

**Site Description**

Measurement dates 7/20/2005 10/20/2006  
 Coordinents 43.98° N 72.62° W  
 Elevation 1485 feet

**Table 2.1: Wind Characteristics (10-minute averages)**

30m anemometer	Winter	Summer	Annual
Average wind speed (mph)	9.0	7.2	8.1
Peak wind speed (mph)	33.1	24.1	33.1
Wind turbulence	0.21	0.22	0.21

**Table 2.2: Estimated Turbine Performance\***

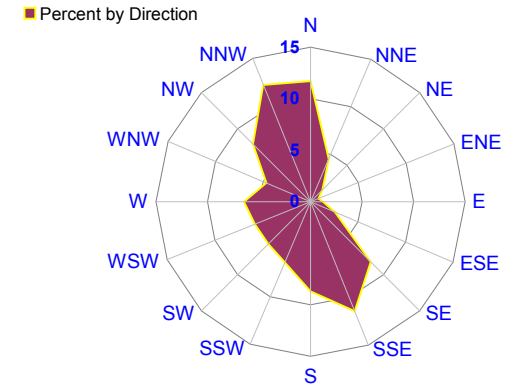
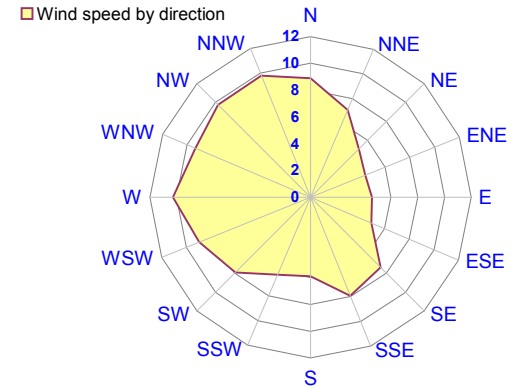
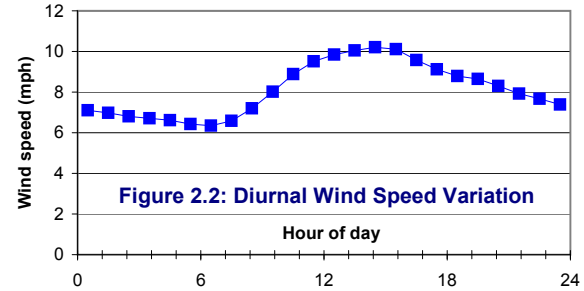
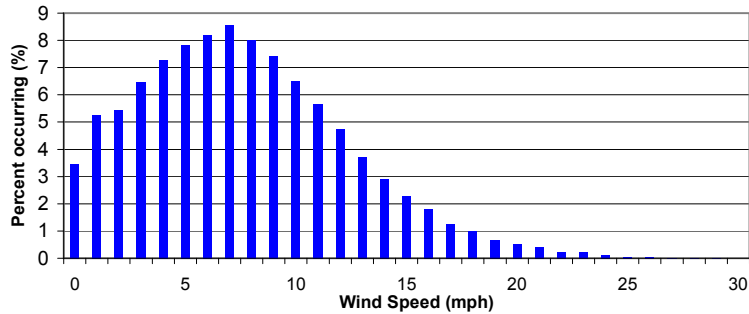
	3.7 kW	10 kW
Cumulative annual energy (kWh)	1678	5093
Average monthly energy (kWh)	139.8	424.4
Average daily energy (kWh)	4.6	14.0
Capacity Factor (%)	10.6	5.8

\*Based on wind statistics for anticipated long-term values and standard power curves

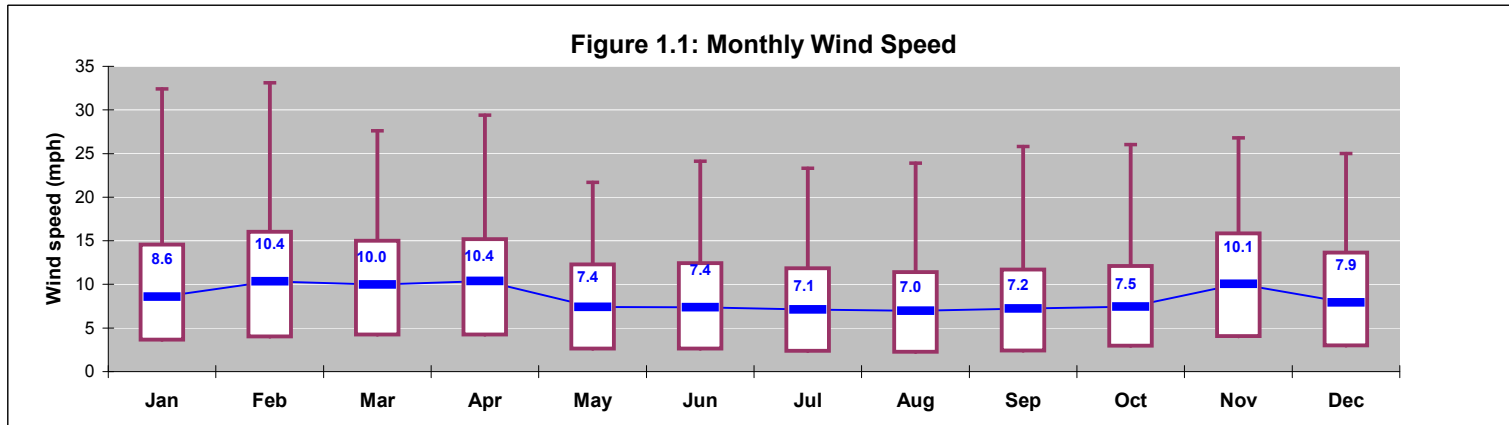
**Table 2.3: Air Temperature and Air Density**

	Winter	Summer	Annual
Average Temperature	25.1	67.3	50.2
Maximum Temperature	53.1	98.4	90.7
Minimum Temperature	-4.1	-22.6	-4.1
Air Density (kg / m <sup>3</sup> )	1.307	1.159	1.182

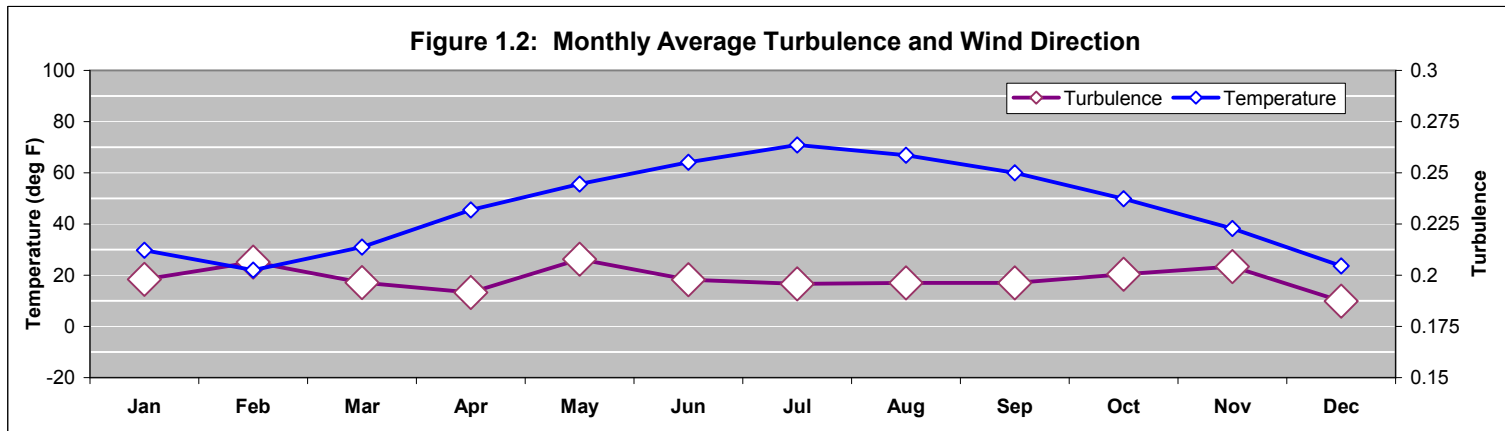
**Figure 2.1: Frequency distribution (30m)**



## Randolph Center



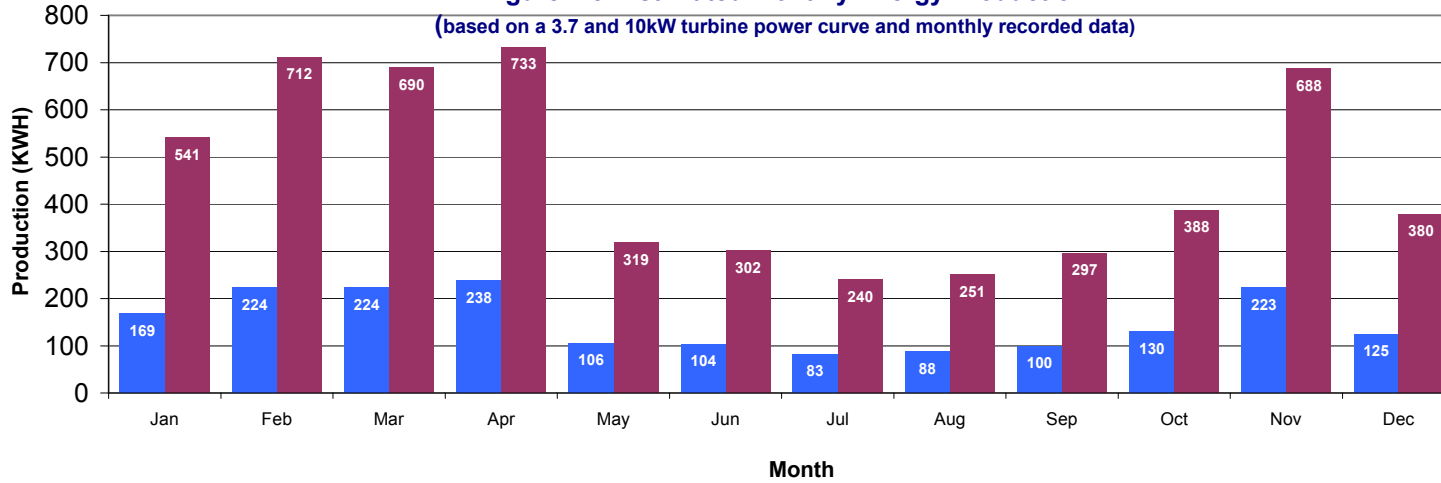
Box plot of monthly wind speeds. The white boxes represent the range of daily average wind speeds recorded in the month with the monthly average shown as the blue line with accompanying value. The outlying points are the highest 10-minute average wind speed recorded in each month.



Turbulence is defined as the standard deviation of the wind speed divided by the average wind speed

**Figure 2.5: Estimated Monthly Energy Production**

(based on a 3.7 and 10kW turbine power curve and monthly recorded data)



**Figure 2.6: Estimated Cumulative Energy Production**

(based on a 3.7 and 10kW turbine power curve and monthly recorded data)

