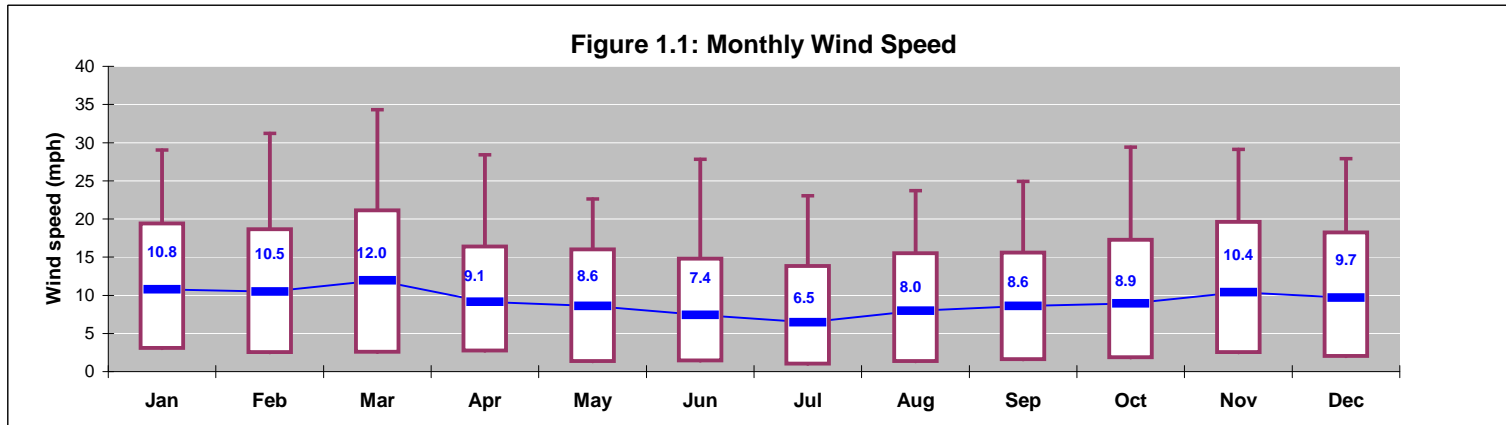
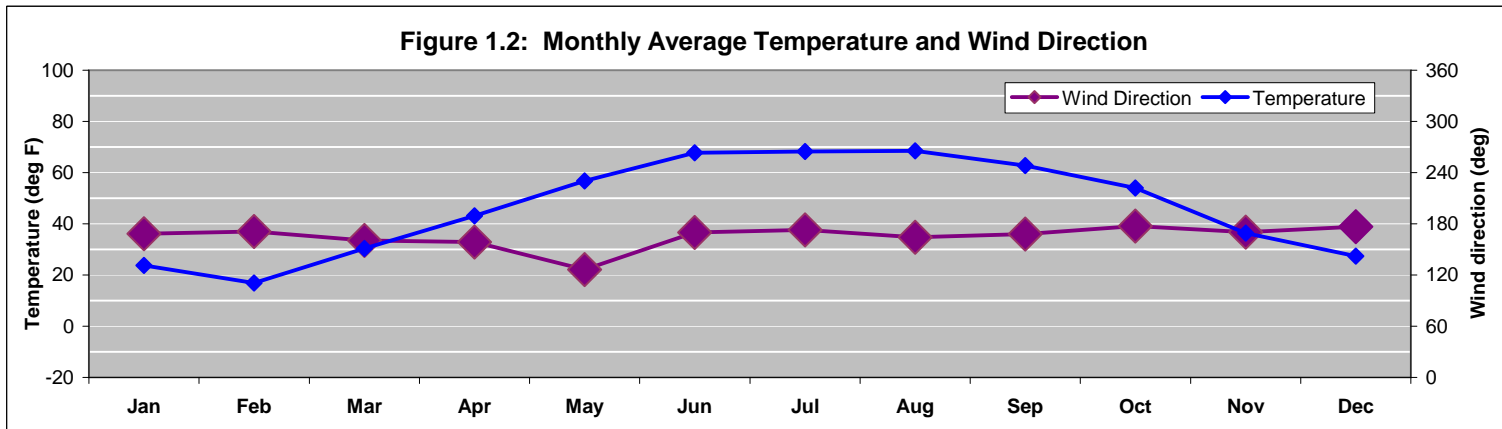


Charlotte Private Residence



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.



Site Description

Measurement dates 12/16/2006 12/27/2007
 Coordinates 44.30° N 73.20° W
 Elevation (ft) 169

Table 2.1: Wind Characteristics (10-minute averages)

30m anemometer	Winter	Summer	Annual
Average wind speed (mph)	10.3	7.3	9.2
Peak wind speed (mph)	31.2	27.8	34.3
Wind turbulence	0.19	0.23	0.20

Table 2.2: Estimated Turbine Performance*

	3.7 kW	10 kW
Cumulative annual energy (kWh)	2388	9079
Average monthly energy (kWh)	199.0	756.6
Average daily energy (kWh)	6.5	24.9
Capacity Factor (%)	15.1	10.4

*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	31.5	61.2	46.1
Maximum Temperature	83.4	99.3	99.3
Minimum Temperature	-18.0	21.3	-18.0
Air Density (kg / m ³)	1.286	1.213	1.250

Figure 2.1: Frequency distribution (30m)

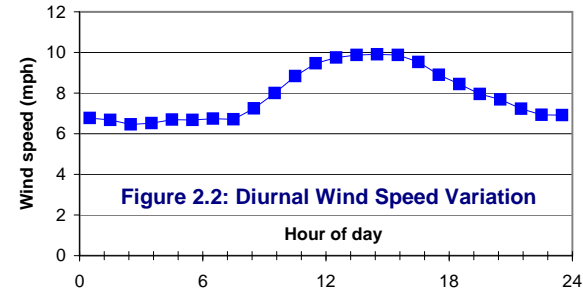
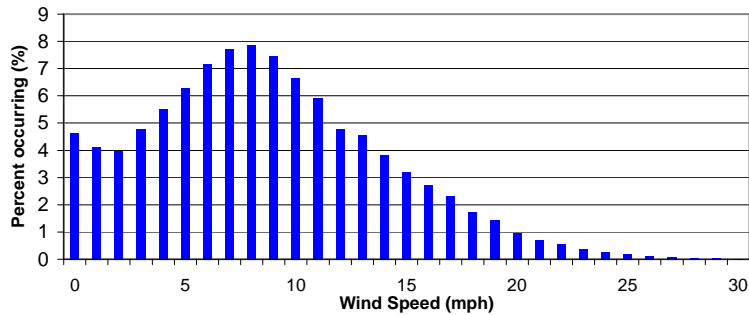


Figure 2.2: Diurnal Wind Speed Variation

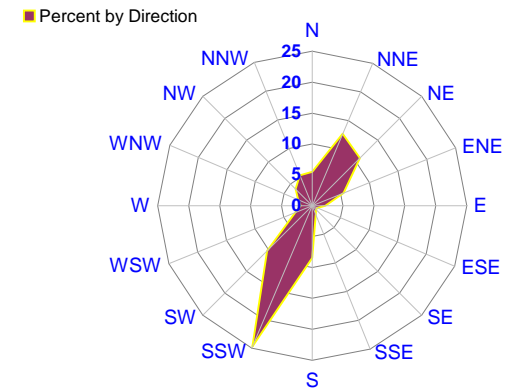
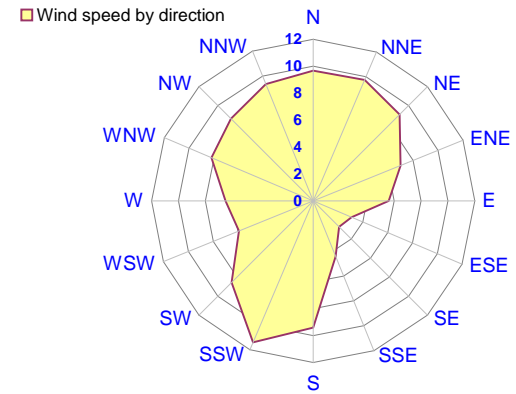


Figure 2.5: Estimated Monthly Energy Production

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

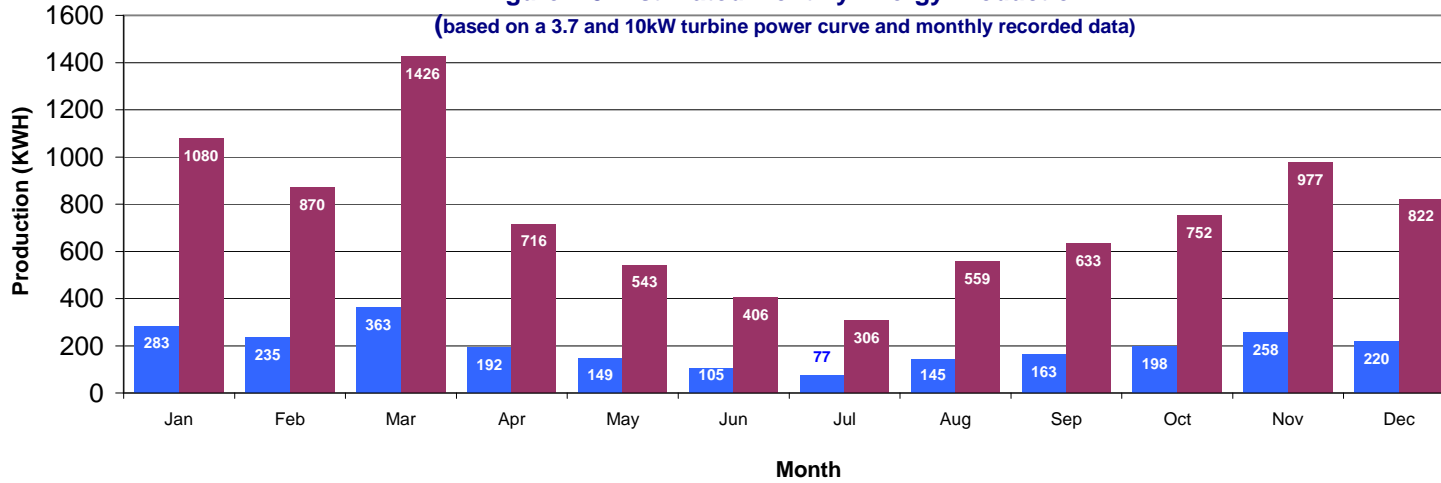


Figure 2.6: Estimated Cumulative Energy Production

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

