

# Renewable Energy Research Laboratory

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### Data Update for Mt. Tom, Holyoke, MA October 2007

Prepared for Massachusetts Technology Collaborative 75 North Drive, Westborough, MA 01581

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### **Monthly Data Summary for October 2007**

This update summarizes the monthly data results for the Mt. Tom monitoring site in Holyoke, MA, at 42° 14′ 59.2″ N, 72° 38′ 42.2″ W (NAD83). More information on the sensors and site, including the data, can be found at <a href="http://www.ceere.org/rerl/rerl\_resourcedata.html">http://www.ceere.org/rerl/rerl\_resourcedata.html</a>.

| Height | Wind Speed    |              |                         |                     | Prevailing        | Power Law         |
|--------|---------------|--------------|-------------------------|---------------------|-------------------|-------------------|
|        | Mean<br>[m/s] | Max<br>[m/s] | Turbulence<br>Intensity | Good<br>Data<br>[%] | Wind<br>Direction | Shear<br>Exponent |
| 24 m   | 5.10          | 15.97        | 0.24                    | 69.96               | -                 | 0.44              |
| 37 m   | 6.18          | 18.65        | 0.17                    | 69.982              | 202.5° SSW        |                   |

The data reported here are based only on the percentages of good data indicated; missing data may skew these values.

#### **Data Recovery**

All raw wind data are subjected to a series of tests and filters to identify data that are faulty or corrupted. The gross percentage of data recovered (ratio of the number of raw data points received to data points expected) and net data recovered (ratio of raw data points which passed all QA control tests to data points expected) are shown below.

| Gross Data Recovered [%] | 63.897 |
|--------------------------|--------|
| Net Data Recovered [%]   | 57.527 |

The gross data recovered is less than 100% because the data logger failed at the end of September and a new data logger was installed on Oct 10, so there was no data collected for the first few days of the month and also due to a malfunctioning vane sensor at a height of 24m. The net data recovered is less due to a few hours of fault in the anemometers and a malfunctioning external temperature sensor.

# **Maintenance Issues and Changes to Site Configuration**

A new data logger was installed on October 10

## **Monthly Data Time Series**

Seen below is a graph of wind speed at Mt. Tom for the month of October 2007, at the anemometer height of 37 m.

# Mt Tom Wind Speed Time Series, 37m

