



CanWEA

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Canadian Wind Energy Case Studies

Parc Éolien du Renard, Québec

Located on the eastern tip of the province of Québec, just north of New Brunswick and surrounded by the Gulf of St. Lawrence, the Gaspé Peninsula is home to one of Canada's windiest regions. With a population reaching 100,000 in eight major communities, the region is known primarily for its exquisite beauty, Appalachian ridge and exceptional hospitality and not its potential for a successful wind industry.

Its 500 kilometres of coastline, provide the Gaspé Peninsula with outstanding wind energy resources. In the last few years the region has grown to encompass 32-percent of Canada's current installed wind energy capacity, including the following wind projects: Le Nordais – Matane (44.25 MW) and Le Nordais – Cap Chat (57.75 MW). The latest addition and smaller than its predecessors the Parc Éolien du Renard (PER) wind project was commissioned in late 2003.

Located in the municipality of Gaspé, at the eastern tip of the Gaspé Peninsula, PER consists of three 750 kW turbines with a capacity of 2.25 MW and produces enough electricity to meet the needs of approximately 675 homes every year. The wind farm was the result of an association of four complementary enterprises, Fabrication Delta Inc., Groupe Ohméga Inc., Hélimax Energy Inc., and Lefèbvre Frères Ltd and the financial backing from the Ministère de la Recherche, de la Science et de la Technologie du Québec and Développement Économique Canada.

Even with these developments, the Gaspé Peninsula has only begun to scratch the surface of its wind energy potential. This fact has been recognized by the Government of Québec which has issued a request of proposals for 1,000 MW of new wind energy development in the Gaspé Peninsula that is to be installed by 2012.

Wind Power Benefits

Public awareness and concern over the environmental impacts of conventional electricity production continues to grow. From an environmental perspective, Wind energy is a proven electricity source that does not contribute to climate change, air and water pollution, destroy habitat, or generate solid, toxic or nuclear wastes. Wind Energy can be substituted for other forms of electricity production to decrease environmental concerns arising from the electricity sector.

A single wind turbine (660 kW) in an average year will produce 2,000 MWh of electricity, enough power for over 250 Canadian homes. Using wind to produce electricity rather than burning coal will leave 900,000 kilograms of coal in the ground and reduce 2,000 tonnes of greenhouse gases annually, the same positive impact as taking 417 cars off the road or planting 10,000 trees. Newer and larger wind turbines will result in an even greater positive impact. *Canada now has 326 MW of wind energy capacity and CanWEA's goal is 10,000 MW by 2010.*

Local Economic Impacts

Parc Éolien du Renard is unique to Canada due to the exceptionally high level of Canadian content that went into the project.

In order to ensure the success of the project, French Jeumont Turbines were adapted to allow them to efficiently operate in Canada's northern climate while also guaranteeing that they met all appropriate North American Standards. The required technology adaptations were undertaken by engineers from across the province, including local Gaspé engineers and technicians. As a result the project significantly increased local skills and expertise in respect to wind energy technology and its application in cold climates.

In addition to the Canadian redesign, the wind turbines were also partly manufactured in Québec with the wind turbines towers being manufactured in the Gaspé region. Furthermore, the turbines were completely assembled and tested in the province while the construction of the wind farm was undertaken by local entrepreneurs. As a result the construction phase ensured over 30-percent local Gaspésie content and more than 50-percent Québec content.

Local economic benefits are also evident in the operation of the wind farm. The project is operated by a Gaspé based company that provides the equivalent of one full time job in the community – an impressive number for such a small project. Most of the operating budget is spent locally, a key aspect being the payment of royalties to local landowners. Owners of lands used by the project received lump sum payments following project construction, while those who signed land options also receive a portion of royalties earned by the project.

Furthermore, the Government of Québec's recent 1,000 MW request for proposals includes strict local content requirements, and the PER wind project has helped ensure that local entrepreneurs can position themselves to be engaged in the provision of goods and services that are necessary for new wind energy projects in the region. The fact that local and Québec based entities were responsible for the technology adaptations illustrates how Canadian skills and expertise can contribute to the rapidly growing global wind energy industry.

Public Attitudes

The PER project has been well accepted within the municipality of Gaspé and experienced no opposition during the community consultations held prior to development. Wind projects have been

favorably viewed by the citizen that live within the Gaspé region. It is expected that this positive outlook will continue as new projects are installed over then newt few years.



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