



PowerShift Atlantic

PowerShift Atlantic is a research demonstration project focused on finding more effective ways of integrating wind energy into our electricity system in the Maritimes, using pilot programs with residential and commercial utility customers across the region.

This collaborative project is led by Natural Resources Canada through the Clean Energy Fund and by NB Power in partnership with Saint John Energy, Maritime Electric, Nova Scotia Power, New Brunswick System Operator, the University of New Brunswick (UNB), and the Governments of New Brunswick and Prince Edward Island. This multi-year initiative, up until the end of the demonstration portion of the project, will last until 2014.

Although this project is particularly focused on wind energy, what we learn may also be applied to research regarding other intermittent renewable energy sources as well, such as solar and tidal.

PowerShift Atlantic is the first innovative project of its kind in Canada, and one of 19 Clean Energy Fund projects currently underway nationwide.

How it works

PowerShift Atlantic is all about *shifting when we use our power*. This shift ultimately allows for a more efficient electricity system, and may offer a solution to finding a more efficient way of integrating wind power.

Our region's utilities are always striving to ensure the most reliable electricity system possible – which means providing enough power generation to ensure Maritimers have electricity when they need it.

The challenge with wind is that it is difficult to predict. UNB has developed tools to help predict wind power output in the short-term, but there is no way of adjusting weather patterns or wind production to meet customers' energy demands. Although we can't shift when the wind blows,

we can look at shifting or moving **when** we use our power to make more efficient use of wind generation.

This research project is focused on exploring how we might manage energy demands to correspond better with normal variations in wind power. In order to do this, PowerShift Atlantic will install technology in the homes and businesses of customers interested in participating in the research project – **technology that enables the utility to shift the amount of energy delivered to a participant’s monitored equipment when it is not required by the customer.**

Commercial Research Program

Commercial customers will be approached by their local utility to determine whether they are interested in participating in the research program and whether they qualify for the project. Commercial customers will be required to have a qualifying end use (for example, refrigeration/HVAC systems), as well as a suitable energy load that can be shifted, **based on the availability determined by the customer.**

Through a mixture of required hardware and software, the utility will be able to remotely control certain end uses at the customer’s location to help integrate wind energy more efficiently into our electricity system in the Maritimes.

This research program does not require a change in customers’ daily routines. The goal of the project is to find acceptable ways to shift the amount of electricity that flows to businesses, at times when it is convenient for the customer and business as usual.

Making a difference

Participating in this project means contributing towards a valuable research initiative designed to help meet future electricity demand in a more efficient way and reduce green house gas emissions from burning fossil fuels.

This is an exciting step toward speeding up the adoption of clean renewable energy sources, a more sustainable electricity system and helping create a better legacy for future generations of Maritimers.

For more information:

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