

# Virginia State-Based Anemometer Loan Program Loan Description

## Introduction

The Virginia State-Based Anemometer Loan Program (SBALP) was established by the Department of Energy's Philadelphia Regional Office with the goal of spurring wind development in the State of Virginia. James Madison University (JMU) is responsible for administering this program with assistance from the Department of Mines, Minerals, and Energy, and the National Renewable Energy Laboratory. Please review the following loan description before filling out an application.

## Borrower Eligibility Requirements

The borrower must provide proof of ownership of the property on which the anemometer will be placed or provide written exclusive authorization from the property owner. Generally, only one anemometer tower will be lent to a given entity; however, more than one tower may be borrowed given sufficient justification. All anemometers must only be sited within the state of Virginia. For other areas outside the state of Virginia, contact the respective state energy office.

## Borrowing Process

The borrowing process consists of the following steps:

- Application and approval
- Loan agreement and scheduled anemometer installation
- Anemometer installation and maintenance
- Monthly exchange of batteries and data chip
- Schedule to have the system disassembled

## Applications and Approval

To request an anemometer, send an application to the JMU contact listed below. The purpose of the application is to verify that:

- The borrower will replace the data chips and batteries monthly;
- The borrower has identified potential sites that have a favorable combination of good wind resource, road access, transmission proximity, and land ownership;
- The borrower has envisioned a viable project concept if the wind resource is sufficient.

Once the loan request is approved, JMU will process the loan agreement.

## **Loan Agreement**

Upon receiving approval to borrow an anemometer, a representative should contact JMU to execute a loan agreement and schedule an installation date for the 50 Meter NRG Tall Tower kit. The loan period will be for up to 13 months. This should allow enough time for installation, collecting 1 year of data, disassembly, and return to JMU.

## **The Equipment**

Each set consists of an NRG 50 Meter Tall Tower kit, three anemometers, two wind vanes, and a Symphonie data logger. The installed set collects and saves wind speed and direction data.

## **Anemometer Installation**

Anemometer installation will be carried out by JMU. With completion of the loan agreement the borrower will have scheduled an installation date for the anemometer.

If for any reason, the tower must be lowered, the borrower must contact JMU. However, because this equipment has a good reputation for reliability, we expect that most users will not need to lower their anemometer tower prior to the end of the data collection period.

As with siting, JMU will provide technical assistance with the installation of the tower and programming of the data logger.

## **Processing Wind Data**

The sensors collect continuous wind speed and direction data. This data is stored as 10-minute averaged data in a data chip. Each anemometer will include two data chips. Each chip is capable of holding roughly two years of ten-minute data. However, as part of the loan agreement, the user must replace the plugs monthly. Every month a self-addressed and stamped envelope will be mailed to the borrower, along with a new data chip and sometimes batteries as well. The borrower is responsible for replacing the batteries and data chip and mailing the data chip to Patrick Wilson at the address below. Please be sure to include a return address so that the data chip can be returned after the data has been downloaded and processed. A copy of the data results will be sent to the borrower and JMU will publish a full report upon completion of the monitoring period. Please be advised that all wind speed data will be public domain.

## **Return of the Anemometer and Tower**

James Madison University must be notified whenever an anemometer is lowered and disassembled. Upon completion of data collection, JMU will schedule a disassembly with the borrower so that the tower may be taken down.

## **Agency Roles and Responsibilities**

JMU selects qualified borrowers, manages the lending of the anemometers, and offers technical support on siting, installation, and operation of the anemometers as well as analysis of the collected wind speed data. For information contact:

Patrick Wilson  
James Madison University  
MSC 4905  
1401 Technology Drive, Suite 120  
Harrisonburg, VA 22807  
Phone: 540-568-8754  
Email: [wilsonpr@jmu.edu](mailto:wilsonpr@jmu.edu)

## **Questions/Comments/Suggestions for Improvement**

Contact Patrick Wilson at the above address.