



windNavigator  
Campaign Management Report

**Arkansas Tall Tower Program**  
**December 2011**

Submitted To:  
Arkansas Economic Development Commission

Submitted By:  
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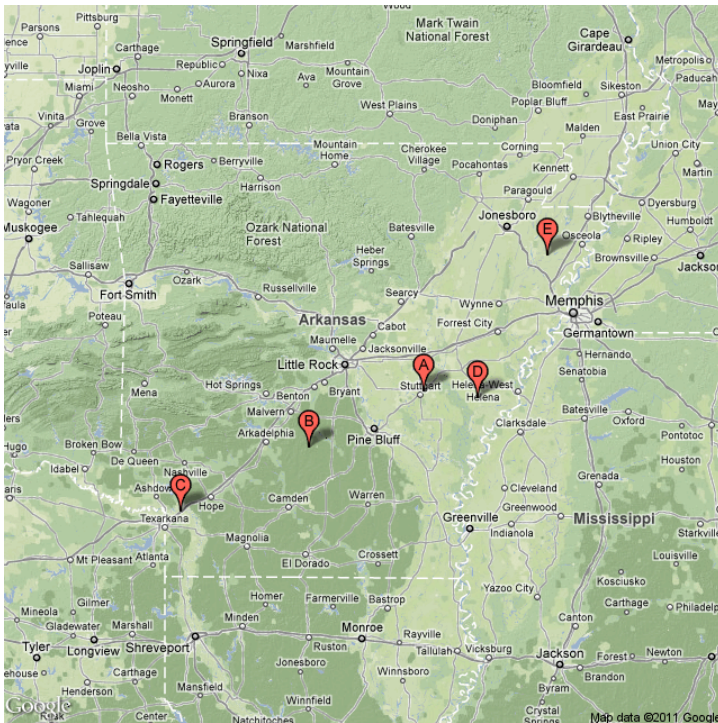
## Executive Summary

This report summarizes the December 2011 wind resource of 5 masts in the Arkansas Tall Tower Program project area. A map of the project area and the location of each project mast is presented below.

The 80 m projected wind speed for December 2011 range from 4.82 m/s (AR1121) to 6.23 m/s (AR1138). Data recovery for the month ranges from 99.8% (AR1050) to 100.0% (AR1004, AR1121, AR1134). The following pages provide a more in-depth summary of each mast.

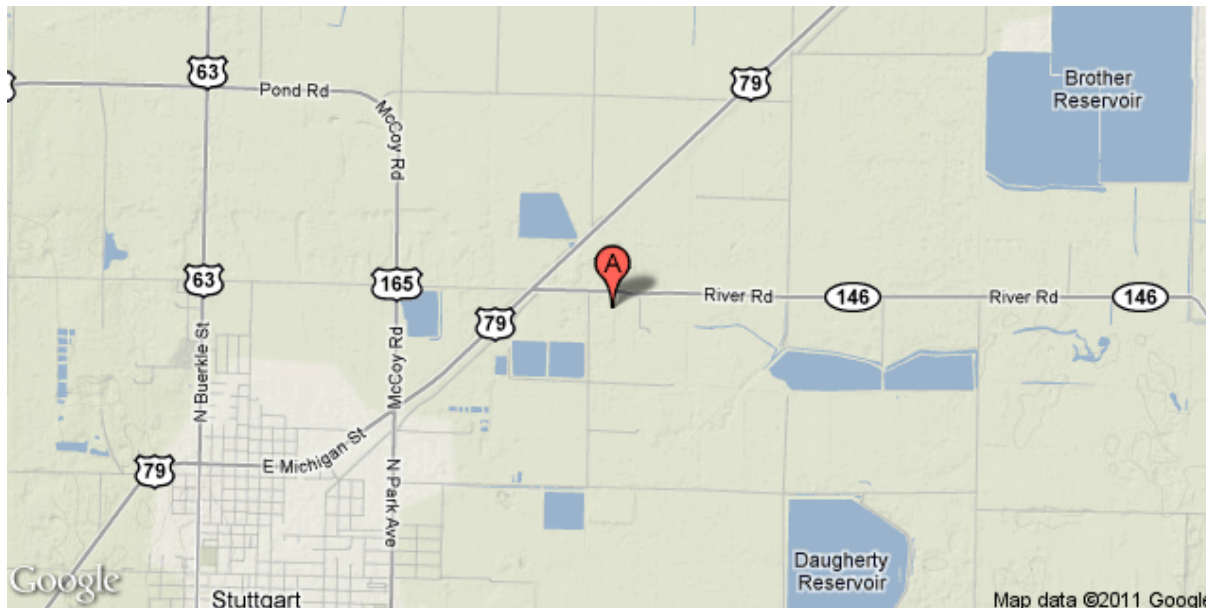
## Project Characteristics

Latitude: 34.5211      Number of Masts: 5  
 Longitude: -91.52027



Label	Mast	Period of Record	Status
A	AR1004	2011-05-05 - 2011-12-31	Operational
B	AR1050	2011-04-01 - 2011-12-31	Operational
C	AR1121	2011-03-22 - 2011-12-31	Operational
D	AR1134	2011-04-01 - 2011-12-31	Operational
E	AR1138	2011-03-28 - 2011-12-31	Operational

# A. AR1004, Arkansas Tall Tower Program Monthly Report



Elevation (m)	Latitude	Longitude
65	34.52111	-91.52027

Anemometer	WS (m/s)	TI	DR (%)
71m W	5.56	0.10	100.0
71m SE	5.50	0.10	100.0
62m W	5.22	0.11	99.2
62m SE	5.23	0.11	99.2
50m W	4.82	0.12	100.0
50m SE	4.80	0.12	100.0

Summary Statistics	
71m W Wind Power Density (W/m <sup>2</sup> )	187.9
70.9 m / 50.3 m Shear	0.442
80 m Projected Wind Speed (m/s)	5.86
Mean Temperature (°C) @ 49.7m	7.9
Mean Temperature (°C) @ 70.4m	7.9

## Sensor Status

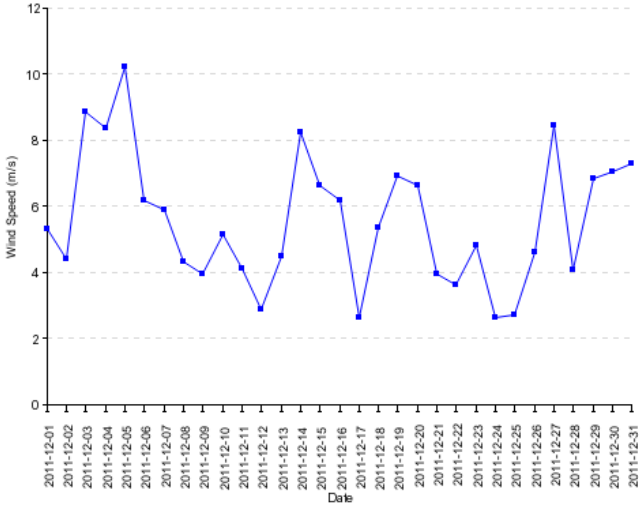
Wind Speed Sensors
71m W (Ch 3) : Operational
71m SE (Ch 4) : Operational
62m W (Ch 1) : Operational
62m SE (Ch 2) : Operational
50m W (Ch 1) : Operational
50m SE (Ch 2) : Operational

Wind Direction Sensors
71m (Ch 1) : Operational
62m (Ch 1) : Operational
50m (Ch 6) : Operational

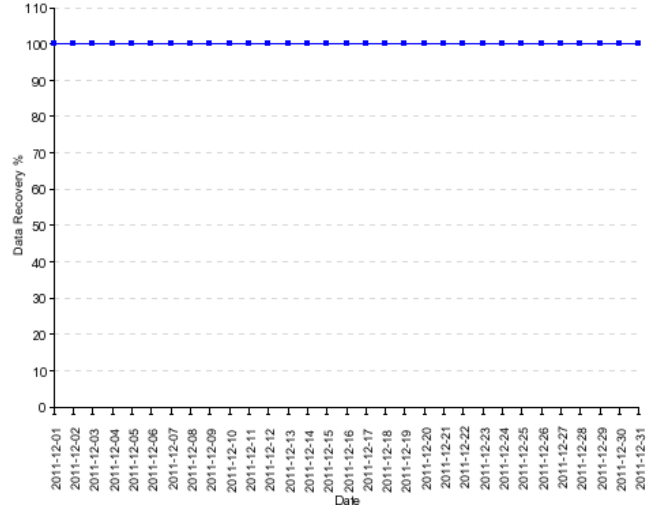
Other
70m (Ch 4) : Operational
50m (Ch 3) : Operational

# Wind Speed Graphics

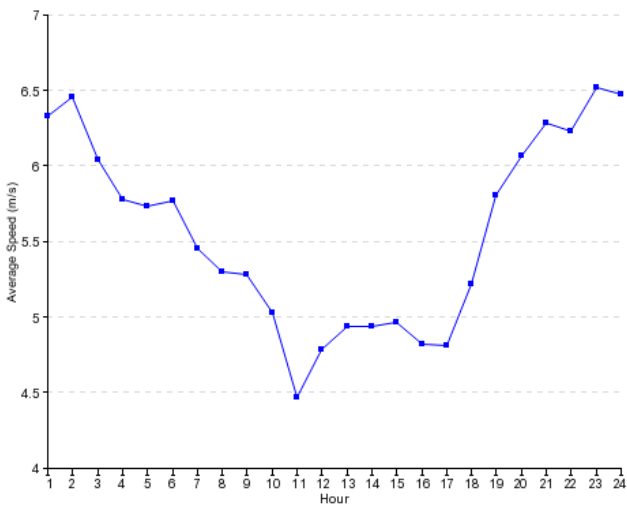
71m W Daily Average Wind Speeds



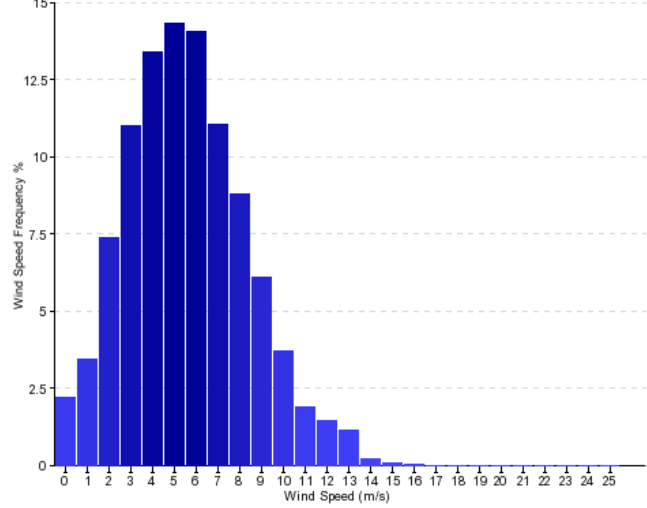
71m W Daily Average Data Recovery (%)



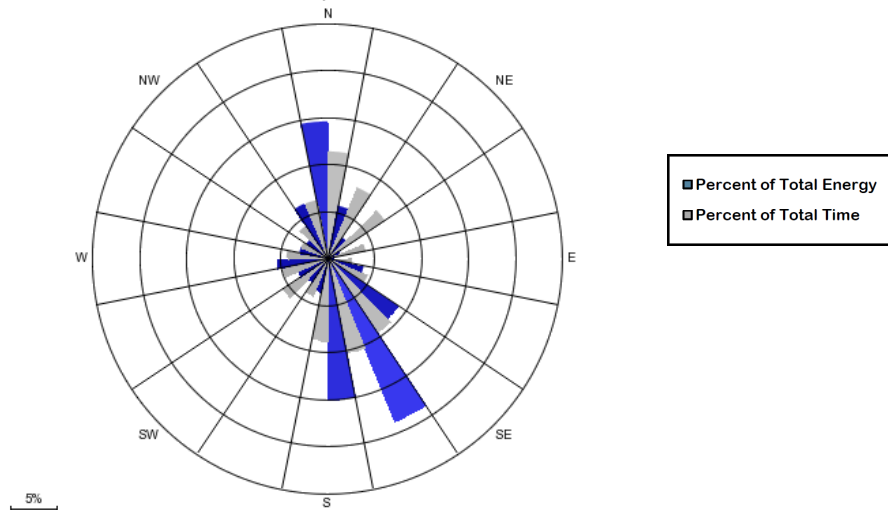
71m W Diurnal Wind Speed



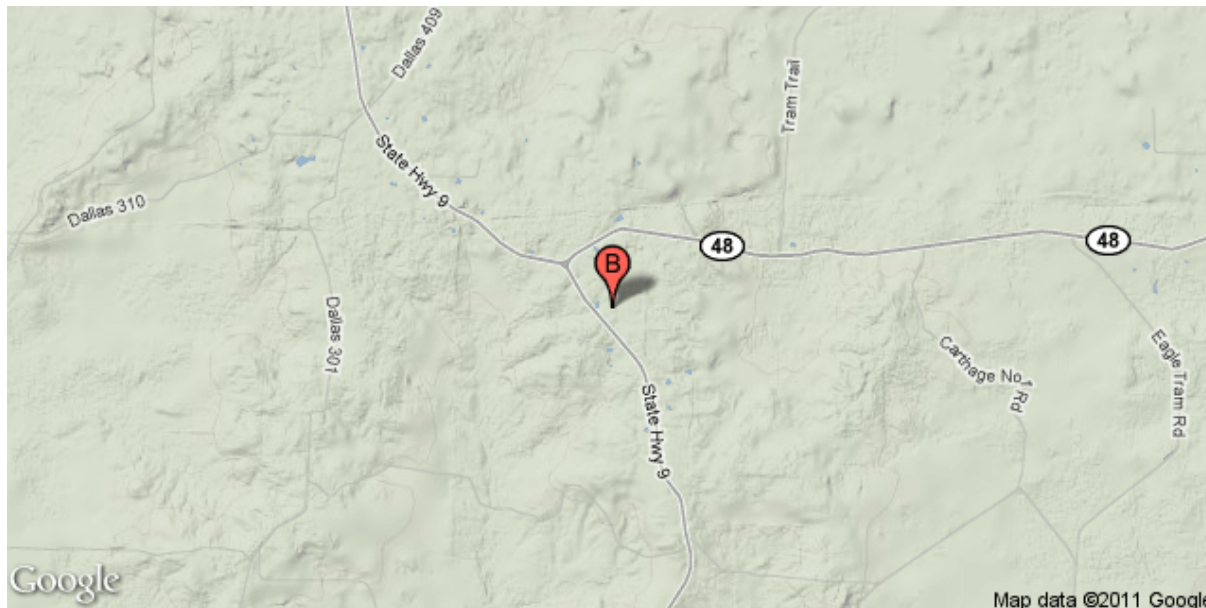
71m W Wind Speed Frequency Distribution



71m Monthly Wind Rose



## B. AR1050, Arkansas Tall Tower Program Monthly Report



Elevation (m)	Latitude	Longitude
144	34.06752	-92.63160

Anemometer	WS (m/s)	TI	DR (%)
96m W	5.76	0.10	99.8
96m SE	5.74	0.10	99.8
76m W	5.27	0.11	99.2
76m SE	5.23	0.11	99.2
61m W	4.74	0.12	100.0
61m SE	4.72	0.12	100.0

Summary Statistics	
96m W Wind Power Density (W/m <sup>2</sup> )	187.8
96.6 m / 76.3 m Shear	0.412
80 m Projected Wind Speed (m/s)	5.33
Mean Temperature (°C) @ 60.5m	7.8
Mean Temperature (°C) @ 96.1m	7.8

### Sensor Status

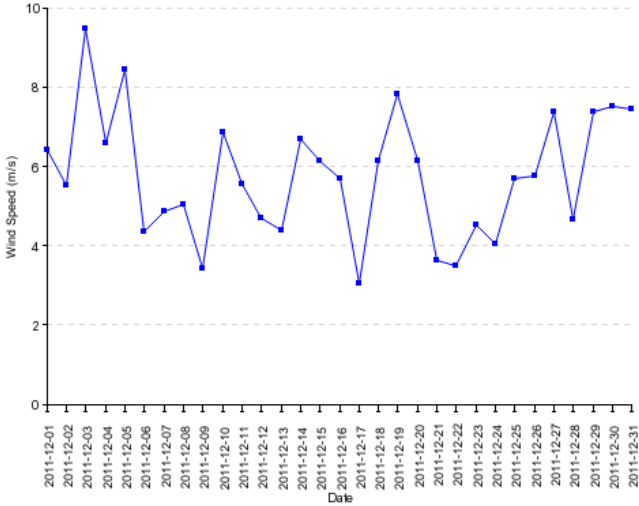
Wind Speed Sensors
96m W (Ch 3) : Operational
96m SE (Ch 4) : Operational
76m W (Ch 1) : Operational
76m SE (Ch 2) : Operational
61m W (Ch 1) : Operational
61m SE (Ch 2) : Operational

Wind Direction Sensors
96m (Ch 4) : Operational
76m (Ch 1) : Operational
61m (Ch 6) : Operational

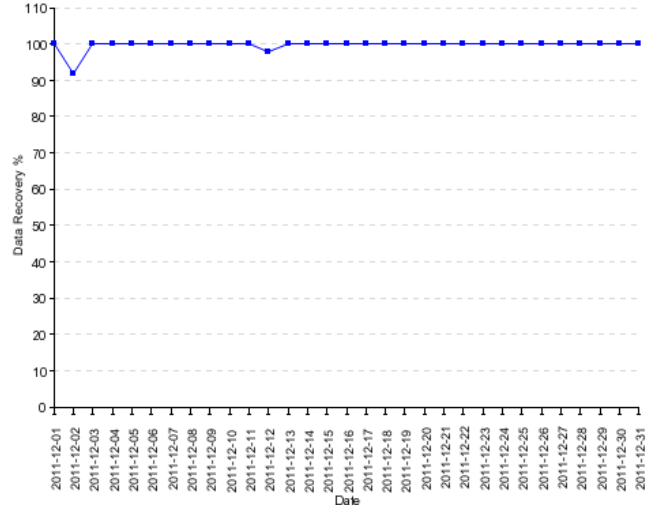
Other
96m (Ch 4) : Operational
61m (Ch 3) : Operational

# Wind Speed Graphics

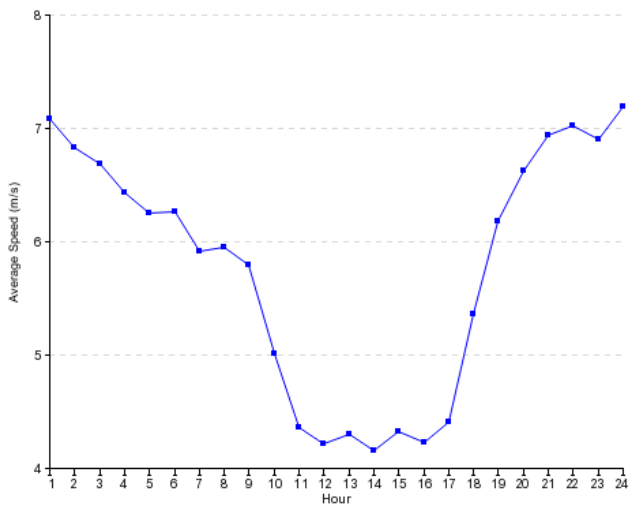
96m W Daily Average Wind Speeds



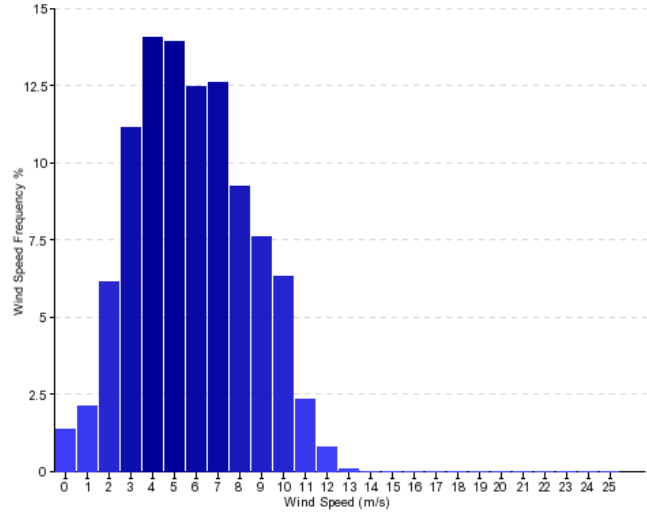
96m W Daily Average Data Recovery (%)



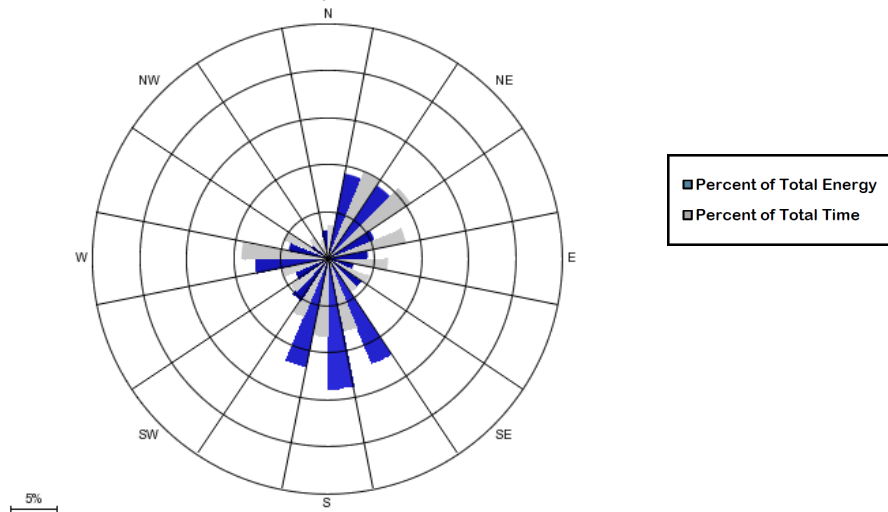
96m W Diurnal Wind Speed



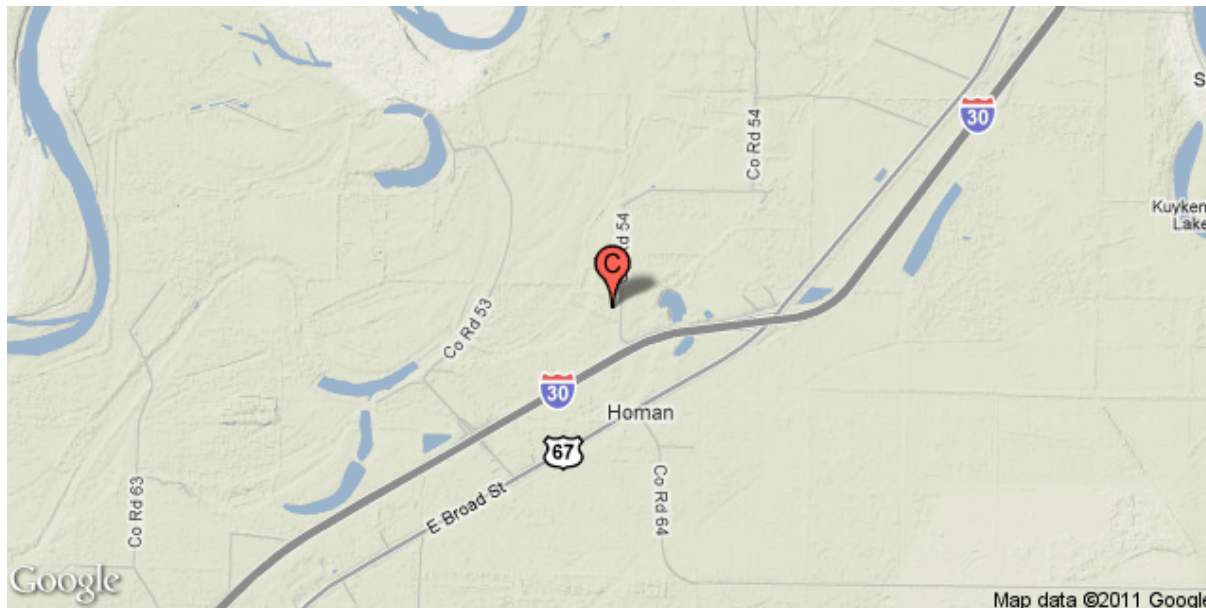
96m W Wind Speed Frequency Distribution



96m Monthly Wind Rose



## C. AR1121, Arkansas Tall Tower Program Monthly Report



Elevation (m)	Latitude	Longitude
80	33.55066	-93.88885

Anemometer	WS (m/s)	TI	DR (%)
86m NW	4.97	0.10	100.0
86m SE	4.98	0.10	100.0
61m NW	4.38	0.11	100.0
61m SE	4.36	0.11	100.0
37m NW	3.60	0.14	99.9
37m SE	3.64	0.14	99.9

Summary Statistics	
86m NW Wind Power Density (W/m <sup>2</sup> )	128.9
86.4 m / 61.4 m Shear	0.384
80 m Projected Wind Speed (m/s)	4.82
Mean Temperature (°C) @ 36.2m	8.7
Mean Temperature (°C) @ 85.8m	8.5

### Sensor Status

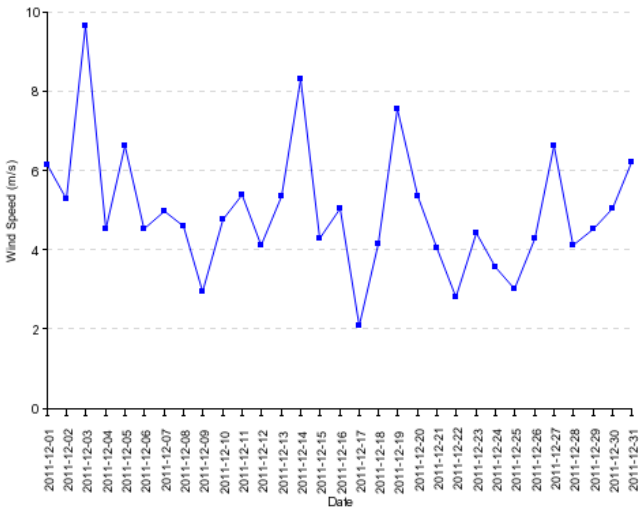
Wind Speed Sensors
86m NW (Ch 3) : Operational
86m SE (Ch 4) : Operational
61m NW (Ch 1) : Operational
61m SE (Ch 2) : Operational
37m NW (Ch 1) : Operational
37m SE (Ch 2) : Operational

Wind Direction Sensors
86m (Ch 2) : Operational
61m (Ch 1) : Operational
36m (Ch 6) : Operational

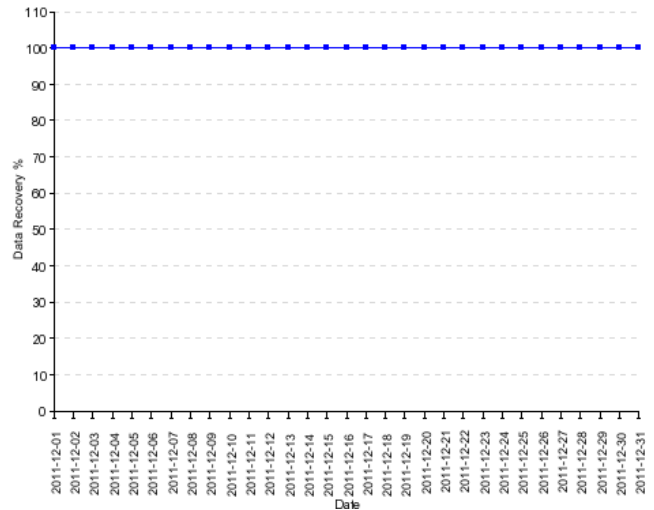
Other
86m (Ch 4) : Operational
36m (Ch 3) : Operational

# Wind Speed Graphics

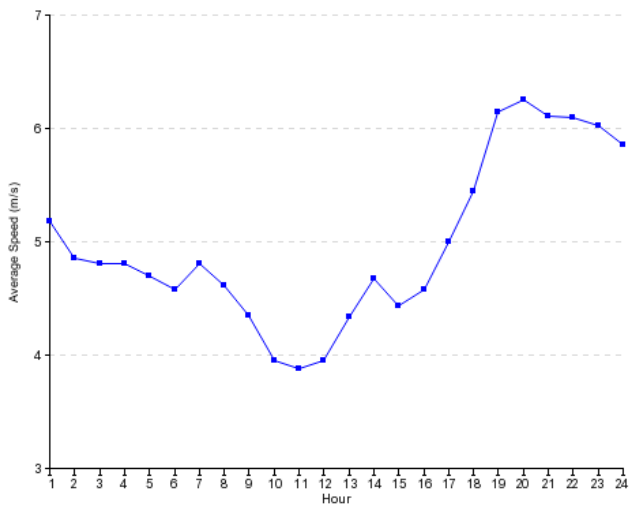
86m NW Daily Average Wind Speeds



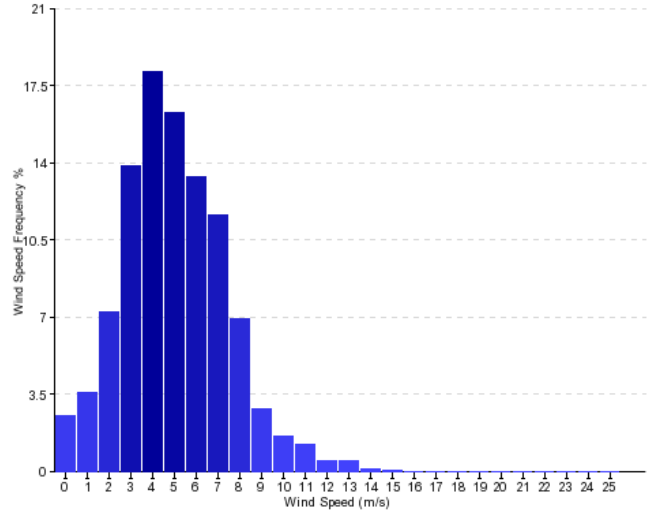
86m NW Daily Average Data Recovery (%)



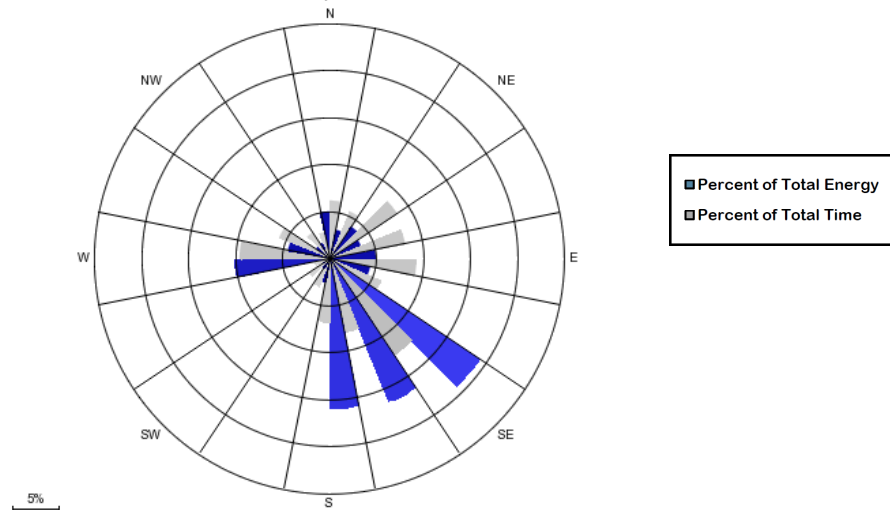
86m NW Diurnal Wind Speed



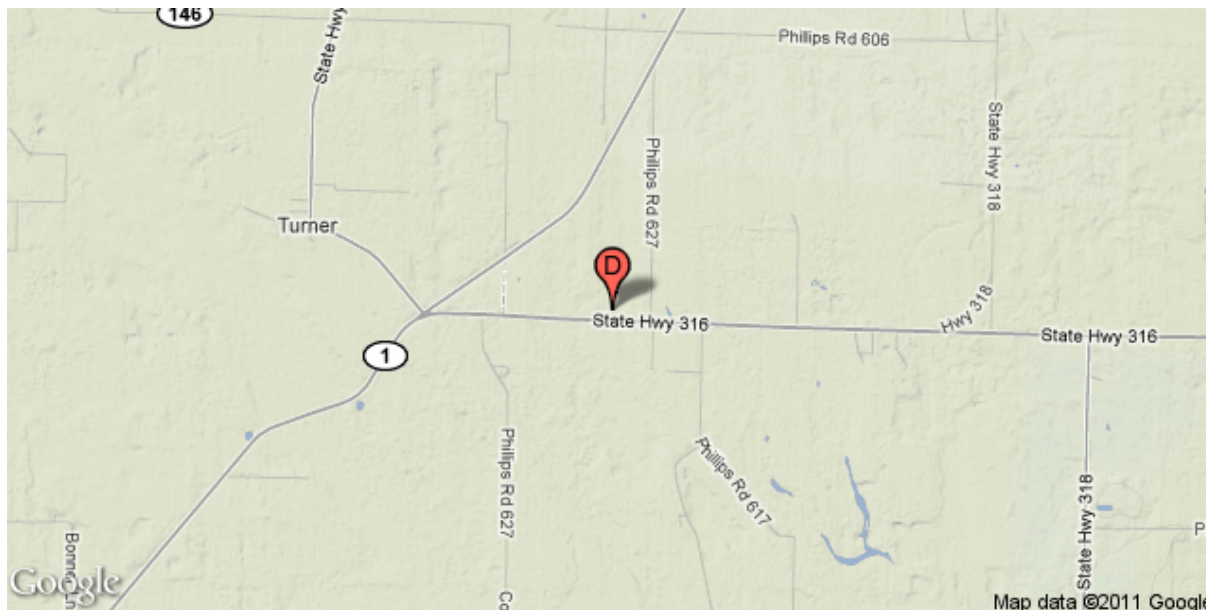
86m NW Wind Speed Frequency Distribution



86m Monthly Wind Rose



# D. AR1134, Arkansas Tall Tower Program Monthly Report



Elevation (m)	Latitude	Longitude
53	34.46977	-90.99100

Anemometer	WS (m/s)	TI	DR (%)
96m SE	5.79	0.09	100.0
96m W	5.88	0.09	100.0
76m SE	5.29	0.10	99.9
76m W	5.37	0.10	99.9
56m SE	4.57	0.13	100.0
56m W	4.62	0.13	100.0

Summary Statistics	
96m W Wind Power Density (W/m <sup>2</sup> )	202.5
95.9 m / 75.6 m Shear	0.406
80 m Projected Wind Speed (m/s)	5.46
Mean Temperature (°C) @ 55.6m	7.9
Mean Temperature (°C) @ 95.8m	7.9

## Sensor Status

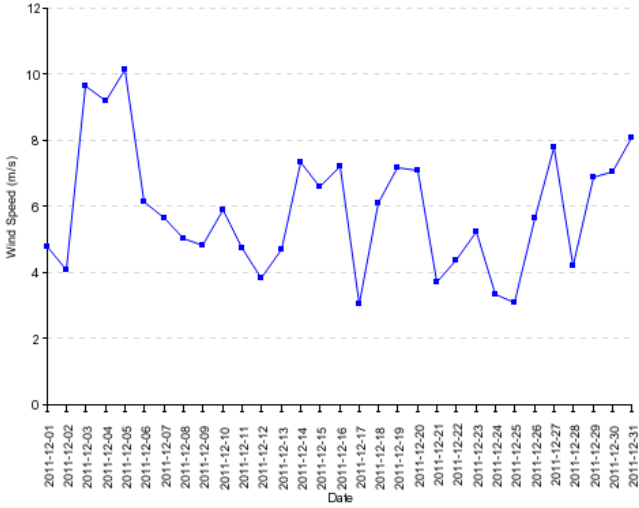
Wind Speed Sensors
96m SE (Ch 4) : Operational
96m W (Ch 3) : Operational
76m SE (Ch 2) : Operational
76m W (Ch 1) : Operational
56m SE (Ch 2) : Operational
56m W (Ch 1) : Operational

Wind Direction Sensors
96m (Ch 2) : Operational
76m (Ch 1) : Operational
56m (Ch 6) : Operational

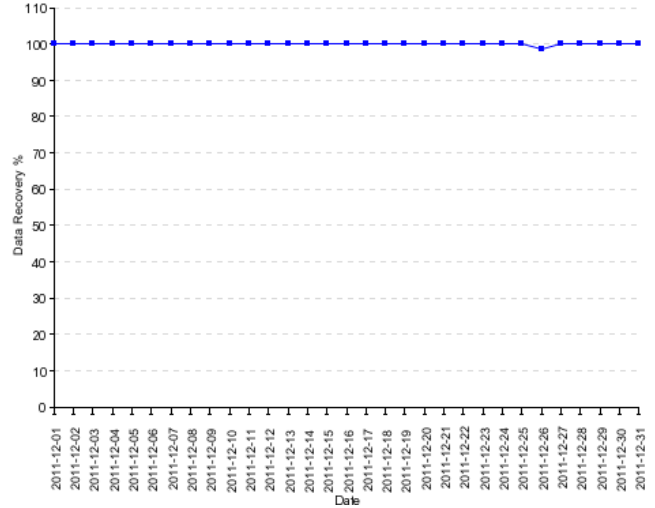
Other
96m (Ch 4) : Operational
56m (Ch 3) : Operational

# Wind Speed Graphics

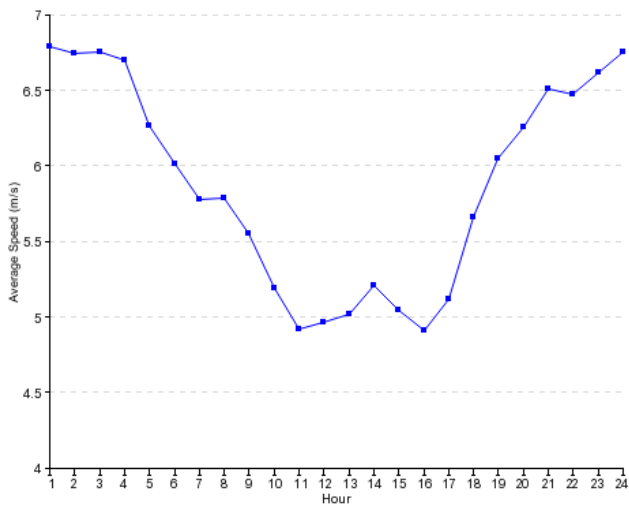
96m W Daily Average Wind Speeds



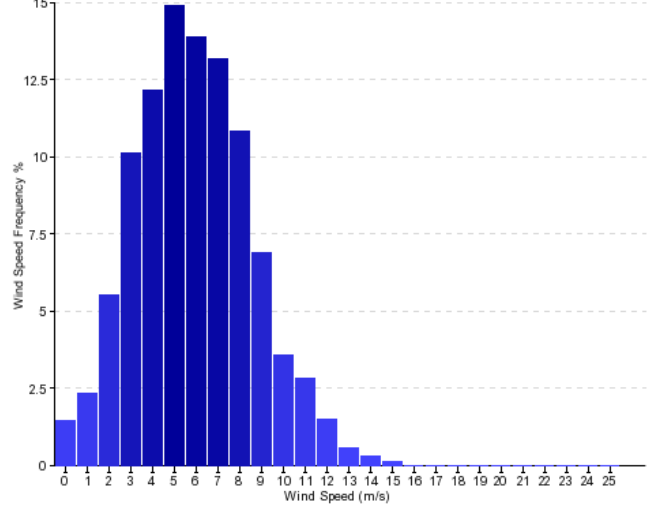
96m W Daily Average Data Recovery (%)



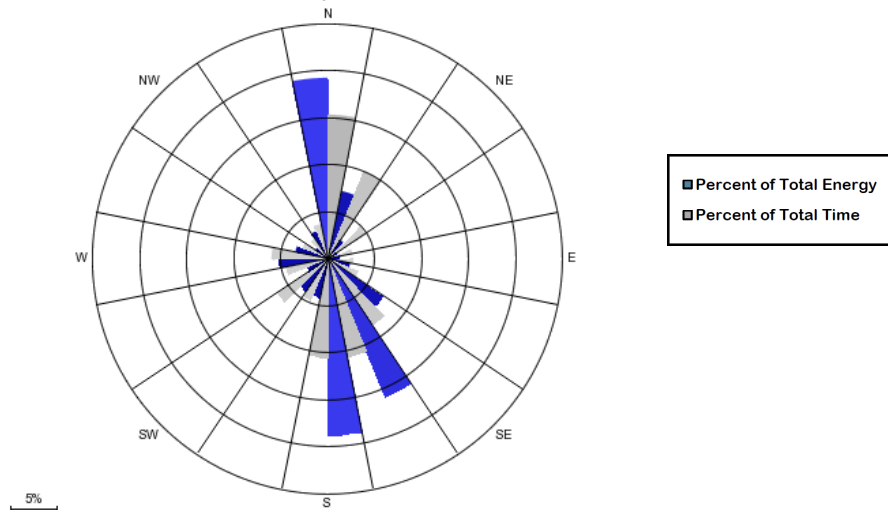
96m W Diurnal Wind Speed



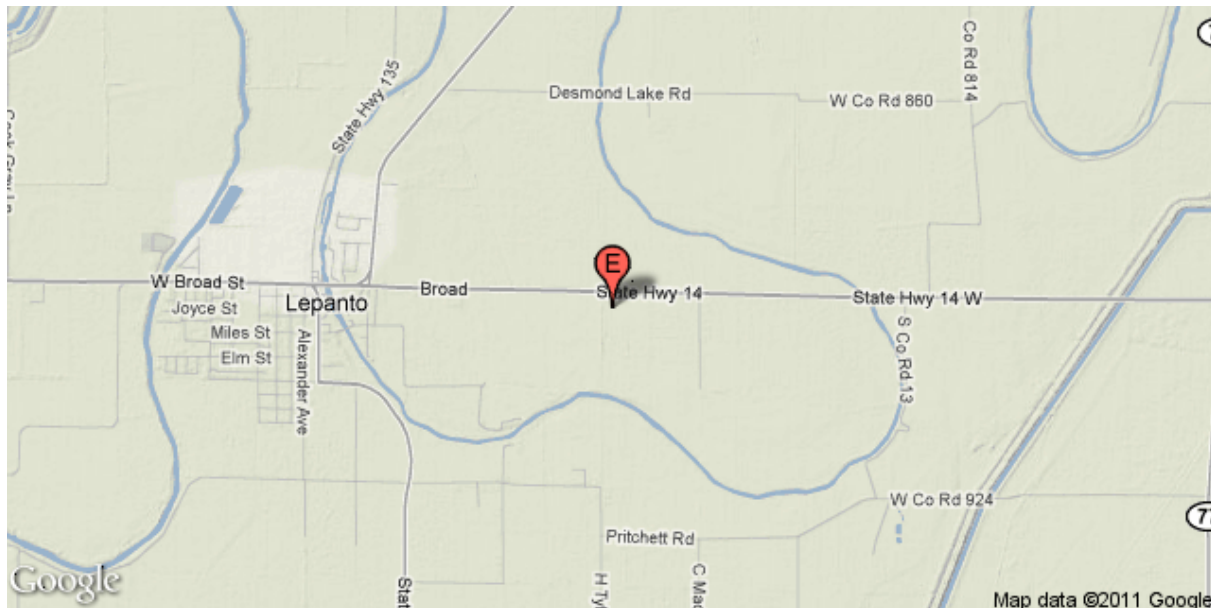
96m W Wind Speed Frequency Distribution



96m Monthly Wind Rose



# E. AR1138, Arkansas Tall Tower Program Monthly Report



Elevation (m)	Latitude	Longitude
67	35.61166	-90.30388

Anemometer	WS (m/s)	TI	DR (%)
76m W	6.15	0.08	99.9
76m SE	6.08	0.08	99.9
53m SE	5.52	0.09	99.8
53m W	5.58	0.09	99.8
36m SE	4.93	0.10	99.7
36m W	4.91	0.10	99.7

Summary Statistics	
76m W Wind Power Density (W/m <sup>2</sup> )	260.8
76.4 m / 53.0 m Shear	0.284
80 m Projected Wind Speed (m/s)	6.23
Mean Temperature (°C) @ 272.0m	7.2
Mean Temperature (°C) @ 76.6m	7.1

## Sensor Status

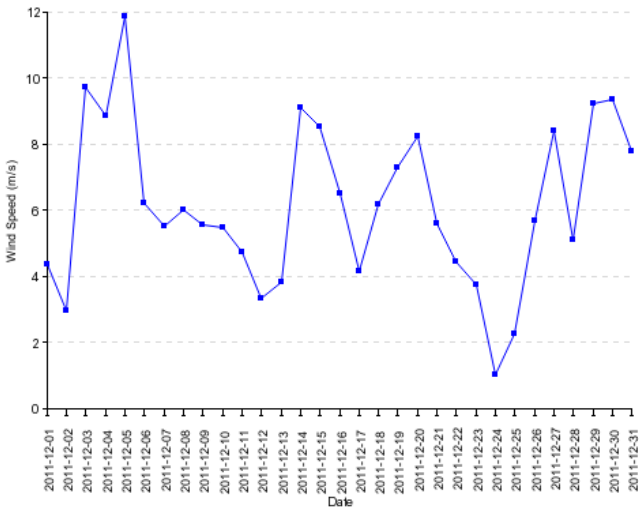
Wind Speed Sensors
76m W (Ch 3) : Operational
76m SE (Ch 4) : Operational
53m SE (Ch 2) : Operational
53m W (Ch 1) : Operational
36m SE (Ch 2) : Operational
36m W (Ch 1) : Operational

Wind Direction Sensors
76m (Ch 2) : Operational
53m (Ch 1) : Operational
36m (Ch 6) : Operational

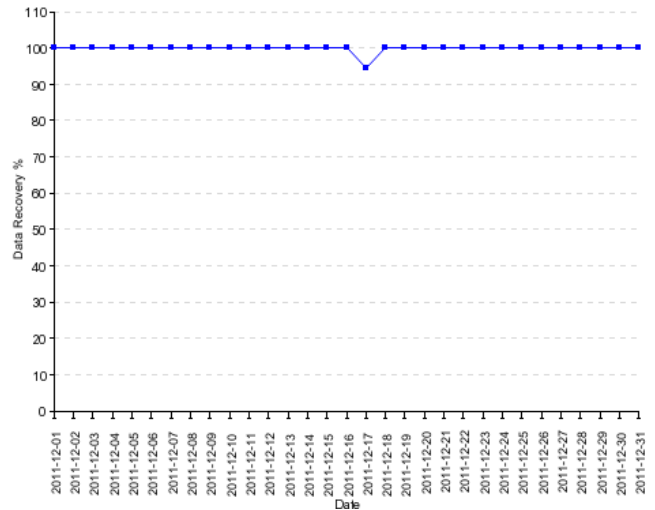
Other
36m (Ch 3) : Operational
77m (Ch 4) : Operational

# Wind Speed Graphics

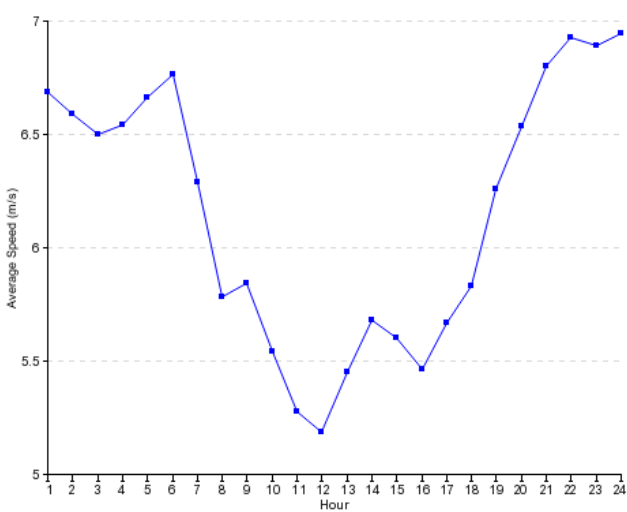
76m W Daily Average Wind Speeds



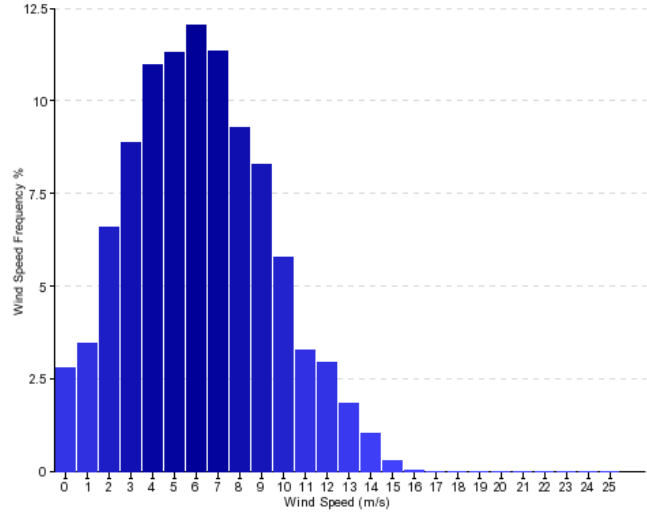
76m W Daily Average Data Recovery (%)



76m W Diurnal Wind Speed



76m W Wind Speed Frequency Distribution



76m Monthly Wind Rose

