High Bridge Wind Project

Case No. 18-F-0262

1001.2 Exhibit 2

Overview and Public Involvement Summary

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EXHIBIT 2 OVERVIEW AND PUBLIC INVOLVEMENT SUMMARY

(a) Brief Description of the Proposed Facility

The proposed Facility is a large-scale electric generation wind facility located in the Town of Guilford, Chenango County, New York (see Figures 2-1 and 2-2 for Facility location and layout). The proposed Facility components will be situated on leased land. Farmers and landowners can continue with existing land uses such as farming, mining and forestry alongside these components. Key terms used to describe the High Bridge Wind Project are defined below:

- Facility: The Facility consists of up to 25 wind turbines generating up to 100.8 megawatts of electricity, together with the following structures and equipment:
  - Access roads: The Facility access roads will be approximately 12 miles long. Temporary access roads will be gravel surfaced and typically 60 feet wide to accommodate construction/delivery vehicles. The roads will be restored for use as permanent access roads, which will be gravel-surfaced and typically 20 feet wide.
  - Meteorological (met) towers: Two permanent met towers will be installed to collect meteorological data and support performance testing of the Facility.
  - Collection lines: The Facility includes collection lines within an approximately 18 mile corridor to deliver power from the wind turbines to the collection substation. The collection lines will be buried to the maximum extent practicable.
  - Substations: The collection substation and the point of interconnection (POI) substation will be co-located adjacent to an existing New York State Electric and Gas (NYSEG) transmission line. The collection substation will include a battery energy storage system. The collection and POI substation will be connected by a 200-foot long span of overhead transmission line.
  - Temporary laydown yard/staging area: A temporary construction laydown yard of approximately 10 acres will be established to accommodate construction trailers, storage containers, large project components, a temporary concrete batch plant (if needed), and parking for construction workers.
  - Operation and maintenance (O&M) facility: The proposed O&M facility be located on a three-acre site adjacent to the laydown yard and will consist of two buildings totaling approximately 10,400 square feet. The O&M facility will house permanent staff offices and store maintenance equipment and supplies.
- Facility Area: The general area of interest identified by the Applicant and depicted on Figures 1 and 2 of the Preliminary Scoping Statement (PSS) used to initiate scopes of studies and inform early outreach efforts.
- Facility Site: Those parcels/portions of parcels proposed to host the Facility components, depicted on Figure 2-2.
- Off-site Ancillary Features: Limited to temporary public road improvements in the vicinity of the Facility.

(b) Brief Summary of the Application Contents

A table summarizing applicable exhibits and accompanying appendices required under 16 NYCRR Part 1001 is located after the Table of Contents.

(c) Brief Description of the Public Involvement Program Plan (PIP) before Submission of Application

The draft PIP was submitted to the Siting Board on April 26, 2018. Comments on the PIP were received from the New York State Department of Public Service (DPS) on May 31, 2018, and the Applicant filed the revised PIP on June 27, 2018. The PIP is available on DPS' Document Matter Master (DMM) (http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=56497&MNO=18-F-0262) and on the Applicant's Facility-specific website (http://calpine/highbridgewind/com). The first goal of the PIP is to identify affected stakeholders. Since the PIP's final submission, the Stakeholder List has been updated based on the Applicant's consultations, meetings with stakeholders, and other outreach efforts. See Appendix 02-A for the updated Stakeholder List, which includes host and adjacent landowners.[1] The Applicant has completed the consultations identified in the PIP and held additional stakeholder meetings, discussions and outreach. These efforts are summarized in a PIP Tracking Log (see Appendix 02-B), which has been submitted regularly to DMM and will continue to be updated and posted on DMM throughout the Application process. Below is a summary of notable pre-application public outreach activities conducted by the Applicant:

- Presented to the Town Board in 2017 and 2019. The first meeting on August 9, 2017 focused on the Article 10 process, methods to obtain intervenor funds, scopes of studies, and general project location. The second presentation on July 17, 2019 before an audience of approximately 75 people focused on project specifics, including Facility layout, the Article 10 Application and methods for public viewing of the application materials.
- Sent direct mailings and notifications to stakeholders that included information on the Facility, permitting milestones, and websites for finding Facility information. The Applicant sent multiple rounds of pre-application outreach mailings (see Affidavits of Service in Appendix 02-C), including a request for water well information from landowners and businesses within ½ mile of a wind turbine or substation site and/or within 500 feet of the Facility Site and a pair of requests to municipal, state, and community organizations seeking information on visually sensitive resources and potential simulation viewpoint locations (see Exhibit 24).
- Held Open House Informational Sessions at the Guilford Town Hall on August 22, 2018 and November 28, 2018. Approximately 50-75 members of the public attended each session to ask questions and learn about the Facility. These sessions were publicly noticed in display ads in the *Evening Sun* and the Norwich *Pennysaver* (see

[1] For the purposes of the Stakeholder List, "adjacent landowners" include all landowners owning parcels within ½ mile of a wind turbine or substation site and/or within 500 feet of the Facility Site.

Appendix 02-D for Proofs of Publications). Direct mailings to local landowners and businesses within the Facility Area were sent in advance of these meetings.

- Sent notification letters in July 2019 regarding the project Stipulations public comment period and the filing of the Article 10 Application via direct mailing to all stakeholders, including host and adjacent landowners. These, along with PSS Notices (DMM Item 17), Intervenor Funding Notices (DMM Item 21), and Notice to Commence Stipulations (DMM Item 36) have been previously submitted to DMM.
- The Applicant is hosting a website (http://www.calpine.com/highbridgewind) that includes information about the Facility, maps, and the Article 10 process and provides links to key documents.
- The Applicant has filed/will file paper copies of non-confidential major documents (e.g., the PIP, PSS and Application) at the following repositories listed in the PIP: Guilford Town Hall, Guernsey Memorial Library, Oxford Memorial Library, and Gilbertsville Free Library.

In addition to the public outreach efforts listed above, the Applicant was proactive at meeting with potentially affected agencies. Key highlights of meetings with affected agencies include:

- Met with Chenango County officials on July 18, 2018, including a meeting with the Chairman of the Board of Supervisors, Director of Planning, Director of Public Works, and staff from the Highway Department.
- Corresponded with local area utility providers (i.e., Dig Safely NY, NYSEG, etc.) regarding the location of nearby utilities and potential setback and design standards (see Exhibit 12).
- Met with staff from the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) and discussed previous studies that could provide protocols/guidance on cultural efforts (see Exhibit 20).
- Met or otherwise consulted with the New York State Department of Environmental Conservation (NYSDEC), Delaware-Otsego Audubon Society (DOAS), and U.S. Fish & Wildlife Service (USFWS) regarding the scope of avian studies and the Facility's effect on eagle and raptor populations (see Exhibit 22).
- Submitted a Freedom of Information Law (FOIL) request to the New York State Department of Health (NYSDOH) for information on known public water supplies (see Exhibit 23).
- Participated in a conference call with Lt. Warren Eaton Airport steering committee members on May 31, 2019 regarding the Federal Aviation Administration (FAA) filing process.
- Attended a site tour with New York State Department of Agriculture & Markets (NYSDAM) staff on July 19, 2019.

See the PIP Tracking Log (Appendix 02-B) for additional information regarding outreach activities.

Per 16 NYCRR § 1000.5, the Applicant submitted a PSS to DPS on January 24, 2019. At the close of the public comment period, the Applicant prepared a response document summarizing the comments on the PSS and its response to those comments, which was submitted to DMM. The majority of comments received were from DPS.

Although the comments covered a broad range of issues, many focused on noise impacts, preliminary design and construction concerns, and visual/shadow flicker impacts. NYSDEC's comments focused on terrestrial ecology, wetland and water resource impacts. Comments also were received from NYSDAM and NYSDOH covering various subjects, including noise, visual and transportation impacts, and public safety concerns. The DOAS submitted comments relating to bird/bat and wildlife impacts.

The Applicant has worked to address the majority of topics raised by the stakeholders and the public as part of pre-application outreach. The key items or concerns raised during these outreach efforts are summarized below Table 2.1, which also provides examples of how the Applicant has worked to address the matters.

Table 2-1 Summary of Key Topics Identified During Pre-Application Outreach

Key Topics Raised During Pre-Application Outreach Activity	Applicant's Response
Access to Information	As described above, the Applicant has worked to inform the local community of various Article 10 milestones via open houses, mailings, and meetings with the Town Board and others. The Applicant has made non-confidential major documents available via local repositories and its online website and has presented this information to the public during open houses and other presentations.
Potential wildlife and wetland impacts	As described in Exhibit 22, the Applicant has prepared numerous avian and ecological studies. Through an iterative design process, the Applicant has located wind turbines, access roads, and collection lines largely outside of wetlands, and is working with NYSDEC to develop adaptive management techniques to avoid and minimize potential impacts to wildlife to the maximum extent practicable.
Wind Turbine Height/Visual Impacts	The Applicant conducted extensive outreach to municipal, state, and community groups to identify visually sensitive resources and viewsheds of concern and provide the information needed to assess the potential visual impact of the Facility (see Exhibit 24). As described in Exhibit 9, the use of taller, more efficient wind turbines reduces the number of turbines needed to meet the 100.8 MW capacity thus reducing other adverse environmental impacts.
Transportation Impacts	The Applicant has coordinated directly with the host community to discuss road use and methods to avoid/minimize temporary impacts on transportation and roads associated with the Facility (see Exhibit 25).
Wind Turbine Height/Constructability	The Applicant has completed a preliminary geotechnical evaluation, which includes a desktop analysis and on the ground soil borings collected at a subset of Facility component locations to assess constructability (see Exhibit 21).
Impacts to Water Wells	The Applicant sent surveys to landowners within ½ mile radius of wind turbine and substation sites and/or within 500 feet of the Facility Site to identify potential wells. The Applicant has agreed that no wind turbine will be located within 100 feet of a known well and no blasting will occur within 500 feet of a known well.

(d) Brief Description of the Public Involvement Program after Submission of Application

(1) Post-Application PIP

Section 5.3 of the PIP requires the Applicant to identify additional activities to encourage stakeholder participation during the certification process. These activities include: periodically updating the Stakeholder List; attending stakeholder meetings to provide Project updates, if needed; providing notice of construction activities to stakeholders; and implementing complaint-resolution procedures (see Exhibit 12 and Appendix 12-B). The Applicant has agreed to provide a public presentation to the Town of Guilford in the summer/fall of 2019 after filing the Application. In addition, the Applicant will be setting up a local office for the Project. Information regarding these and all ongoing PIP activities will be tracked in the log posted periodically on DMM (see weblink above).

(2) Updated Stakeholder List

The Stakeholder List (see Appendix 02-A), which has been updated throughout the pre-application process, will be filed confidentially with this Application because it includes personal host and adjacent landowner information. The list will be used for mailing notices of Facility milestones, including submission of this Application, and will be updated as new stakeholders are identified.

(3) Stakeholder Identification

Early pre-application notices and mailings sent prior to the finalization of the Facility layout were sent to landowners of all parcels that intersect the Facility Area as defined in the PIP and PSS. See Affidavits of Services (Appendix 02-C). The current Stakeholder List includes host and adjacent landowners, among many others. The Applicant defines "adjacent landowners" as all landowners owning parcels within ½ mile of wind turbine or substation sites and/or within 500 feet of the Facility Site. This list will be updated post-filing to account for any new host or adjacent landowners that are identified as a result of layout changes as well as those that request in writing to be added to the Stakeholder List.

(4) Additional Notices

In addition to the notices required under 16 NYCRR §§ 1000.6 and 1000.7, the Applicant mailed notice of the pending Application submittal to the updated stakeholder mailing list as described above. The notice includes information on the Facility generally and the Article 10 Application specifically. A copy of the mailing list and documentation indicating the dates the mailings were made will be provided to the Secretary of the Siting Board.

(5) Publication in Free Community Newspaper

In addition to publication in the local paper of record (the *Evening Sun*), notice of the Application and any subsequent notices will be published in at least one free community newspaper (e.g., the Norwich *Pennysaver*), when feasible.

(e) Brief Overall Analysis

This Section provides the Siting Board with the information required to: (1) make the required findings regarding the nature of the probable environmental impacts of the construction and operation of the Facility on (a) ecology, air, ground and surface water, wildlife and habitat, (b) public health and safety, (c) cultural, historic and recreational resources, and (d) transportation, communications, utilities and other infrastructure; (2) decide whether to grant a Certificate under New York Public Service Law (PSL) § 168(2); and (3) make the determinations required by PSL § 168(3).

(6) Ecology, Air, Ground and Surface Water, Wildlife and Habitat

(i) Ecology

Approximately 73% of the 3,921-acre Facility Site is forested with beech-maple mesic forest and hemlock-northern hardwood forest. Approximately 18% and 2% of the Facility Site is hayfield/pasture and row crops, respectively. The Facility Site also includes successional old field (6.0%), disturbed/developed (0.6%), and open water (0.3%) ecological community types. Approximately 117.4 acres will be temporarily disturbed by the Project; approximately 111.3 acres will be permanent converted (i.e., maintained by the Applicant in a successional state); and approximately 43.5 acres will be permanently impacted (i.e., converted to built facilities).

The Applicant has designed the Facility Site specifically to avoid sensitive resources such as wetlands and forested land to the maximum extent practicable. Facility access roads were sited on existing roads, farm lanes and logging roads, wherever possible. These and other measures mean that the Facility will impact only 192.7 acres of forest land: 84.5 acres will be allowed to revegetate, 82.0 acres will be converted to a different cover type (e.g., scrub shrub), and 26.2 acres will be converted to built facilities. In the limited areas where the Applicant could not avoid or further minimize these impacts, it has identified mitigation measures (i.e., restoration seeding, invasive species control, and other best management practices [BMPs]) that will mitigate/offset the impacts (see Exhibit 22).

With respect to wetlands, after completing the initial delineation process for the Facility, the Applicant relocated certain structures, reducing permanent wetland impacts to 0.51 acres, permanent forested wetland conversion to 0.78 acres, and temporary wetland impacts to 1.24 acres. A review of NYSDEC freshwater wetland maps indicates there are no State-regulated wetlands that intersect the Facility Site. To address unavoidable impacts to wetland resources, the Applicant is proposing mitigation through an in-lieu fee payment to the Wetland Trust Mitigation Bank to offset the lost functions of these resources (see Exhibit 22). Any potential indirect impacts to wetlands and other sensitive resources will be avoided/minimized by implementing plans, including the Facility-specific Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention, Control and Countermeasures (SPCC) Plan, as well as by implementing other impact minimization measures (e.g., establishing no equipment access and restricted activity areas).

No threatened, endangered, candidate, rare plant species, or significant ecological communities were identified at the Facility Site. Accordingly, the temporary and permanent disturbance to vegetation communities is not expected to result in adverse impacts to protected plants or significant ecological communities. The Applicant will implement measures to prevent the spread of invasive species and has included an Invasive Species Control Plan with the Application.

(ii) Air

Although air emissions are expected from construction equipment and vehicles, they will be minor and limited to the construction period. To minimize localized air impacts (including fugitive dust and emissions from sources such as the concrete batch plant, as needed), the Applicant will require the contractor to adhere to BMPs, including prohibiting unnecessary idling of equipment and adherence to New York State guidance on controlling fugitive dust emissions. Overall, the Facility will have a positive impact on ambient air quality since it generates electricity without emissions.

(iii) Ground Water

The nearest primary and sole source aquifers are located within 24 and 13 miles of the Facility Site, respectively. Accordingly, no adverse impacts to these types of aquifers are anticipated. The Facility Site overlays a 0.2 acre portion of an unconsolidated aquifer mapped by NYSDEC. However, Facility construction activities will be located more than a quarter mile from this aquifer; thus, no adverse effects are anticipated. The Applicant reached out to NYSDOH for information about public water supplies within 1 mile of the Facility Site and surveyed landowners within ½ mile of wind turbine or substation sites and/or within 500 feet of the Facility Site to obtain information about existing groundwater wells. Based on information received to date, it is unlikely that construction of the proposed Facility will impact water wells. Most wind turbines are located on hilltops, generally above and outside the aquifer footprints, and the excavations will be comparatively shallow and so are not expected to intercept groundwater. In addition, most of the wells are located more than a quarter mile from the nearest wind turbine. The Applicant will conduct pre- and post-construction baseline testing of certain wells to identify potential impacts and mitigate, as necessary (see Exhibit 23(b)(5)).

During construction, the greatest potential for groundwater impacts is the installation of wind turbine foundations. Any blasting required will comply with applicable laws and be completed according to a site-specific blasting plan designed to protect surrounding structures, including wells. There is the potential for short-term, minor impacts to groundwater from accidental discharge of petroleum/chemicals; disruption of groundwater flows down-gradient of proposed wind turbine foundations; minor modifications to surface runoff or stream-flow potentially affecting groundwater recharge characteristics; minor degradation of groundwater quality relating to installation of concrete foundations; impacts to groundwater recharge areas (wetlands); and groundwater migration along collection line trenches. However, these impacts will be insignificant and/or avoided altogether through adherence to the Facility's SWPPP, SPCC Plan,

Inadvertent Return Plan, and Blasting Plan, among others. Construction phase impacts will be further avoided through implementation of an Environmental Monitoring & Compliance Plan (ECMP). Operation of the Facility is not expected to affect groundwater quality or quantity.

(iv) Surface Water

As part of the wetland/stream delineation process, the Applicant identified all NYSDEC-mapped streams within the limits of disturbance for the Facility. Five Class C streams were identified, along with one Class C(t) stream, Kent Brook. Class C(t) is the lowest classification eligible for protected status. Facility construction will temporarily disturb approximately 2,201 linear feet of perennial, intermittent and ephemeral streams and permanently disturb 731 linear feet. Over the course of the design process, the Applicant reevaluated the Facility layout to reduce impacts to sensitive resources, including streams, to the maximum extent practicable. The Applicant has attempted to site Facility components to minimize stream crossings and cross at narrow points when streams cannot be avoided. Despite these efforts, direct impacts to surface waters may occur during construction of the Facility, including: an increase in water temperature and conversion of cover type due to clearing of vegetation; siltation and sedimentation due to earthwork, such as excavating and grading activities; disturbance of stream banks and/or substrates resulting from buried cable installation; and the direct placement of fill in surface waters to accommodate road crossings. Indirect impacts to surface waters may result from sedimentation and erosion caused by construction activities (e.g., removal of vegetation and soil disturbance leading to stormwater-related impacts). The Applicant has committed to implementing measures to protect surface water resources from direct and indirect impacts (e.g., establishing no equipment access areas and restricted activity areas, and restricting work periods consistent with NYSDEC guidance). The Applicant also is implementing trenchless technologies, such as horizontal directional drilling (HDD) that are designed to avoid and/or minimize stream impacts. Finally, construction impacts will be minimized through measures identified in the SWPPP (e.g., erosion and sediment control practices and daily site inspections) and implementation of the ECMP. The Applicant also will implement erosion and sediment control practices (e.g., dry swales, vegetative filters and level spreaders) to minimize indirect discharges of surface runoff once construction of the Facility is complete.

The Facility layout has been designed to avoid floodplains. No Facility components, including laydown areas, are within designated 100-year floodplains. Also, the access road layout has been developed with deliberate intent to avoid permanent water crossings wherever feasible. Where access roads must cross streams (e.g., there is no other practicable way to access the wind turbine), the crossings have been designed to accommodate high flow levels. During construction, the Applicant will deploy various preventative measures to minimize impacts associated with potential flooding events, such as reinforcing/stabilizing erosion control practices prior to storm events.

(v) Wildlife and Habitat

The Applicant conducted comprehensive surveys of wildlife on the Facility Site using a combination of existing databases and field surveys. The key conclusions from these surveys and analyses are set forth below:

- The only mammals (excluding bats) known to occur at the Facility Site are species common to south central New York. No endangered/threatened mammal species or species of special concern were identified during on-site surveys or by the New York Natural Heritage Program (NYNHP) or USFWS Information for Planning and Consultation (IPaC) tool.
- Several common New York bat species are likely to be found in the Facility Site including the big brown bat, hoary bat, eastern red bat and silver-haired bat. Other bat species that may use the Facility Site include little brown bat, small-footed bat and tri-colored bat. According to the NYNHP review, there are no known maternity roosts, hibernacula, or critical habitat for the State-listed northern long-eared bat (NLEB). However, per NYSDEC, it is possible that NLEB may occur within the Facility Site during fall migration (July 1 – October 1). The Applicant developed a Net Conservation Benefit Plan (NCBP) to implement measures to avoid and minimize direct and indirect impacts to NLEB and ensure a net conservation benefit to the species. The Applicant's minimization measures will reduce risk to all bat species, specifically migratory tree bats (i.e., eastern red bat, hoary bat, and silver-haired bat).
- No rare, threatened or endangered terrestrial invertebrates were identified within the Facility Site.
- Based on publicly available data, it is estimated that 11 species of reptiles and 19 species of amphibians may be found within the Facility Site.
- Protocols for raptor migration and breeding bird surveys following NYSDEC recommended guidelines and eagle use surveys and eagle nest aerial surveys following recommendations in the USFWS Eagle Conservation Plan Guidance were reviewed by DOAS, NYSDEC, and USFWS. A second year of eagle use surveys is on-going, and a full two-year report will be available June 2020. Data gathered during on-site avian surveys combined with public data sources showed that most birds observed were common NY bird species. During on-site surveys, two state-endangered species (peregrine falcon and golden eagle), two state-threatened bird species (bald eagle and northern harrier) as well as 14 high priority species of greatest conservation need or species of greatest conservation need were identified. No active bald or golden eagle nests were documented in the Facility Site. The closest active and occupied bald eagle nest is approximately 2.8 km (1.7 miles) from the closest proposed wind turbine. Based upon on-site survey results, the Applicant will not be seeking incidental take authorization for State-listed avian species. However, the Applicant has committed to implement avoidance and minimization measures in the NCBP that will benefit all avian species.

Impacts to wildlife are expected to be minimal and not expected to have population-level effects on any single species that occurs in the Facility Site. Construction-related impacts to wildlife include incidental injury and mortality due to

construction activity and vehicular movement. Minimal habitat disturbance/loss is anticipated with clearing and earth-moving activities, and displacement of wildlife may occur due to increased noise and human activity. However, none of these construction-related impacts will be significant enough to affect local populations of any resident or migratory wildlife species. Tree clearing is intended to take place primarily between November 1 and March 31 when bats and other mammals are in hibernation and many birds are not nesting. If tree clearing is required outside this season or if an eagle nest or roost is discovered on the Facility Site, the Applicant will implement measures to avoid/mitigate potential impacts from tree clearing that are described in the NCBP.

Impacts relating to Facility operation include direct habitat loss, habitat degradation through forest fragmentation, disturbance/displacement of wildlife due to the presence of the wind turbines and other equipment, and incidental avian and bat mortality as a result of collisions with operating wind turbines. With respect to wildlife habitat, no significant natural communities or critical habitats were identified within the Facility Site. A total of 43.5 acres of wildlife habitat will be converted to built facilities; however, this represents approximately 1% of the 3,921-acre Facility Site. A detailed study included with the Application concluded that given the limited amount of forested habitat to be cleared for construction of the Facility (approximately 5% of the Facility Site) and the current patchwork of forested and non-forested habitat, it is unlikely that the Facility will cause significant forest fragmentation impacts to bird communities. The study reached a similar conclusion regarding the impact of loss of forested habitat on bats. The potential disturbance/displacement impacts on breeding birds, waterbirds, raptors, and game species should be insignificant.

Although some bird/bat mortality associated with wind turbine collisions is expected, the Facility has been designed to minimize such incidences. Among other things, electrical collection lines between the wind turbines will be buried. Lighting of the wind turbines (and other infrastructure) will be minimized to the extent possible without compromising site safety and security or FAA compliance, and will follow specific design guidelines to reduce collision risk.

NLEB are rarely found at wind farms compared to other bat species. No NLEB have been recorded in Chenango County. The closest known county with summer maternity records is 42 miles from the Facility and the closest known hibernacula is approximately 46 miles away. Direct impacts to migrating NLEB and other migratory bats will be reduced by curtailing from 30 minutes before sunset to 30 minutes after sunrise from July 1 to October 1 when wind speeds are below 5.0 m/s and temperatures are above 10 degrees Celsius. More generally, the avoidance, minimization, and mitigation measures outlined in the NCBP will offset the potential impacts of the Facility to NLEB and result in a net conservation benefit for the species as well as reduce direct impacts to all bats, specifically migratory bat species.

(7) Public Health and Safety

To the best of the Applicant's knowledge, there are no known instances of the general public being injured at an operating wind farm in the United States, despite unique impacts posed by wind farms (including the extremely rare events of blade throw, tower collapse, ice shedding and ice throw). Moreover, the isolated location of the Facility reduces the already minimal risk to the public presented by these potential impacts (see Exhibit 15).

Significant adverse shadow flicker impacts are not anticipated. Of the 818 receptors identified in the study area, only 14 are could potentially exceed the 30-hour-per-year design goal; of that number, only seven are on non-participating parcels. These results are inherently conservative because modeling receptors assume a window faces every wind turbine ("greenhouse mode") and all receptors are modeled without obstacles that could block the shadow flicker effect. The Applicant is committed to limiting shadow flicker to a maximum of 30 hours annually at any non-participating residential receptor and has identified various mitigation measures to achieve that goal (see Exhibits 15 and 24).

The Facility will not result in any public health and safety issues due to infrasound and audible frequency noise. Modern pitch-regulated wind turbines of the type proposed for this Facility do not create adverse levels of low frequency noise. As discussed in Exhibit 19, no impact of any kind, whether related to annoyance or health, is expected from Facility-related low frequency noise.

Based on the detailed analyses summarized in Exhibit 19, the Facility has been designed to minimize sound impacts. No non-participating receptors will exceed 45 dBA $Leq_{9\ hr\ night}$, and no participating receptors will exceed 55 dBA $Leq_{9\ hr\ night}$. The proposed limits minimize and mitigate any potential adverse impacts associated with the sound produced by the construction and operation of the Facility and are consistent with the 1999 and 2009 World Health Organization (WHO) guidelines to address sleep disturbance and health effects, respectively. Adherence to these WHO guidelines will avoid potential impacts due to sound from the proposed Facility and will protect the health of the residents of the community. To confirm that the Project is not exceeding noise thresholds, the Applicant has prepared a post-construction noise evaluation protocol. Also, a noise-specific complaint resolution plan has been developed.

(8) Cultural, Historic and Recreational Resources

Within the Facility's Area of Potential Effect (APE) for Direct Effects, the Applicant identified four archaeological resources—Pre-Contact Isolates 1-3 and the W. Doolittle Historic Period Site—and 10 Native American stone feature (SF) sites consisting of 35 individual SFs. None of the sites are believed eligible for listing on the State/National Register of Historic Places (S/NRHP). The Applicant has worked and will continue to work with NYSOPRHP to assess the feasibility of avoiding impacts to SFs. Going forward, mapped locations of potentially significant archaeological sites within approximately 200 feet of proposed Facility-related impacts will be identified in construction drawings and marked

in the field by construction fencing with signs restricting access. Unanticipated archaeological resources encountered during construction will be addressed consistent with the Facility's Unanticipated Discovery Plan (see Exhibit 20).

No historic structures will be damaged or removed during construction and operation of the Facility. The Facility's impact on cultural, historic and recreational resources is limited to its potential visual impacts. The historic resources survey resulted in the identification of 465 historic properties, including 20 S/NRHP-listed properties located within the APE for Indirect Effects. A total of 242 of these properties were recommended by the Applicant to be S/NRHP eligible. It is anticipated that the Facility will be visible from a subset of these S/NRHP-listed and eligible properties within the APE for Indirect Effects. Following determination by NYSOPRHP regarding the S/NRHP eligibility of the 465 resources included in the survey, a separate Historic Resources Effects Analysis will be prepared and submitted to NYSOPRHP that will assess the potential visual and auditory effects of the Facility on properties listed on or determined eligible for listing on the S/NRHP by NYSOPRHP, and on the overall character and setting of the rural landscape.

More generally, as discussed in Exhibit 24, the Applicant conducted a comprehensive Visual Impact Assessment (VIA) to determine the extent and significance of the Facility's visual impacts. The study assessed the character and quality of the existing landscape, used models to assess the potential visibility of the Facility within a 10-mile study area, and included simulations of the Facility from various viewsheds in the area. Taking account of the screening effects of topography, vegetation and structures, the visual impact modeling shows that wind turbines will not be visible within approximately 90.5% of the Visual Study Area (92.6% at night). The Applicant conducted a comprehensive outreach process to identify viewsheds of concern in the community. Fifteen simulations were then prepared to assess the potential visual impact of the Facility in various settings (forest, open water, transportation corridor, rural residential/agricultural and city/village). A panel of five registered landscape architects reviewed the simulations and concluded that the Facility's overall contrast with the visual/aesthetic character of the area will generally be minimal/moderate. Based on experience with currently operating wind power projects, public reaction to the Facility is likely to be highly variable based on proximity to the wind turbines, the affected landscape, and the attitude of the viewer regarding wind power.

(9) Transportation, Communications, Utilities and Other Infrastructure

(i) Transportation

Virtually all of the traffic-related impacts associated with the Facility will occur during construction (see Exhibit 25). There will be a temporary increase in truck traffic on area roadways serving the Facility Site, including conventional construction trucks, crane transporters, concrete trucks, and oversized semi-trailers to transport the Facility components. The delivery of each wind turbine will require the use of approximately 11 oversized/overweight (OS/OW)

vehicles. The crane required to assemble the wind turbines will be delivered to the Facility Site using up to 16 trucks; additional trips may be required to transport the crane between wind turbines. Numerous additional truck trips are required to deliver gravel, concrete and other materials to the Facility Site. Although minor traffic delays may occur during delivery of equipment components, because existing traffic volumes are low, local traffic flow should not be significantly impacted. Moreover, the Applicant has identified preventative measures to facilitate transportation and maintain road user safety.

As part of its assessment of the traffic impacts of the Facility, the Applicant's consultant reviewed available traffic information, corresponded with local highway supervisors, and drove around the Facility Area to identify possible access routes, assess road conditions, and identify routes that posed safety concerns (sharp curves, steep grades, restricted sight distance). Based on this assessment, the Applicant determined that: there are no posted bridges in the route evaluation study area; there are some culverts along the haul routes that may need improvement; and certain roadways have other physical restrictions (width, deficient intersection radii, low utility wires, etc.) that must be remedied prior to use by OS/OW vehicles. The Applicant has preliminarily identified the improvements that must be made to the transport routes identified to address these deficiencies and ensure safe use. Any damage to local, county or state roads caused by construction of the Facility will be repaired in accordance with agreements with local communities (i.e., road use agreements [RUAs]). In addition, the Applicant will obtain all required local, county and state permits and approvals (highway work permits, utility work permits, etc.).

Normal operation and maintenance of the Facility will not impact local traffic or road conditions. Periodic trips to each wind turbine location using non-OS/OW vehicles will be necessary to conduct inspections and repairs/maintenance. In the rare instance where a major component requires removal/replacement, the Applicant will be required to transport the components consistent with the RUAs.

(ii) Communication

As discussed in Exhibit 26, the Facility is not expected to have an impact on cable or satellite television, AM or FM radio broadcast coverage, amateur radio stations, emergency responder services, municipal/school district services, industrial/business land mobile sites, area-wide public safety and mobile phone communications, microwave telecommunications, the New York State Mesonet, or GPS. The Facility is also not anticipated to result in any significant adverse impacts to Doppler, NEXRAD, or other radar systems. Although minor impacts to certain off-air television signals are possible, the Applicant has committed to addressing any concerns through its complaint resolution process.

The Applicant sent a written notification of the proposed Facility to the National Telecommunications and Information Administration (NTIA) seeking feedback on possible impacts of the Facility on federal communication systems. The

NTIA noted that the Facility fell within the notification zone of the Binghamton NEXRAD radar. However, the U.S. Department of Commerce required further contact only if the Facility Site changes or wind turbine heights increase by 10 meters or more. In addition, the Applicant has submitted a request for Determinations of No Hazard (DNH) from the FAA pursuant to 49 USC § 44718. Upon receipt of the request, the FAA must reach out to the U.S. Department of Defense and other agencies to determine the potential impact of the wind turbines on air safety and military readiness. Issuance of DNHs is confirmation that the wind turbines will not have adverse impacts in these areas.

(iii) Utilities and Other Infrastructure

As described in Exhibit 12, there are few public utility systems in the vicinity of the Facility because of the rural nature of the area. The Applicant has reviewed publicly available databases and consulted with local municipalities and other stakeholders to identify major utility systems within the Facility Site. Based on that review, the Applicant identified one 115 kV transmission line owned by NYSEG and multiple overhead electric distribution and telecommunications lines. No other existing utility systems or pipelines were identified within the Facility Site. The Applicant will coordinate with NYSEG to avoid interfering with transmission, distribution and telecommunications lines.

(10) Determinations Pursuant to PSL Section 168

Under PSL § 168(3), the Application must provide the Siting Board with the information needed to make five determinations. These determinations are set forth below.

(i) The Facility is a Beneficial Addition or Substitution for Electric Generation Capacity of the State

The Facility is a beneficial addition and substitution for the electric generation capacity of the State as it helps the State achieve the goals of the 2015 State Energy Plan and related State energy policies to increase renewable energy generation and reduce carbon emissions. Based on the results of the System Reliability Impact Study, the Facility is not anticipated to have any adverse effects on the New York power grid. The Facility will improve fuel diversity within the State by increasing the electric capacity from renewable wind power. In so doing, it will reduce demand for fuel and ease fuel delivery constraints. The inclusion of battery storage will help achieve New York's energy storage goals.

(ii) The Construction and Operation of the Facility Will Serve the Public Interest

In addition to the beneficial impacts to the State's energy grid—including new battery storage capacity—the Facility will have a positive impact on air quality, climate change and socioeconomics (e.g., increased employment, increased revenues to local municipalities, and purchases of products and services in the local community).

(iii) The Facility Will Minimize/Avoid Adverse Environmental Effects to the Maximum Extent Practicable

The information contained in this Application and summarized above thoroughly addresses the Facility's environmental impacts. Although some adverse environmental impacts will occur, they will be minimized through the use of various general avoidance and minimization measures to the maximum extent practical, as well as through site-specific mitigation measures, including but not limited to:

- Siting the Facility to largely avoid impacts to wetlands and minimize, to the maximum extent practicable, impacts to forest lands and streams.
- Configuring the Facility to avoid and minimize direct impacts to prehistoric or historic archeological resources, including SFs.
- Consolidating the layout to minimize vegetation disturbance and reduce impacts to the viewshed.

With the implementation of these and other avoidance and minimization measures outlined in the Application, the Facility is expected to result in positive, long-term overall impacts that will offset the adverse environmental effects that cannot otherwise be avoided, minimized or mitigated.

The Applicant also has developed programs to ensure that the Facility's impacts will be offset or minimized for the duration of the Certificate. These programs include, but are not limited to: a complaint resolution plan, which identifies and addresses concerns that may develop during Facility construction and operation; implementation of a post-construction invasive species control plan; implementation of an operation and maintenance plan to optimize the Facility's operational capacity and availability and proactively detect any significant safety or maintenance issues; and a post-construction avian and bat monitoring program to monitor any adverse impacts to avian and bat species and determine additional mitigation measures to avoid significant adverse impacts.

(iv) The Applicant Will Offset/Minimize Impacts to Environmental Justice Communities for the Duration of the Certificate Using Verifiable Measures

The nearest potential EJ area as identified by the NYSDEC is approximately 5.2 miles from the Facility Site. Given this distance, and the lack of adverse air quality impacts as described in Exhibit 17, no adverse effects to EJ areas are anticipated (see Exhibit 28).

(v) The Facility Will Comply with State and Local Laws and Regulations

The Facility will conform to all State substantive requirements for those approvals, consents, permits, certificates, or other conditions needed to construct and operate the Facility. The Applicant's compliance with State requirements is thoroughly outlined in Exhibit 32. The Facility's compliance with local laws and regulations is addressed in Exhibit 31 of this Application. As currently proposed, the Facility will comply with all applicable local laws and regulations and does not require any waivers from the Siting Board.