

# The Fox Islands Wind Project

## Leading the Way on U.S. Coastal Wind Power

With the largest community-based wind project on the East Coast, the residents of Maine's Fox Islands have become renewable energy leaders by coming together to lower their own electricity bills and move toward a clean energy future. The commissioning of three 1.5 MW General Electric wind turbines in November 2009 will serve as a strong example to the rest of Maine and New England that the vast wind power potential of the region can power communities, create jobs, and clean the air.

Tapping into the self-reliant nature of the islands' resource-based communities, and grounded in Yankee ingenuity, the project is expected to meet the communities' total electric power needs and cut their electric bills immediately.

### Features of Fox Islands Wind

#### Community Embraces the Project

- A vigorous public education and outreach effort resulted in a nearly unanimous vote in July 2008 to proceed with the project.
- Over 100 community members gathered at the Vinalhaven wharf to cheer the arrival of the first load of turbine blades on the island in September 2009.
- Excitement has continued to build through project updates and town newsletters that reach all residents, both seasonal and year-round.



#### The Tradition of Wind Power Comes Full Circle

- Maine's strong offshore winds made these communities viable 100 years ago, when sailboats carried granite, timber, livestock, people, food and vital supplies between islands and the mainland. Those winds will now power 21<sup>st</sup> century homes and businesses on these two islands.



#### Wind Power Works for the Fox Islands

- The project benefits are kept in the community to offset the high cost of electricity on the islands – it's not about shipping power off somewhere else.
- The project is scaled to a size that serves the electric needs of the islands by, on average, generating the amount of electricity that the islands need.
- The grid is already sized to this capacity – the community is not going into the power-selling business.

## Harnessing the Wind – Project Specifics

- The project consists of three General Electric 1.5 megawatt turbines.
- The turbine towers are 80 meters (262 feet) and the blades are 37.7 meters (123.7 feet) long – each turbine will stand 118.5 meters (388.7 feet) tall.
- The turbines are expected to generate ~11,605 megawatt-hours of electricity per year.
- The project is sited on a 25-acre parcel of land specifically purchased by two local residents for a community wind-power project.
- Before the project, electricity was delivered to the islands via an underwater cable; residents paid approximately 28 cents per kilowatt hour, **more than double the national average.**
- Thanks to the new wind installation, electricity rates are expected to go down within the first year, with a 20-year payback on the entire installation.
- Over the course of a year, the turbines will generate slightly more electricity than the islands use. More than 50% of the electricity generated by the turbines will be used on the islands.

## Community Information

- The Fox Islands comprise Vinalhaven and North Haven, two year-round island communities located in Penobscot Bay approximately 12 miles from Rockland in mid-coast Maine.
- North Haven’s year-round population is between 300 and 400, swelling to 800 in the summer; Vinalhaven is the largest of Maine’s 15 year-round island communities, with a year-round population of 1,200 and over 4,000 in the summer.

## Environmental Benefits and Responsibility

- Extensive environmental investigations have been completed to assess impacts to wildlife, including birds, bats, rare plants and habitats.
- One year of pre-construction avian-impact studies was completed in April 2009 with little to no impact recorded; avian monitoring will continue one year after project commissioning.
- According to the Environmental Protection Agency’s eGRID2007 database, electricity generated from the project is expected to offset:
  - 5,400 tons of carbon dioxide (CO<sup>2</sup>)
  - 14 tons of sulfur oxides (SO<sub>x</sub>)
  - 5 tons of nitrogen oxides (NO<sub>x</sub>)

## A New England-Based Partnership

The companies most closely involved the Fox Islands Wind Project are New England-based, increasing the regional economic benefits.

- **EOS Ventures:** Engineering and procurement; **Hancock, MA**
- **Cianbro Corporation:** Construction and transportation; **Pittsfield, ME**
- **Island Institute:** Community outreach and permitting; **Rockland, ME**
- **Diversified Communications:** Tax equity investment; **Portland, ME**
- **Fox Islands Electric Cooperative:** Local electric utility; **Vinalhaven, ME**
- **Fox Islands Wind, LLC:** Project management; **Vinalhaven, ME**



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