“I Have Windy Property”

REMY LUERSSEN
VIRGINIA CENTER FOR WIND ENERGY
Overview

- Is it windy where the turbine will be?
- Is it windy all year?
- Is it windy enough?
- How do I know if wind energy is a good option for me?
Virginia - Annual Average Wind Speed at 80 m

Obstruction of the Wind by a Building or Tree of Height (H)

Region of highly turbulent flow

2H

20H
<table>
<thead>
<tr>
<th>Category</th>
<th>Nameplate Capacity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Onsite</strong></td>
<td>≤ 10 kW (residential) ≤ 500 kW (commercial)</td>
<td>These systems are small, either stand-alone or net metered, and would probably involve only 1 turbine.</td>
</tr>
<tr>
<td><strong>Community</strong></td>
<td>≤ 10 MW</td>
<td>Community-scale projects are typically either net metered or connected to the local distribution network, but could be connected to transmission. These projects are typically owned by and serve the community. They would probably involve less than 5 turbines. In the Midwest, there are community wind systems that are also “utility scale” using our definition.</td>
</tr>
<tr>
<td><strong>Utility</strong></td>
<td>&lt; 50 MW</td>
<td>Industrial-scale wind power projects are most often developed by a company that either will own or sell the project for the purpose of realizing a return on their investment.</td>
</tr>
<tr>
<td></td>
<td>≥ 50 MW</td>
<td>An industrial-scale wind power project equal to or greater than 50 MW nameplate capacity is subject to the full approval process by the Commonwealth’s State Corporation Commission.</td>
</tr>
<tr>
<td>Wind Speed (at 50m)</td>
<td>Potential for Wind Development</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| 0-6.4 m/s           | • Marginal for onsite  
                     | • Unsuitable to marginal for community-scale  
                     | • Unsuitable for utility-scale            |
| 6.4-7.0 m/s         | • Appropriate for onsite  
                     | • Marginal to appropriate for community-scale  
                     | • Generally unsuitable for utility-scale |
| 7.0-7.5 m/s         | • Appropriate for onsite or community-scale  
                     | • Marginal for utility-scale            |
| 7.5+ m/s            | • Appropriate for all scales |
Wind Energy Calculator

All fields on this page are required. If you do not know what to enter for any field, read the help column on the right.

Site Location and Wind Resources

Your site location is important because it allows us to figure out what class of wind resource you have on your property.

Street Address: 1644 Brodie Circle
City: Virginia Beach
State: Virginia
Zipcode: 23464

Acreage: 100

Topography: Small Towns

Electricity Information

Electricity Rate ($/kWh):
Questions?

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