Comment Source	Topic and item, per Comment Letter	Topic	Comment	Response
1 (DPS)	General Item 1	Public Service Law Requirements	In addition to the specific comments on many topics below, Staff advises that the Application must also contain all of the informational requirements included in 16 NYCRR §1001.	The Application will include the information required for wind energy facilities by 16 NYCRR 1001.
1 (DPS)	General Item 2	Substation Terminology	Terminology used in pre-application and future application phases should be standardized. For example, the PSS document uses the terms “POI substation” and “POI switchyard” interchangeably. DPS recommends that the Point of Interconnect component of the proposed major transmission facility subject to PSL Article VII be referred to as the ‘POI switchyard’ (as described at PSS p. 92); and that the “Project substation” should refer to the component site and equipment that includes both low voltage and high voltage components, and which defines the delineation between the proposed major generating facility and the proposed major electric transmission facility. The substation is expected to include step-up transformers and related equipment to increase voltages from 34.5 kV to 230 kV or similar.	Updated PSS consistently uses the identified terminology.
1 (DPS)	General Item 3	Article 10 and Article VII jurisdiction	The PSS includes various descriptions of the Project and the Facility, which are not consistent and should be clarified to distinguish the Article 10 Siting Board jurisdictional “Generating Facility” from the Article VII Public Service Commission jurisdictional “Major Transmission Facility.” The PSS also fails, however, to acknowledge the requirement of Public Service Law Article 10 to address cumulative impacts of the Generating Facility and related facilities including those of the Major Transmission Facility. See PSL §168.2 and §168.4. DPS advises that analysis should address Project facilities as appropriate, such as operational noise assessment of the wind generators and the substation transformers.	Impacts resulting from the generating facility (Project) and the transmission facility (which together are one project) will be described and assessed in the Application.
1 (DPS)	Exhibit 1, General Requirements	Case 26680 CECPN	Page 1 refers to the proposed interconnection switchyard and states that this Project component will be transferred to the New York Power Authority upon completion of the project. DPS notes that the interconnection will be to the Moses-Willis-Plattsburgh transmission facilities that were issued a CECPN pursuant to Public Service Law Article VII in Case 26680. A modification or amendment of that CECPN may be necessary. (See also, comment below re: Exhibit 32.)	BRE has no opinion on whether an amendment to NYPA’s CECPN would be required by BRE transferring ownership of the switchyard that will be built by BRE pursuant to the CECPN that BRE is seeking.
1 (DPS)	Exhibit 2, Overview and Public Involvement Item 1	Transmission line outreach	Section 2.1, page 3 – DPS advises that the Project outreach should include efforts to engage with stakeholders and identify interests in the transmission line as well as the wind generating facilities and related facilities.	BRE will conduct additional public outreach efforts to collect feedback on the transmission line route when BRE has completed its work in planning and evaluating the route.
1 (DPS)	Exhibit 2 Item 22	Article VII summary	Section 2.3, page 4 generally describes Application and PSS Contents. DPS advises that a description of studies to be made of the related Article VII facility should be characterized and summarized to enable concurrent Article 10 and Article VII project reviews.	The updated PSS lists typical studies to be included in the Article VII application.
1 (DPS)	Exhibit 2 Item 3	PIP reference	Section 2.4 - The Applicant refers to the PIP in this section; however, makes no mention of where the PIP and/or related information can be found.	Updated PSS describes the PIP and where it can be found.
1 (DPS)	Exhibit 2 Item 3A	Article VII outreach	The Applicant should include information on the Article VII piece of the project, and describe the public outreach the Applicant has undertaken to keep the public informed about this part of the project as well.	The updated PSS specifies that any outreach on the transmission line should be documented in Exhibit 2.
1 (DPS)	Exhibit 2 Item 3B	Local document repositories	The Applicant should make clear that there are local repositories with information of the project documents including the PIP and the PSS, in addition to materials presented at its public outreach events.	Updated PSS describes document locations.

1 (DPS)	Exhibit 3, Location of Facilities	Local document repositories	Section 3.1 - The Applicant should clarify that the local repositories have received paper copies of the project documents including the PIP and PSS and any other materials presented at outreach events.	BRE mailed paper copies of the PSS to all repositories. U.S. Mail tracking data indicates the documents were received at all locations, and BRE has spoken with librarians or clerks at all locations to verify it had been received.
1 (DPS)	Exhibit 4, Land Use Item 1	DEC 480-a	The PSS does not address lands enrolled in long-term forest management programs administered by NYSDEC under Section 480-a Forest Tax Law. DPS recommends consulting with Project participating landowners and NYSDEC regarding properties enrolled in this program and addressing potential effects of the facilities on continued enrollment.	Updated PSS adds a section stating the application will identify parcels subject to forest management plans required by New York's section 480-a Forest Tax Law.
1 (DPS)	Exhibit 4 Item 2	Planning documents	Section 4.11 – Project Compatibility with Existing and Planned Land Uses (pg. 9) refers to "recent documents…by the North Country Economic Development Council, and…the North Country Planning Consortium." Please provide citations to these documents or provide copies to DPS for review.	BRE will email these documents to DPS.
1 (DPS)	Exhibit 5, System Reliability Impact Study	SRIS	DPS Staff advises the Applicant that pursuant to 16 NYCRR 1001.5(a) this exhibit must contain a System Reliability Impact Study (SRIS). Failure to include the SRIS with the application may result in the application bring deemed incomplete.	As required by 1001.5(a) the SRIS will be provided.
1 (DPS)	Exhibit 6, Wind Power Facilities Item 1	Property Line Setback	Section 6.1 – Setback Requirements- indicates that local laws in the project area establish setback requirements and turbine tip height limits. As indicated in PSS Table 6.1 (pg. 14), the tip heights of proposed turbines for the Project exceed required setback distances to Property Boundaries and roads for three Towns in the Project Area. DPS advises that minimum setback distances are generally related to maximum heights for tall infrastructure including large-scale wind turbines. The relation of height-to-setback in two of these local laws is 1:1.25; thus the corresponding setback for a 590 feet tall turbine would be 738 feet. In establishing facility design and layout criteria, consideration of greater setback distances is recommended, to comport with the intent of provisions of local law that preclude siting turbines within fall-down distance of neighboring properties and public roads, and to assure public safety is not compromised.	Updated PSS specifies that Exhibit 6 will document the setbacks BRE finds appropriate and the basis for that determination.
1 (DPS)	Exhibit 6 Item 2	Setbacks	The PSS also indicates that Exhibit 6 of the Application will include setback guidelines of potential manufacturers. However, there is no information pertaining to Applicant setback requirements or recommendations. There is also no indication of setback requirements from transmission lines. The PSS does include reference to facility setbacks from "aboveground utilities." Additionally, there is no information provided regarding setbacks from areas of public gathering. Per NYCRR §1001.6(a), provide the following: a. General setback requirements and/or setback recommendations of the Applicant. If none exist, Staff advises the Applicant explain its rationale; b. Any local, Applicant, or manufacturers' setback requirements and/or setback recommendations for turbines from areas of public gathering; c. Any Applicant or manufacturers' setback requirements and/or setback recommendations for turbines from barns and other unoccupied structures; d. Setback information from transmission lines, or if applicable, provide a definition of aboveground utilities, as referenced in Table 6.1.	The updated PSS adds a requirement for BRE to document and explain the setbacks it finds appropriate for designing the Project, including those for areas of public gathering and for barns and other unoccupied structures. BRE considers NYPA transmission lines to be "above ground utilities" which are covered in row 5 of PSS Table 6.1. BRE's interpretation of the "aboveground utility" requirement of local law is added to the updated PSS.
1 (DPS)	Exhibit 6 Item 3	Setback compliance clarifications	Page 14 states that "[t]he PSS Project layout complies with the local laws' setback requirements for roads, residences, and aboveground utilities, with the following clarifications: Locations of residences, roads, and above-ground utilities are preliminary and have not been field-verified; Road setbacks are assumed to apply to year-round roads, but not to seasonal roads, private	Exhibit 6 will identify the number of locations, if any, where the Project would not comply with local setbacks. As of the writing

			roads, or roads no longer maintained by the towns, or county; and because landowner discussions are ongoing, no properties are considered to be non-participating." Staff advises that the following information should be provided: a. An indication of the approximate number of residences, roads, and above-ground utilities that will not comply with the noted local setbacks after field verification; b. Any Applicant, local, or manufacturers' setback requirements and/or recommendations applicable to seasonal roads, private roads, or roads no longer maintained by the towns or county; c. There is no separate setback information cited for "non-participating" and "participating" properties. Include setback requirements and/or recommendations for "non-participating" properties and provide a discussion and definition of the two terms.	of the PSS, none were anticipated subject to the caveats listed in the PSS. BRE will recommend appropriate setbacks for siting turbines near seasonal and abandoned roads. Exhibit 6 will provide the definitions of "non-participating" and "participating" as used in evaluating setback compliance.
1 (DPS)	Exhibit 9, Alternatives	Alternative analysis for different setbacks	DPS recommends that this exhibit include consideration of alternative setback considerations, as discussed above in comments regarding Exhibit 6.	1001.9(a) delimits the alternatives to be evaluated to "reasonable and available alternate location sites" under a private applicant's control. Appropriate setbacks for the Projects WTGs will be assessed in Exhibit 6, and not assessed as alternatives in Exhibit 9.
1 (DPS)	Exhibit 11, Preliminary Design Drawings Item 1	Lighting fixtures	Section 11.6 – Lighting Plan – The Applicant should provide more specific information regarding the types of permanent lighting fixtures to be installed than "general types of fixtures." Explanations of the need for and design criteria of exterior lighting should be provided.	Updated PSS specifies the application will explain the needs and criteria, and provide examples of fixtures for each type of exterior non-FAA lighting.
1 (DPS)	Exhibit 11 Item 2	Multiple collection lines	Section 11.9 – Electrical Collection System Drawings – The Applicant should show locations of individual collection system lines, indicating the number and location of individual circuits including where multiple circuits are co-located in close proximity.	Information on routing of individual circuits will be included in the site plans. Updated PSS sections 11.1 and 11.9 clarify this.
1 (DPS)	Exhibit 11 Item 3	Substation drawings	Section 11.10 – Project Substation Drawings- The Applicant suggests that only typical substation design will be provided. DPS recommends that design consideration should be site-specific to the extent that design will be appropriate for consideration in the Project-associated Article VII application.	Updated PSS clarifies the typical drawings will show expected number of breakers and transformers, and it will show preliminary grading, driveway, and fencing appropriate for the site.
1 (DPS)	Exhibit 11 Item 4	POI switchyard drawings	Section 11.11- POI Switchyard Drawings – see comment re: Section 11.10 above.	Updated PSS clarifies the typical drawings will show expected number of breakers , and it will show preliminary grading, driveway, and fencing appropriate for the site.
1 (DPS)	Exhibit 15, Public Health and Safety Item 1	Shadow flicker impacts	Section 15.5 of the PSS provides a very limited discussion of the potential from flicker shadows to trigger seizures in people with photosensitive epilepsy. DPS notes that: a. The discussion of flicker impacts in the PSS should be expanded sufficiently to support the statements. The Applicant should explain whether the assessment of health effects from frequency of flicker will be based on the number of cycles per unit of time for a single turbine only (Hz) or on the combination of the cycles per unit of time (Hz) of a greater number of turbines, if they are aligned in such a way that they can simultaneously produce flicker on the same receptor location. b. A thorough literature review of adverse impacts and health effects from flicker should be included in the Application under 16 NYCRR §1001.15 -Exhibit 15, Public Health. The Application should also provide a discussion about potential health effects from flicker with consideration of potential for annoyance, stress or any cognitive, physical or health effects.	Updated PSS addresses frequency of shadows from multiple turbines and specifies that Exhibit 15 will summarize a review of literature on the health impacts of wind turbine shadows. The Updated PSS also includes an expanded definition of Shadow-Sensitive Receptors that includes locations on non-participating properties where the owner has applied for a residential building permit.

			c. The analysis and assessment of shadow flicker impacts should include any sensitive receptor and also apply to any officially-announced, planned land use developments, such as residential sites or community buildings, under review or already approved for site plan development or building permit issuance at the time of filing the Article 10 application.	
1 (DPS)	Exhibit 15 Item 2	Health impacts evaluation using projected noise levels	Section 15.6 (Audible Frequency Noise) refers to Exhibit 19 for assessment of potential impacts on health from audible noise. DPS recommends to include the discussion of Health effects under 16 NYCRR §1001.15 -Exhibit 15, Public Health, with consideration of the findings of 16 NYCRR §1001.19 -Exhibit 19, Noise and Vibration. DPS notes that the scope in Section 19.5 doesn't include consideration of other potential health impacts from noise such as sleep disruptions, stress or cardiovascular disease.	Updated PSS Exhibit 15 specifies that an evaluation of potential health impacts will be made using the project-specific noise modelling of Exhibit 19.
1 (DPS)	Exhibit 15 Item 3	Literature review to support noise impact conclusions	Section 15.7 states: "Modern wind turbines, including the types BRE proposes for this Project, incorporate the upwind rotor design, which greatly decreases the generation of low-frequency sound. Such modern, upwind-rotor wind turbines generate no more low-frequency sound than what is already present in windy rural areas as background noise. Therefore, there is no expected impact of low- frequency noise from the proposed facility (Snow 1997; Bollin et al 2011; O'Neal et al 2011)." In addition, Section 19.6 states: "Although BRE is not aware of scientific literature supporting a direct link between wind turbine noise and actual health outcomes, a potential exists for community complaints regarding wind turbine noise. BRE anticipates that careful siting of the turbines will minimize negative subjective noise impacts." a. DPS notes that the discussion of adverse impacts in the PSS does not provide a sufficiently detailed basis to support the statements. A thorough literature review of adverse impacts and health effects from noise, low frequency sound, infrasound and vibration should be included in the Application under 16 NYCRR §1001.15 -Exhibit 15, with consideration of the findings of 16 NYCRR §1001.19 -Exhibit 19, Noise and Vibration. The review should include government, scientific and professional studies and peer reviewed publications, and the guidelines and recommendations of the World Health Organization (WHO). DPS notes that Exhibit 15 requires "A statement and evaluation that identifies, describes, and discusses all potential 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: …(e) for wind power facilities, impacts due to blade throw, tower collapse, audible frequency noise, low-frequency noise, ice throw and shadow flicker." DPS also notes that 16 NYCRR §1001.19 -Exhibit 19(e) requires: "an analysis of whether the facility will produce significant levels of low frequency noise or infrasound." b. In addition, the PSS does not propose a methodology, reference or guideline for the evaluation of health effects from noise including low frequency noise and infrasound for the project. DPS recommends at a minimum, comparing the noise levels from the project with the guidelines and recommendations from the World Health Organization: (i) World Health Organization. Night Noise Guidelines for Europe. 2009. (ii) World Health Organization. Guidelines for Community Noise. 1999.	Updated PSS Exhibit 15 specifies the Application will discuss government, scientific, and professional studies on health effects of audible and low frequency noise from wind turbines and WHO Guidelines for Community Noise and WHO Night Noise Guidelines for Europe.
1 (DPS)	Exhibit 15 Item 4	Noise mitigation	Section 15.11 of the states: "[i]mpacts associated with operations, noise, visual and flicker will be minimized by careful siting and screening where needed and will be monitored for continued compliance with certificate condition requirements." DPS notes that avoidance and minimization measures should be expanded to include additional options for mitigation. DPS comments above regarding Exhibit 15 should be taken into consideration in revising proposed scope of studies including impact minimization and mitigation measures.	BRE has updated PSS Section 19 to increase the scope of studies and to discuss potential noise mitigation options.
1 (DPS)	Exhibit 17, Air Emissions	Emergency Generator Air Emissions	Discussion of the Project does not consider emissions from any emergency generator(s) associated with the proposed substation or switchyard. Provide indication of the size and operating and emissions characteristics of any emergency power generators that may be associated with Project operation.	The updated PSS describes the emergency generators and likely emissions.

1 (DPS)	Exhibit 18, Safety and Security Item 1	Time to Implement Security Measures	There is a reference to additional security measures, such as lighting, cameras, or roving security patrols that could be employed if security problems occur. Please advise how long it would take to deploy those additional measures if they were required.	Updated PSS specifies that Exhibit 18 will discuss deployment times for additional security measures.
1 (DPS)	Exhibit 18 Item 2	Staff responsibility for security	The security plan filed with the application should the entity that is specifically responsible for monitoring to ensure that locks and fences are locked “at all times.” “Staff” is used as a broad term to denote responsibility, however a more systematic approach would be preferred.	The PSS has been revised to clarify that the on-site O&M team would be responsible for keeping the equipment locked.
1 (DPS)	Exhibit 19, Noise Impact Assessment Protocol Item 1	Quieter turbine alternative	Section 2.2. of the PSS, page 4 states: “Studies in the application will use the most conservative assumptions about turbine characteristics and impacts, e.g., tip height and noise emissions will be the highest and loudest of turbines BRE considers likely candidates. “ DPS notes that although the evaluation of turbines with the highest and loudest noise emissions proposed for the Project may provide an estimate of the maximum sound impacts, the scope should also include an evaluation of quieter wind turbine options and alternatives layouts with greater setbacks, as assessment of alternatives that may avoid or minimize noise impacts from the project. DPS notes that the intent of Article 10 regulations is avoiding or minimizing environmental impacts. In addition, 16 NYCRR §1001.19 -Exhibit 19 (j) requires an “identification and evaluation of reasonable noise abatement measures for the final design and operation of the facility including the use of alternative technologies, alternative designs, and alternative facility arrangements.”	Updated PSS adds a new section in Exhibit 19 specifying the application will include an assessment of noise levels and energy generation with the turbines in noise reduced operating mode.
1 (DPS)	Exhibit 19 Item 2	Construction noise surveys	Section 19.3 states that “the discussion of construction noise will include reasonable noise abatement measures to be implemented and steps that can be taken to respond to any noise complaints that might be received during construction.“ DPS recommends specifying in the PSS whether construction noise surveys will be included as part of the scope for monitoring construction noise levels or in response to any construction noise related complaints.	Updated PSS states that BRE plans to implement its complaint monitoring plan from the start of construction, but it does not plan to conduct noise surveys during construction.
1 (DPS)	Exhibit 19 Item 3	Building damage from blasting or HDD	Section 19.4 refers to blasting noise. The scope should be expanded to include potential for structural damage on existing buildings and infrastructure from blasting. In addition, the scope should include evaluation of the potential for some construction activities (such as pile driving, excavation, horizontal directional drilling (HDD) or rock hammering, if any) to produce any cracks, settlements or structural damage on any existing proximal buildings, including any residences and historical buildings.	PSS Section 21 specifies that Exhibit 21 will include a preliminary blasting plan with procedures on when to conduct surveys of nearby buildings. The updated PSS adds text requiring Exhibit 21 to include a discussion for the need for, and potential impacts of, other construction methods that could result in structural damage to nearby buildings.
1 (DPS)	Exhibit 19 Item 4	Low frequency noise evaluation	Section 19.5 propose a “discussion on whether the Project will generate significant levels of low-frequency sound or infrasound”. DPS recommends to expand the scope to include the potential for air-borne induced vibrations from the operation of the facility to generate annoyance, cause rumbles or vibration and rattles in windows, walls or floors of sensitive receptor buildings. The applicant may want check the Hubbard’s Methodology to evaluate this issue or, the outdoor criteria established in annex D of ANSI standard S12.9 -2005/Part 4. Applicable portions of ANSI 12.2 (2008) may be used for the evaluation of frequency bands where ANSI 12.2 (2008) may be a more restricting criteria or if it is expected ANSI S12.9-2005/Part 4- Annex D guidelines being met but still represent a potential for perceptible vibrations at indoor locations of sensitive sound receptors, if any.	Updated PSS and NIAP add more detail on how BRE will perform the low frequency noise evaluation, including specification of the octaves to be analyzed and use of ANSI standards 12.2 and 12.9.
1 (DPS)	Exhibit 19 Item 5	Seismic and infrasound monitoring stations	Section 19.6 states: “BRE is not aware of any technical, industrial, or medical activities in the Study Area that would be affected by wind turbine sounds.” DPS advises to include in the scope the following potential impacts that may need to be evaluated separately: a. Potential of low-frequency noise including infrasound and vibration from operation of the facility to cause any interference with the closest seismological and infrasound monitoring systems. For this subject DPS Staff recommends that the Application	Updated PSS adds a new section in Exhibit 19 to cover low frequency noise and infrasound. It specifies that the Application will identify seismic and infrasound monitoring stations and review the suggested references to evaluate potential impacts. The low frequency evaluation will compare predicted noise

			include a map in proper size and scale to show the location of the closest seismological and infrasound stations on both sides of the border between US and Canada in relation to the Project site, and a table with approximate GPS coordinates and distances from identified stations to the Project site. For a discussion about potential issues the Applicant may want to consult, among others, the following references: i. Technological Information and Guidelines on the Assessment of the Potential Impact of Wind Turbines on Radio Communication, Radar and Seism Acoustic Systems. Radio Advisory Board of Canada (RABC). Canadian Wind Energy Association (CanWEA). April 2007. ii. Micro Seismic and Infrasound Monitoring of Low Frequency Noise and Vibrations from Wind farms. Recommendations on the siting of Wind Farms in the vicinity of Eskdalemuir, Scotland. Styles, Stimpson, Toon, England, Wright. Applied and Environmental Research Group. Earth Sciences and Geography. School of Physical and Geographical Sciences. Keele University. 18 July 2005. iii. For information about Seismic Stations in the U.S. that are part of the USGS monitoring system, the Applicant may want to consult the USGS website. iv. For information about seismic stations in Canada, the Applicant may want to consult the NRCAN website. v. For information about the existing and planned infrasound and seismic stations that are part of the International Monitoring System (IMS) the Applicant may want to visit the CTBTO (Comprehensive Nuclear Test Ban Treaty Organization) website www.ctbto.org. b. Potential for ground-borne transmitted vibrations from the operation of the Facility to reach a noise sensitive receptor and cause vibrations on the floors or on building envelope elements that may be perceived by the occupants. The Applicant may want to illustrate the discussion with findings from other projects with consideration of the technical variables related to the ground borne transmission of vibrations such as oscillating/rotating masses, frequencies of rotation, vibration isolation, type of foundation, soil type and set-backs. The Applicant may want to consider the criteria and procedures discussed in the following national and international standards: i. ANSI S2.71-1983 (Guide to the Evaluation of Human Exposure to Vibration in Buildings (R 2012)). ii. ISO 2631-2-2003 (Evaluation of Human Exposure to Whole-body Vibration Part 2: Vibration in buildings (1 Hz to 80 Hz)). iii. Additional information may also be found in ASHRAE Handbook- HVAC Applications 2011, chapter 48, Noise and vibration control, Vibration Criteria p.p. 48.43-48.44.	levels to those expected to be perceptible per ANSI standards 12.2 and 12.9.
1 (DPS)	Exhibit 19 Item 6	Noise-sensitive receptors, cabins	Section 2 of the Noise Impact Assessment Protocol (NIAP) considers only “year round” residences as noise-sensitive receptors. DPS recommends that, for the purposes of Exhibit 19, any residence be considered as a noise-sensitive receptor.	Updated NIAP specifies seasonal residences (e.g. “cabins”) on non-participating properties will be evaluated as noise-sensitive receptors.
1 (DPS)	Exhibit 19 Item 7	Noise-sensitive receptors, libraries, public buildings, etc.	Section 2 of the NIAP list several receptors that are considered noise-sensitive receptors. DPS recommends to expand the list to include libraries, commercial buildings, outdoor public facilities and public buildings.	Outdoor public uses were already identified in the NIAP as noise-sensitive receptors. The updated NIAP adds libraries, commercial buildings, and buildings for public meetings as noise-sensitive receptors.
1 (DPS)	Exhibit 19 Item 8	Noise-sensitive receptors, verification	Section 2 of the NIAP states: “Attachment 1 maps the noise-sensitive receptors in the areas expected to be within one mile or less of proposed wind turbines or the project substation. Invenergy developers familiar with the local area identified these receptors by review of aerial photographs”. DPS recommends that the Applicant compare the inventory of noise sensitive receptors with local authorities as well.	Updated NIAP specifies BRE will review receptor list with local authorities or their designees.

1 (DPS)	Exhibit 19 Item 9	Ambient noise data, temporal accuracy	Section 3.1 of the NIAP specifies “two weeks” as the minimum period where ambient sound data was and will be collected. The Applicant should include in the scope the estimate of temporal accuracy for the final number of days of testing at each position. DPS notes that ANSI/ASA Standard S12.9-1992 (R 2013)/Part 2 contains procedures to determine temporal accuracy based upon a 95% confidence interval, results of data collections, and the number of samples that were collected.	The Application will discuss the temporal accuracy of the noise monitoring based on the actual number of days of data collection. The updated PSS and NIAP add language requiring this discussion in the Application.
1 (DPS)	Exhibit 19 Item 10	Ambient noise data, spatial accuracy	Section 3.2. of the NIAP states that six community locations were selected to continuously measure ambient sound data. The Applicant should provide justification for selection of six locations for characterization of the preconstruction ambient noise levels within the project area and include in the scope determination of spatial accuracy. DPS notes that ANSI/ASA Standard S12.91992 (R 2013)/Part 2 has several recommendations and procedures to either determine the number of sites that are required for achieving a specific spatial accuracy (Survey Class) or to determine the spatial accuracy based upon a 95% confidence interval, results of data collections, and the number of locations that were selected.	The Application will discuss the spatial accuracy of the noise monitoring. The updated PSS and NIAP add language requiring this discussion in the Application.
1 (DPS)	Exhibit 19 Item 11	Ambient noise data, traffic data	Section 3.2. of the NIAP reports the six locations that were selected to continuously measure ambient sound data. The Applicant should provide justification for selection of all positions especially for noise monitoring locations “along the highway corridors” where noise levels “are likely higher”. DPS notes that as per 1001.19, Exhibit 19(c), ambient preconstruction baseline noise conditions shall be evaluated “at representative potentially impacted noise receptors.” Please provide AADT traffic information along with traffic composition and posted speeds, as available, for testing positions in proximity of the roadways.	BRE’s noise expert selected sites to represent the range of noise-sensitive receptors, most of which are located adjacent to roadways. The application will include more discussion on the selection of monitoring locations, and it will include traffic data where available. The updated NIAP requires traffic data be provided in the ambient noise report.
1 (DPS)	Exhibit 19 Item 12	Ambient noise data, coordinates	Sections 3.2 and 3.3 of the NIAP lists the positions that were selected for long-term and short-term evaluations of pre-construction ambient sound levels. Please provide GPS coordinates for all selected and evaluated positions.	Coordinates have been added to the updated NIAP.
1 (DPS)	Exhibit 19 Item 13	Ambient noise data, infrasound measurements	Section 3.4 of the NIAP reports the one-third octave band frequency band of 12.5 Hz as that the lowest band that will be collected. DPS recommends to include in the scope a collection of baseline infrasound levels in the area which may be later compared to estimates of infrasound levels from the Project at sound sensitive receptors. DPS notes that 1001.19 Exh. 19 (e) requires an evaluation of whether the facility will produce significant levels of low frequency noise or infrasound. Some Sound Level Meters can be adapted with software and infrasound microphones that can measure from or even below 1 Hz.	1001.15 requires an evaluation of all potential adverse impacts “at a level of detail that reflects the severity of the impacts and the reasonable likelihood of their occurrence [and that] identifies the current applicable statutory and regulatory framework.” 1001.19(f) identifies in detail the ambient sound measurements that must be collected, which list does not include low frequency noise or infrasound. 1001.19(e) requires “an analysis of whether the facility will produce significant levels of low frequency noise or infrasound” without requiring the collection of ambient measurements. BRE will comply with these requirements. Several studies have shown wind projects do not introduce significant levels of infrasound. Because infrasound impacts are not expected, an ambient infrasound study is not warranted.
1 (DPS)	Exhibit 19 Item 14	Ambient noise data, equipment specifications	Section 3.5 of the NIAP lists two ANSI standards that the instrumentation complies with. The Applicant should specify whether the Sound Level Meters comply with ANSI S1.43-1997 (R March 16, 2007). Specifications for Integrating-Averaging Sound Level Meters. In addition, the Applicant should specify a Class for acoustical calibrators and whether they comply with ANSI S1.40-2006 (R October 27, 2011) (Revision of ANSI 1.40-1984) Specifications and Verification Procedures for Sound Calibrators.	The sound level meters used in the ambient studies are high quality instruments. They meet IEC 61672-1 Class 1, ANSI S1.4 Type 1, and/or ANSI S1.43 Type 1; and the acoustical calibrators meet IEC 60942 Class 1 and/or ANSI S1.40. These specifications will be documented in the ambient noise study report.

1 (DPS)	Exhibit 19 Item 15	Ambient noise data, equipment specifications	Section 3.5 of the NIAP include specific models for sound level meter instrumentation. Please report specifications such as sound floor, temperature and humidity ranges of operation, and whether the sensitivity checkers (field acoustical calibrators) were calibrated by an independent accredited laboratory within a year prior to its use for the sound surveys. Please also provide types, makes and models of wind screens that were used or are proposed to be used for sound collections with information from the manufacturer or independent laboratory to include attenuation effects (insertion losses) and wind induced noise levels.	This information will be provided in the Application. The updated NIAP specifies this information will be included in the ambient noise report.
1 (DPS)	Exhibit 19 Item 16	Ambient noise data, L90 calculations	Section 3.6 of the NIAP specifies that the L90 noise descriptor will be collected in 10-minute intervals and that 1/3 octave band sound pressure levels will be collected for every second interval. The Applicant should explain how the collected information will be processed to calculate the L90 noise descriptor as required by 1001.19 Exh. 19, section (f).	The updated NIAP details how the ambient statistics will be processed to produce the statistics required by 1001.19.
1 (DPS)	Exhibit 19 Item 17, part 1	Ambient noise data, weather station specifications	Section 3.6 of the NIAP mentions that wind speed sensors will be installed in the vicinity of several noise monitoring stations. Please specify brand, make and model of anemometers, accuracy as stated by the manufacturer and whether the anemometers comply with the recommendations from ANSI standards for accuracy of weather stations. DPS recommends using at a minimum a portable weather station at a representative noise sensitive location to continuously document temperature, relative humidity, wind speed, wind direction, precipitation, and barometric pressure (optional) during the periods of sound collections. Accuracy for the portable weather stations or any hand held anemometers should be as recommended by ANSI Standards.	The noise report will provide anemometer specifications, and the updated NIAP now requires this. Only wind speed is being collected at the monitoring stations as this has the greatest usefulness on analyzing trends in the ambient measurements. Wind direction and temperature will be available from BRE's on-site meteorological towers.
1 (DPS)	Exhibit 19 Item 17, part 2	Ambient noise data, filtering	The Applicant should report how measured data will be excluded based upon weather conditions such as, wind speed including gusts, precipitation and relative humidity. In addition, the protocol should specify how seasonal noise, animal sounds, wind noise, etc., will be filtered. DPS notes that 1001.19 Exh. 19 (b) requires the ambient pre-construction baseline sound levels to be filtered to exclude seasonal and intermittence noise. The Applicant may want to consider the provisions in ANSI/ASA S3/SC1.100-2014/ANSI/ASA S12.100-2014 (Methods to Define and Measure the Residual Sound in Protected Natural and Quiet Residential Areas), for filtering animal, seasonal sounds and pseudonoises on the sound microphones.	The updated NIAP specifies that BRE's consultant will filter the collected data to remove seasonal insect sounds, if any, buffeting sounds from wind gusts, and data from times when the air temperature is outside the range over which the meters are designed for use. The noise report will describe the specific procedures used to filter the data.
1 (DPS)	Exhibit 19 Item 18	Ambient noise data, calibrations	Section 3.7 of the NIAP specifies that the monitoring stations will be visited during the monitoring period for equipment checks. Please specify that the Application will provide notations of any acoustical calibrations that are performed during these inspections.	Per the updated NIAP, any adjustments made as part of the field checks will be documented in the noise report.
1 (DPS)	Exhibit 19 Item 19	Ambient noise data, analysis	Section 3.8 of the NIAP specifies the scope for documenting, reporting and commenting the collected data. DPS advises that collected information should be analyzed, at a minimum, by following the requirements of 1001.19 Exh. 19 regulation. As such, the scope of NIAP should be expanded to include all the requirements of 1001.19 Exh. 19.	The updated NIAP clarifies that statistics required by 1001.19 will be collected, and provides additional detail on how these statistics will be collected.
1 (DPS)	Exhibit 19 Item 20	Town noise limits	Section 4.1 of the NIAP specifies 50 dBA as the maximum L10 noise level required by local laws at non-participant residences. DPS notes that local law from the Town of Ellenburg seems to have different provisions. In addition, if the ambient noise levels exceed 50 dBA, the Towns of Altona and Clinton have requirements in terms of 5 minutes per hour which approximates to the L8 statistical noise descriptor (sound level that is exceeded only 8% of the time in an hour). Please revise section 4.1 and provide a summary of relevant provisions of local laws including noise limits and prominent tone requirements.	All three of the local laws have additional provisions on noise that apply if the 50 dBA limit cannot be met. The updated NIAP describes these additional noise provisions.
1 (DPS)	Exhibit 19 Item 21	Operating noise criteria	Section 4.2 of the NIAP seems to propose the NYSDEC Noise Policy DEP-00-1 as a single methodology for evaluation of impacts for the project. DPS advises that 1001.19 Exh. 19 (k) requires an evaluation of various potential community noise impacts such as hearing damage, indoor and outdoor speech interference, interference with use of outdoor public facilities, community complaint potential, potential for structural damage, and potential for interference with activities that are sensitive to vibration and infrasound. In addition, 1001.19 Exh 19 (e) requires evaluation of prominent tones, amplitude modulated sound and analysis of low frequency noise and infrasound. Although related to Exh 15, DPS also advises that 1001.15 Exh 15 requires	As specified in the updated NIAP, BRE will use 1999 WHO guidelines and the 2009 WHO Europe guidelines as metrics by which expected sound levels from the Project will be evaluated. Both guidelines were developed to minimize health impacts from community noise.

			evaluation effects of noise on Public health. DPS requests that the Applicant specify in the scope the different methodologies, standards and guidelines that are proposed to be used for the analysis of the project and identify any topics that are proposed to be analyzed under the NYSDEC noise policy DEP-00-1 with a justification about whether the proposed criteria is also consistent with applicable methodologies, standards or guidelines to evaluate the noise impacts in question. The Application should include design goals for the Facility for issues that will be evaluated in terms of absolute noise guidelines (e.g.: sleep disruptions, outdoor and indoor speech interference, hearing loss, annoyance, complaint potential and health issues). The Applicant should explain whether the analysis of annoyance and complaints may also require an additional evaluation in terms of relative noise guidelines and include the references for such methodologies/guidelines. Should the Applicant select the DEP-00-1 noise policy to evaluate any of the topics required by 1001.19 Exh. 19, the NIAP should specify how the policy is planned to be applied including the noise descriptors that will be used to describe ambient and operational sounds along with a summary of the procedures that will be followed for its application.	
1 (DPS)	Exhibit 19 Item 22	Construction noise analysis	Section 5.1. of the NIAP lists methods of analysis for construction noise. DPS recommends, at a minimum, following the guidelines and recommendations of the FHWA Highway Construction Noise Handbook (FHWA-HEP-06-015) that are applicable to the project. Although developed mainly for roadway projects, the handbook is applicable to many construction projects and provides guidance in measuring, predicting, and mitigating construction noise and developing noise criteria. The Handbook also reflects substantial improvements and changes in the way highway construction noise has been addressed since the 1977 FHWA Special Report. The Applicant may also want to consult the noise database for construction equipment listed in the FHWA Highway Construction Noise Handbook and determine whether these emissions or any other, resembles the noise emissions of the construction equipment that is proposed to be used. The PSS should specify whether selected noise emissions will also be used as criteria for selection or rejection of construction equipment during the construction phase.	As specified in the updated NIAP, BRE will employ the applicable provisions of the FHWA guidelines and recommendations to minimize, predict, and manage noise levels from Project construction.
1 (DPS)	Exhibit 19 Item 23	Noise analysis software	Section 6.1 of the NIAP lists the Cadna/A computer software as the noise model selected for the project. The PSS should briefly describe the specifications of the computer model that is proposed to be used for evaluation of operational noise impacts including range of frequencies that will be evaluated and whether the model calculations will be performed in full octave or one-third octave bands. The applicant should also specify how the meteorological corrections will be assumed or calculated. Since Cadna/A may not be available to some parties including DPS, modeling software specification should be expanded to include other similar computer programs that also comply with ANSI S12.62-2012 or follow ISO-9613-2.	The Cadna/A modelling will be done on a full octave basis. The NAIP has been updated to specify this and give a brief statement on the qualifications of Cadna/A. Additional information on Cadna/A will be provided in the noise report. BRE originally planned to perform one Cadna/A case for standard meteorological conditions (50F and 70%RH) and turbines at their maximum noise level. But to accommodate various comments received herein, BRE will model multiple cases, spanning a range of meteorological conditions and wind speeds. The updated NIAP and other responses describe the cases to be analyzed. To allow verification of BRE's modelling, BRE will provide the Cadna /A input files to interested parties as required by 1001.19. BRE could provide the data in soundscape or other formats that can be easily exported from the Cadna/A software.
1 (DPS)	Exhibit 19 Item 24	Operating noise predictions – wind speed assumptions	Section 6.1 of the NIAP specify that "All wind turbines will be assumed to be operating simultaneously at the sound power levels specified by the turbine manufacturer." DPS Staff recommends that this section be expanded with considerations for wind speed magnitude.	BRE will analyze cases for multiple wind speeds. A new section in the updated NIAP specifies the range of wind speeds to be evaluated.
1 (DPS)	Exhibit 19 Item 25	Turbine noise specifications	Section 6.1 of the NIAP mentions that turbines will be considered as point sources consistent with the IEC-61400-11 standard for determination of sound power levels for the turbines. Please also specify whether the sound power levels, and tonal information from the wind turbines following IEC 61400-11 2012 Part 11, "Acoustic Noise Measurement Techniques," are	The updated NIAP specifies that vendor sound data, including tonal information if available, will be provided in the noise report. Note that this information may be required to be filed as

			available from potential manufacturers and if so, specify that they will be provided with the Application. The Applicant should also inform whether Sound Power Level information, as reported by using IEC TS-61400-14 Part 14 (Declaration of apparent sound power level and tonality values), is currently available for potential turbine options and if so, provide it with the Application.	business confidential information, depending on the manufacture's requirements. Octave level data on sound emissions is available for two of the turbines that BRE is most likely to model as part of the noise assessment.
1 (DPS)	Exhibit 19 Item 26	Modelling of pad-mount transformer noise	Section 6.1 of the NIAP states that the transformer(s) will be "modelled as sound point sources using a sound power level equal to or louder than the specification intended to be used during equipment procurement." DPS recommends to model the transformers with sound power information provided by the manufacturers.	Because a transformer vendor has not been finalized, sound emission data for the actual transformer is not available. Instead, BRE's consultant will model the transformer using a standard model for a high efficiency transformer, the assumed specifications of which will be documented in the noise report. The installed transformer will have noise emission specifications equal to or less than those modelled.
1 (DPS)	Exhibit 19 Item 27	Ground absorption assumptions for noise modelling	Section 6.1 of the NIAP provides a discussion about the ground absorption values selected for computer noise modeling of the project. DPS recommends that the scope be expanded to include a general discussion about the effects in accuracy regarding the assumptions for ground absorption values (e.g. 0, 0.5, 1) in conjunction with the proposed propagation standards proposed for the project (ISO/Concawe), with illustration of correlations between computer noise predictions and actual post-construction measurements for documented cases.	As specified in the updated NIAP, the noise report will provide further discussion of the basis for the ground absorption assumption, including comparisons to post-construction noise monitoring, where available.
1 (DPS)	Exhibit 19 Item 28	Meteorological assumptions for noise modelling	Section 6.2 of the NIAP states that "[t]he report will present results from the project sound model that employs the standard Cadna/A configuration. In addition, the report will discuss results from a model that employs the CONCAWE configuration and compared with those of the standard model". The PSS should explain how many combinations of scenarios (operational noise and meteorological conditions such as wind speed, wind magnitude and atmospheric stability) are proposed to be modeled for the project so that the operational noise levels as required by 16 NYCRR §1001.19 – Exhibit 19 and by local regulations can be properly calculated. DPS Staff notes that 16 NYCRR §1001.19 – Exhibit 19, requires worst case (L10) and typical (L50) operational noise levels either for a year, summer, winter, daytime or nighttime. The PSS should also specify how the meteorological corrections will be calculated (e.g., ISO 9613, CONCAWE, etc.) and provide a brief discussion about the advantages or disadvantages of the use of the proposed corrections as compared to other alternatives.	The NAIP has been updated to require running an ISO 9613 model for multiple meteorological cases. BRE will provide results for multiple wind speeds, summer and winter, day and night.
1 (DPS)	Exhibit 19 Item 29	Noise contour map	Section 6.2 of the NIAP states that a map with contours of expected upper noise levels will be included in the report of modeling results. DPS recommends that noise contours be rendered at least out to 1 mile from any turbine location. Scale and incremental steps (e.g. dB, 5 dB) should be proposed. Sensitive receptors should be identified with land/tax ID numbers and property lines should be included.	The updated NAIP specifies the noise contour map will include the requested information, including 1dBA noise contours.
1 (DPS)	Exhibit 19 Item 30	Reporting of noise results	Section 6.2 of the NIAP proposes reporting noise statistics and descriptor (L10, L50) for "one or more" noise sensitive receptor and typical and "greatest impact" non-participating parcels. DPS recommends reporting all predicted noise levels (L10 and L50) for all receptors including participating and non-participating receptors in tabular format. Forecasted noise levels at property lines can be reported in graphical format with noise contours in 1 dB increments.	The updated NAIP specifies that statistics required by 1001.19 be provided for all Noise-Sensitive Receptors.
1 (DPS)	Exhibit 19 Item 31	Reporting of noise results	Section 6.2 of the NIAP proposes tables with Leq and L90 background levels for "each of the above locations" DPS recommends reporting all measured and calculated pre-construction ambient noise levels for all evaluated receptors in tabular format. Since for the purposes of fulfilling the requirements of 1001.19 Exh 19.f.(5) (6) and (9) it is impractical to measure L90 and Leq ambient noise levels at all locations, these can be estimated based on the results of ambient noise surveys. If ambient sound levels for all receptors or groups of receptors are proposed to be characterized by single numbers using ambient sound results at all or some measurement locations, the associated spatial accuracy should be estimated by following the procedures	The updated NAIP specifies that ambient noise levels will be assumed for each of the Noise-Sensitive receptors by matching each receptor to the most similar ambient noise monitoring location.

			included in ANSI S12.9-1992 (R2013)/Part 2. In this case, although Leq and L90 values may be represented by mean values, the lower and upper limits of the 95% interval should also be reported. The PSS should include specific provisions for calculation or estimate of each requirement from 1001.19 Exh 19.f. (1) to 1001.19 Exh 19.f. (9).	
1 (DPS)	Exhibit 19 Item 32	Low frequency noise impacts	Section 6.2 of the NIAP proposes scope for modeling and reporting of low frequency noise levels. The scope should be expanded with consideration of the potential from airborne induced vibrations in sensitive receptor buildings and potential to generate annoyance, rattles and rumbles at interior spaces. The Applicant should also clarify whether the evaluation of infrasound impacts will be based upon sound data information from the manufacturer or from infrasound levels collected from wind turbine projects with the same potential turbine models operating at similar conditions.	The updated NAIP contains additional language on how low frequency noise impacts will be evaluated, including consideration of ANSI 2.2 and ANSI 12.9 guidance of regarding potential for airborne-induced vibrations. As stated in the updated NAIP, the noise report will discuss and evaluate potential impacts of infrasound using infrasound measurements conducted at an operating wind project.
1 (DPS)	Exhibit 19 Item 33	Tonal impacts	Section 6.2 of NIAP should include a methodology for determination of tonality or prominent tones from the wind turbines and substation tonal noise sources. DPS Staff notes that Annex A from ANSI Standard S1.13-2005 has different methods for identification and evaluation of prominent tones. Additionally, Annex C from ANSI Standard S12.9- 2005/Part 4, has a simplified method for evaluation of sounds with tonal content that could be applied under some specific circumstances. In addition, section 9.5 of IEC 61400-11 (Wind Turbines –Part 11- Acoustic noise measurements techniques) has a method for determination on prominent tones for the wind turbines. Please specify definitions of tonality for the purposes of evaluation of tones under the requirements of 16 NYCRR §1001.19, Exhibit 19, and provisions for tones in local noise codes, if any.	As part of the check for compliance with local laws, BRE will evaluate pure tones using the definition of tones given in the local laws. The updated NIAP includes a requirement to perform this tonality evaluation.
1 (DPS)	Exhibit 19 Item 34	Amplitude modulation impacts	Section 6.2 of the NIAP: Amplitude Modulation should be expanded to include more details about the scope and methodologies for evaluation. The PSS should specify any standards that are proposed for evaluation of wind shear and turbulence, such as IEC 61400- 11 Annexes B and D.	The updated NIAP clarifies that the noise assessment will include an analysis of on-site meteorological data for shear and turbulence patterns that could indicate a greater potential for amplitude modulation impacts.
1 (DPS)	Exhibit 20, Cultural Resources Item 1	Expanded Project Area for SHPO studies	The proposed Project Area extent and boundary has increased significantly since the Phase 1A work reported in the PSS was compiled in 2015. Updated Project Area maps and an expanded Phase 1A section are necessary for establishing the appropriate scope of studies for the evaluation of cultural resource impacts associated with the larger Project Area and layout.	By Panamerican Consults letter dated August 4, 2016, BRE notified New York's State Historic Preservation Office (SHPO) of the current Project Area. BRE and Panamerican are consulting with the SHPO in developing study scopes for archaeological and historic surveys for the Project Area shown in the PSS and formally sent to SHPO on August 4, 2016.
1 (DPS)	Exhibit 20 Item 2	Historic resource data from previous wind projects	The PSS does not refer to prior evaluation of Historic Resources in any portions of the Project Area made by developers of existing wind farms in the region, the Applicant should provide this information to advance scoping for Exhibits 20 and 24.	PSS Appendix, Phase 1A Study Report for Bull Run, Table 4.1 lists 35 previously identified historic architectural resources in the Study Area.
1 (DPS)	Exhibit 21, Geology, Seismology and Soils Item 1	Acidic soils	Section 21.2, Page 47 – The PSS states that one of the four main types of soils in Clinton County is acidic glacial till. Acidic soils can be corrosive to steel reinforcement and degrade concrete. The Application should include a description of the presence of acidic glacial till within the Project Area and a map at a scale of 1:24000 showing the locations of acidic soils, based on publically available data on the National Resources Conservation Service (NRCS) Web Soil Survey and the results of preliminary geotechnical investigations. Areas within the project boundary that are identified as having a moderate or high risk of corrosion of steel or concrete, as defined by the NRCS Web Soil Survey, should be identified and measures for reducing risk of degradation of foundation structures should be discussed. The potentially acidic soil conditions should also be considered when assessing the suitability of existing soils for re-use as fill.	The updated PSS requires a mapping of soils with a moderate or high risk for corroding concrete or steel. The maps will be of sufficient scale to show if any wind turbines are proposed in these soils. If they are, measures to reduce risk will be discussed.

1 (DPS)	Exhibit 21 Item 2	Geotech plan	Section 21.3, Page 48 – The draft PSS states that "Exhibit 21 will include results from preliminary geotechnical testing performed at a range of sites…." The Application should include a Preliminary Geotechnical Investigation Plan in order to allow parties an opportunity to review and provide feedback to the Applicant regarding the scope of investigations. The Preliminary Geotechnical Investigation Plan should provide a full description of the proposed geotechnical investigations for evaluating the subsurface conditions in the project area and include test borings in representative locations of turbine foundations, road construction, underground collection line and interconnection line installation, and areas where trenchless methods, including horizontal directional drilling (HDD) are considered.	This comment appears to go beyond the requirements of 1001.21, which requires information concerning geology, seismology and soils, "based on information to be obtained from available published maps and scientific literature, review of technical studies conducted on and in the vicinity of the facility, and on-site field observations, test pits and/or borings as available". The regulations do not anticipate that the suggested plan be included. In Exhibit 21 BRE will include the results of any field work and information from available sources and a general description of the geo-tech work planned to be done prior to construction. As described in the updated PSS, BRE's application will include a preliminary geotechnical plan describing tests to be done at turbine sites, the Project Substation site, and the POI Switchyard site.
1 (DPS)	Exhibit 21 Item 3	HDD Plans	Section 21.4, Page 48 – Exhibit 21 of the Application should identify all locations where cables are proposed to be installed via horizontal directional drilling (HDD). A frac-out contingency plan should be provided which identifies site specific potential receptors, a frac-out risk assessment based upon preliminary geotechnical investigations, and description of frac-out mitigation and response methods.	Section 11.1 of the updated PSS specifies that BRE will show HDD locations on the site plans provided with the Application. Section 21 identifies frac-outs as a risk of HDD and specifies Exhibit 21 will assess this risk in the Project Area and discuss minimization and response measures.
1 (DPS)	Exhibit 21 Item 4	Excess material	Section 21.6, Page 49-50 – The draft PSS indicates that the Applicant does not anticipate that any excavated fill will need to be removed from the project area. Given the anticipated shallow soil depths and the amount of bedrock excavation that is anticipated, it is unclear why the Applicant does not anticipate that transport of excavated bedrock offsite will be needed. Separate calculations of the amounts of topsoil, subsoil, and bedrock that will be disposed offsite should be provided in the Application. Designated areas for temporary storage of excavated materials should also be included in Site Plans provided in the Application. Additionally, the Application should include a discussion in Exhibit 21 assessing the suitability of existing soils in the project area for re-use as fill. Preliminary calculations of the amounts of cut and fill necessary to construct the facility should be based on the results of preliminary geotechnical investigations and the Applicant's assessment of the suitability of existing soils for re-use.	The updated PSS specifies that the application will explain BRE's plans for redistributing materials on-site and will provide estimates of volumes of topsoil, subsoil, and bedrock to be excavated. A requirement for typical turbine assembly area site plan showing temporary storage areas for topsoil and foundation excavation material has been added to the PSS.
1 (DPS)	Exhibit 21 Item 5	Blasting likelihood	PSS Section 21.7, Page 50 – According to the PSS, the Applicant anticipates that project construction can be completed without blasting. The Application should provide a discussion assessing the potential need for blasting based on the results of preliminary geotechnical investigation. If the preliminary geotechnical investigations indicate that blasting will likely be necessary, the Blasting Plan included in the Application should provide impacts assessment and mitigation measures, including all informational requirements per 16 NYCRR §1001.21(i)-(k), specific to those locations where blasting is anticipated.	The updated PSS specifies that Exhibit 21 will include an updated assessment of the need for blasting based on the results of the preliminary geotechnical survey. If blasting is determined to be likely, the blasting plan will contain the information required by 1001.2 (i)-(k).
1 (DPS)	Exhibit 22, Terrestrial Ecology Item 1	Mammals, reptiles, amphibians, and insects	The PSS does not clearly discuss the potentially significant adverse impacts on terrestrial ecological resources. While some mention is made that the Project could affect birds (22.5) and bats (22.6), there is no discussion about possible impacts to other wildlife (i.e., other mammals, reptiles, amphibians, insects). While the PSS identifies bird and bat surveys the applicant did or will perform and that potential bird and bat impacts will be discussed, no mention is made of the methods or analyses the applicant plans to perform and present in the Application. A proposed scope of studies for additional evaluation of these resources and potential impacts should be provided.	PSS Section 22.3 summarizes results of the Site Characterization Report and the fact that two species of bat are the only federally-listed species expected to occur in the Project Area. The Site Characterization Report identifies other species that, based on range and habitat data, could exist at the Project Area, including two amphibians and one reptile that are classified as state species of special concern that justify consideration but not regulatory protection. The Site Characterization Report further identifies the habitat

				preferences for these species, and correlates the habitat types with the land cover present in the Project Area. PSS Section 22.3 specifies that the Application will include a habitat study that will discuss potential impacts, avoidance and minimization measures, which are still being analyzed. PSS Section 22.4 further addresses unlisted species, other than birds and bats which will also be discussed in Exhibit 22.
1 (DPS)	Exhibit 22. Item 2	Forest fragmentation	Section 22.12 states that clearing or habitat fragmentation impacts should be compared to timber harvesting on Project properties, but no mention is made how this will be done in the Application. The applicant should discuss how forest fragmentation impacts and edge effects will be assessed in the Application for turbine sites, electrical connection facilities, access roads, and human activities both during construction and operation of the Project. Since no mention is made of any such studies at the Project location, a literature review should be undertaken and reported on in the Application to assess these types of ecological impacts (i.e., fragmentation, edge effect, displacement).	The updated PSS describes a forest inventory and fragmentation assessment that will be provided in the Application.
1 (DPS)	Exhibit 22. Item 3	Cumulative impacts	Section 22 makes no mention of cumulative ecological impacts from the proposed Project and the several other existing and proposed wind farms in the region. DPS advises that consideration of cumulative operational impacts should be included in the scope of studies for the Application.	The updated PSS includes a new Section 15.11 to address cumulative impacts.
1 (DPS)	Exhibit 23, Water Resources and Aquatic Ecology Item 1	Groundwater surveys, dewatering	Section 23.5, Pages 59-60 – Based on the information provided in the draft PSS, a high number of residents and businesses in the project area rely upon groundwater as their primary water source. Additional groundwater data, including groundwater depth, quality and flow direction, should be obtained during the advancement of geotechnical test borings within the project area and the results of groundwater investigations should be included in the Application. Because of the generally anticipated shallow depth of the unconfined aquifer, it is expected that dewatering will be required during project construction. The Application should include a detailed description of the proposed dewatering practices and a demonstration of how the proposed dewatering will avoid and/or minimize flooding, surface water runoff, transport of fine-grained soils into existing surface water bodies, and impacts to local water well usages of the unconfined aquifer. Any locations where permanent dewatering will be required should be identified and permanent dewatering practices should be described in detail.	BRE's application will provide groundwater depth information collected as part of preliminary geotechnical studies, but groundwater quality and flow direction will not be collected as part of the geotechnical studies and will not be supplied in Exhibit 23. The updated PSS includes a new section on dewatering. Exhibit 23 will describe de-watering practices both during construction and, if needed, permanently.
1 (DPS)	Exhibit 23 Item 2	Well survey	The Application should include the results of a private water well survey, distributed to local residents and businesses. The well survey should request information regarding the locations, depths, withdrawal rates and water quality of wells within one mile of the project area. Given that there are existing private wells that pull from the unconfined aquifer, the Application should include a plan for minimizing impacts to well usages in the area. Such a plan should include a complete inventory of all known shallow water wells near the project area, information on the depth and usages of these wells, as available from the well owners, and plans to minimize impacts to well productivity and water quality.	Exhibit 23 will include a plan for avoiding impacts to the aquifer and the wells that rely on it, and for responding to complaints. However, a private well survey is not likely to provide useful information, and BRE is not planning to conduct such a survey.
1 (DPS)	Exhibit 23 Item 3	Blasting and wells	Plans for notifying well owners of blasting operations (if necessary) and plans for monitoring well productivity and ground water quality should be included in the Blasting Plan included in the Application. Additionally, any Blasting Plan should include measures for minimizing potential impacts to productivity and water quality of private and public water wells and provide 24 hour contact information for well owners to report impacts to well productivity and water quality during and following blasting operations.	PSS Section 21.7 discusses the potential for blasting and specifies a blasting plan will be provided with the Application. The updated PSS further specifies that the blasting plan will cover potential well impacts.
1 (DPS)	Exhibit 23 Item 4	HDD and wells	Exhibit 23 should identify the proximity of any proposed HDD operations to existing water supply wells and describe mitigation measures to minimize impacts of HDD operations on the hydrologic flow patterns of the unconfined aquifer.	As described in updated PSS Section 23.5, Exhibit 23 will identify residences within 500 feet of expected HDD operations

				and describe measures for minimizing impacts to associated drinking water wells from HDD impacts.
1 (DPS)	Exhibit 24, Visual Resources Item 1	Lake Champlain Heritage Area	Section 24.2 – Potential Aesthetic Resources – This section should include consideration of the federally-designated Lake Champlain Heritage Area, which as defined includes all of Clinton County, and any specific locations identified in the LCHA Management Plan, adopted in 2014 and administered primarily by the Lake Champlain Basin Program headquartered in Vermont.	BRE has added the Lake Champlain Heritage Area to the list of potential aesthetic resources in the updated PSS. Potential impacts to this area will be assessed by the Visual Resource Assessment (VRA).
1 (DPS)	Exhibit 24 Item 2	NRE places from surveys for previous wind projects	Section 24.2 should also include consideration of known resources listed or eligible for listing on the National Register of Historic Places, including locations previously evaluated by other recent wind energy development activity in the Project Study Area.	Potentially impacted resources that have been identified as eligible for listing as part of other projects will be identified as part of the Phase 1b historical survey that is underway. As stated in PSS Section 24, the VRA will include an updated list of potential aesthetic resources, including any properties eligible for listing, whether they be identified for the first time in BRE's survey or they be properties that were also previously identified as part of surveys for other projects.
1 (DPS)	Exhibit 24 Item 3	Route 11 Historic Military Trail	DPS advises that the Route 11 Historic Military Trail is a designated NYS Scenic Byway, and should be considered pursuant to NYSDOT Scenic Byways program.	Updated PSS reflects this designation and need to consider it pursuant to the NYS DOT program.
1 (DPS)	Exhibit 24 Item 4	Cumulative impacts at Lyon Mountain	Lyon Mountain, the northern-most peak in the Adirondack Park, is acknowledged in the PSS. This location provides a panoramic view that provides a comprehensive long-distance vista of the multiple wind projects in the Clinton and Franklin Counties vicinity. This location should be identified as a candidate for cumulative visual impact assessment of the Bull Run Project in close relation to these other wind projects.	Updated PSS specifies BRE will generate a visual simulation from atop the mountain.
1 (DPS)	Exhibit 24 Item 5	Lake Champlain	Potential for views of the Bull Run Project from the Lake Champlain area should be addressed in preliminary visual assessment, and visual study area expanded accordingly.	The nearest point of Lake Champlain is 15 miles from the eastern edge of the Project Area. At that distance, the turbines would be difficult to see and also easily blocked by nearby vegetation and buildings. Nonetheless, BRE will evaluate potential visual impacts to the areas along the western shore of the lake by visiting the area along Lake Shore Road, characterizing views from the area, and producing a visual simulation if a location is found from where the project might be easily viewed. The updated PSS describes this evaluation.
1 (DPS)	Exhibit 24 Item 6	Scale of viewshed maps	Section 24.4 – Viewshed Analysis – DPS advises that the scope should specify that viewshed maps will be produced at an appropriate scale, such as 1:24,000, to allow discernment of resource areas and close identification of viewpoint locations.	BRE will generate the Study Area viewshed maps at a native scale of 1:24,000, but printed copies may be on reduced sheets. Any viewshed maps for areas beyond the Study Area may be done at large scales (i.e., more "zoomed out").
1 (DPS)	Exhibit 24 Item 7	Vegetation height assumption	Section 24.4 - The basis for assuming forest vegetation height screening should be justified. Most visual assessments use a standard of 40 feet, rather than 50 feet as identified in the PSS (pg. 66).	BRE selected 50 feet based on discussions with area loggers. The VRA will provide justification for the assumed height in the PSS.if sufficient justification cannot be easily documented 40 ft will be assumed.

1 (DPS)	Exhibit 24 Item 8	Cumulative impacts visual simulations	Section 24.5 – Photographic Simulations – The scope should include consideration of cumulative impacts of the proposed generating facility with the proposed transmission facility; and also cumulative impacts with the several other existing and proposed wind energy projects in the region.	Visual simulations will include potential impacts of the Project's interconnection line, although BRE does not consider these to be "cumulative impacts" as they are part of the same Project. The updated PSS has a new Section 15.13 that discusses cumulative impacts. As discussed in this section, the Application will include at least one photo-simulation showing the combined impacts of the existing wind turbines and proposed Project.
1 (DPS)	Exhibit 24 Item 9	Visual impact rating procedure	Section 24.8 – Impact Assessments – Provide documentation including description of method, rating forms and rating panelist instructions for the modified BLM Visual Resource Management methodology mentioned at page 68.	The PSS has been updated to require the specific information in the comment.
1 (DPS)	Exhibit 24 Item 10	FAA light visibility	Section 24.9 – FAA Light Viewshed – This section should address locations where lighting is predicted to be visible based on viewshed analysis.	The original PSS requires an FAA lighting viewshed map be included in the PSS; this type of map will show where FAA lights are expected to be visible.
1 (DPS)	Exhibit 24 Item 11	Shadows at cabins	Section 24.10- Shadows - Provide a justification for only assessing residences occupied year-round as opposed to all residences within the specified study distance.	The updated PSS more clearly defines the receptors to be evaluated for shadow impacts, and it includes seasonal residences on non-participating properties.
1 (DPS)	Exhibit 24 Item 12	Shadow impacts	Section 24.10 – Shadows- Evaluation Criteria should be clarified to address the methodology for assessing actual shadow flicker impacts as likely receptor locations.	Exhibit 24 will discuss the potential impacts of shadows at receptors where annual average shadow hours are estimated to be 30 or more.
1 (DPS)	Exhibit 24 Item 13	Shadow impacts	Section 24.10 states: "The primary concern with shadow flicker is the annoyance it can cause for adjacent residents. As discussed in PSS Exhibit 18, some people have postulated that wind turbines could trigger epileptic seizures in vulnerable individuals, but this has not been found to be a real impact." DPS notes that the discussion of shadow flicker in the PSS does not provide a sufficiently detailed basis to support the statements. DPS also notes that section (a)(9) in 16 NYCRR §1001.24 Exhibit 24: Visual Impacts requires an "analysis and description of related operational effects of the facility such as visible plumes, shading, glare, and shadow flicker" and section 16 NYCRR §1001.24 (b)(8) requires analyses of the operational characteristics of the facility and related facilities, including shading, glare, shadow flicker, or related visible effects of facility operation, including an assessment of the predicted extent, frequency, and duration of any such visible effects created by the facility.	The updated PSS removes the phrase "but this has not been found to be a real impact." Potential impacts of shadows will be discussed in Exhibits 18 and 24.
1 (DPS)	Exhibit 24 Item 14	Shadow receptors	Section 24.10 only includes "locations of inhabited residential structures" in the scope. The PSS should include all flicker sensitive receptors and a justification for differentiation of "inhabited residential structures" from other residences as well as methods for determination.	The updated PSS more clearly defines the receptors to be evaluated for shadow impacts.
1 (DPS)	Exhibit 24 Item 15	Bounding turbine for shadow analysis	Section 24.10 states that the flicker analysis will be performed on the Wind turbine dimensions for the tallest anticipated wind turbine. The scope should be expanded/clarified to include consideration of diameter of the blades.	If BRE proposes a turbine that is shorter than the tallest turbine but with blades 5% or more longer, then it will run a separate analysis for the shorter, larger rotor turbine. Otherwise, it's reasonable to use the tallest turbine to characterize shadow impacts.

1 (DPS)	Exhibit 24 Item 16	Shadow criteria	Section 24.10 proposes a 30-hour/year threshold for assessment of flicker impacts. a. The PSS should clarify whether the threshold is proposed for a “worst case” or a “real/expected-case” evaluation. Typically, worst-case evaluations assume that there is no cloud coverage so that the sun is always shining during the daytime. In addition, the wind direction is parallel to the direction of the sunrays so that the plane of rotation of the blades is always perpendicular to the sunrays and the area with flicker shadow is maximal. In an “expected case” evaluation, however, cloud coverage and wind direction are accounted for so that the sun is not always shining during the daytime and the wind turbines are not assumed to be always facing the sun. b. In addition to the maximum number of hour of shadow flicker per year, the PSS should propose a threshold for the maximum number of minutes per day with considerations of potential health effects and whether the proposed threshold corresponds to a “worst-case” or an “expected-case” evaluation.	The 30 hour per year criteria will be applied to a real/expected case evaluation. The updated PSS adds an evaluation to identify any receptors that might experience 30 minutes per day of shadows.
1 (DPS)	Exhibit 25, Effect on Transportation Item 1	Road agreements	Section 25.3 (pg. 71) - PSS states that “[t]o mitigate such damage (road), BRE intends to enter into road agreements with the towns and county that will require BRE to (i) check roadways after construction to verify that roadways are in a condition no worse than what existed immediately prior to Project construction, and (ii) repair or resurface roads that are shown to have been damaged by Project construction. Further, BRE proposes to conduct a road survey prior to construction to identify bridges or weak road spots where BRE may elect to install steel plating or other reinforcements to minimize road impacts during construction.” Per requirements of 16 NYCRR 1001.25 (d) (5), provide a description of all road use and restoration agreements between the applicant and landowners, municipalities, or other entities, regarding repair of local roads damaged by heavy equipment or construction activities during construction or operation of the facility.	BRE intends to reach agreement with local road and highway authorities covering the use and restoration of roads used during construction; these agreements will likely be part of the host community agreements and will be included in the Application if available at the time of filing.
1 (DPS)	Exhibit 25 Item 2	Malone-Dufort airport	The Applicant states that “the Project could impact instrument flight paths and other navigation tools used by public-use airports.” In light of this, Staff recommends that the affected airport(s) be added to the stakeholder list. In the original PIP, the Plattsburgh International Airport was noted as not being an affected agency in its potential stakeholders list. There is also no mention of the Malone-Dufort Airport; however, according to the PSS the project should serve no impact.	BRE will add the Malone-Dufort airport to the stakeholder list.
1 (DPS)	Exhibit 27 Socioeconomic Effects	Construction employment and payroll	Section (a) of the regulations state that this exhibit shall contain an estimate of the peak construction employment level. Section (b) of the regulations state that this exhibit shall contain an estimate of the annual construction payroll, by trade, for each year of construction. Please provide this information.	The updated PSS clarifies the required information will be in Exhibit 27.
1 (DPS)	Exhibit 29, Site Restoration and Decommissioning	Decommissioning criteria	Page 85 states that “BRE will decommission the Project at the end of its useful life, which BRE estimates will be 40 years or more after the start of commercial operation.” However, there is no indication that a statement will be provided of the performance criteria proposal for site restoration in the event the facility cannot be completed. Per 16 NYCRR §1001.29 (a), provide a statement of the performance criteria for this particular scenario.	The PSS describes the restoration criteria for decommissioning as follows: “After decommissioning, the Project Area will be suitable for essentially all uses for which it is currently suitable, including farming, timbering, and hunting – the three primary current uses. As part of decommissioning, BRE would remove wind turbines, pad-mount transformers, foundations to a depth of 3 feet below grade, overhead collection and transmission lines, and the Project substation. Roads would be left in place for landowner use.” The same criteria will apply to site restoration in the event the facility cannot be completed.
1 (DPS)	Exhibit 31, Local Laws and Ordinances Item 1	Project Substation Location and Local Zoning Requirements	The PSS does not provide a description or indication of the location of the proposed step-up substation that would mark the intersection of the major generating facility and the major electric transmission facility. This location should be defined since there are other provisions in local codes than the Wind Energy laws cited that are likely to apply to the collection and step-up substation.	The Application will include maps and descriptions of the electric collection system, including the step-up substations, and Exhibit 31 will include an assessment of all Town codes as they may apply to the collection system.

			Allowable uses, area requirements such as height restrictions, lot size and coverage and setbacks requirements, sign ordinances, and related provisions are included in local codes separate from the Wind Energy laws. DPS advises that both the Article 10 and the Article VII applications will need to address the substation location, since there are low-voltage components of the substation that apply to the facilities subject to Article 10, and high-voltage components that apply to Article VII facility. Regardless of the distinction, Public Service Law §168(2) requires that the Siting Board make findings regarding "the nature of the probable environmental impacts of the construction and operation of the facility, including the cumulative environmental impacts of the construction and operation of related facilities such as electric lines…."	
1 (DPS)	Exhibit 31 Item 2	Local zoning requirement other than wind energy laws	The PSS does not address substantive local law provisions other than those included in the various local Wind Energy laws. As an example, DPS notes that the Town of Ellenburg Zoning Law at *Section 440 - Stream Protection*, requires that all structures shall be set back at least 50 feet from streams. This provision would potentially apply to electrical collection system poles, the O&M building, pad-mount transformers or other facility component equipment. Provisions from Ellenburg Zoning Law *Section 510 – General Standards for Conditional Use* specify sight distance at access road entry and exit point on public roads are potentially applicable. Local Flood Hazard Area review and design provisions may also be applicable to facility location and design. DPS advises that the applicant should provide a more robust assessment of local code applicability for all involved municipalities.	BRE will continue examining all town codes for applicable measures. BRE notes that in the first example in the DPS comment, the Wind Energy Facilities laws of Clinton, Ellenberg and Altona define "Wind Energy Facility" as "including all related infrastructure, electrical lines and substations, access roads and accessory structures." Therefore, although, the PSC may distinguish the transmission facility from the generating facility for the purpose of applying Article VII, under town laws governing wind farms, all aspects of the wind farm are governed by the wind farm laws
1 (DPS)	Exhibit 32, State Reviews, Permits and Approvals	VGL and New England Clean Energy Proposal	Section 33.2 – Other Approvals – This section does not describe the Applicant's efforts to participate in the clean energy market in New England States (Connecticut, Massachusetts and Rhode Island as "The Wind and Hydro Response" (as described at project website http://vermontgreenline.com/faqs)). Applicant should provide unredacted copies of its submittals from that proceeding. Also, the Applicant should identify any needed tariffs, approvals, permits or contracts with federal or state agencies or regional system operators for the proposed Project.	Because the BRE is not dependent on actions taken by the New England states regarding the RFP the requested materials do not have any decisional consequence in this proceeding. In addition, because NY and the NE states will likely be competitors in the market for RECs, any competitive, commercial information will be provided, if relevant, only pursuant to a protective order.
1 (DPS)	Exhibit 35, EMF Study	EMF Study	Staff expects the Applicant will complete an EMF study for the Application at summer normal rating (by the manufacturer) for the conductor and the winter normal rating (by the manufacturer) for the conductor. The electro static study shall be done at a voltage 1.05 time the normal line rating.	The updated PSS clarifies these points on the EMF study.
1 (DPS)	Letter to the PSC from Applicant	PSS delivery	The Applicant states that copies of the PSS were mailed to those individuals on the service list (Attachment 1) but it is unclear as to whether all stakeholders were mailed a copy of the PSS. Please confirm this.	BRE sent hardcopies or CD's of the PSS to individuals on the service list and the six public document repositories specified in the PIP, but not to all stakeholders. BRE mailed post cards to all stakeholders notifying them of the availability of the PSS at www.BullRunWind.com.
1 (DPS)	Attachment A, Service List Item 1	PSC contacts	Mr. James Denn is noted as the contact person for DPS as the Public Information Officer. Mr. Denn should be listed as the contact for inquiries. This contact should be updated to include Kathleen H. Burgees, Secretary to the Commission to whom comments should be submitted.	BRE has updated the service list as advised.
1 (DPS)	Attachment A Item 2	Master stakeholder list	A master stakeholders list should be added to include and reference those parties on the service list.	BRE will update the stakeholder list to include any parties on the service list but not on the stakeholder list.

1 (DPS)	Attachment 3	Case Number	Staff notes that the Applicant did not include the case number on correspondence to Assemblywoman Duprey nor Senator Little. The case number should be referenced on all documents so it can be easily identified with the specific case. This is essential information that should be included in all the Applicant's correspondence and outreach efforts (including to DPS Staff, Stakeholders and interested parties).	Comment noted. BRE will make a point to include the case number on all Article 10 documents and notices.
2 (DEC)	Significant Issues Item 1	Cost-Benefit	In general, the Applicant has not shown that the benefits of the Project outweigh the significant amount of impacts to natural resources that would occur during construction and operation thereof.	Following the filing and the review by all parties of the Application, the record in its entirety will enable the Siting Board to make this determination.
2 (DEC)	Significant Issues Item 2	Wetland impact avoidance and minimization	The Project, as proposed in the PSS, would result in impacts to DEC-regulated freshwater wetlands and the 100-foot DEC-regulated wetland adjacent areas, and the Applicant has not shown they have avoided and/or minimized impacts thereto to the greatest extent practicable.	Following the filing and the review by all parties of the Application, the record in its entirety, including aspects of the record addressing alternatives, will enable the Siting Board to make this determination.
2 (DEC)	Significant Issues Item 3	Stream impact avoidance and minimization	The Project, as proposed in the PSS, would impact numerous DEC-protected and/or Federally-regulated small streams. The Applicant has not shown that they have avoided and/or minimized impacts to the greatest extent practicable.	Following the filing and the review by all parties of the Application, the record in its entirety, including aspects of the record addressing alternatives, will enable the Siting Board to make this determination.
2 (DEC)	Significant Issues Item 4	Forest impacts	The Project, as proposed in the PSS, would impact large areas of forested wildlife habitat, including impacts due to habitat loss and fragmentation. The analysis of the impacts of this activity provided, thus far, is scientifically flawed and grossly underestimates the amount of impacts likely to occur and, as such should be redone.	The PSS statements are initial characterizations to support scoping, not final analyses of potential impacts. The Application will include a forest inventory and impacts analysis to assist evaluation of potential forest fragmentation. The updated PSS contains additional language describing these evaluations.
2 (DEC)	Significant Issues Item 5	Wetland functions	The wetland benefits and functions analysis provided is flawed and not comprehensive. A complete evaluation of all of the benefits and functions provided by the wetlands within the Project area must be provided.	The PSS discussion and mapping of wetlands was intended to support scoping, but not as a final or complete evaluation of wetland benefits, functions, and potential impacts. A wetlands functional assessment will be provided with the Application. A statement clarifying this has been added to section 22.8 of the updated PSS.
2 (DEC)	Significant Issues Item 6	NYS endangered species law	Construction and operation of this Project must comply with the requirements of New York Code Rules and Regulations ("NYCRR") Part 182.	We acknowledge the potential applicability of the cited law to the Project.
2 (DEC)	Exhibit 9 Section 9.3	Alternatives, natural resource impacts	The discussion on alternatives for the Project needs to include a comparison of the natural resources impacts - including those to wetlands, streams, wildlife habitat, and forest blocks – for each alternative.	Exhibit 9 will include the described comparisons. Updated PSS section 9.2 clarifies these will be included.
2 (DEC)	Exhibit 22 Section 22.1	Vegetation types disturbed	The summary of different types of vegetation to be disturbed during construction should include mixed evergreen/deciduous forest, and grassland/hay fields, to the extent that they occur in the project area and may be impacted.	The updated PSS adds a category for mixed evergreen /deciduous forest. A category has also been added for "grasslands." Hayfields will be considered agricultural fields as owners may periodically plant them as hay, corn, or other crops, and thus "hayfield" is a relatively temporary designation.

2 (DEC)	Exhibit 22 Section 22.3	Protected and Declining Species	In addition to evaluating habitat that is known or suspected of supporting any threatened or endangered listed species or state species of special concern, the Applicant also should include an evaluation of impacts to the species themselves. DEC notes that direct impacts to bat species may occur as a result of the operation of the Project, regardless if suitable or occupied habitat is identified on site.	The review of habitat is an appropriate tool for evaluating the likelihood of the species to be present at the Site, and it does not imply that potential impacts to the species will not be evaluated. The original PSS states that Exhibit 22 "will discuss the potential Project impacts to the identified species."
2 (DEC)	Exhibit 22 Sections 22.5 and 22.6	Cumulative impacts to birds and bats	The Applicant must evaluate and discuss all potential direct and indirect cumulative impacts to birds, bats, and other wildlife as a result of the construction and operation of the Project. Such an evaluation should include an estimate of bird and bat fatalities, as well as direct habitat loss (development/clearing) and indirect habitat loss (avoidance/edge effects). The Applicant should consider all data from both operating and proposed wind energy projects located in the vicinity of the Project evaluation.	The updated PSS specifies the evaluation of impacts to birds and bats will consider both impacts from the Project alone and any cumulative impacts from the Project plus existing wind projects specified in a PSS Section 15.13.
2 (DEC)	Exhibit 22 Section 22.7	Post-construction bird and bat monitoring	A post-construction monitoring plan should be developed through consultation with DEC and United States Fish and Wildlife Service ("USFWS"), and include an assessment of the indirect impacts to birds (such avoidance, habituation, and new forest edge effects created by the construction and operation of turbines) through breeding bird surveys using Before-After Control-Impact design as described in DEC's *Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects*, June 2016.	BRE conducted breeding bird surveys in 2016 to support a before-after-control-impact (BACI) design bird habituation study to be carried out post-construction.
2 (DEC)	Exhibit 22 Section 22.8	Wetlands mapping	All regulated wetlands (including those regulated by DEC and those regulated by the United States Army Corps of Engineers ("USACE"), must be delineated using the proper agency-approved methodology to show the current wetland boundaries before Project-related wetlands impacts can be adequately assessed. Mapped wetland boundaries (i.e., DEC regulatory and the National Wetlands Inventory maps), are only approximate and cannot be relied on as definitive wetland boundaries. Likewise, air photo interpretation does not provide sufficiently accurate wetland boundaries for impact review. Once the wetland boundaries are delineated and approved by the appropriate regulatory agencies, the Applicant will need to submit air photos with the wetland boundaries overlain at a scale where the wetland boundary is clearly visible in detail. The small-scale maps included provide an overview of wetlands, but not sufficient detail for project review at each wetland and adjacent area impacted. DEC notes it does not accept delineations that are more than five years old.	The PSS presented preliminary wetlands mapping to support scoping. As stated in the PSS, BRE will delineate wetlands according specified USACE and DEC manuals. The maps provided in the application will show wetlands at a suitable scale to show individual wetlands and adjacent areas.
2 (DEC)	Exhibit 22 Section 22.9 Part 1 of comment	Wetland impact avoidance	The statute and regulations under Article 24 require that projects must first avoid any impacts that can be avoided, and then minimize all impacts that can be minimized. Projects must show the proposed impacts are compatible with the functions and benefits of wetlands, or that the positive economic and social need for the project clearly outweighs the potential impacts to the wetlands and adjacent areas.	BRE will develop the project to avoid and minimize unavoidable impacts while striving to provide a new renewable energy resource that generates electricity at a reasonable cost. As mitigation plans may not be appropriate or required, the updated PSS removes reference to mitigation plans.
2 (DEC)	Exhibit 22 Section 22.9 Part 2 of comment	Wetland impact table	The total amount of Project-related impacts to all regulated wetlands and DEC-regulated wetland adjacent area should be provided in tabular form. Said table(s) should include the following information: 1) Wetland name, size and class; 2) Agency jurisdiction; 3) Type of impact (i.e., road, tower, transmission line or temporary versus permanent impacts etc.); and 4) Written description of the impacts that includes (i) whether the impact is temporary or permanent; (ii) the type of habitat impacted, if applicable; (iii) size of the impact; (iv) a discussion of the restoration planned after construction; (v) a justification of the impacts; and (vi) the steps taken for avoiding and minimizing these impacts.	Exhibit 22 will present wetland impacts in tabular form. The updated PSS specifies the information to be provided for each impact.

2 (DEC)	Exhibit 22 Section 22.9 Part 3 of comment	Wetland impact mapping	For each proposed turbine location, roadway or transmission line that (i) will impact a DEC-regulated wetland; (ii) is within 100 feet of a DEC-regulated wetland boundary; or (iii) will cross or disturb an area within 50 feet of a stream, provide a site development plan that including all of the following information: • Existing contours (2' interval) • Proposed contours (2' interval) • Limits of proposed grading • Existing features (road, stone wall, hedgerow) • Proposed turbine location with extent of permanent base • Proposed roadway with culvert locations • Proposed crane area • Proposed transmission line • Delineation of wetland or stream (include flag number and location) • Name of wetland (Federal or State) • Limits of disturbance (permanent and temporary) • Placement of erosion and sediment control	BRE intends to present the requested information in the Site Plans provided as part of Exhibit 11, except that instead of showing proposed contours the Site Plans will identify areas, if any, where BRE expects significant cut or fill will be required. The Site Plans will also show limits of disturbance that will bound the construction activities. Existing features such as stonewalls, trails, and hedgerows will be visible on aerial photos, but will not be specifically called out.
2 (DEC)	Exhibit 22 Section 22.9 Part 4 of comment	Wetland delineation report and additional information on impacts	In addition [to wetlands impact mapping], provide the following supplemental materials for each site plan: • Wetland delineation report • Rationale for determination of upland area within DEC mapped wetland area • Photo log keyed to site plan • Erosion and sediment control plan (or typical) • Culvert placement and design (or typical) • Description of proposed vegetation removal • Mitigation plan for temporary impacts • Tax map showing property owner name • Written agreement with property owner	BRE's Application will include a wetland delineation report as stated more clearly in updated PSS Section 22.8. Exhibit 23 will include a draft stormwater plan showing. Typical E&S measures and estimated sizes and locations of culverts to be installed. Exhibit 13 will include a map with owner names and information on BRE's property rights. Written agreements with owners are confidential and should not be required given the information being proposed in Exhibit 13. The updated PSS specifies that Exhibit 22 will discuss plans for removing vegetation in areas where wetlands are proposed and measures to minimize temporary impacts to wetlands during Project construction.
2 (DEC)	Exhibit 22 Section 22.9 Part 5 of comment	Wetland impact mapping	A functional assessment of the quality of wetlands being impacted will need to be completed for all wetlands and DEC-regulated wetland adjacent areas impacted, and compared to potential mitigation projects proposed. Note that DEC does not concur that wildlife habitat is the most dominant function, nor that mitigation should focus on only providing for lost wildlife habitat. All of the functions impacted needs to be assessed and mitigation provided for all functions and benefits.	A wetlands functional assessment will be provided with the Application. A statement clarifying this has been added to section 22.8 of the updated PSS.
2 (DEC)	Exhibit 22 Section 22.9 Part 6 of comment	Wetland impact mapping	Provision of wetland delineations must also include analysis of wetlands that are not currently mapped but that meet State criteria for jurisdiction. It is important that the applicant work in consultation with wetland regional staff early and often. It cannot be overstated that DEC wetland jurisdictional maps are an approximation and actual jurisdiction can extent significantly beyond currently mapped areas. On-site field delineations should be provided to the DEC as early as possible and include a description of the hydrologic connectivity of all delineated wetlands within the Project area including a summary of the anticipated state or federal jurisdictions, or both, of each delineated wetland. Assessments of potential state wetlands jurisdiction shall include "unmapped wetlands" that meet the DEC's 12.4-acre size threshold (including any wetlands with discernable surface hydrological connections which function as a unit in providing wetland benefits, pursuant to 6 NYCRR 664.7(b)) or otherwise meet state criteria for jurisdiction (e.g., wetlands determined to be of Unusual Local Importance, pursuant to 6 NYCRR 664.7(c)). A summary of off-site wetlands adjacent to the Project area that may be hydrologically or ecologically influenced by development of the Project, including Significant Coastal Fish and Wildlife Habitat Areas designated by the New York State	BRE understands the approximate nature of mapped DEC wetlands. If practicable, BRE will provide DEC with wetland delineation results prior to submittal of the Application so that DEC can identify "unmapped wetlands."

			Department of State and public lands, to determine their general characteristics and relationship, if any, to the delineated wetlands within the Project area. As mentioned above, the Applicant is required to first avoid and then minimize impacts to wetlands. Mitigation cannot be proposed to mitigate for impacts that can be avoided or minimized. If DEC concurs that avoidance and/or minimization has been achieved, then mitigation will be required for all wetland and adjacent area impacts.	
2 (DEC)	Exhibit 22 Section 22.10	Invasive species management	An Invasive Species Prevention and Management Plan ("ISPMP") that incorporates methods that will be utilized to avoid and minimize the potential for spread of invasive species (including those listed in 6 NYCRR Part 575) must be submitted to, and approved by, the appropriate agency/ies. Specifically, the ISPMP will include the following: 1) A summary of the survey methods the Applicant used to identify existing non-native invasive plant and insect species within the Project area; 2) Specific methods the Applicant will use to ensure that imported fill and fill leaving the Project area will be free of non-native invasive plant and insect species to the extent practicable; 3) Indication whether fill materials to be placed within the Project area will be free of nonnative invasive plant and insect species or only used within the areas free of non-native invasive plant and insect species infestation; 4) Project area grading and erosion and sediment control methods that will be used to prevent the introduction, spread or proliferation of non-native invasive plant and insect species to the extent practicable; 5) Details of cleaning procedures for removing non-native invasive plant and insect species from equipment and personnel, and properly disposing of infested materials; 6) Details of procedures for preventing the spread of invasive insects, such as the emerald ash borer, and compliance with the state quarantine on the transport of ash trees, where applicable, from the Project area; 7) Implementation plans for ensuring that equipment arrives at and departs the Project area free of non-native invasive plant and insect species, and remains free of such species when moving between locations on the site; 8) Description of the Best Management Practices or procedures that will be implemented, and the education measures that will be used to educate workers; 9) Details of post-construction monitoring and survey measures and procedures for revising the ISPMP in the event that the goals of the initial plan are not met within a specified timeframe; and 10) Anticipated methods and procedures used to treat non-native invasive plant and insect species that have been introduced or spread as a result of the construction or operation of the Project. DEC has a zero percent allowance (no new infestations) for any invasive species that were not present prior to construction, and that occur on site after construction.	The PSS stated BRE would be providing an invasive species management plan. The updated PSS clarifies BRE will survey areas to be disturbed prior to conducting construction in that area, and adds the requirement to address ash tree transport. Other portions of this comment are covered in the existing PSS text.
2 (DEC)	Exhibit 22 Section 22.12	Forest impacts	Comparing the temporary changes in forest structure associated with timber harvesting with impacts associated with permanent clearing and filling is not well founded in science. Impacts from timber harvest are temporary as forests will regrow. Also, harvested areas continue to provide important quality habitat for early and mid-successional wildlife. Construction areas of this project will either be permanently modified to non-wildlife habitat, or permanently altered to a different habitat. The areas under powerlines may be permanently converted to different habitat, such as shrubs, but the areas filled and maintained as developed area or grass within forested areas will have minimal if any value as wildlife habitat. Impacts from occasional timber harvesting are not comparable to permanent changes and fragmentation due to development. Human development alters the forest in negative ways that occasional timber harvesting does not. The project area contains large areas of intact habitat that are utilized by a variety of wildlife, including many species of conservation need. Thus, the application needs to fully compare the habitat currently existing on site (even logged high quality habitats) to the habitats that will occur after construction.	The PSS statements are initial characterizations to support scoping, not final analyses of potential impacts. The Application will compare the impacts from timber harvesting in the area to project impacts. The Application will also include a forest inventory and impacts analysis to assist evaluation of potential forest fragmentation. The updated PSS contains additional language describing these evaluations.
2 (DEC)	Exhibit 23 Section 23.2 Item 1	Stream crossings	On page 63 of the PSS, the Applicant states that Project impacts during construction will be "limited" and that Project "operations will not impact the streams and fish." There is not enough information provided in the PSS to support these statements. Construction activities could have a significant impact on streams and wetlands. Permanent impacts associated	PSS Section 23.2 has been updated to require an evaluation of the use of HDD for stream crossings.

			with construction (culverts, sedimentation, erosion, clearing of cover, thermal changes) could impact the aquatic resources for the life of the Project. The Applicant needs to evaluate the feasibility of using horizontal directional drilling ("HDD") to avoid impacts at protected stream and wetlands crossings. If the Applicant finds that HDD is not feasible at any given crossing, a justification for such a finding must be provided, as well as an alternative to HDD. The Project impacts on streams due to clearing overhead cover (temporary and permanent) must also be evaluated and the amount of crossings must be clearly set forth. A map depicting the classification of protected waters needs to be provided, and this map needs to show the class and designation [e.g., which streams are C(t) and C(ts)]. Please note that New York State design standards for stream and wetlands crossings will apply, as well as time of year restrictions with respect to trout streams.	PSS Appendix 23-2 maps the DEC classification of streams in the Project Area.
2 (DEC)	Appendices Item 1	Bird and bat study reports	DEC has not yet received the results of any of the 2015 or 2016 bird and bat work conducted on site as described in Appendices 22-2, 22-3, and 22-4 of the PSS. DEC requests the opportunity to review and comment on these study results as soon as reports are completed.	The study reports are being prepared. BRE will provide DEC the study reports when they are available, even if that is before the Application is submitted.
2 (DEC)	Appendices Item 2	Version of bat mist netting plan in the PSS	The work plan included in Appendix 22-4 (Summer 2016 Pilot Bat Mist-Netting and Telemetry Work Plan) is dated June 23, 2016. DEC received a plan of the same name dated July 27,2016, with updated text and the inclusion of permits for capturing, handling, and tracking listed species. The most recent work plan should be used in the PSS.	BRE will file the updated version of the plan.
2 (DEC)	Appendices Item 3	Shape files	DEC also requests GIS shapefiles for use in ESRI's ArcGIS ArcMap software depicting the most current locations of the: • Project boundary • Turbines • Access and maintenance roads • Electric collection and transmission lines • Laydown/storage areas • Any temporary or permanent buildings constructed in support of the project • Any other temporary or permanent Project components • Areas to be cleared around each turbine, roads, electric lines and all other project components • Bird and bat survey points and transects	When BRE files its Application, it will supply the requested shape files to parties equipped to use them.
3 (DOH)	Item 1	Cumulative effects	The proposed Bull Run Wind Energy Center (“Bull Run”) would be one of the largest wind energy projects in New York State, and would be sited in Clinton County where a number of wind energy projects are already located. The application should include a discussion of the potential for cumulative effects (e.g., noise, vibration, visual, etc.) associated with the large number of turbines involved in the Bull Run project and considering the multiple wind farms already sited in Clinton County.	The updated PSS adds new section 15.13 that discusses cumulative impacts.
3 (DOH)	Item 2	FAA lights	Exhibits 11 and 18 of the application will include present applicable lighting requirements and a lighting plan for the wind turbine structures. The Preliminary Scoping Statement (“PSS”) indicates that the night-time blinking of tower red lights (required by FAA) will be synchronized. The applicant should also evaluate whether there could be a benefit (in terms of reduced potential annoyance) from synchronization of blinking red lights with nearby existing wind farms. Also, given the scale of the project, the applicant may wish to explore the feasibility and safety of lighting only a subset of the turbine structures to reduce night time lighting impacts.	Typically, FAA does not require all turbines to be lit, and BRE will light the minimum number of turbines required to meet FAA safety requirements. The updated PSS specifies that Exhibit 18 will discuss the feasibility of synchronizing the FAA lights with those of existing turbines.
3 (DOH)	Item 3	Seasonal residences	In evaluating public health impacts associated with wind turbine noise, the applicant will consider sensitive receptors defined as year-round residences, schools, hospitals, houses of worship, and outdoor public use areas. In the absence of a reasonable justification, the applicant should also consider noise impacts to seasonal residences located throughout the study area, some possibly located quite close to the turbines. Moreover, other potential safety and health impacts (including blade and ice throw,	The updated NIAP specifies that seasonal residences (i.e. “cabins”) on non-participating parcels will be evaluated as Noise-Sensitive Receptors.

			tower collapse, shadow flicker/visual impacts, drinking water wells, electromagnetic fields, etc.) should be considered for seasonal-residential locations in the study area, in addition to those locations identified in the PSS.	
3 (DOH)	Item 4	NYSERDA noise report; WHO noise criteria	Exhibits 15 and 19 of the application will evaluate potential public health and safety issues and noise and vibration, respectively. It may be helpful to update the Noise Impact Protocol by considering information contained in a New York State Energy Research and Development Authority report which explored the current knowledge and research needs associated with wind turbine noise and health effects, including annoyance, sleep disturbance and other health effects. Additionally, we request that the applicant compare modeled noise impacts to the World Health Organization's (WHO) health-based noise guidelines, including WHO's night-time noise guidelines to protect from sleep disturbance which can adversely affect health.	The PSS and NIAP have been updated to require evaluation of the potential of the Project noise to generate the health effects identified in the cited NYSERDA report. BRE will use the 1999 and 2009 WHO guidelines as a metrics by which expected sound levels from the Project will be evaluated.
RE3 (DOH)	Item 4a	Number of ambient noise monitoring locations	The Noise Impact Assessment Protocol indicates that pre-construction noise measurements will be conducted at six locations throughout the study area. It is not clear whether six noise monitoring locations will be adequate to characterize ambient pre-construction noise levels across the full range of possible relevant locations throughout the large study area. Please describe how the choices of monitoring locations (e.g., proximity to other noise sources) could impact conclusions about facility noise impacts and provide some justification for limiting the proposed monitoring to six locations.	The six noise locations were selected by the noise expert to represent the range of acoustic conditions at Noise-Sensitive Receptors. Despite the large size of the Project Area, the majority of receptors are located in similar acoustic environments where the main noise sources are likely traffic or agricultural equipment. The six sites selected cover the range of traffic and agricultural noises expected to be typical. The noise report in the application will include additional discussion on the basis for selecting the noise monitoring locations.
3 (DOH)	Item 4b	Noise metrics	Additionally, this section should clearly define the metrics presented (e.g., Leq, L90, L10) in the Noise Impact Protocol and describe how applicable noise guidelines will be compared to these modeled and measured metrics.	The updated NIAP has footnotes defining the different ambient noise metrics. It also explains further how the measured and modelled values will be used to compare to different criteria.
3 (DOH)	Item 5	Environmental justice map	The PSS states that potential Environmental Justice ("EJ") communities, as defined and identified by the New York State Department of Environmental Conservation, are not present within a five mile-buffer from the locations of the project area (the "study area"). The applicant should present a map of potential EJ communities in Exhibit 28 to support this assertion.	BRE will update its PIP to include a map of potential environmental justice areas in the vicinity of the Project.
3 (DOH)	Item 6	Construction noise, emission and traffic impacts	The PSS indicates that applicant will minimize potential temporary impacts related to construction of the facility by implementing a quality assurance and control plan, hiring an on-site environmental monitor and implementing complaint resolution. The plans should also include mechanisms to minimize noise associated with construction and to prevent traffic accidents associated with transportation of construction-related materials. Additionally, the application should explore approaches to minimize or control emissions from any on-site construction facilities (e.g., a concrete batch plant, if required by the project) and equipment.	PSS Section 19.3 discusses construction noise impacts. The updated PSS includes a new Section 25.7 addressing traffic safety and construction vehicles.
4 (Towns)	Item 1	Security	The Municipalities do not believe the applicant has given due weight to the necessity for security during the construction period. Although the Applicant may believe the threat of vandalism during the construction phase is not a primary concern, maintaining a secure site is important to the Municipalities to prevent access by children and thrill seekers from what can only be termed an attractive nuisance. The Municipalities believe that site security will need to more adequately address this issue.	BRE values the municipalities' experience with security issues in past projects. BRE will be prepared to implement additional measures as will be discussed more fully in Exhibit 18.
4 (Towns)	Item 2	Turbine type	The Municipalities are concerned with the lack of detail regarding the type of turbines to be used for the project. Without this information, the Municipalities have no way to evaluate requests for variations from their wind energy laws and the overall safety of the units being proposed.	PSS Section 2.2 describes both why Invenergy elects not to specify a particular WTG this far in advance of installation and how, by identifying the "worst case" features of existing WTG models of the type BRE would use for the Project, in terms of potential impacts, i.e., tip height, rotor diameter, and noise production, the Application will assess potential impacts from

				the Project in a conservative manner. The safety of the Project wind turbines will be discussed in Exhibit 15, and will identify risks that could vary depending on the dimensions of the final turbines selected.
4 (Towns)	Item 3	Complaint resolution	The complaint resolution process in the PSS is too vague. From past experience, the Municipalities know they will be the recipients of all complaints, unless the Applicant implements and publicizes adequate complaint resolution procedures. The complaint procedure section of the PSS has no detail whatsoever. The Municipalities request this oversight be corrected.	As indicated in PSS Section 19.8. the Application will provide a complaint handling procedure, which will include procedures for notifying both DPS and the relevant town of complaints and their resolution.
4 (Towns)	Item 4	Early responders	The PSS seems to minimize the impact of potential health and safety issues related to this project on the Municipalities' early responders. The possible need for rescues of people in distress while working at the heights contemplated by the project pose a tremendous risk for the volunteers of the municipalities' emergency services. The PSS should more adequately address these issues to mitigate the adverse impact on the municipalities.	Emergency responders are addressed in PSS Sections 15.10, 18.6, 18.8, and 27.8. BRE will provide an Emergency Response in Exhibit 18 and work to obtain input from the Clinton County Office of Emergency Responders. As discussed in PSS Section 27.8, BRE will train its personnel to lower injured workers to the ground where they can be tended to by emergency responders, preventing the responders from being exposed to unnecessary risk.
4 (Towns)	Item 5, part 1	Setbacks	The Municipalities take issue with the Applicant's intention to disregard certain provisions of the Towns' wind energy laws, including setbacks and hours of operations. Of particular concern, is the Applicant's focus on residential dwellings and their exclusion of other types of structures. The requirements of the Municipalities' wind energy laws, while perhaps not binding on the Siting Board, are important to the residents from a safety, economic productivity, and quality of life perspective.	Aside from tip-height and construction hour restrictions, and subject to final layout determination, BRE is not seeking override of any local law requirements. See PSS Sections 6.1 and 31.2. Regarding setback requirements as reported in Section 6.1, none of the Towns prescribes setbacks from non-residential structures.
4 (Towns)	Item 5, part 2	Hours of Construction	During this construction project, the residents will be exposed to traffic, noise, dust, and a general disturbance to their normal routine/life. A process of exceptions has been used successfully in the past for other wind projects in the area where, for instance, a Town's representative (on-site monitor) is contacted with a need to extend work hours beyond the limits contained in the local ordinance, the request is evaluated, communicated to the Town, and permission granted. Examples of such exceptions would include, but not be limited to: (a) Concrete pours starting early in hot months (usually 5:30a.m.) in order to maintain the specified temperature of the concrete; (b) Blading Towers early in the morning or in the evening to take advantage of the lower wind conditions; (c) After hours work for equipment break downs where a task must be finished (such as a base pour that must be continuous with no cold joints, a component lift which must be completed for safety reasons); and (d) Substation transformer commissioning. A process that uses "exceptions" should be encouraged, rather than the complete removal of work day limits as proposed by the Applicant, which could result in safety concerns from overworked labor, work performed in unsafe conditions due to inadequate lighting, as well as continuous disruption to the residents.	Article 10 authorizes the State through the Siting Board and DPS to supervise construction matters because of the state-wide importance of major electric generating facilities. Particularly in light of the shorter daylight construction periods in the North Country BRE will ask the Siting Board to override local time restrictions. BRE is willing to agree on reasonable restrictions provided they are easily understood and are not subject to prior approval.
4 (Towns)	Item 6a	Metric Units	Linear measurement provided in meters should also be provided m feet for understandability and perception (e.g. 36 meters (118.11 feet)).	The Application text will state linear measurements in both feet and meters.

4 (Towns)	Item 6b	Black and white maps	Figures, maps, & exhibits should have a pattern or design to the lines/roads/figures in addition to color so that should they be reproduced in black and white, they will still be understandable;	Application figures and maps will use notations or symbology to make the intended meaning of lines understandable if printed in black and white.
4 (Towns)	Item 6c	Noise monitoring locations near buildings	Noise monitoring locations should be located away from obstacles, structures, or topography where sound waves could be reflected back and provide erroneous study results. The photos of the Noise Monitoring Locations show buildings in close proximity to the monitoring locations. Attention should be paid to orientation of the monitoring location to the turbine(s) in relation to all structures in the area;	Monitoring locations were selected with the aim of characterizing the sound environments at residences where people live. Based on the experienced field team observations, the microphones were sited to measure the typical sounds in the area without undue influence from structures that could shield or reflect existing sounds and potential future turbine sounds, be relatively secure, and not interfere with the resident's activities. The design of the ambient sound measurement program and selection of the monitoring locations are consistent with well-established practices that have long been employed in energy industry projects. For example, guidance for conducting a community sound measurement program is provided in "Electric Power Plant Environmental Noise Guide 2nd Edition" by the Edison Electric Institute (1984). Page 3-12 of the EEI Guide states: During the measurements, microphones should be placed 1.2 to 1.5m above the ground surface and at least 4m from any vertical reflecting surface, such as the side of a building.
4 (Towns)	Item 6d	Noise sensitive receptors verification	Noise-Sensitive Receptors - Page 1 of the Noise Assessment Protocol, Section 2, states that Invenergy developers familiar with the local area identified these receptors by review of aerial photographs. The developer should additionally field verify and/or refer to Town/County tax/parcel information;	The updated NIAP specifies BRE will review receptor list with local authorities or their designees.
4 (Towns)	Item 6e	Map colors	In Appendix 3-6, the Fire Districts Map contains colors that may not be discernable by people that have certain types of color blindness. A pattern and/or more dissimilar colors would be helpful. This comment should be applied to all graphic maps, exhibits, appendices, etc.;	BRE will file an updated version of the fire districts map with colors that are more distinct or other notations to eliminate any confusion.
4 (Towns)	Item 6f	Gravel road widths	Section 25.3, Road Survey, should include identifying gravel road widths, especially if the roads are to be considered for haul routes. If gravel roads are to be utilized for hauling, they should be of sufficient width to allow large vehicles such as dump trucks and concrete trucks to safely pass one another when they meet;	The local road survey will indicate widths of gravel roads.
5 (FWS)	Page 2 Paragraph 3	Years of wildlife surveys	To date, we have not received results from the studies and so cannot speak to their adequacy. Regardless, the Service generally recommends more than one season and more than one year of study to account for year to year variation in wildlife activity which may be influenced by local and regional weather patterns, food resources, and population level fluctuations. Therefore, we recommend that the Commission require the study results be provided to our office and that any future recommendations on additional studies be completed.	Per the *Comprehensive Pre-Construction Habitat and Wildlife Survey Work Plan* dated July 13, 2015 that BRE developed in consultation with and submitted to DEC and FWS, BRE is performing one year of on-site wildlife studies, which includes two hours of survey each month per avian use plot during migratory periods and a total of 532 survey hours, covering 30% of the Project Area. BRE will also incorporate adaptive management strategies into its post-construction monitoring plan, which would outline BRE's strategy if its impact was

				greater than expected, a potential result of interannual variability. The study reports are being prepared and will be provided to DEC and FWS when they are available, even if that is before the date the Application is submitted.
5 (FWS)	Page 2 Paragraph 4	Bald eagle surveys	Bald eagle (Haliaeetus leucocephalus) surveys were started in the fall of 2015 and will continue for one full year in accordance with the 2007 National Bald Eagle Management Guidelines. However, the Service does not yet have the complete results of this study. It should be noted that the guidelines are currently being revised and more study effort may be required.	As mentioned, BRE is performing avian use surveys in accordance with its *Comprehensive Pre-Construction Habitat and* Wildlife Survey Work Plan that was developed in consultation with FWS and DEC. BRE will evaluate recommendations of new guidelines once they are final. Survey reports will be provided when available.
5 (FWS)	Page 3 Paragraph 1	Golden eagle migrations	Migratory raptor surveys were conducted by Invenergy during the spring and fall migration period. We currently do not have the complete results of the studies and, therefore, cannot comment on the adequacy of the data. The Service may recommend at least one additional year of monitoring to gauge migration variation per our wind energy guidelines. We are particularly interested in golden eagle observations from this area, as the species has been documented migrating through the area.	The avian use surveys were designed to capture migratory activity. The number of hours of observation were doubled during fall and spring migration, improving the chances of observing migratory species, including golden eagles. BRE will provide the study report when available.
5 (FWS)	Page 3 Paragraph 2, part 1	Survey locations	For avian surveys, study plans provide the number of projected sample sites, but not the locations. Therefore, it is unknown if the data collected are applicable to the potential turbine locations. Migratory bird surveys will be conducted using transects, but the locations are unknown.	The study report will include maps showing transect locations relative to proposed Project facilities.
5 (FWS)	Page 3 Paragraph 2, part 2	Resurvey after operations	If the project is built, all transects should be resurveyed once turbines are operating to determine any potential displacement effects.	BRE's post-construction monitoring plan will include a bird habituation study.
5 (FWS)	Page 3 Paragraph 3	Forest fragmentation	It is predicted that most of the project turbines will be constructed in forest and wetland habitats. We have concerns about the loss of these habitats that serve as breeding, resting, and foraging areas for migratory birds and other wildlife (Alerstam 1990). In addition, turbine pads, access roads, and collector lines can fragment them and reduce habitat quality. Fragmentation has been shown to influence 300 feet or more into forest interior habitat (Robbins et al. 1989). Cumulative fragmentation can lead to reduced population levels, increased predation, and increased competition (Robinson et al. 1995). We request the Commission require an analysis of existing unfragmented forest areas and those that will be affected by project development.	The Application will include a forest inventory and impacts analysis to assist evaluation of potential forest fragmentation. The updated PSS contains additional language describing these evaluations.
5 (FWS)	Page 3 Paragraph 4	Wetland habitat impacts	Likewise, fragmentation and disruption of hydrology can impact wetland habitat quality. Roads and collector line trenches can block or channel water away from aquatic areas. The Service previously expressed concern about constructing wind turbines in the project area. We provided that concern to the U.S. Army Corps of Engineers during the review of the adjacent Marble River wind energy project. The Marble River project area was reduced in size to avoid wetlands in this area. If the project proceeds, the Service will review the Bull Run project pursuant to the CWA; however, we urge the Commission to also closely examine this issue.	BRE expects the Siting Board will examine these issues closely, and BRE will supply the analyses and data required by the relevant federal and state laws. Since the Marble River project was reviewed, both NYS and the federal government have placed an increased emphasis on expanding renewable power resources.
5 (FWS)	Page 3 Paragraph 5; Page 4 Paragraphs 1-2	Northern long-eared bat	The northern long-eared bat (Myotis septentrionalis) (NLEB) is listed as a threatened species under the ESA and is known to hibernate in mines approximately 25 miles south of the project area. To determine potential presence of the NLEB in the project area, bat acoustic surveys were conducted in the fall of2015 and followed the New York State Department of Environrnental Conservation (NYSDEC) guidelines.	BRE performed mist-net surveys in summer 2016 in potential NLEB habitat to check for possible presence of this and other bat species. Results will be provided in study reports when available, and the Application will discuss potential avoidance measures.

			It is important to note that several NLEBs have been killed by wind turbines in New York in previous years. Additional information regarding the NLEB can be found at http://www.fws.gov/midwest/endangered/mammals/nlbalindex.html. NLEB may migrate through the project area during the spring and fall. Operating wind turbines are known to kill and injure migrating bats (Cryan and Barclay 2009). Although the NLEB is protected from incidental "take" under the ESA, provisions of the ESA allow for certain activities to be exempt from the take prohibition under Section 4(d). The Service will continue to provide technical assistance to Invenergy regarding this issue.	
5 (FWS)	Page 3 Paragraph 6	Number of bat mist-net sites	Mist net surveys were also conducted in July and August 2016. A draft study plan was provided to our office and we noted that the limited number of mist net sites would not meet our standards for a presence/probable absence study. Despite the statement on Page 54 that the Service reviewed bat survey protocols, we recommended that the studies be completed in accordance with the 2016 Rangewide Indiana Bat Summer Survey Guidelines found at http://www.fws.gov/midwest/ endangered/ marnrnals/I nbalinbasummersurveyguidance.html. Even with a reduced number of sample sites, two adult male NLEBs were captured on the site.	As described in its *Summer 2016 Pilot Bat Mist Netting and Telemetry Work Plan* reviewed by and finalized in consultation with FWS and DEC, the objective of BRE's mist netting study was to assess species composition in the Project Area, and not to establish probable absence. The *2016 Rangewide Indiana Bat Summer Survey Guidelines* outline the effort recommended to determine whether Indiana (or northern long-eared) bats are present or likely absent. Since BRE established presence of northern long-eared bats during the 2016 survey, BRE does not plan to conduct further surveys and will assume presence of northern long-eared and Indiana bats from spring through fall migration.
5 (FWS)	Page 4 Paragraph 3	Bird and bat post-construction mortality monitoring plan	If the project proceeds, the Service recommends that the site be monitored for impacts to wildlife following construction and during turbine operation. A post-construction bat and bird mortality monitoring plan should be developed and provided for review. Proposals for conducting monitoring should be coordinated with both the Service and the NYSDEC to ensure they are comprehensive, accurate, and correctly timed. Information gained from post-construction monitoring will continue to aid the Service and project sponsors as we learn more about potential impacts, or lack thereof, to wildlife in the project area. Monitoring should also be part of a strong adaptive management program for the project. We recommend that project approval not be given until after the details of the post-construction monitoring plan and adaptive management program have been reviewed and approved by the Service and the NYSDEC.	PSS Section 22.7 specifies BRE will submit a proposed monitoring plan as part of Exhibit 22 of the Application. BRE will develop its plan in consultation with USFWS and DEC.
5 (FWS)	Page 4 Paragraph 4	Conclusion	In conclusion, the Service is concerned about the proposed location of the Bull Run wind energy project due to the large amounts of forest and wetland habitat. This habitat should support large numbers of breeding and migrating bird species as well as other wildlife. Based upon that information, the risk to wildlife from operating wind turbines could rise to elevated levels. We may recommend additional studies be conducted to account for annul variation in weather and migration patterns. Finally, we believe that Invenergy should consider the regulatory requirements of the ESA, BGEPA, and MBTA in siting and operating this project and work toward avoiding and minimizing wildlife impacts.	BRE designed and conducted its pre-construction surveys following the FWS's *Land-based Wind Energy Guidelines*, the DEC guidelines, and in consultation with FWS and DEC. It continues to analyze its survey results and potential direct, indirect, and cumulative impacts to wildlife. State, national, and international policy supports renewable energy in part because of its benefit to wildlife and sustained biodiversity.

Comment Sources

1. NYS Department of Public Service, August 26, 2016 letter from Graham Jesmer, Assistant Counsel, to Eric Miller, Bull Run Energy LLC.
2. NYS Department of Environmental Conservation, August 26, 2016, letter from Sita Crounse, Senior Attorney, to Hon. Kathleen H. Burgess, Secretary to the NYS Public Service Commission.
3. NYS Department of Health, August 26, 2016 letter from Richard Thomas, Assistant Counsel, to Eric Miller, Bull Run Energy LLC.
4. Towns of Clinton, Ellenburg, Altona, and Mooers, August 26, 2016 letter from Eric Gustafson, town counsel, to Eric Miller, Bull Run Energy LLC.
5. U.S. Fish and Wildlife Service, August 24, 2016 letter from David Stillwell, Field Supervisor, to Hon. Kathleen H. Burgess, Secretary to the NYS Public Service Commission.