

# Community Wind Basics



## Baddeck Wind Proposal - June 2014

### To Residents & Landowners:

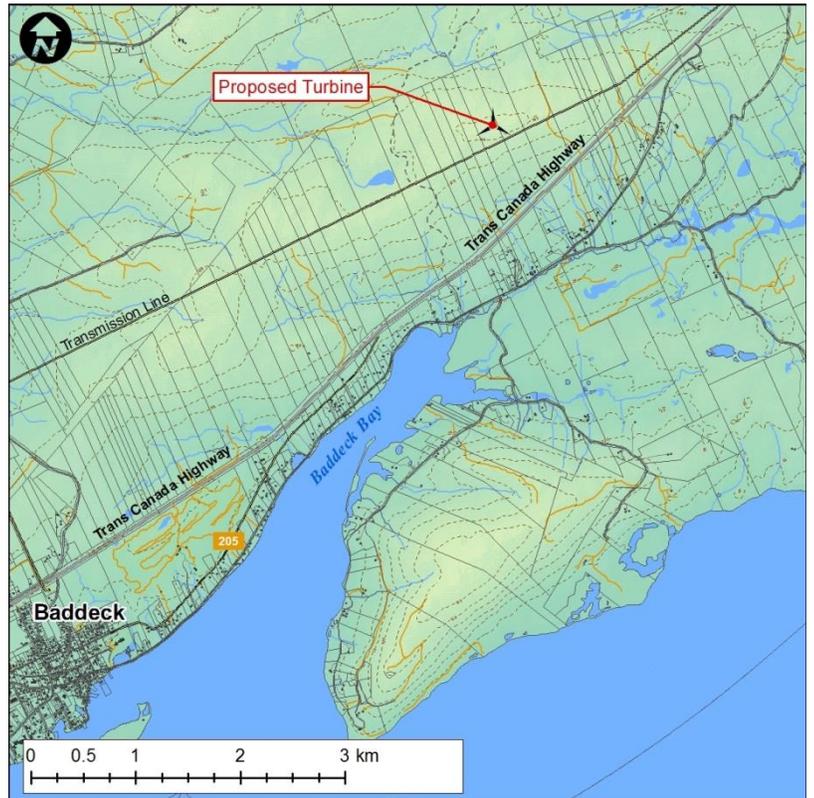
We are sending this notice to you to introduce ourselves as a first step in consulting with the local community regarding the erection of a wind energy turbine at a location near Baddeck. There has been a meteorological tower installed at the location to measure wind speed in the area. This will begin the long process of collecting data and making applications in support of a proposed turbine installation.

The project has been awarded conditional approval from the Department of Energy as a Community Feed-In-Tariff project. Scotian Wind Inc is in the process of studying the wind energy potential and conducting environmental studies. This research will be conducted over the next year with a targeted plan to install a turbine in 2016.

The capacity of the turbine we would expect to put on site just under 2 Megawatts, representing enough energy to power 500 to 600 households. The tower for this turbine is projected to be approximately 100 meters high, with each blade measuring about 50 meters in length.

### Public Information

Scotian Wind Inc plans to hold an Open House in the community later this summer or early fall. As soon as we arrange the time and place we will send notice out to residents. The Open House will give folks a chance to learn more about the project and wind energy in general. As well, Scotian Wind will have the opportunity to hear feedback from residents.



### Community Electricity

The provincial government has established clear targets for clean energy: 25% of our electricity is to be renewable by 2015, with a goal of 40% by 2020. The renewable energy targets are part of the larger provincial initiative set out in legislation called the Environmental Goals and Sustainable Prosperity Act (EGSPA). EGSPA sets out targets to help Nova Scotia become "one of the most environmentally and economically sustainable places in the world by 2020".

The provincial government recognizes that small community-owned projects are an effective way to reach the goal in a way that benefits all Nova Scotians. Their vision will shift ownership from the virtual monopoly currently held by Nova Scotia Power to a decentralized structure that would see many small groups owning

our electricity sources. All of the electricity produced by the turbine at Baddeck will be consumed at the local level. Only the people who are connected to the same electrical substation as the turbine can use its power.

### Nearest Turbine

The nearest large wind turbine to the proposed Baddeck project is the Scotian Wind Inc turbine at Saint Rose, Inverness County. That turbine is about the same height and size as the turbine that Scotian Wind intends to install in Baddeck.

Visiting a turbine is a great way to get a sense of the sound and scale of today's utility-scale wind turbines.

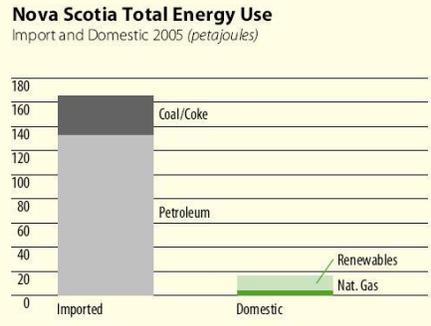
[www.scotianwindfields.ca](http://www.scotianwindfields.ca)

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## Energy Security

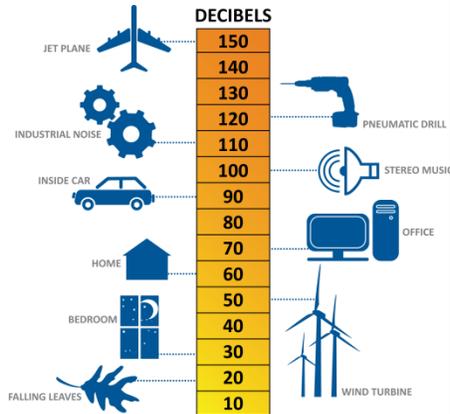
Wind energy is a safe, locally produced source of energy that will lessen our dependence on foreign sources of fuel. Once a wind turbine is installed, it produces electricity without the need for costly fuels. After a few short months, the turbine has generated as much electricity as it takes to build, install, and decommission it.

As the figure on the right shows, the amount of energy that our province imports vastly outweighs the amount of energy that we produce. Every shipment of coal or oil that is unloaded in Nova Scotia is effectively an exportation of money out of the province. With the price of oil and coal expected to keep rising with each passing year, electricity costs are expected to rise accordingly as shown in the figure on the right. By contrast, wind power offers Nova Scotians a way of ensuring that their electricity bills won't be tied to the price of oil, while promising to keep more of our energy dollars within the province.



## Sound

Over the past 30 years, over 60,000 wind turbines have been installed around the world. During that time, new technologies have allowed the sound produced by industrial turbines to decrease year by year. Each turbine must meet strict environmental requirements, including minimum setbacks from nearby homes that limit the possibility of noise pollution. Thousands of people have been living near large wind turbines for decades, with a relatively small number of those people experiencing negative effects. As a result, a large amount of peer-reviewed studies have focused on the impacts of wind turbines on human health. In 2009, after reviewing all the available literature to date, Ontario's Chief Medical Examiner concluded that though some people find the sound of wind turbines "annoying", she could find "no conclusive evidence that turbines have an effect on health." Scotian Wind is committed to ensuring that none of our projects have a negative impact on the health of those who live nearby. The figure above shows how the sound from a wind turbine compares to various other everyday noises.



## Community Benefits

One of the questions we are most often asked is how does a turbine installation in my community benefit me. We all understand how replacing dirty fossil fuels with clean renewable energy benefits the world, but seeing the benefit of a turbine near our own home is a little complex.

First of all, 100 percent of the energy produced by our projects is consumed locally. More sources of power distributed throughout our province is better for the grid. Locally produced power means less reliance on foreign owned sources and stabilizes the price you pay for electricity. Children see their own community caring about \*their\* future. Energy responsibility is an important lesson for building a better future. Scotian Wind is a Community Economic Development Corporation (CEDC). It is owned by local investors and that means more money in the pockets of people in communities around Nova Scotia and a boost to local economies.

And finally, Scotian Wind is putting money into the communities that host our projects. 1% of revenue from each turbine will be reinvested into community projects as chosen by the community. We estimate that will mean approximately \$8,000 toward community projects in the Baddeck area each year.

## Climate Change

Climate change is happening at an ever increasing rate, and it will seriously affect the lives of people around the world. During the twentieth century the sea level in Nova Scotia rose approximately 30 centimeters. Researchers expect an additional increase from 70 to 140 cm over the next century. Nova Scotia is particularly sensitive to coastal impacts. Combining the relative rise in sea level with more intense storms means that storm surges will be larger. This means more damage to people, property, infrastructure, wildlife, and ecosystems along the province's 13,300 kilometers of coastline. The proposed turbine near Baddeck would offset approximately 5,000 tonnes of CO2 each year.

**Wind Power for the People**

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