



## Berkshire Wind Power Facts

**Berkshire Wind Power Cooperative Corporation**  
125 High Street, Boston, MA 02110

### Overview

The Berkshire Wind Power Project consists of 10, 1.5-megawatt wind turbines on the ridgeline of Brodie Mountain in Hancock, MA, one of the Commonwealth's most promising wind power sites. The project is owned by the Berkshire Wind Power Cooperative Corporation, which is comprised of 15 non-profit public power entities, including the Massachusetts Municipal Wholesale Electric Company (MMWEC) and 14 consumer-owned municipal utilities that provide electric service to the Massachusetts communities of Ashburnham, Boylston, Groton, Holden, Hull, Ipswich, Marblehead, Paxton, Peabody, Shrewsbury, Sterling, Templeton, Wakefield and West Boylston.

### Benefits

The Berkshire Wind Power Project embodies the energy, environmental and economic benefits of renewable energy development, moving toward achievement of important state and national goals. The Cooperative was formed and the project undertaken to deliver these benefits to customers of the 14 municipal utility members of the Cooperative. Berkshire Wind is the largest wind project to date in Massachusetts, which has a wind power development goal of 2,000 megawatts by 2020.



Photo by OnSite Studios

- **Energy:** The project will generate enough electricity to serve about 6,000 homes. With wind as its fuel, the project will diversify the Commonwealth's energy resources, reducing reliance on fossil fuels to produce electricity, which will help stabilize energy costs by limiting exposure to volatile spikes in the price of oil and natural gas.
- **Environmental:** Development of renewable energy resources such as the Berkshire Wind Project are at the core of state and national initiatives to reduce carbon dioxide and greenhouse gas emissions in order to address climate change issues. The project will offset the production of nearly 612,000 metric tons of carbon dioxide and the use of 1.17 million barrels of oil.
- **Economic:** "Green" jobs such as those created through development of the Berkshire Wind Project are a key part of state and federal economic recovery programs. Construction of the Berkshire Project created the equivalent of approximately 50 full-time jobs, both union and nonunion, including construction, engineering, manufacturing and other work for more than 20 Massachusetts companies.
- **Payment In Lieu of Taxes:** The Cooperative will make payments in lieu of taxes to the towns of Hancock and Lanesborough, where the Cooperative's project property is located.

### Innovation and Initiative

Cooperative members, including a political subdivision of the Commonwealth and 14 municipal entities, have embraced the state's call for renewable energy development voluntarily. Unlike other utilities, municipal utilities are not required to purchase renewable energy. Nonetheless, because their customers support renewable energy development, these public entities took the initiative to form the Cooperative and complete the Berkshire Wind Power Project. They have made a vital commitment to developing the Commonwealth's next generation of renewable energy resources.

**Developed by Massachusetts Municipal Utilities Serving the Communities of:**  
**Ashburnham – Boylston – Groton – Holden – Hull – Ipswich – Marblehead – Paxton – Peabody**  
**Shrewsbury – Sterling – Templeton – Wakefield – West Boylston**  
**In Affiliation with the Massachusetts Municipal Wholesale Electric Company (MMWEC)**



## Quick Facts

- **Ownership:** The Project is owned by the Berkshire Wind Power Cooperative Corporation (BWPC), a Massachusetts Municipal Lighting Plant Cooperative created under the 1997 Massachusetts electric industry restructuring law to conduct business associated with the purchase, sale and distribution of electricity.
- **MMWEC:** Through a series of agreements with BWPC, MMWEC acts as the BWPC's agent to perform numerous tasks associated with the acquisition, development, financing, construction and operation of the project.
- **Components:** The project consists of 10, 1.5-megawatt General Electric wind turbine generators, an approximate 16,000-foot access road and an electric interconnection system to collect and transmit electricity from the turbines to the electric distribution system on Brodie Mountain Road. From there, an approximate 8-mile distribution circuit dedicated to the project will carry electricity to a Pittsfield substation and into the power grid.
- **Heights:** The turbine hub height is 262 feet. The height to a vertical blade tip is 390 feet. The elevation of Brodie Mountain is approximately 2,500 feet above sea level.
- **Generation:** Wind speeds atop Brodie Mountain, one of the best inland wind sites in Massachusetts, average about 8 meters/second, making it a Class 6 wind resource on an American Wind Energy Association scale of 1 to 7. Based upon wind resource data, the project is expected to operate at a capacity factor of approximately 40 percent and produce more than 52,500 megawatt hours of electricity a year, enough to power approximately 6,000 homes.
- **Offsets:** The project will offset the production of nearly 612,000 metric tons of carbon dioxide and the use of 1.7 million barrels of oil.
- **Key Players:** General Electric (turbine components/technical assistance); Reed & Reed, Woolrich, ME (general construction contractor); EOS Ventures, Hancock, MA (community relations); Peoples Bank, United Bank, Dexia, Morgan Stanley and Bank of Montreal (project financing).
- **Financing:** The BWPC has issued \$64,705,000 in tax-exempt revenue bonds to finance the project. Through contracts with BWPC and MMWEC, the municipal utilities will receive their respective shares of project output and be responsible for their proportionate share of debt service over the 20-year life of the bonds. Prior to the bond issue, MMWEC coordinated a series of short-term financings required to purchase the wind turbines and finance construction activities.



Photo by OnSite Studios

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## **BWPCC Members**

### **Massachusetts Municipal Lighting Plants**

Massachusetts Municipal Lighting Plants, also known as municipal electric utilities, are owned and operated by the communities they serve and were created by a vote of the local citizenry. They are governed by a Board of Light Commissioners that is either elected or appointed by locally elected officials. They operate on a non-profit basis and are entitled to issue tax-exempt revenue bonds to finance their operations. All revenues are applied to finance operations, improve the quality of service or reduce electric rates. Unlike the private, investor-owned utilities of Massachusetts, municipal utilities have no need to generate a profit to pay stockholders. There are 40 municipal utilities in Massachusetts. The 14 listed below are members of the BWPCC.

### **Massachusetts Municipal Wholesale Electric Company (MMWEC)**

MMWEC is a non-profit, public corporation and political subdivision of the Commonwealth that provides energy, financial, risk management and other services to Massachusetts municipal utilities. Under Massachusetts General Law, Chapter 775 of the Acts of 1975, MMWEC is empowered to issue tax-exempt bonds to finance energy facilities and sell the output of such facilities under “take-or-pay” contracts with municipal utilities. MMWEC has issued more than \$4.4 billion in bonds to finance and refinance its ownership interests in several New England power plants that provide more than 720 megawatts of electric generating capacity to 28 Massachusetts municipal utilities.

In addition to its BWPCC membership, MMWEC is the required “public corporation” member of several other Municipal Lighting Plant Cooperatives created to develop wind, solar and other energy resources in municipal utility communities.

<i>Berkshire Wind Power Cooperative - Municipal Utility Members</i>			
	<u><i>Municipal Department</i></u>	<u><i>Output KW</i></u>	<u><i>Percent Share of Output</i></u>
1	<i>Ashburnham Municipal Light Plant</i>	686	4.573%
2	<i>Boylston Municipal Light Department</i>	663	4.419%
3	<i>Groton Electric Light Department</i>	830	5.533%
4	<i>Holden Municipal Light Department</i>	1,041	6.938%
5	<i>Hull Municipal Lighting Plant</i>	765	5.102%
6	<i>Ipswich Municipal Light Department</i>	962	6.416%
7	<i>Marblehead Municipal Light Department</i>	1,009	6.727%
8	<i>Paxton Municipal Light Department</i>	632	4.212%
9	<i>Peabody Municipal Light Plant</i>	2,727	18.180%
10	<i>Shrewsbury Electric &amp; Cable Operations</i>	1,908	12.718%
11	<i>Sterling Municipal Light Department</i>	785	5.232%
12	<i>Templeton Municipal Light &amp; Water Plant</i>	823	5.484%
13	<i>Wakefield Municipal Gas &amp; Light Department</i>	1,363	9.091%
14	<i>West Boylston Municipal Lighting Plant</i>	806	5.374%

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