

4.0 CUMULATIVE AND GROWTH INDUCING IMPACTS

4.1 Cumulative Impacts

In addition to environmental impacts associated with the proposed Project, cumulative impacts to area resources previously discussed may occur as a result of existing, proposed or future projects and activities. Due to the height of the proposed turbine structures and the unique nature of their movement, it is anticipated the cumulative impacts would result from development of other potential wind energy projects, rather than development of facilities more common to the landscape such as cellular/communications towers, and transmission facilities. Although it is difficult to determine where and how future wind projects will be developed, and which future wind projects might contribute to cumulative impacts to area resources, the SEQR process requires that reasonably related cumulative impacts be evaluated.

There are no existing wind energy projects in the vicinity of the proposed St. Lawrence Wind Energy Project. As a result, cumulative impacts associated with existing wind projects were not evaluated in this DEIS. However, numerous potential wind energy projects across New York State are in the development and planning phases. Progress of these projects is highly variable, and ranges from preliminary site investigations (e.g., critical information analyses) to those with completed System Reliability Impact Studies (requirement of New York State), detailed project plans, and landowner agreements. Based on local filings, the BP Wind Power Project in the Towns of Cape Vincent and Lyme may be considered a proposed or future project for the purposes of cumulative impact analysis. It should be noted that several other projects in the United States and Canada are likely in the planning and/or pre-development phases as well, but specific details are presently unknown. This is because the location and other site related information are not publicly available at this time. However, based on known wind resources, it is reasonable to assume that proposed project sites range from less than 1 to approximately 20 miles from any component of the proposed Project. Given these distances, cumulative impacts to the residences and other ancillary structures within the Project area from noise or shadow flicker will not occur, as the turbines would not overlap or be interspersed with the proposed Project.

Other potential cumulative impacts may include construction related impacts to roads and bridges. However, this would only occur if the Projects were constructed simultaneously and if they used the same construction delivery routes. In the unlikely event that this situation arises, any cumulative impacts would be temporary and short-term in duration. Upon approval(s) of individual projects, coordination of transportation routes would be undertaken by the involved project developers to assure that the duration and extent of project impact is minimized and that road repair/restoration work is accomplished in an appropriate amount of time.

The most likely cumulative impact(s) resulting from the construction of the cited project, and of other potential projects in this high wind resource area, is the effect on migrating and local birds,

bats and other ecological resources, visual/aesthetic resources and community character. Annual fatalities for birds and bats at wind projects vary among sites depending on site specific conditions but, based on several post construction mortality studies, an average annual fatality rate have been estimated at 3.2 birds per turbine per year and 14.5 bats per turbine per year. Cumulatively, this may result in an adverse effect on the regional populations of certain avian and bat species that are not able to reproductively compensate for such reductions. However, it should also be noted that bird collisions with wind projects represent a very small portion of all bird collisions with man-made objects. From a habitat perspective, the surge in development of wind projects in the northeast, as part of various state initiatives to promote renewable energy production, may also result in a regional loss and fragmentation of forested habitat depending upon the site selection of specific projects.

The cumulative impact of multiple projects will be highly variable depending upon the number of turbines visible, their proximity to the viewer, the landscape setting and the viewer's opinion regarding renewable energy. If multiple projects were visible, the typical scenario would have portions of one project being visible in the foreground while another is visible in the background. General perspective and viewing distance differences are discussed in the VRA in Appendix C. Long distance views are highly variable and often screened by topography and forest vegetation. As a result, visibility of multiple projects would be greater in an area such as Jefferson County due to the relative flat topography, open agricultural areas and low residential density.

The assumption that one or more projects would complete all appropriate local, State and Federal reviews, permitting and other associated requirements is speculative in nature. As a result, any or all proposed projects may not be constructed and thus not contribute to cumulative impacts associated with the proposed St. Lawrence Wind Energy Project.

The proposed Project and other potential projects would offer positive cumulative impact(s) to air quality and socioeconomics. The construction of the Project, and other potential projects, would result in cumulative positive impact from their operation, which would result in the avoidance of pollutant emissions. Further, the proposed Project (and others) would result in a net positive cumulative socioeconomic benefit to the local communities. The projects (including SLW's) are expected to generate millions of dollars in direct economic benefit from landowner royalties and wages, and millions of dollars in municipal revenues to the local Towns and school boards.

4.2 Growth Inducing Impacts

Some proposed actions under the SEQR process have the potential to trigger further development by either attracting a significant local population, inviting commercial or industrial growth, or by inducing the development of similar projects adjacent to the built facility. The

proposed wind energy project does not require a permanent work force greater than approximately 3 to 10 employees, and therefore will not lead to significant, permanent growth in local population or housing. The temporary impacts associated with the construction workforce were discussed in Section 3.11. As a result, secondary or indirect impacts associated with local growth are not anticipated to occur as a result of the proposed Project.

The St. Lawrence Wind Energy Project is proposed, in part, because of the existing wind resource and associated transmission facilities allow the action to be economically viable. Specifically, the availability of adequate wind and the presence of an existing transmission line in the Town of Lyme allows for generation and transmission of the Project's electric output to the power grid. Since existing transmission lines have limited additional capacity, the Project may make future projects more difficult to develop if such development could only be accommodated by upgrading existing transmission lines.