

# Renewable Energy Research Laboratory

Department of Mechanical and Industrial Engineering University of Massachusetts 160 Governor's Drive Amherst, MA 01003-9265 Phone: 413-545-4359 Fax: 413-577-1301 www.ceere.org/rerl rerl@ecs.umass.edu



### Data Update for Mt. Tom, Holyoke, MA January 2008

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

By Puneet Malhotra

#### **Monthly Data Summary for January 2008**

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 (NAD27). 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>.

	Wind Speed			Prevailing	Power
Height	Mean [m/s]	Max [m/s]	Turbulence Intensity	Wind Direction	Law Shear Exponent
24 m	5.48	15.41	0.22	-	0.35
37 m	6.38	17.86	0.17	225° SW	0.33

#### **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 [%]	91.304
Net Data Recovered [%]	82.241

The gross data recovered is less than 100% due to a malfunctioning vane sensor at a height of 24m and the net data recovery percentage is less because of a few hours of fault in the anemometers and a malfunctioning external temperature sensor.

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

No maintenance issues were reported during the month.

### **Monthly Data Time Series**

Seen below is a graph of wind speed at Mt. Tom for the month of January 2008, at the anemometer height of 37 m.

# Mt Tom Wind Speed Time Series, 37m

