

Site Description

| | | |
|--------------------|--------------|--------------|
| Measurement period | 10/21/2006 | 12/8/2007 |
| Coordinates | 44° 00' 59"N | 72° 23' 14"W |
| Elevation | 1940 feet | |

Table 2.1: Wind Characteristics (10-minute averages at 100 ft)

| | Winter | Summer | Annual |
|--------------------------|--------|--------|--------|
| Average wind speed (mph) | 9.3 | 7.1 | 8.4 |
| Peak wind speed (mph) | 46.9 | 54.6 | 54.6 |
| Wind turbulence | 0.25 | 0.26 | 0.26 |

Table 2.2: Estimated Potential Turbine Performance*

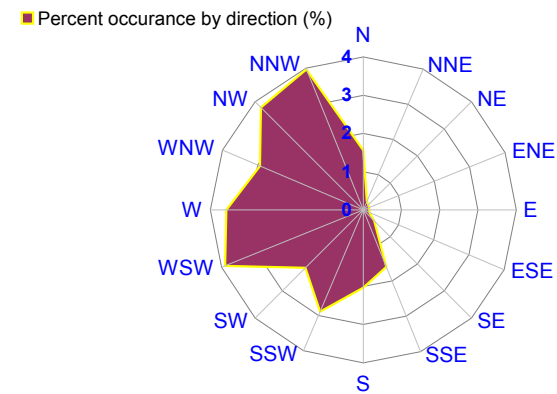
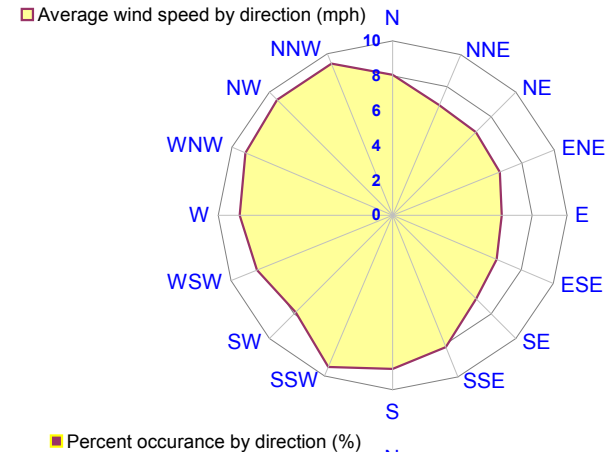
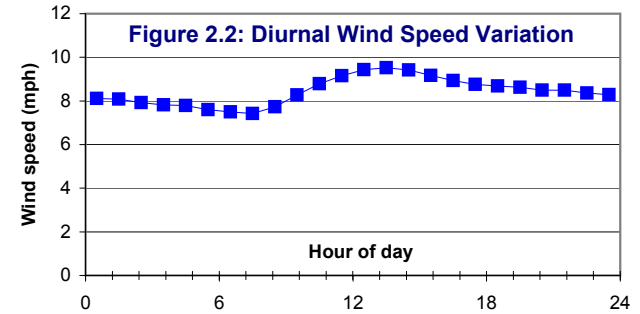
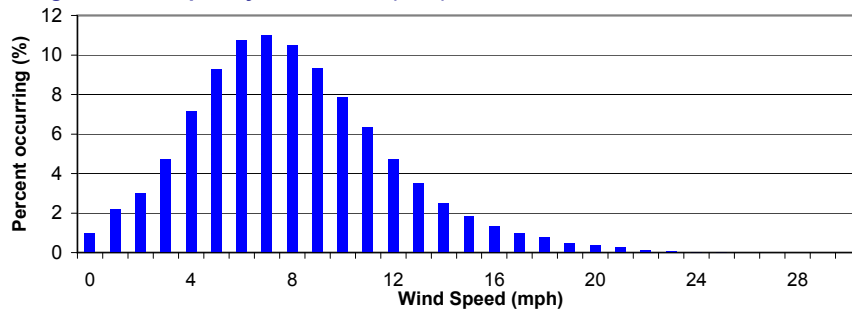
| | 3.7 kW | 10 kW |
|--------------------------------|--------|-------|
| Cumulative annual energy (kWh) | 1644 | 4517 |
| Average monthly energy (kWh) | 137.0 | 376.4 |
| Average daily energy (kWh) | 4.5 | 12.4 |
| Capacity Factor (%) | 10.4 | 5.2 |

*Based on wind statistics for anticipated long-term values and standard power curves in optimal conditions

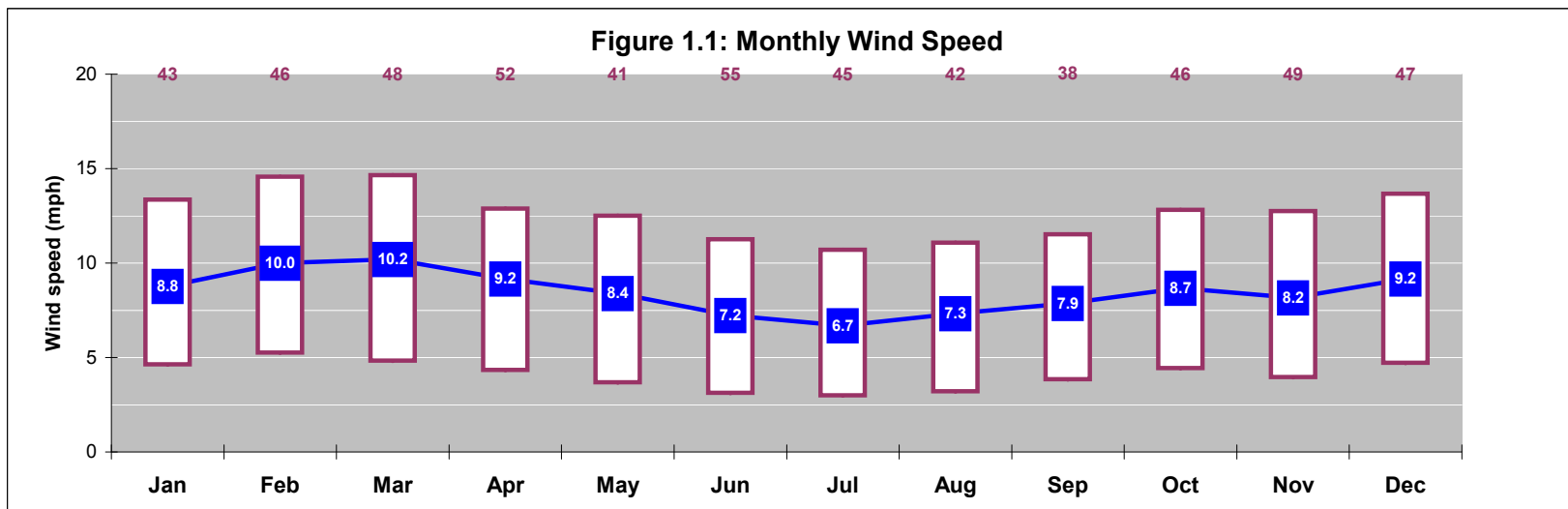
Table 2.3: Air Temperature and Air Density

| | Winter | Summer | Annual |
|------------------------------------|--------|--------|--------|
| Average Temperature (F) | 20.8 | 64.9 | 44.5 |
| Maximum Temperature (F) | 59.3 | 98.4 | 87.8 |
| Minimum Temperature (F) | -12.5 | -22.6 | -13.7 |
| Air Density (kg / m ³) | 1.325 | 1.144 | 1.176 |

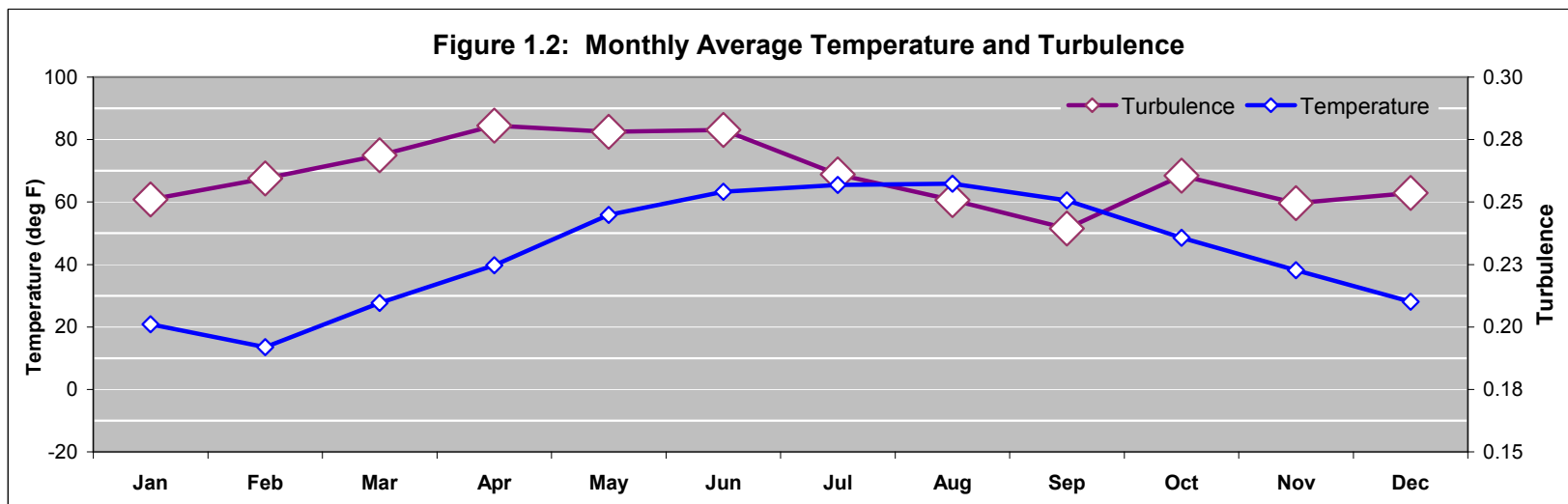
Figure 2.1: Frequency distribution (30m)



Washington Residence



Box plot of measured 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 purple values at the top of the graph are the highest recorded gusts during each month.



Turbulence is defined as the standard deviation of the wind speed divided by the average wind speed for a given period

Figure 2.5: Estimated Monthly Energy Production

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

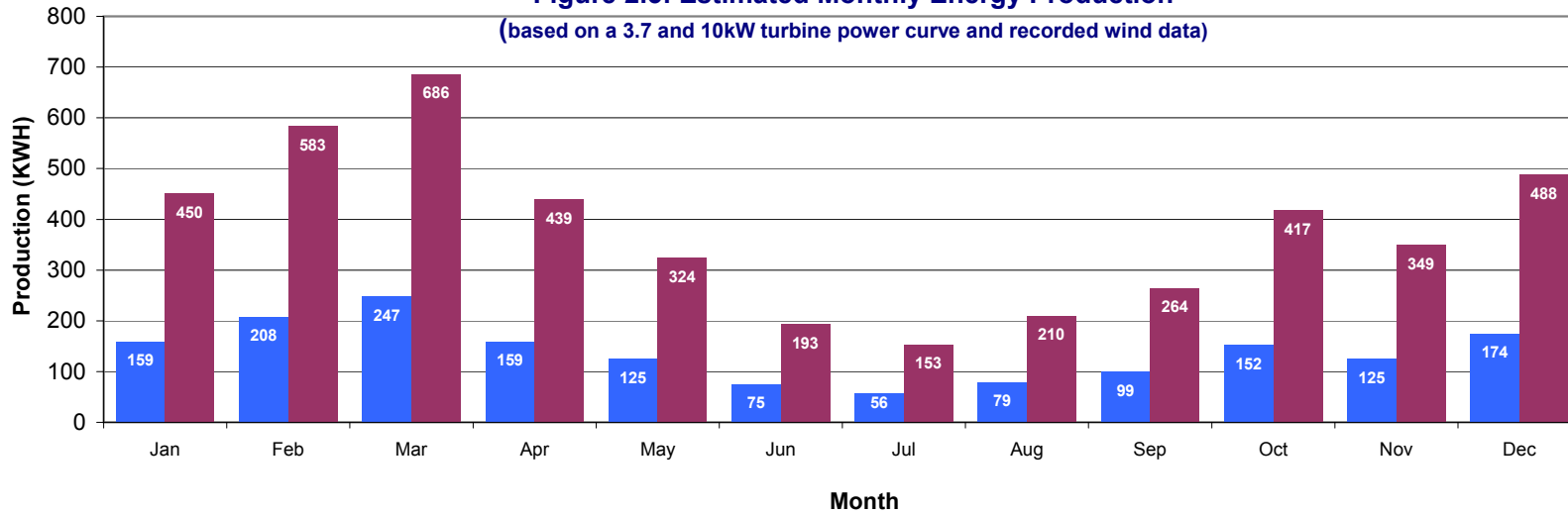


Figure 2.6: Estimated Cumulative Energy Production

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

