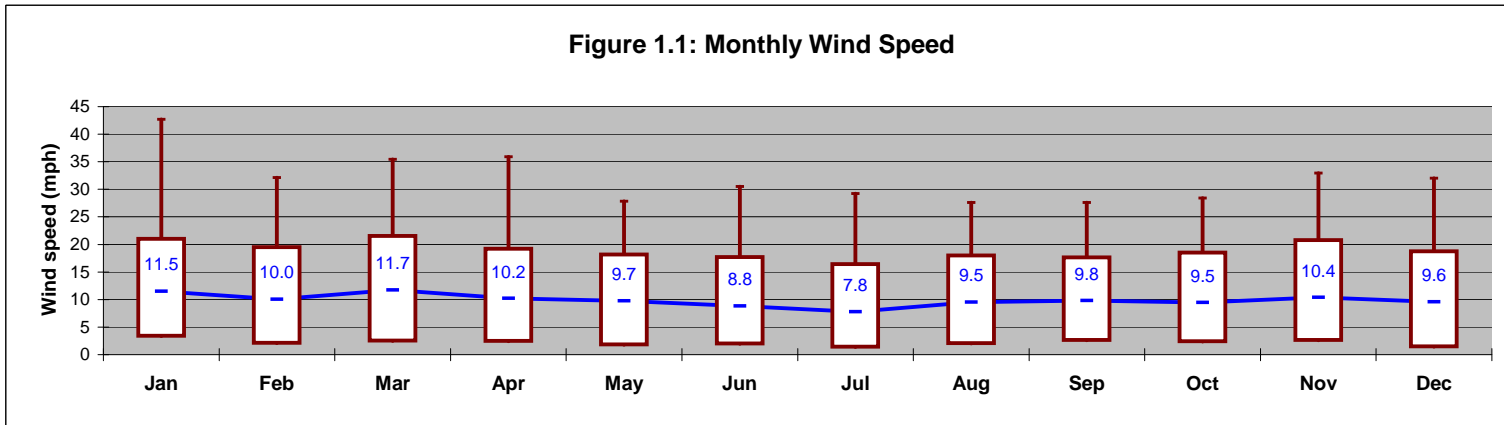


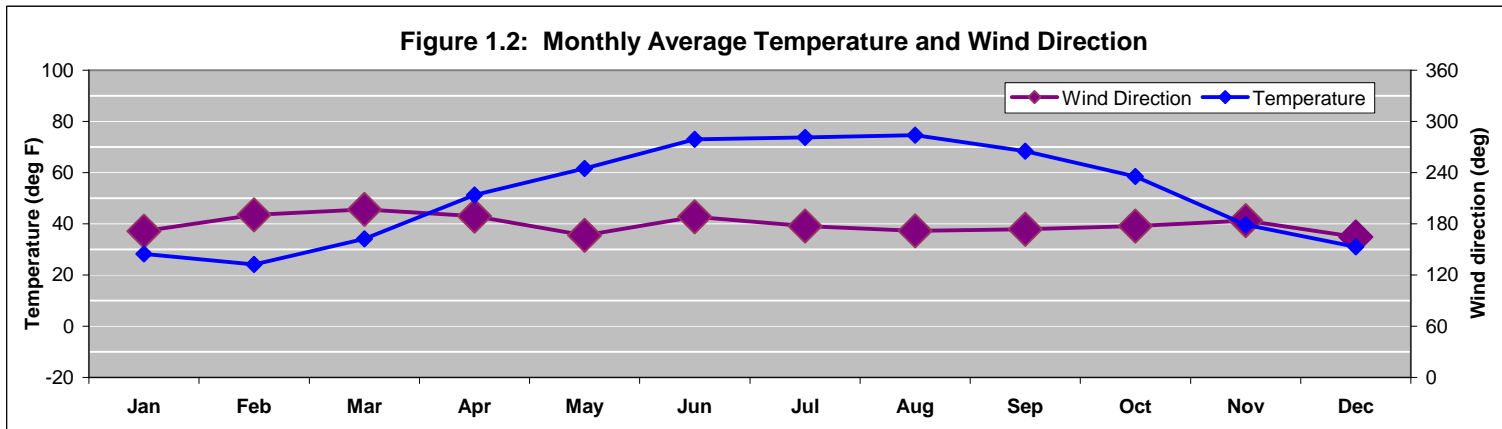
Waltham Private Residence

Figure 1.1: Monthly Wind Speed



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.

Figure 1.2: Monthly Average Temperature and Wind Direction



Site Description

Measurement dates	12/18/2006	5/3/2008
Coordinates	44.08° N	73.14° W
Elevation (ft)	300	

Table 2.1: Wind Characteristics (10-minute averages)

30m anemometer	Winter	Summer	Annual
Average wind speed (mph)	10.4	8.7	10.1
Peak wind speed (mph)	42.7	30.5	42.7
Wind turbulence	0.12	0.21	0.18

Table 2.2: Estimated Turbine Performance*

	3.7 kW	10 kW
Cumulative annual energy (kWh)	2737	10781
Average monthly energy (kWh)	228.1	898.4
Average daily energy (kWh)	7.5	29.5
Capacity Factor (%)	17.4	12.3

*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	35.9	67.1	47.0
Maximum Temperature	87.3	106.5	106.5
Minimum Temperature	-14.6	26.2	-14.6
Air Density (kg / m ³)	1.269	1.194	1.242

Figure 2.1: Frequency distribution (30m)

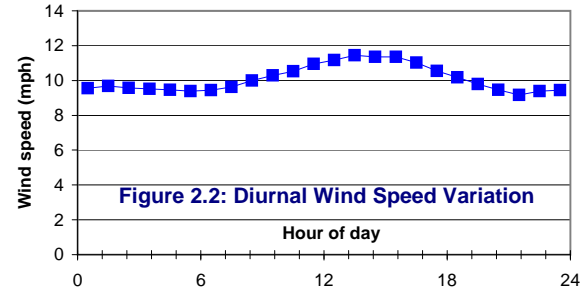
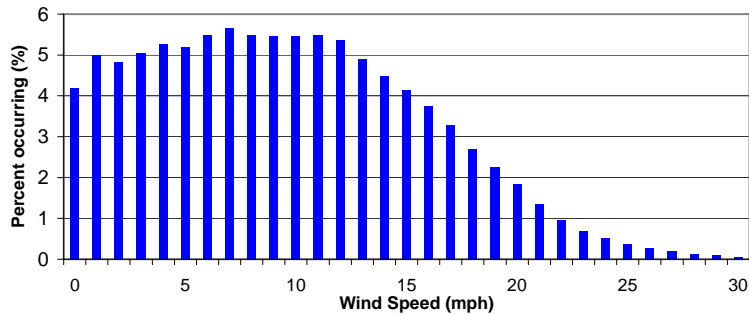


Figure 2.2: Diurnal Wind Speed Variation

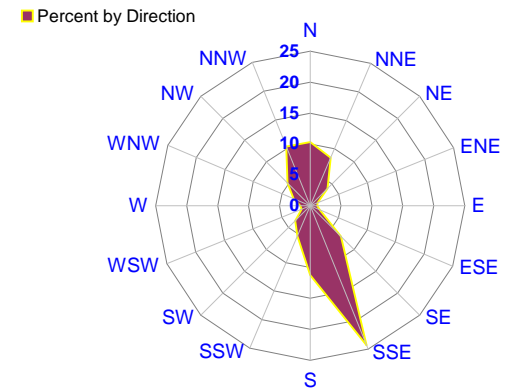
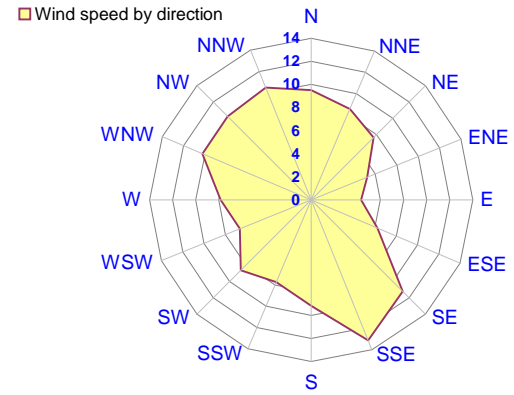


Figure 2.5: Estimated Monthly Energy Production

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

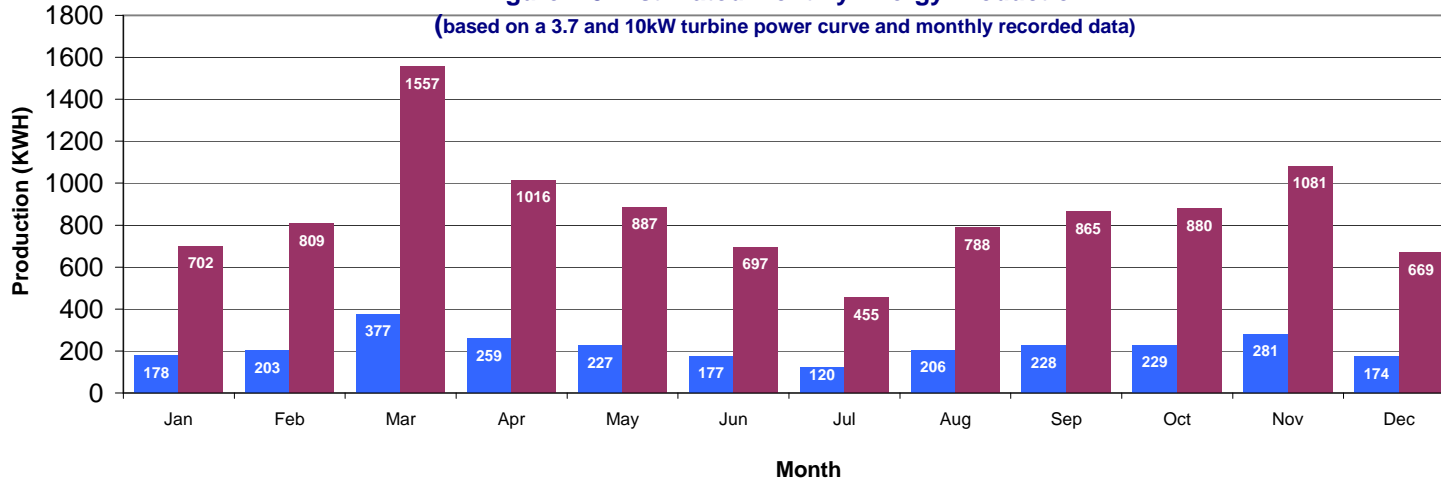


Figure 2.6: Estimated Cumulative Energy Production

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

