0	32.0	31.9	32.2	31.1	29.6	26.5	23.6	21.9	21.0	20.2	19.6	24.5
19	19.5	19.1	18.8	18.4	18.5	18.8	19.6	21.5	23.5	25.2	25.9	26.7	27.7	28.2	28.7	27.7	26.9	25.8	24.4	23.1	21.6	20.4	18.8	18.6	22.8
20	18.0	17.4	17.8	17.3	16.2	16.3	18.2	22.1	24.8	26.7	27.7	30.2	31.3	32.1	31.6	23.9	23.5	19.4	19.1	19.2	19.1	18.4	18.5	18.6	22.0
21	18.5	18.4	18.5	18.6	18.3	17.9	18.6	20.0	21.2	22.4	23.4	24.3	25.1	25.5	24.6	24.0	22.9	21.4	20.0	19.4	19.2	18.3	17.5	16.8	20.6
22	16.3	16.5	16.6	16.5	16.4	16.5	16.7	17.1	18.8	20.8	22.8	24.4	27.1	28.8	29.5	29.4	26.9	25.4	24.2	23.3	22.6	21.9	22.2	21.7	21.8
23	20.8	20.8	20.8	20.1	19.4	19.6	20.6	21.6	22.7	23.4	24.7	26.5	28.3	29.5	30.3	29.6	26.6	20.9	21.5	20.4	19.9	20.3	20.1	19.6	22.8
24	19.1	18.7	18.5	18.0	17.3	17.6	19.6	22.0	24.0	26.3	28.0	29.7	30.7	31.3	31.8	31.4	31.0	29.5	26.1	24.6	23.8	23.7	22.2	20.2	24.4
25	19.1	17.9	16.9	17.1	16.9	17.7	19.6	22.7	25.4	28.5	30.9	31.8	32.4	33.1	32.8	32.4	31.8	30.1	26.5	24.4	24.1	23.3	21.9	20.2	24.9
26	19.8	19.2	18.3	17.9	17.3	17.5	20.4	23.0	25.1	27.0	28.5	30.0	30.9	31.8	32.1	31.9	30.6	28.5	25.5	23.1	21.9	21.0	20.8	20.5	24.3
27	19.3	18.2	16.9	16.5	16.4	16.8	20.1	24.3	27.1	28.4	29.9	30.9	31.6	32.0	32.3	31.4	30.7	28.9	25.5	23.4	21.4	20.3	19.5	19.1	24.2
28	18.8	17.6	16.8	16.2	16.3	17.3	20.9	24.2	26.7	28.1	29.3	30.3	31.1	31.7	31.8	31.4	30.4	28.4	24.7	21.3	19.5	18.1	17.1	16.7	23.5
29	15.9	16.7	16.6	15.4	15.0	14.6	20.9	23.7	26.4	28.5	29.1	29.7	31.3	31.8	31.6	30.9	30.1	27.7	24.1	20.9	19.7	18.1	17.4	17.0	23.1
30	15.9	15.3	13.1	13.5	13.4	14.9	20.3	25.3	27.7	29.5	30.9	31.8	31.2	31.6	31.5	30.3	30.4	28.8	24.5	22.5	22.3	19.7	19.2	18.8	23.4
31	17.8	15.5	14.8	14.6	14.7	15.7	20.8	25.8	28.5	30.1	31.2	32.2	32.1	32.6	33.1	33.4	32.6	29.8	25.7	23.6	20.9	20.7	19.8	19.8	24.4
AVG	20.8	20.3	19.8	19.1	18.6	19.3	22.0	24.7	27.0	28.8	30.3	31.5	32.6	33.3	33.3	32.7	31.7	29.8	26.8	24.6	23.7	22.8	22.0	21.2	25.7

Generated Thursday, September 13, 2012 **Total 10-minute intervals: 4464 Intervals used in calculations: 4464 Percent data used: 100** **NRG Systems SDR Version 6.10**

Energy production estimated for August 2012 at the Agricultural Science Center at Clovis

Wind Speed (m/s)	# of hours at given wind speed	Power Curve [1] (kW)	Energy Production (kWh)
0	0	0	0
1	11	0	0
2	31	0	0
3	56	12	687
4	81	77	6,191
5	106	150	15,952
6	111	288	31,782
7	117	457	53,208
8	94	682	64,085
9	60	971	58,533
10	37	1,234	46,033
11	17	1,470	25,426
12	11	1,500	16,050
13	4	1,500	5,700
14	4	1,500	5,250
15	3	1,500	4,050
16	2	1,500	2,250
17	1	1,500	1,200
18	0	1,500	450
19	0	1,500	300
20	0	1,500	0
Total	744		337,147
		August 2012 Monthly Capacity Factor	**30.20%**

These results are only estimates, therefore should not be considered as a feasibility analysis nor be intended as a wind farm development analysis.

[1] Power Curve approximated for a GE 1.5 MW Wind Turbine @ 65 m hub height.