2.0 PROJECT DESCRIPTION

The following describes the proponent, background and location of the Project, and detailed Project activities.

2.1 Presentation of the Proponent

Amherst Wind Power LP is a Canadian limited partnership and a subsidiary of Amherst Wind Energy Canada Inc. (collectively "Acciona"). Amherst Wind Energy Canada Inc. is a wholly owned subsidiary of Acciona Energía, S.A. The company's focus is to develop, own and operate a diversified portfolio of renewable energy projects in North America. Acciona is dedicated to the development, construction, operation and ownership of renewable energy projects and has become one of the global leaders of the wind power industry.

Acciona is one of the largest wind developers in the world with a portfolio of 4,918 megawatts installed in 180 wind farms in 10 countries (3,603 owned by the company). Acciona is one of the premier international corporations working in the development and management of infrastructure services and renewable energy sources, employing more than 38,000 people worldwide. The company manufactures wind turbine generators using in-house technology. In solar energy, Acciona's Nevada Solar One project represents the largest solar thermal electric power plant (64 MW) built in the world in the last 16 years, in addition to the company's 35 MW installations of photovoltaic power and a 46 MW photovoltaic solar plant under development in Portugal. In the area of biomass, Acciona operates three plants (33 MW) and 19 small hydro power plants (59 MW). In biofuels, the company produces biodiesel from vegetable oils and bioethanol from surplus wine. Acciona is listed on the IBEX-35 in Spain with a market capitalization of more than $18.9 billion.

2.2 Background of the Project

Acciona is proposing to construct and operate a wind energy facility, the Amherst Wind Energy Project, in Cumberland County, near the Town of Amherst, Nova Scotia. The Amherst Wind Energy Project site will have a nameplate capacity of 30 MW. The Project is planned to connect into the Nova Scotia electrical grid.

The land is currently used primarily for agriculture (*i.e.,* sod farming), which complements the Project very well in that, once constructed; the wind farm has little impact on the ability to farm the land. As a result, the proposed wind power Project will be compatible with the area's existing land use.

Several years worth of wind data has been gathered from the site from two meteorological stations. A combination of consistent wind and community desire to develop the wind potential make the site an ideal location for wind development.

2.3 Purpose of Project

The Project has been proposed in response to a request for proposals issued by Nova Scotia Power Inc. (NSPI). The Project would have the capacity to contribute up to 30 MW of clean, renewable energy to the provincial grid, assisting Nova Scotia in reducing greenhouse gas emissions.

2.4 Summary of Project

The Proponent intends to use their own model of turbine (AW-1500) for this Project. The Project would consist of 20, 1.5 MW wind turbine generators. Table 2-1 includes the technical specifications for this turbine model. In addition, the following ancillary facilities are also considered part of the Project:

- underground, 12 kV collection lines (to link the wind turbines to the substation);
- substation (to step up the electric output from 12 kV to 138 kV);
- 138 kV distribution line (< 200 m) from the substation to the existing 138 kV overhead lines;
- maintenance and control building(s);
- access roads;
- culvert across LaPlanche River; and
- crane pads for assembly of the wind turbines.

Table 2-1 Turbine Technical Specifications AW-1500

Turbine Component	Specifications
Rated capacity	1.5 MW
Cut-in wind speed	3 m/sec
Cut-out wind speed	25 m/sec (1 minute)
Rated wind speed	11.4 m/sec
Number of blades	3
Diameter	76.7 m
Swept area	4616 m^2
Rotor speed (variable)	18.3 rpm
Tower (hub) height	80 m
Gearbox	Planetary/helical gears
Generator	Asynchronous 12000 volt 50/60Hz
Yaw system	4 Planetary stages
Control system	Computer control
Tower design lightning protection	Lightning rod on nacelles

2.5 Location of Project

The proposed Project is to be located in Cumberland County, near the town of Amherst, Nova Scotia. The wind energy facility will be constructed on agricultural lands generally bounded to the east by Highway 104, west by marshlands and north and south by sparsely populated residential areas (Figure 2.1). The Project area, within which the Project would be constructed, lies within the boundaries of the properties identified on Figure 1-2. The Project area is considered that area within which direct Project interactions with the natural environment could occur. It is within this area that information on natural, socioeconomic and environment features and activities has been collected for the purpose of assessing the potential impacts of the proposed Amherst Wind Energy Project.

The Project area is approximately 437 ha in size as illustrated in Figure 1-2. However the actual footprint of the tower structures and ancillary facilities for the proposed wind farm will occupy only a small fraction of the land base within the Project area. The location of the turbines and substation is shown in Figure 2-2.

The site is used for agriculture, primarily a sod farm with some pasture areas. A permit for variance under the *Agricultural Marshland Conservation Act* has been approved to allow for development in a marshland area. Information on the flora and fauna of the Project area, as well as a discussion of significant features of the surrounding general area are presented in Section 4.3.

In Amherst, approximately 25% of the labour force is concentrated in manufacturing and construction industries, roughly 34% in the service industry, and less than 4% in agriculture. In Cumberland County, 27% of the labour force is concentrated in manufacturing and construction industries, while roughly 11% is concentrated in agriculture. Ultimately, more than half of the labour force in Cumberland County is involved in manufacturing, construction, and service industries (Statistics Canada 2006). Details of the socioeconomic environment of the Project area and the surrounding local area are addressed in Section 4.5.

2.6 Detailed Project Activities

The following section provides details on the planning, construction, operation, maintenance and decommissioning of the Project. Activities that have the potential for environmental effects at the Project site are addressed in Section 5.

The development of the proposed Project will include several phases: site preparation and construction; operations and maintenance; and decommissioning. This Project will continue to contribute to the community through job creation for local contractors. It is estimated that the Project will provide 25 to 40 new or existing jobs during the construction phase, four new or existing jobs during the operation and maintenance phase, and two to ten new or existing jobs during the decommissioning phase. Table 2-2 lists various components and activities associated with each phase of the Project.