

With respect to tourism in the region, it is worth noting that other wind power projects in New York have resulted in a significant increase in visitation from tourists interested in the projects. This has resulted in increased local expenditures for goods and services, but these have not been quantified, and are probably fairly modest.

3.11.2.3 Municipal Revenues and Taxes

The proposed Project would significantly increase the revenues of each of the taxing jurisdictions in the Project area. Annual PILOT payments would be negotiated, along with road use agreements. The Project would have a beneficial impact on municipal budgets and taxes because the taxing jurisdictions would receive additional annual revenue from the Project in the form of PILOT revenues, which would be necessarily distributed to the relevant taxing jurisdictions according to their share in the combined tax rate.

During construction, the Project would not impact municipal budgets and taxes. Temporary construction workers would not create significant demand for municipal or school district services or facilities. These workers would not generate significant revenue through payment of property taxes. The Project would result in impacts to the local road system and this would have the potential to affect local highway department expenditures and budgets.

3.11.3 Mitigation Measures

As described above, construction and operation of the proposed Project would not have a significant adverse impact on local population and housing, and would have a short-term beneficial impact on the local economy and employment. The negotiated PILOT agreement would provide a significant long-term benefit to the communities and school districts. Consequently, no mitigation is necessary to address these impacts.

The only potential adverse impact to municipal budgets and taxes would be the impact of Project construction on local roads, and the need to repair or upgrade these roads to accommodate construction vehicles and higher activity. To mitigate this impact, any construction-related damage or improvements to State, County, or Town roads would be the responsibility of the Applicant, and would be undertaken at no expense to the municipalities.

3.12 Telecommunications

3.12.1 Affected Environment

Comsearch was contracted to evaluate the potential for the Project to impact existing telecommunication signals. Comsearch performed an analysis to evaluate the potential effect of the planned St. Lawrence Wind Energy Project in Jefferson County, New York on existing non-

Federal Government microwave telecommunication systems and off-air television stations within 100 miles, both in the United States and Canada (Appendix E).

3.12.1.1 Microwave Analysis

Microwave telecommunication systems are wireless point-to-point links that communicate between two sites (antennas) and require clear line-of-sight conditions between each antenna. Comsearch identified three (3) microwave paths that intersect the Project area (see graphics in Appendix E): WLQ373, WML409 and WPOS292. However, only one of these paths (WPOS292) was identified to have a potential conflict with any of the proposed turbine locations. As a result, proposed turbines No. 19 and 20 would be relocated out of the Worst Case Fresnel Zone such that interference would be avoided.

3.12.1.2 Television Analysis

Off-air stations are television broadcast signals that can be received directly on a television receiver from terrestrially located broadcast facilities. Rotating wind turbines can compete with the "direct wave" appearing at the antenna of a ground receiver. In some instances it is possible to create television signal distortion capable of making reception difficult (Evans, 2005). To determine if the proposed turbines would affect television reception in the area, Comsearch identified the off-air television stations within a 100-mile radius of the proposed Project (Appendix E), both in the United States and in Canada. Comsearch examined the coverage of the off-air TV stations and the communities in the area that could potentially have degraded television reception due to the location of the wind turbines. The stations that are most likely to affect Jefferson County and the vicinity would be those stations at a distance of 40 miles or less. Within this range, there are 32 licensed stations in the United States and 13 licensed stations in Canada (Appendix E).

Of the 32 licensed stations in the United States, only 9 are presently broadcasting. Three of these 9 are full power analog stations, one of which is also licensed in the area with digital modulation. However, digital signals are not subject to interference from intervening structures (NWCC, 2005). Therefore, there is a potential for two American off-air TV stations to be affected by rotating wind turbines (Appendix E).

Of the 13 Canadian stations licensed within the 40-mile area, only 8 produce television broadcast signals in the vicinity of the Project. Seven of these 8 stations have analog signals; the remaining station broadcasts digitally.

Comsearch also determined that there is approximately the same amount of Canadian television stations available in the area as American television stations. Without including low power television stations, there are a total of ten analog stations and two digital stations serving the Project area.

3.12.1.3 AM Radio Analysis

In general, it is possible for a turbine to interfere with AM radio signals. If a turbine intercepts a low frequency radio wave from an AM broadcast antenna, it can "re-radiate" the signal with an arbitrary phase delay. This secondary radiator then becomes a radio frequency source that interferes with the primary signal, causing fading and noise in receivers tuned to the frequency (Evans, 2005). The Federal Communications Commission (FCC) requires that studies be conducted to determine if a proposed development will affect existing AM radio broadcast stations. Specifically, a study is required when the proposed development is located within 1.6 miles (1.0 kilometers) of a non-directional broadcast station and/or within 4.8 miles (3.0 kilometers) of a directional broadcast station. SLW determined that there are no AM broadcast stations located within these distances that would require an FCC study (<http://www.fcc.gov/mb/audio/amq.html>). SLW also determined that it is unlikely that the proposed turbines would interfere with AM radio signals.

3.12.1.4 National Telecommunications and Information Administration Notification

In the spring or summer of 2007 (or as required by the lead agency), SLW would send a written notification of the proposed project to the National Telecommunications and Information Administration (NTIA) of the United States Department of Commerce. Upon receipt of notification, the NTIA provides plans for the proposed project to the federal agencies represented in the Interdependent Radio Advisory Committee (IRAC), which include the Department of Defense (DoD), Department of Education (DOE), Department of Justice (DOJ), and the FAA. The NTIA then identifies any project-related concerns during a 30-day review period.

3.12.2 Potential Impacts

3.12.2.1 Operation

Microwave Communication Systems

Comsearch identified three (3) microwave paths that intersect the Project area. However, only one of these paths was identified to have a potential conflict with any of the planned turbine locations. SLW would relocate these turbines (Turbines Nos. 19 and 20) such that the Project would not impact microwave communication systems.

Television Communication Systems

The television analysis report developed by Comsearch detailed information for each of the off-air television stations that occur within 100 miles of the Project. This information included the strength (power) of each broadcast, as well as the type of service provided (digital, analog, etc.). Comsearch concluded that although in some locations particular television channels may be distorted or lost once the wind turbines are operational, many of the other channels would continue to be received without degradation. Based upon this data, it is unlikely that there would be a significant impact to television signal coverage during project operation.

AM Radio Analysis

All proposed wind turbines within the Project are located at least 1.6 miles (1.0 kilometers) from a non-directional AM broadcast station and/or 4.8 miles (3.0 kilometers) from a directional AM broadcast station. Therefore, it is unlikely that the Project will interfere with existing AM radio transmissions.

NTIA Notification

Should the NTIA identify Project-related concerns related to signal blockage following their 30-day review of the Project, SLW would relocate the appropriate project facilities. Therefore, impacts to the IRAC radio frequency transmissions are not anticipated.

3.12.3 Mitigation Measures

3.12.3.1 Operation

Microwave Communication Systems

SLW would relocate proposed Turbines Nos. 19 and 20 such that the Project would have no impact on microwave communication systems. Therefore, no mitigation measures would be necessary.

Television Communication Systems

If Project operation results in any impacts to existing off-air television coverage, SLW would address and resolve each individual problem as necessary. Mitigation actions could include adjusting existing receiving antennae, upgrading the antenna, or providing cable or satellite systems to the affected households. In addition, the FCC's mandate to transition all off-air television broadcasts from analog signals to digital signals by January 1, 2009 would eliminate turbine-related interference problems as digital signals are not subject to interference from intervening structures (NWCC, 2005).

AM Radio Analysis

The Project will not impact existing AM radio transmissions. No mitigation measures will be necessary.

NTIA Notification

Should the NTIA identify Project-related concerns related to signal blockage following their 30-day review of the Project, SLW would relocate the appropriate project facilities.

3.13 Safety and Security

3.13.1 Affected Environment

3.13.1.1 Microwave Analysis

Safety concerns associated with the construction of wind energy projects mirror the concerns of most large-scale construction projects. These concerns include, but are not be limited to (1) transportation of equipment and materials using heavy construction equipment, (2) overhead hazards, (3) open excavations, and (4) electrocution. These “typical” hazards are well understood, and would be mitigated through the use of common construction safety measures.

During the operation of wind energy facilities, other, more unique, safety concerns sometimes arise and need to be addressed to mitigate their potential effect. Examples of such safety concerns include possible ice shedding, tower collapse, blade throw, stray voltage, fire and lightning strikes.

3.13.1.2 Ice Shed

Ice shed may occur when ice builds up on the blade of a turbine and then breaks off and falls to the ground. While this is a potential safety concern, it should be noted that there has never been a reported injury from ice shed by wind turbines, despite the installation of more than 6,000 MW of wind energy worldwide (Morgan, Bossanyi, and Siefert, 1998).

The ice that forms on a wind turbine's blades is relatively thin. Ice buildup on a turbine's blade changes its shape, reducing the lift-drag ratio and increasing surface friction and resulting in the blade losing its ability to develop speed (AWEA, 2006). Ice would be shed from blades as the temperature rises, and then the blades would begin to rotate at higher speeds.

3.13.1.3 Tower Collapse/Blade Failure

While there is the potential for a tower collapse or blade failure during the operation of wind energy projects, these events are extremely rare. Such collapses are potentially dangerous for both project personnel and the general public. Past incidents have generally been the result of