

Step 1: Enter the information about your proposed wind energy system in the green boxes.

? <-Mouse over these icons for relevant help

General Information

Name of Person Completing this Form
 Applicant Name
 Applicant Email Address
 Site Address

| |
|-----------------------------------|
| David Hauser |
| Hinsdale Wind Unit 6 |
| David.Hauser@susrescon.com |
| Plunkett Reservoir Rd Hinsdale MA |

Site and Wind Resource Information

| | |
|-------------|--------|
| ? Latitude | 42.43 |
| ? Longitude | -73.15 |
| ? Elevation | 550 m |

| Wind Resource Map Estimate of Average Annual Windspeed | |
|--|---------------------------------|
| 5.7 | m/s 30m above eff. ground level |
| 6.3 | m/s 50m above eff. ground level |
| 6.8 | m/s 70m above eff. ground level |

Note: These windspeed estimates are a starting point. Using these values and the proposed site geographical information, to be entered in subsequent steps, CWEST I will model the site conditions and provide a site specific wind resource estimate.

[Go To Step 2](#)

Note:

This calculator tool was developed by The Cadmus Group, Inc. on behalf of the Massachusetts Clean Energy Center (MCEC). It is intended to provide a coarse estimate of wind resources and neither The Cadmus Group, nor MCEC, makes any guarantees as to the actual resource availability for specific locations. Factors such as site condition parameters entered by the user, topography, geography, and other variables will all affect the model's resource estimation. The primary purpose of this tool is to predicate the probability of Wind Resource availability in Massachusetts. It is a preliminary rough estimate of what the likely wind resource is for the area of interest. It should not be used for system design. Should the resource estimate appear to be sufficient please contact a qualified wind turbine installer for a detailed site assesment.

For Questions or Comments on this calculator:

PTS@cadmusgroup.com

Step 2: Site Characteristics

Wind frequency numbers in the table below are automatically derived from the New England Wind Resource Map along with the entered coordinates. Use the pull down menus to describe the roughness of the terrain. If your site has thick vegetation or obstacles, such as forest, near (within 300 feet) of the tower base, estimate the average height of the obstacle and select an obstacle type from the drop down menu for each direction. Finally, you may proceed from this page to the Wind Resource Site Report. This report can be printed. If you wish to have a hard copy of the Wind Resource Site Report.

Units | ▼



| Wind Direction | Frequency (Percent) | Terrain Roughness | Height of Nearby Obstacles | Obstacle Type | Description of Terrain/Obstacles |
|----------------|---------------------|-------------------|----------------------------|---------------|----------------------------------|
| N | 3.69% | Rough ▼ | 30 | ▼ | Forest |
| NNE | 2.12% | ▼ | 30 | ▼ | Forest |
| NE | 1.76% | ▼ | 30 | ▼ | Forest |
| ENE | 2.07% | ▼ | 30 | ▼ | Forest |
| E | 3.58% | ▼ | 30 | ▼ | Forest |
| ESE | 4.44% | ▼ | 30 | ▼ | Forest |
| SE | 3.70% | ▼ | 30 | ▼ | Forest |
| SSE | 2.84% | ▼ | 30 | ▼ | Forest |
| S | 4.17% | ▼ | 30 | ▼ | Forest |
| SSW | 8.06% | ▼ | 30 | ▼ | Forest |
| SW | 10.14% | ▼ | 30 | ▼ | Forest |
| WSW | 9.44% | ▼ | 30 | ▼ | Forest |
| W | 9.81% | ▼ | 30 | ▼ | Forest |
| WNW | 16.46% | ▼ | 30 | ▼ | Forest |
| NW | 11.23% | ▼ | 30 | ▼ | Forest |
| NNW | 6.50% | ▼ | 30 | ▼ | Forest |

[Return to Step 1](#)

[Generate Wind Resource Site Report](#)

MCEC Commonwealth Wind Site Resource Report

Report Date: 7/9/2010
 Report Completed By: David Hauser
 Site Name: Hinsdale Wind Unit 6

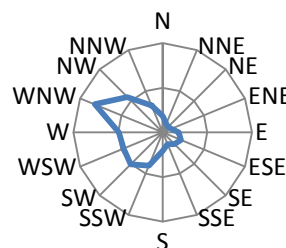


Site Information

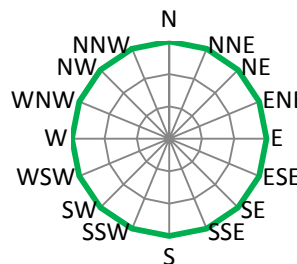
| | |
|-----------------------------|--------|
| Latitude (decimal degrees) | 42.43 |
| Longitude (decimal degrees) | -73.15 |
| Elevation (m) | 550 |

| Direction | Frequency | Obstacle Height (m) | Description |
|-------------------------|-----------|---------------------|-------------|
| N | 3.69% | 9 | Forest |
| NNE | 2.12% | 9 | Forest |
| NE | 1.76% | 9 | Forest |
| ENE | 2.07% | 9 | Forest |
| E | 3.58% | 9 | Forest |
| ESE | 4.44% | 9 | Forest |
| SE | 3.70% | 9 | Forest |
| SSE | 2.84% | 9 | Forest |
| S | 4.17% | 9 | Forest |
| SSW | 8.06% | 9 | Forest |
| SW | 10.14% | 9 | Forest |
| WSW | 9.44% | 9 | Forest |
| W | 9.81% | 9 | Forest |
| WNW | 16.46% | 9 | Forest |
| NW | 11.23% | 9 | Forest |
| NNW | 6.50% | 9 | Forest |
| Avg Obstacle Height (m) | | 9 | |

Site Wind Rose (5% frequency/division)



Obstacle Height (10 ft/division)



Wind Resource Statistics

| | |
|----------------------------------|------|
| Weibull k Value | 2.39 |
| Average Site Wind Shear Exponent | 0.37 |

| Wind Map Reference Height (m) | Wind Map Wind Speed (m/s) | Wind Speed Corrected for Site Factors (m/s) |
|-------------------------------|---------------------------|---|
| 30 | 5.7 | 5.2 |
| 50 | 6.3 | 6.0 |
| 70 | 6.8 | 6.6 |

Note: The average site wind shear exponent is based on empirical data for various terrain types and is calculated based on user inputs. It is recommended that the user use this value to estimate hub height wind speeds, rather than calculating a wind shear exponent based upon the wind speeds from the wind map, as these values are based on large scale computer models and do not accurately account for micro-siting conditions. The wind shear exponent is a mathematical representation of terrain roughness and is used to calculate wind speed as a function of height.

The data displayed in this report is intended for preliminary assessment purposes only and should be combined with an appropriate feasibility study to determine project viability. This tool has been developed by the Cadmus Group, Inc., on behalf of the Massachusetts Clean Energy Center. Wind resource data is derived from AWS Truewind New England Wind Map.