

LEMPSTER Wind Power Project



Project Overview

The first modern, commercial-scale wind farm in the state, the Lempster Wind Power Project is located in the town of Lempster in Sullivan County, New Hampshire. The project is located on privately owned land in southwestern New Hampshire, approximately 20 miles north of Keene and 10 miles south of Newport. Home to one of the most wind-rich areas in New Hampshire, the wind farm has 12 wind turbines on the site.

The wind turbines produce renewable electricity and generate zero emissions. The Lempster Wind Power Project produces enough clean energy on average to power approximately 10,000 New Hampshire homes and offsets carbon dioxide emissions for our customers equivalent to taking 5,700 cars off the road each year. The Lempster Wind Power Project, over its project life, will contribute substantial amounts to the community through payments to the town of Lempster and to landowners.

Project Details

Project Capacity: 24 MW

Number of Wind Turbines: 12 Gamesa 2 MW wind turbines

Project Location: town of Lempster in Sullivan County, New Hampshire

Approximate Acreage: 1,500 acres with approximately 5 percent of the land actually impacted

Local Economic Benefits

The project has paid more than \$4 million in local taxes from 2009-2014, and more than \$1.5 million in state taxes in the same period, for a total of more than \$5.5 million since the project reached commercial operation. Additionally, the project has supported the Windmill 5k run at the project to benefit the Newport Area Chamber of Commerce, the Rumney Old Home Day, the Goshen-Lempster Coop School, the Lempster Historical Society, and the Lempster Firefighters' Association.





Customer: Eversource Energy

Eversource Energy, formerly Public Service of New Hampshire (PSNH), the Granite State's largest electric utility, is purchasing all of the energy from the project, and is reselling a portion of the power to the New Hampshire Electric Cooperative (NHEC), the local service provider. Eversource worked with Avangrid Renewables and NHEC to connect the wind project to New England's regional power grid.

Engineering and Construction

Contractors and crews from all over New Hampshire and New England helped to build the Lempster project. In addition, numerous supplies and services were purchased from New Hampshire firms, including concrete, electrical cable, fuel, sand, food, lodging, and many other products.

Construction Workforce

In 2008, the construction effort peaked at more than 120 workers who helped engineer and build the wind project.

Technology

Turbine Height: 396 feet (120 meters) to the tip of blade
Total Turbine Weight: Approximately 383 tons (767,000 lbs.)
Turbine Type: Gamesa 2 MW wind turbine
Blade Length: 139 feet
Tower: Four-section tubular steel
Tower Height: 256 feet (78 meters)
Turbine Foundation: Each wind turbine foundation consists of 18, 45-foot steel rock anchors, with a surface steel-reinforced concrete base of approximately five feet.
Footprint: Turbines are spaced from 700 to 850 feet apart.
Concrete: Approximately 120 cubic yards per turbine

Plant Infrastructure

Turbine Access: 25,800 linear feet (4.9 miles) of gravel surfaced roads
Transmission Interconnection: Interconnected to Eversource Energy's Newport substation via a 10.5-mile 34.5 kilovolt (kV) distribution line
Collector Switchyard: 34.5 kV switchyard with pole mounted equipment
Collection System: 34.5 kV Underground collector feeder system

Developer, Owner and Operator

Avangrid Renewables, LLC is a subsidiary of AVANGRID, Inc. (NYSE: AGR) and part of the IBERDROLA Group. IBERDROLA, S.A. is an energy pioneer with the largest renewable asset base of any company in the world. Avangrid Renewables, LLC is headquartered in Portland, Ore., and has more than \$10 billion of operating assets totaling more than 6,000 MW of owned and controlled wind and solar generation in the U.S. Avangrid Renewables recently changed its legal name from Iberdrola Renewables, LLC, and is in the process rebranding.

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