

2011 Maine Turbine Vendor Directory

Aeris Alternative Energy

www.aerisalternative.com
Meridith Greig
(207) 622-4900 phone
meridith@aerisalternative.com

Serving Maine with free site assessments, sales, maintenance/repairs, and technical support

Turbines: Air X; Air Breeze; Whisper; Skystream 2.4 kW; Evance 5 kW; Aerostar 10 kW, 32 kW, 50 kW

All Season Home Improvement

www.all-season.com
Kim St Amand
(207) 626-3039 phone
kim@all-season.com

Serving Maine with free site assessments, installation, and maintenance/repairs

Turbines: Skystream 2.4kW; Evance 5kW; Aerostar 10 kW, 32 kW, 50 kW

BRJ Works Inc

Brent Wakefield
(207) 377-8316 phone · cell (207) 242-3995
brjworksinc@roadrunner.com

Serving Maine with site assessments, system design, sales, installation, and maintenance/repairs

Turbines: Bergey Excel 10 kW, Windspire

Green Earth Energy

www.greeneearthenergy.info
Michael Paradis
(207) 834-4242 phone · cell (207) 316-5318
michael@greeneearthenergy.info

Serving Maine with site assessments, system design, sales, installation, and maintenance/repairs

Turbines: Endurance 5.3 kW, 50 kW; Bergey 1 kW, 5.2 kW, 10 kW; Northern Power 100; Evance 5 kW; Raum 3.5 kW; Southwest Windpower turbines (0.4–3 kW)

Heliotropic Technologies, PA

www.heliotropictech.com
Michael J Mayhew, PD, GBE
(207) 633-1061 phone · cell (207) 315-0990
coolsolarguy@yahoo.com

Serving Maine with site assessments, sales, and installation

Turbines: Bergey models; Southwest Windpower models; A&C Green Energy Talon

Linkel Construction

www.linkelconstruction.com
Lance Linkel
(207) 725-1438 phone
linkelconstruction@comcast.net

Serving midcoast and southern Maine with installation

Turbines: Bergey models

Maine Guide Wind Power, LLC

www.maine guidewindpower.com
Rick Theriault
(207) 723-5535 phone · cell (207) 731-9902
masterguide@myfairpoint.net

Serving Maine with site assessments, sales, installation, and maintenance/repairs

Turbines: Bergey 1 kW, 10 kW

Northern Power Systems

www.northernpower.com/community-wind
Chris Lamonina
(802) 461-2955 phone
info@northernpower.com

Serving Maine as a turbine manufacturer

Turbines: Northern Power 100

Perception of Aroostook

www.perceptionofaroostook.com
Leo Freeman
(207) 764-5506 phone · cell (207) 592-7788
freemanlm@ainop.com

Serving northern Maine with site assessments, sales, installation, and maintenance/repairs

Turbines: Southwest Windpower models; Skystream 3.7; Air Breeze; Whisper; Aerostar models; Evance 5 kW

Western Maine Wind Power

www.westernmainewindpower.com
David McCullough
(207) 205-0935 cell
damccullough90@yahoo.com

Serving western and southwestern Maine with site assessments, sales, installation, and maintenance/repairs

Turbines: Bergey Excel 10 kW

This Buyers' Guide was created with support from:

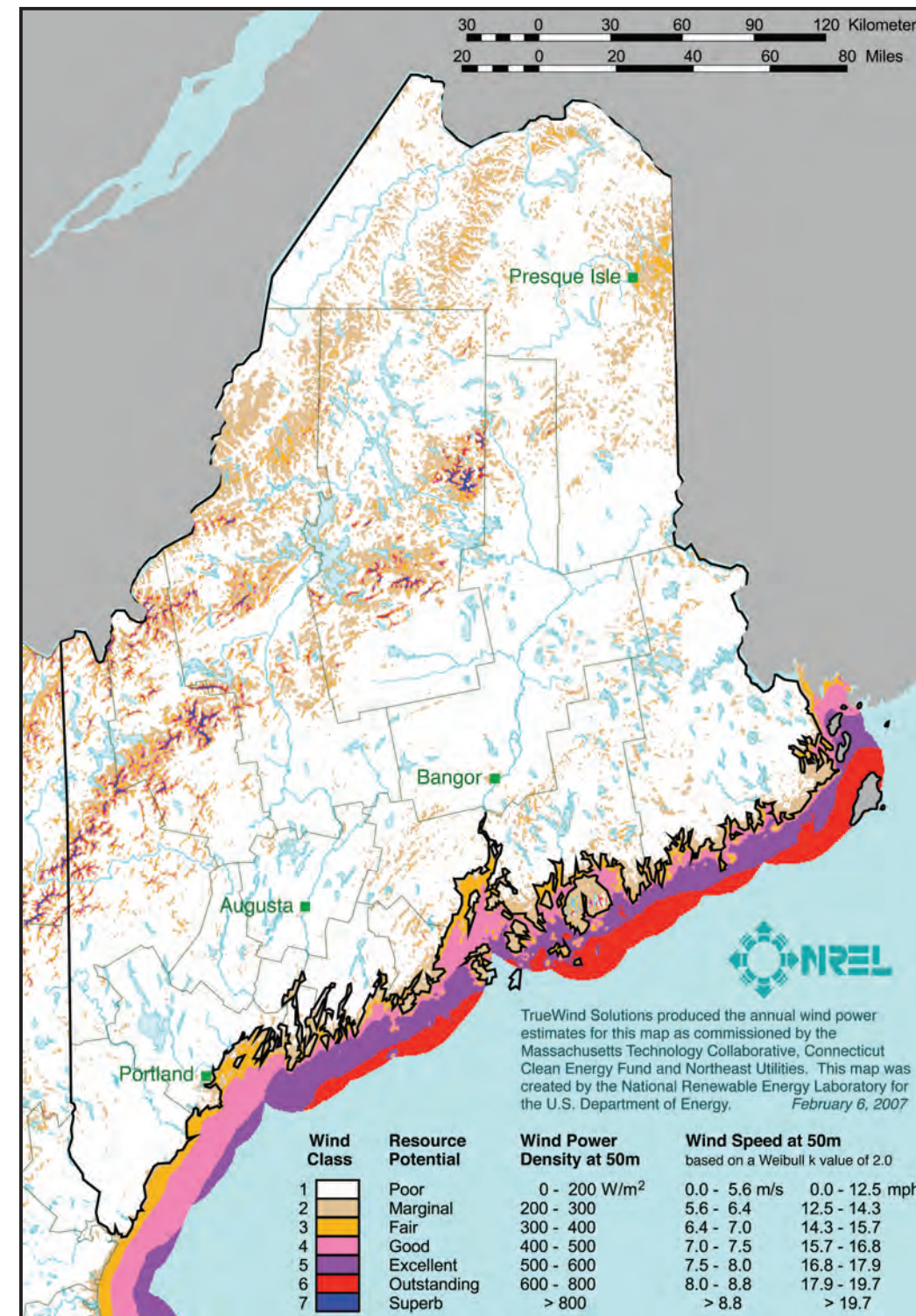


Stay abreast of new developments by subscribing to our Harvesting Clean Energy newsletter at www.mainerural.org/energy! We listen to what's needed, connect the right players and create value-added solutions.

Help promote smart energy solutions for Maine! Share your experience (good or bad) with any energy efficiency or renewable technology so that we can all learn. Or, tell us about a vendor or turbine that we should add to this guide.

Contact Claudia Lowd at (207) 581-4523 or cleanenergy@mainerural.org.

Wind Turbine Buyers' Guide 2011



Wind is very site specific. This wind map is your first reference point. Note that most of Maine is rated Class 1 (poor). Class 2 is worth exploring. Class 3 and above are good bets for success. Turbines are designed to perform within a wind speed range. The rated wind speed needed for best performance is identified for each of the eight turbines showcased inside.

This image has been adapted and reprinted from the U.S. Department of Energy, Energy Efficiency & Renewable Energy, Wind Powering America, Maine Wind Map and Resource Potential website (accessed December 13, 2010): http://www.windpoweringamerica.gov/wind_resource_maps.asp?stateab=me

Investing in a wind turbine can be risky and time consuming. This Buyers' Guide highlights Maine's current small- to mid-size turbine options and the active local professionals who can bring your project to reality.

Before selecting a specific turbine, you should know:

- the average wind speed at your site
- how much energy you wish to produce
- your budget

Unity College and Maine Rural Partners are developing a wind assessment program that can assist you with the initial steps of evaluating your site. See the back cover of this guide to access more resources, including professional site assessors who know the business well.

All turbine information in this guide was provided by the manufacturers. Perform due diligence before making any final decision. Maine Rural Partners does not represent or endorse any manufacturer, product or vendor. Subscribe to our Harvesting Clean Energy newsletter at mainerural.org.





Skystream 3.7 turbine (2.4 kW)

www.skystreamenergy.com

Approximate cost: \$16,000–22,000 (fully installed)

Recommended tower: 33–60 foot monopole or 70–120 foot guyed

Rotor diameter: 3.7 meters (12 feet)

Cut-in wind speed: 3.5 meters/second (8 mph) *This is the minimum speed for the turbine to produce power.*

Rated wind speed: 13 meters/second (29 mph) *This is the optimal speed for the turbine to generate electricity efficiently.*

Example installation: Vienna, ME — During the winter months (November–April), this Skystream 3.7 produces about half the electricity its owners need. *Photo courtesy of Jim and Martha Floyd.*



Evance R9000 turbine (5 kW)

www.evancewind.com

Approximate cost: \$38,000–42,000 (fully installed)

Recommended tower: 40–80 foot monopole or 100–120 foot guyed

Rotor diameter: 5.5 meters (18 feet)

Cut-in wind speed: 3 meters/second (7 mph)

Rated wind speed: 12 meters/second (27 mph)

Example installation: Lafayette, IN — Mintonye Elementary School publishes performance data for their turbine at <http://view2.fatspaniel.net/PV2Web/merge?&view=PV/standard/Simple&id=268580> *Photo courtesy of Aeris Alternative Energy.*



Bergey Excel-S turbine (10 kW)

www.bergey.com

Approximate cost: \$31,770 plus tower and installation (turbine only)

Recommended tower: 24 meter (79 foot) guyed-lattice tower

Rotor diameter: 7 meters (23 feet)

Cut-in wind speed: 2.5 meters/second (5 mph)

Rated wind speed: 12 meters/second (27 mph)

Example installation: North Dumpling Island, NY — This turbine reduces the electric bill for Dean Kamen's residence. *Photo courtesy of Bergey.*



Aerostar Independence turbine (32 kW)

www.aerostarwind.com

Approximate cost: \$101,500 plus installation (turbine and 80 foot tower only)

Recommended tower: 80 or 100 foot monopole

Rotor diameter: 12.6 meters (41 feet)

Cut-in wind speed: 3.5 meters/second (8 mph)

Rated wind speed: 13.9 meters/second (31 mph)

Example installation: Westport, MA — The original Independence installation generates over 3,000 kWh per month. *Photo courtesy of Aerostar.*



Endurance E-3120 turbine (50 kW)

www.endurancewindpower.com

Approximate cost: \$350,000 (fully installed)

Recommended tower: 120 foot lattice or monopole

Rotor diameter: 19.2 meters (63 feet)

Cut-in wind speed: 3.5 meters/second (8 mph)

Rated wind speed: 9.5 meters/second (21 mph)

Example installation: Martha's Vineyard, MA — Morning Glory Farms Installed their E-3120 to reduce energy costs; the farm expects this turbine to pay for itself within six years. *Photo courtesy of Endurance Wind Power.*



Northern Power 100 turbine (100 kW)

www.northernpower.com/community-wind

Approximate cost: \$500,000–575,000 (fully installed)

Recommended tower: 120 foot monopole

Rotor diameter: 21 meters (69 feet)

Cut-in wind speed: 3.5 meters/second (8 mph)

Rated wind speed: 14.5 meters/second (32 mph)

Example installation: Medford, MA — This turbine provides about 10% of the McGlynn School's electricity, saving \$25,000 per year. *Photo courtesy of Northern Power Systems.*



Aeronautica Norwin 29-225 turbine (225 kW)

www.aeronauticawind.com

Approximate cost: \$425,000 plus tower and installation (turbine only)

Recommended tower: 30, 40 or 50 meter (98, 131 or 164 foot) monopole

Rotor diameter: 32 meters (105 feet)

Cut-in wind speed: 4 meters/second (9 mph)

Rated wind speed: 15 meters/second (34 mph)

No example installation available: The Norwin 29-225 is a new product that will hit the ground in February 2011. These turbines will be manufactured in New Hampshire. *Photo courtesy of Aeronautica Windpower.*



PowerWind 56 turbine (900 kW)

www.powerwind-energy.com

Approximate cost: \$3.0–3.25 million (fully installed)

Recommended tower: 59 or 71 meter (194 or 233 foot) monopole

Rotor diameter: 56 meters (184 feet)

Cut-in wind speed: 3 meters/second (7 mph)

Rated wind speed: 12 meters/second (27 mph)

Example installation: Charlesmont, MA — The pictured turbine is installed at Berkshire East Ski Area to offset the resort's entire electricity usage, with a small amount of excess power sold. *Photo courtesy of PowerWind.*