

# 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 Bishop and Clerks, Nantucket Sound, MA June 2005

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

By Chris Elkinton

### **Monthly Data Summary for June 2005**

This update summarizes the monthly data results for the Bishop and Clerks monitoring site in Nantucket Sound, MA, at 41° 34′ 27.6″ N, 70° 14′ 59.5″ W (NAD 83). More information on the sensors and site can be found at <a href="https://www.ceere.org/rerl/rerl">www.ceere.org/rerl/rerl</a> resourcedata.html.

|        | Wind Speed |           |            | Prevailing |
|--------|------------|-----------|------------|------------|
| Height | Mean [m/s] | Max [m/s] | Turbulence | Wind       |
|        | 2 2        |           | Intensity  | Direction  |
| 15 m   | 6.35       | 15.39     | 0.11       | 225, SW    |

The data can be found at the Renewable Energy Research Laboratory web site: www.ceere.org/rerl/rerl resourcedata.html.

Additional information about interpreting the data presented in this report can be found in the Fact Sheet, "Interpreting Your Wind Resource Data," produced by RERL and the Massachusetts Technology Collaborative (MTC). This document is found through the RERL website:

www.ceere.org/rerl/about wind/RERL Fact Sheet 6 Wind resource interpretation.pdf.

#### **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 [%] | 100   |
|--------------------------|-------|
| Net Data Recovered [%]   | 99.53 |

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

The following maintenance/equipment problems occurred during June 2005, and the following corrective action was taken:

• The logger stopped communicating on June 23, 2005, due to lack of battery charge. The data card was manually recovered on April 12, 2006 and data from June 23 – Sept 14, 2005 were downloaded. The problem with the battery charging system was diagnosed as a failed solar panel.

# **Monthly Data Time Series**

Seen below is a graph of wind speed at Bishop and Clerks for the month of June 2005, measured at the anemometer height of 15 m.

