

- a) A detailed estimate of the total capital costs of the proposed Facility, including a separately stated estimate for each interconnection, broken down in a rational manner by the Applicant into major cost components appropriate to the Facility. These cost components will include:
 1. Turbine
 2. Civil and electrical (engineering)
 3. Construction contingency
 4. Development
 5. Insurance
 6. Legal
 7. Development contingency
- b) A brief statement of the source of the information used as the basis for the estimates required by subdivision (a) of this section.
- c) If required, the Applicant will supply the work papers from which the estimates required by subdivision (a) of this section were made. However, this information is generally proprietary, and would likely be subject to confidential/trade secret protection preventing disclosure under the NYS Freedom of Information Act, or would otherwise be subject to a Protective Order.

Stipulation 15-1001.15 Exhibit 15: Public Health and Safety

Exhibit 15 shall contain:

A statement and evaluation that identifies, describes, and discusses all potentially significant adverse impacts of the construction and operation of the facility, the interconnections, and related facilities on the environment, public health, and safety, at a level of detail that reflects the severity of the impacts and the reasonable likelihood of their occurrence, identifies the current applicable statutory and regulatory framework, and also addresses:

- a) The anticipated gaseous, liquid and solid wastes to be produced at the Facility during construction and under representative operating conditions of the Facility, including their source, anticipated volumes, and composition. During construction, this may include construction debris, waste oils, woody debris, and sanitary wastes. To the extent that construction of the Facility includes temporary emission sources, such as on-site concrete batch plant, the anticipated public health impacts of these activities will also be discussed, as well as any applicable permitting requirements.

During operation, wastes may include waste oils, lubricants or chemicals associated with the use and maintenance of turbines and electric transformers, as well as some limited component parts, should any of those items reach the end of their useful lives prior to decommissioning of the Project.¹ Any sanitary wastes generated at the Operations and Maintenance (O&M) building during regular operations would be eliminated through a standard connection to public

¹ Decommissioning of the Project will be addressed in Exhibit 29.

sewer or septic system, where applicable, based on the location of the building. Any on-site septic system, if applicable, would be designed by a licensed professional engineer. The Applicant will consult the county health department(s) on review and approval authority in the event that type of improvement is proposed. Finally, some routine quantities of standard solid waste, typical of any normal office building or commercial structure, would be generated at the O&M building and disposed of via a public or private trash hauler, as appropriate. Any additional solid or liquid wastes to be produced at the Facility during construction or operation not already considered here will be discussed further in the Application;

- b) That during construction and operation, the Facility is not anticipated to release wastes to the environment in excess of those to be described in section (a);
- c) That Lighthouse Wind does not anticipate additional wastes, beyond those discussed in section (a) above, will be released to the environment, no additional treatment processes are proposed. The procedures for spill prevention and cleanup of any accidental release of those waste materials discussed in section (a) above will be provided in the Stormwater Pollution Prevention Plan (“SWPPP”) and the Spill Prevention, Control, and Countermeasure (SPCC) plan (collectively “spill management plans”). Spill management plans will also include the identification of chemicals and oils to be stored on-site and spill response plans for addressing any substance-specific response measures required. This will include any oils contained in operating equipment, including electrical transformers at turbine sites and at collection and interconnection substations. A preliminary SWPPP, including a draft SPCC plan, will be included in the Application. Pursuant to the regulations governing the SWPPP and SPCC, the NYSDEC will review and approve these plans prior to implementation;
- d) The manner of collection, handling, storage, transport and disposal for wastes retained and not released at the site, or to be disposed of. This will include a discussion of the management of construction debris (e.g., demolition debris, packing materials, and general refuse) as well as slash, stumps, stones, non-merchantable wood waste, and other materials resulting from clearing and construction activities. Exhibit 15(d) will also discuss wastes anticipated to be generated from temporary facilities used by construction workers (e.g., portable toilets) and the permanent O&M facility; and
- e) Impacts due to:
 - 1. *Blade throw*. An analysis of potential blade throw impacts, based on the range of turbine sizes being considered, will be prepared based on information related to turbine dimensions, operating characteristics, and Project site topography. This section will also include a review of international, peer-reviewed research and government reports addressing potential blade throw impacts. Manufacturer recommendations and local requirements will also be recited and discussed;
 - 2. *Tower collapse*. The Applicant will provide certification by a registered New York State professional engineer that the tower’s design is sufficient to withstand wind loading and seismic activity requirements for structures as established by the New York State Uniform Construction Code. Specifications regarding the wind speeds and conditions the selected

turbine is designed to withstand will be provided in the Certificate Application. This section will also include a review of international, peer-reviewed research and government reports addressing potential tower collapse impacts. Manufacturer recommendations and local requirements will also be recited and discussed;

3. *Audible frequency noise.* The Applicant will provide a literature review of national and international scientific, professional and peer-reviewed publications and government reports regarding the potential for noise impacts to cause hearing damage, interfere with speech, generate sleep disruptions, annoyance, complaints, or cause any other detrimental impacts to the health and well-being of local residents, including, but not limited to, the World Health Organization (WHO) guidelines (1999 and 2009). The information on wind turbine generated audible noise will be placed into context of the actual levels anticipated; discussion and analysis of how this relates to existing national and international guidelines, standards or thresholds of exposure will be provided. This information, in conjunction with the information and requirements set forth in Stipulation 19, will be used to discuss the findings and results related to operational noise and vibration studies to be provided in Exhibit 19. A consistent receptor labelling system will be used to identify common receptors in the noise and shadow flicker studies in Exhibits 15, 19 and 24. A discussion of which nonparticipating receptors will experience noise and shadow flicker impacts above established thresholds will be provided in Exhibit 24;
4. *Low-frequency noise and infrasound.* As noted above, the Application will provide a literature review of national and international scientific, professional and peer-reviewed publications and government reports on wind turbines and health effects including, but not limited to, WHO guidelines (1999 and 2009). This will include effects of infrasound and low-frequency noise on participating and non-participating receptors in proximity to the Facility. The information on wind turbine generated low-frequency noise and infrasound will be placed into context of the actual levels anticipated; discussion and analysis of how this relates to existing national and international guidelines or thresholds of exposure will be provided. Further, this information, in conjunction with the information and requirements set forth in Stipulation 19, will be used to discuss the findings and results of the noise and vibration studies to be provided in Exhibit 19;
5. *Ice throw.* An analysis of potential ice throwing range and size of ice fragments will be developed based on information available from operating wind farms, including relation to wind turbine height, blade length, and operational characteristics including blade tip speed and climatological setting. This analysis will include the range of turbine sizes being considered. Climatological data will be analyzed to determine the potential frequency of icing events in comparison with other wind farms in the region. This section will also include a review of international, peer-reviewed research and government reports addressing potential ice throw impacts. Manufacturer recommendations and local requirements will also be recited and discussed; and
6. *Shadow flicker.* The Application will provide a literature review of national and international scientific, professional and peer-reviewed publications and government reports on shadow flicker and associated health effects, including photosensitive epilepsy.

The information on shadow flicker will be placed into context of the actual impacts anticipated; discussion and analysis of how this relates to existing national and international guidelines, standards or thresholds of exposure, will be provided. This information, in conjunction with the information and requirements set forth in Stipulation 24, will be used to discuss the results of the shadow flicker analysis to be provided in Exhibit 24;

7. *Lightning*. The Certificate Application will include up-to-date information on lightning density for the region. Because potential lightning strikes are mitigated through appropriate grounding systems, no further study of lightning strikes is anticipated. A testing and maintenance plan for assuring the ongoing function of the grounding system will be provided in the Application;
8. Construction-related transportation impacts and oversize component deliveries, including potential safety impacts related thereto, will be discussed in Exhibit 25 of the Application.

Manufacturer and local setback requirements will be noted, where applicable, in each of the above sections. A more robust discussion of these setbacks will occur in Exhibit 6 and Exhibit 31.

- f) Maps of the Study Area and analysis showing relation of the proposed Facility site to public water supply resources; community emergency response resources and facilities including police, fire and emergency medical response facilities and plans; emergency communications facilities; hospitals and emergency medical facilities; designated evacuation routes; existing known hazard risks including flood hazard zones, areas of coastal erosion hazard, landslide hazard areas, areas of geologic, geomorphic or hydrologic hazard; dams, bridges and related infrastructure; explosive or flammable materials transportation or storage facilities; contaminated sites; and other local risk factors. Data sources for this mapping include the NYS GIS Clearinghouse, NYSDEC, U.S. Geological Survey (USGS), EPA, local governments, NYS Department of Transportation (NYSDOT), and the U.S. Department of State (USDOS). There are no storm surge zones in the Study Area, therefore this item is not included in the Stipulation;
- g) All significant impacts on the environment, public health, and safety associated with the information required to be identified pursuant to subdivisions (a) through (f) of this section, including all reasonably related short-term and long-term effects;
- h) Any adverse impact on the environment, public health, and public safety that cannot be avoided should the proposed Facility be constructed and operated, and measures for monitoring and measuring such impacts;
- i) Any irreversible and irretrievable commitment of resources that would be involved in the construction and operation of the Facility. This will include a discussion of human (e.g., time required for individuals to plan, review, and monitor the Facility), material (e.g., construction materials and building supplies), environmental (e.g., commitment of land area), and financial

resources (e.g., expenditures for Facility certification and construction) that would be committed to the construction and/or operation of the Facility;

- j) Any measures proposed by the Applicant to minimize impacts described in subdivisions (a) through (f) of this section;
- k) Any measures proposed by the Applicant to mitigate or offset impacts described in subdivisions (a) through (f) of this section. This will include a Complaint Resolution Plan, which provides a means for conveying any Facility-related complaints to the Applicant, a process for analyzing and addressing the complaint, and a procedure for follow-up with the affected party;
- l) A monitoring program for such impacts, including a discussion of the reporting protocols to be used and the manner in which those reported operational impacts will be used to inform the Project's management plans and measures to minimize or mitigate impacts during operations;
- m) A Fire Protection and Response Plan developed in consultation with local first responders and other emergency agencies, including County Sheriffs' Departments and County Offices of Emergency Services. This plan will include the following:
 - 1. Training of all operating personnel and procedures review in conjunction with local fire and safety officials;
 - 2. Regular inspection of transformer oil condition at each wind turbine step-up transformer;
 - 3. Regular inspection of all substation components;
 - 4. Regular inspection of fire extinguishers at all Facility locations where they are installed;
 - 5. All vehicles operating at the Facility will be equipped with firefighting equipment (fire extinguishers and shovels) as well as communications equipment for contacting the appropriate emergency response teams;
 - 6. The Material Safety Data Sheet (MSDS) for all hazardous materials at the Facility will be on file in construction trailers (during construction) and the O&M building (during operation), and provided to local fire departments and emergency service providers; and
 - 7. The Facility's Safety Coordinator shall notify the local fire department of any situation or incident where there is any question about fire safety, and will invite an officer of the fire department to visit the workplace and answer any questions to help implement a safe operating plan.

Stipulation 16-1001.16 Exhibit 16: Pollution Control Facilities

The proposed Facility does not include a pollution control facility component, and therefore Exhibit 16 will not be included in the Application.

Stipulation 17-1001.17 Exhibit 17: Air Emissions

The proposed Facility does not include any new or modified air emission or combustion sources, and therefore Exhibit 17 will not be included in the Application. To the extent that construction of