# Wind Analysis Summary Report

**Site Number**

**0001**

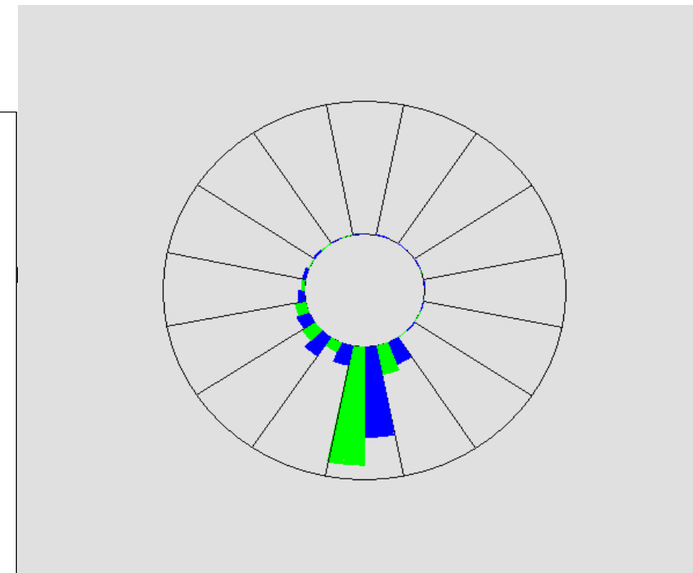
## Site Information

| | |
|---|---|
| Project: | Simmons Farms |
| Location: | NE of Bone, ID |
| Site Elevation: | 6120 ft |
| Averaging Time: | 10 min. |
| Date Range: | 11/25/03 0:00-12/19/03 15:50 |

## Sensor Information

| | |
|---|---|
| Channel: | 1 |
| Type: | NRG #40 Maximum Anemometer |
| Height: | 198 ft |
| Channel: | 4 |
| Type: | NRG #200P Wind Direction Vane |
| Height: | 198 ft |
| Offset: | 0 degrees |

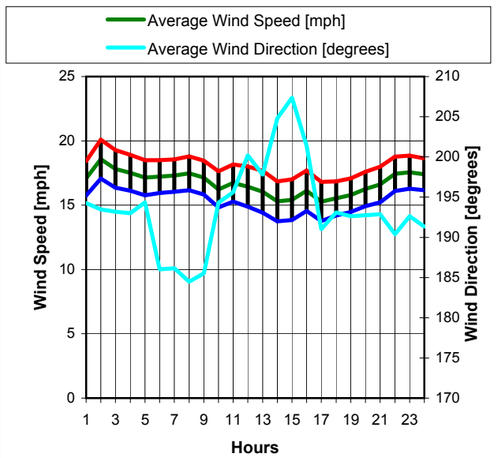
## Wind Rose Graph



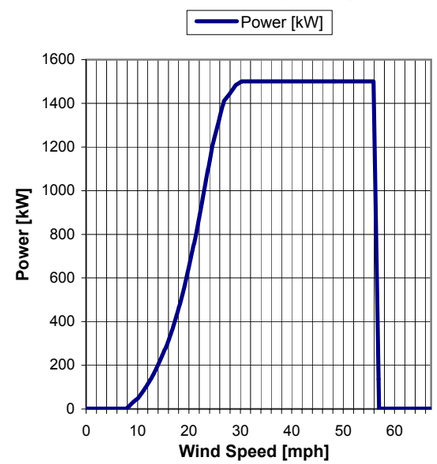
Percent of Total Wind Energy
Percent of Total Time

Inner Circle = 0%
Outer Circle = 70%

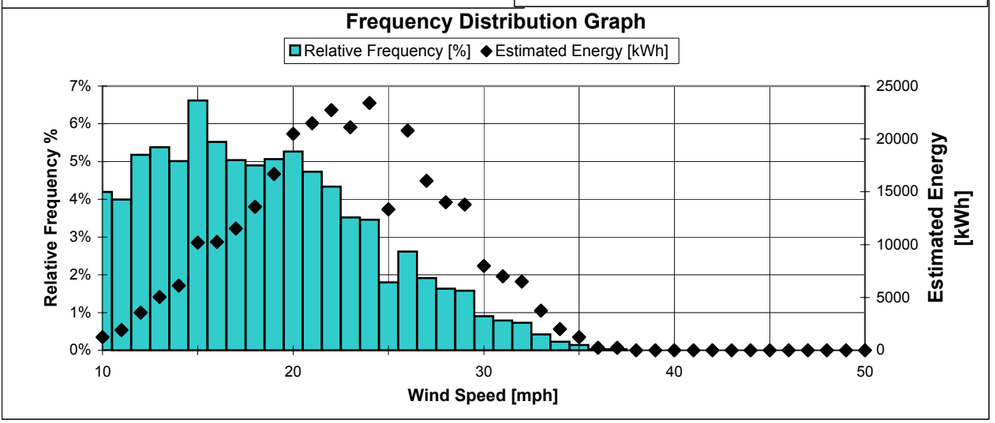
### Diurnal Wind Speed Pattern




### GE 1.5 S, 70.5m rotor (1.06 kg/m3)




### Frequency Distribution Graph




## Statistics

| | |
|---|---|
| Days Used in Calculation: | 24.67 |
| Hours Used in Calculation: | 592.00 |
| Gust Speed: | 36.8 mph |
| Gust Time: | 12/14/2003 4:00 |
| Estimated Energy Output: | 296661 kWh |
| Calculated Air Density: | 1.007 kg/m^3 |
| Average Wind Speed: | 16.73 mph |
| Average Wind Direction: | 194 degrees |
| Capacity Factor: | 0.33 |
| Turbine Manufacturer: | GE Wind Energy |
| Turbine Model: | GE 1.5 S, 70.5m rotor (1.06 kg/m3) |
| Turbine Rating: | 1500 kW |
| Estimated Annual Production: | 4389777 kWh/Year |

| | |
|---|---|
| Capacity Factor, 65m: | 0.34 |
| Estimated Energy Output, 65m: | 304713 kWh |
| Estimated Annual Production, 65m: | 4508927 kWh/Year |