



# 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 September 2006

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

By Melissa Elkinton

### Monthly Data Summary for September 2006

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 (NAD 83). More information on the sensors and site can be found at [http://www.ceere.org/rerl/rerl\\_resourcedata.html](http://www.ceere.org/rerl/rerl_resourcedata.html).

Height	Wind Speed				Prevailing Wind Direction	Power Law Shear Exponent
	Mean [m/s]	Max [m/s]	Turbulence Intensity	Data Good [%]		
24 m	4.7	12.0	0.23	99.4	112.5°, ESE	0.36
37 m	5.6	15.0	0.19	99.3	202.5°, SSW	

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

The data can be found at the Renewable Energy Research Laboratory web site:  
[http://www.ceere.org/rerl/rerl\\_resourcedata.html](http://www.ceere.org/rerl/rerl_resourcedata.html).

### 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 [%]	99.79
Net Data Recovered [%]	98.79

The gross data recovery percentage is less than 100% due to swapping the memory card and maintenance operations. The high net data recovery indicates the sensors and logger are performing well.

### Maintenance Issues and Changes to Site Configuration

The logger batteries were replaced and backup batteries were added on September 8, 2006.

### Monthly Data Time Series

Seen below is a graph of wind speed at Mt. Tom for the month of September 2006, at the anemometer height of 37 m.

