

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 July 2007

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

By Puneet Malhotra

Monthly Data Summary for July 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 http://www.ceere.org/rerl/rerl_resourcedata.html.

	Height	Wind Speed				Prevailing	Power Law
		Mean [m/s]	Max [m/s]	Turbulence Intensity	Good Data [%]	Wind Direction	Shear Exponent
	24 m	4.4	16.19	0.25	86.002	-	0.34
	37 m	5.1	19.52	0.21	86.047	90° E	0.34

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 [%]	78.725	
Net Data Recovered [%]	71.647	

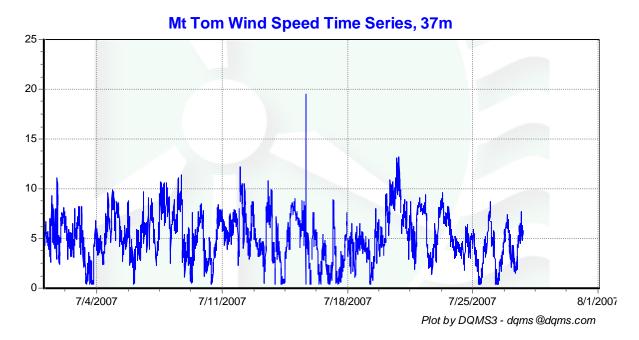
The gross data recovered is less than 100% because towards the end of the month, lightning struck and damaged the data logger together with the landline telephone connection and due to malfunctioning vane sensor at a height of 24m. And, net data recovery percentage is low due to fault in one of the anemometers at a height of 37m.

Maintenance Issues and Changes to Site Configuration

Lightning took down the landline connection and the data logger.

Monthly Data Time Series

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



(The data for July 15th from 1600 to 1700 hrs, seen as the peak in the graph above, was marked as an error because of the data is determined to be corrupted for that period)