

 <p>NEW YORK STATE Adirondack parkagency P.O. Box 99 • Ray Brook, New York 12977 • www.apa.ny.gov Division of Regulatory Programs</p>	<p>COMMERCIAL WIND FARMS</p> <p>Supplemental Information Request</p>
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Instructions: This **Supplemental Information Request** must be submitted with the **General Information Request**. Please provide all of the information requested below which will be required for a complete permit application. If you believe a question is not applicable, explain in your response. Type or print clearly in ink. If you have questions, please call the Agency at the above telephone number. **Provide three (3) copies of all application materials including all required attachments, plans, maps, and reports to the Agency.** A site visit by Agency staff will also be required.

Permits may be granted for the development of commercial wind farm projects to be undertaken in whole or in sections, subject to conditions. No application for a commercial wind farm project or other project to be undertaken in sections shall be deemed complete unless it contains sufficient information as to design of the entire project to allow the Agency to assess the impact of the entire project pursuant to Section 809(9) or 809(10)(e) of the Adirondack Park Agency Act. The Agency may request additional information as to the entire project before determining complete the permit application for initial section(s).

If the applicant is seeking final approval for all phases of the project by the initial permit, construction level detailed plans must be submitted for all phases. If final approval is sought for the initial phase or phases, then the initial application must also contain sufficient details of subsequent phases of the development so that the overall project impact can be assessed.

The applicant is strongly encouraged to have a pre-application meeting with Agency staff to review and refine the information required by the Agency prior to submitting this application. Any request for a pre-application meeting should be made well in advance by calling the Agency's Assistant Director of Regulatory Programs. For a complete application, you will be expected to provide all of the following information unless otherwise agreed to by Agency staff.

I. PROJECT BACKGROUND INFORMATION and DESCRIPTION

Provide a detailed written report that contains the following information keyed to the following headings.

- A. **Project Sponsors and Co-applicants:** List the names of all project sponsors and co-applicants. Specify the legal relationship between the project sponsor(s) and all co-applicants. If the project sponsor or co-applicant is a corporation (including a Limited Liability Company), then provide a certificate of incorporation, the office address, and names, addresses and titles for all corporate officers. If a Partnership, list all partners, identify the general managing partner, and provide the address of the partnership's office.
- B. **Developer Qualifications:** Provide a list of the most recent development projects of a similar type or size undertaken by the project sponsor or development entity. For each project, list the name and location of the project, describe the project as to type and size, state the year the project was started and when it was completed and list the public agencies that were involved in approving the project. Identify the name of the turbine manufacturer and model employed at each facility.
- C. **Technical Advisors:** Provide the company name, address, and telephone number of each consulting firm working on this project. Identify the name, title, and telephone number of the person who will be the primary point of contact for each firm.
- D. **Schedule of Completion for Plans, Studies and Legal Documents:** If any of the required plans, studies and legal documents described herein are not completed and submitted with this permit application, indicate by name, month and year when each will be submitted. If an item is not to be prepared, state why not.
- E. **Project Description:**
 - 1. Provide :
 - a) a list of engineering codes, standards, guidelines and practices that the company intends to conform with when planning, designing, constructing, operating and maintaining the wind turbines, electric collection system, substation, transmission line, inter-connection, and associated buildings and structures.
 - b) a list (by agency or municipality) of the permits, approvals and permissions necessary to construct, operate, maintain and retire the wind turbines, electric collection system, substation, transmission line, inter-connection, and associated buildings and structures.
 - 2. Provide a detailed narrative of the proposed project so as to allow an in-depth understanding of the scope of the project and details of necessary on-site and off-site infrastructure, potential impacts, public service needs, and community benefits.

3. Project Components: Identify and describe all development components (e.g. site preparation, infrastructure by type, structures by type, landscape development, etc. to be undertaken in each phase of the project.

a) Turbines

- i. Identify the name of the turbine manufacturer(s) and specific model(s) proposed. Provide all technical specification sheets which identify the turbine's dimensions and operating data including the rotor, tower, and power control systems and operational mechanisms and limits.
- ii. Provide plans and descriptions indicating design, location and construction controls to avoid interference with existing utility transmission and distribution systems.
- iii. Provide specific manufacturer, industry standard, or state or federal setback requirements to residences, businesses, schools, unoccupied structures, electric transmission lines, and public and opens space use areas (e.g. athletic fields).
- iv. Explain the rationale for the setback distances identified above. If necessary, provide a detailed explanation as to why any stated setback cannot be accommodated in the proposed facility layout,
- v. Provide a details regarding turbine spacing.

b) Transmission Infrastructure

- i. Describe detailed plans for all infrastructure, including communication lines and electric gathering and transmission lines and substation(s). Discuss who will fund the construction, own, operate, and maintain each component of this infrastructure.
- ii. Provide specific manufacturer, industry standard, or state or federal setback requirements to residences, businesses, schools, unoccupied structures, and public and opens space use areas (e.g. athletic fields).
- iii. If the system (or any portion thereof) will be the responsibility of a state or local government or other entity (e.g., public or private utility) describe and provide documents transferring the responsibility. If the system will be the responsibility of an established private utility company/transportation corporation, identify the entity by name, address and a point of contact.
- iv. Provide an estimate of the demand created by various components of the project and the design capacity of any community system. Provide written documentation from the appropriate public or private utility that the off-site system(s) have the capacity to meet the specific needs of the project and detail the existing or proposed legal arrangement with the involved with the utility that will allow interconnection into the grid. If the current system(s) are inadequate to meet the demands of the project, provide written documentation regarding how additional capacity is proposed to be added.

If the project is to connect with proposed or existing off-site transmission infrastructure, provide details on the dimensions/capacity of all off-site systems that will be used and their distance/location relative to the project site.

- v. Provide an analysis of the electrostatic and electromagnetic fields for any proposed electric transmission line. Include a cross-section diagram and chart showing the results of the field strength analysis at average annual and annual maximum conductor current flow (maximum conductor rating). The cross-section diagram should demonstrate the electrostatic and electromagnetic field strengths extending horizontally from facility centerline to a distance of 300 feet.
 - vi. Provide a statement from a responsible company official that the company and its contractors will conform to the requirements for protection of underground facilities contained in Public Service Law §119-b, as implemented by 16 NYCRR Part 753.
 - c) Structures
 - i. Describe all structures (e.g., power control building, equipment storage buildings, etc.) proposed. Each structure should be keyed to footprints identified on the site plans (see below).
 - ii. For each proposed structure identify the proposed use and size of the structure in terms of exterior roof and siding colors, footprint and height (as measured from the highest point on the structure to the lowest point of existing grade or finished grade, whichever is greater)
- 4. Construction of Facility: Provide an overview of facility construction. Specifically address the following topics:
 - a) Provide details regarding construction methods used to construct the turbines including,
 - i. Installation of the access roads,
 - ii. Transmission and gathering lines,
 - iii. Substation construction,
 - iv. Turbine foundation and tower/turbine assembly and erection.
 - b) Indicate the average and maximum projected excavation volume for each turbine base.
 - c) State the months, days and hours of facility construction including but not limited to extraction operations, material processing (e.g., screening and crushing), material loading and transportation tower/turbine installations, etc.
 - d) Identify stationary equipment (e.g., screening and crushing plants) and rolling stock (e.g., front end loaders, bulldozers and trucks) and associated operating noise levels to be employed.
 - e) Describe all measures proposed to control dust.
 - f) Identify the location for disposal of excavation spoils and grubbed vegetation.
 - g) Identify the volume of concrete needed for the each turbine foundation and the project as a whole. Identify the source of the concrete. Please be advised that if a concrete processing plant is proposed additional information will be required.
 - h) Detail the following regarding any proposed blasting:
 - i. State the months, days and hours of operation of blasting and describe conditions under which blasting will not occur such as thermal inversions and thunderstorms.

- ii. State the anticipated average and maximum number of blasts to occur monthly and for the entire project.
- iii. State the projected average and maximum amount of material (in cubic yards) to be removed by each blast event.
- iv. Describe any blast monitoring proposed to be employed, specifically, monitoring locations, whether both air blast and ground vibrations are to be monitored and the levels of air blast (in decibels) and ground vibrations (in peak particle velocity) to be maintained and who will perform any such monitoring. (A professionally prepared study of air blast and ground vibration impacts related to blasting may be required depending on the specific project location and identified levels of air blast and ground vibrations. This aspect should be discussed with Agency staff prior to preparing such a study).
- v. Describe any pre-blast surveys proposed to be conducted on the conditions of nearby structures and wells.
- vi. Describe any provisions for notifications to area residents prior to blast events.
- vii. Provide plans and descriptions indicating design, location and construction controls to avoid interference with existing utility transmission and distribution systems. Indicate detailed locations and specify design separations of proposed facilities from existing electric, gas, and communications infrastructure. Indicate measures to minimize interferences where avoidances cannot be reasonably achieved.
- viii. Describe notification and public relations for work in public rights-of-way.
- ix. Describe and provide plans for any special provisions or requirements for on-site and off-site construction lay-down areas.

5. Development Schedule:

- a) Provide a schedule of the expected start and completion dates, by month and year, for all development (including road infrastructure, tower foundation installation, tower and turbine installation, and gathering, interconnect, and transmission lines and associated facility installations such as equipment storage areas and buildings and management and control facilities) that is proposed to be part of the project. If the project is to be phased, state the expected start and completion date, by month and year, for each phase.
- b) Provide a status report on equipment availability and expected delivery Dates for towers, turbines, transformers, and related major equipment demonstrating availability of equipment and materials in the time frames established in the development schedule.

6. Operation of Facility: Provide facility maintenance and management plans, procedures and criteria. Specifically address the following topics:

- a) Details regarding facility inspection and maintenance schedules by component. Include turbine, tower, electric transmission, gathering and interconnect line safety inspections, maintenance and repairs.

- b) Vegetation clearance requirements and management plans and procedures (inspection and treatment schedules; and environmental controls to avoid off-site effects) for road, turbine, gathering and transmission lines, switchyard and substation yards, and for danger trees around stations; inspection and treatment schedules; and environmental controls to avoid off-site effects.
- c) Provide production estimates with supporting documentation as follows:
 - i. What is the projected annual power generation?
 - ii. What is the anticipated daily, seasonal and annual variation in energy production?
- d) Specify commitments for addressing public complaints, and procedures for dispute resolution during facility construction and operation.
- e) Provide a Quality Assurance and Control Plan, including staffing positions and qualifications necessary, demonstrating how applicant will monitor and assure conformance of facility installation with all applicable design, engineering and installation standards and criteria.

7. Buildup of Turbines by Year: List by year the number of turbines expected to be built and in operation. For each year reference the specific turbines and associated infrastructure to be installed on the site plans below.

F. Development Costs: List estimated development costs for each major project Component, including but not limited to, the following:

- 1. For the entire project provide a list of all local, state and federal development and production inducements, subsidies, tax reliefs; and provide an estimate of the dollar value of each for the life of the project.
- 2. Survey, design, engineering and permitting.
- 3. Site Preparation.
- 4. Infrastructure:
 - a) Roads
 - b) Stormwater Management
 - c) Electric (distribution, substation, and lighting) and communication infrastructure
- 5. Landscape Development (landscaping, reclamation)
- 6. Structures, (by type) including towers/turbines and all structures.

G. Estimated Property Value: Provide the current and anticipated real property tax assessment for the proposed project.

- H. Project Employment:** Estimate the number of short and long term and part-time and full-time jobs likely to be generated by the project on an annual basis. Indicate the distribution of year-round and seasonal jobs during the expected construction period. State whether the project involves the creation of any long-term jobs in operation of the development. If so, provide details.
- I. Future Development:** Describe the scope, location, size and timing for future land use and development. Depict such future development on appropriate scaled plans.
- J. Open Space:** Describe any proposed dedicated open space and any existing or proposed agricultural, recreational, or forestry uses that will be continued, developed or otherwise impacted as part of the project.
- K. Land Use:** Describe and provide an inventory and map showing and labeling the location of all existing and nearby land uses (within one half mile of the boundaries of the project site), including: year-round residences, seasonal residences, commercial and industrial land uses, public and semi-public community uses, mining, forestry and other resource uses, designated scenic vistas, State land (including its classification) and open space, recreational, and vacant land.
- L. Transportation and Traffic:** Identify all roads that will be used for deliveries of the concrete, turbines, turbine blades, and heavy construction equipment.
1. Describe and map trucking routes including the anticipated percentage of loaded truck trips using each route.
 2. Identify the entities owning and maintaining any public or private roads providing access to the project site.
 3. Assess the anticipated increase in traffic volume on primary and secondary roads resulting from the construction and operation of the proposed project.
 4. Assess the capacity of roads to accommodate the construction equipment in terms of weight and capability to accommodate oversized loads.
 5. Determine the need for highway and traffic control improvements (e.g., road paving or repaving, road widening, intersection improvements, etc) resulting from construction or operation of the facility.
 6. Identify any road subject to seasonal closures and describe how these closures affect construction and maintenance of the facility.
 7. Submit written approvals from municipal and State highway departments for any required new access onto municipal or State highways.
 8. Provide details regarding what measures and guarantees will be in place to return public roads to a pre-development condition upon completion of the project?
- M. Public Services:** Describe the existing type, location and capacities of the public services that may be impacted by the project. Identify the names of the entities that own and operate these facilities. For the preferred proposal and each project alternative, assess the potential impact on these services from the proposed project and identify any measures to mitigate any adverse impacts.

N. Safety and Security:

1. Provide description and indicate details of plans to limit public access and assure security at substations, collection points, wind energy facilities and above ground components of electrical collection system.
2. Provide emergency response plans, notification and coordination procedures. Specify plans and procedures for addressing electric line outages, specification of 24-hours per day storm and emergency response situations. Include measures for communication and coordination with operators of existing utility facilities, and residents of adjoining or affected locations.
3. Discuss the following safety concerns and how each will be specifically addressed in the operation of the facility.
 - a. Ice shedding
 - b. Tower collapse
 - c. Blade failure/throw
 - d. Stray voltage
 - e. Fire
 - f. Lightning strikes and extreme weather abnormalities
 - g. Blackouts

O. Decommissioning:

1. Provide a plan for the removal and restoration of the site to its original, predevelopment condition. The plan must address all phases of project development and associated impacts including, but not limited to, soils compaction, stormwater management, turbine, tower, and gathering and transmission line removal. The plan must also clearly identify which installed infrastructure will be retired in place.
2. Provide a means to guarantee that the proposed turbines and all associated infrastructure will be removed and the site restored if required (such as a bond or letter of credit).

II. LEGAL PERMITS, APPROVALS AND AGREEMENTS

A. Provide the following information and documents:

1. The name of each federal, State and local agency from whom a permit, license or other form of approval for this project must be obtained.
2. The types of approvals, permits or variances required from each agency identified above and to which portion of the project they apply.
3. The name, address and phone number for each contact person representing the agencies identified above.
4. Provide a copy of all documents showing the project application has been

submitted to all applicable local government or regional entities. If such approval has been obtained, provide the Agency with documentation of such approval. If approval has not been obtained to date, provide a list of all such applicable approvals that will be required, the expected date of project approval, and documentation that the project meets all the criteria approval.

5. A copy of any applicable zoning, subdivision ordinances and any other local laws, ordinances, resolutions and policies.
6. All documents relating to any variance proposed or any zoning change requested or to be requested. Provide a list of the permits, approvals and permissions the company will have to obtain to construct, operate, maintain and retire the wind turbines, electric collection system, substation, transmission line, inter-connection, and associated buildings and structures.

B. Legal Documents and Agreements:

1. Provide approved or draft copies of each and all of the documents or agreements to which any portion of the project will be subject, including:
 - a) All existing and proposed leases, easements, right-of-way agreements or other similar legal documents affecting the use of the project site.
 - b) Any and all agreements and/or documents which will affect the ownership, use or enjoyment of any of the structures or uses of the project site.
 - c) Identify by survey the boundaries of all open space recreational areas.
 - d) Specify what entity will retain ownership of each area and under what agreements, contracts and documents they will be managed. Provide copies of all such documents. Open space areas include, but are not limited to forestland, agricultural land, trails for hiking, snowmobiles, trailbikes, jeeps, all-terrain vehicles, horses, bicycles, as well as playgrounds, parks, beaches, docks, boat slip areas, and ski trails. Please indicate all areas where public access will be provided on the project site.
 - e) State any intent regarding the dedication of roads or any other structure or use of the property to local government for its ownership and operation. Provide any descriptive information on this arrangement and a statement from the municipality indicating its willingness to accept the dedications of improvements and under what condition(s). If applicable, it is Agency policy to require that roads be constructed to Town standards prior to any development activities, or a bond or other financial guarantee acceptable to the Agency and/or the municipality to be posted to ensure successful completion of roads. In the event the developer elects to proceed with the above, provide a cost estimate from the project engineer detailing the cost of construction of the proposed roads.

III. ENVIRONMENTAL STUDIES AND REPORTS

The following studies and reports shall be required for each project unless otherwise agreed to in advance by Agency staff. The need for these studies and reports and the required depth of detail should be discussed in a pre-application meeting or during a preliminary site visit. The studies and reports shall be prepared by appropriately trained professionals for each task (e.g., biologist, registered landscape architect, licensed engineer) with at least four years of experience performing such investigations/analyses. Provide detailed written narratives or reports for each of the following topics and describe the methodology used to develop the information. Provide the name of the consulting firm and address, the name of the individual preparing the report, the telephone number, and documentation of the training and experience of the involved professional(s) for each task.

A. General Ecology

1. Conduct a field investigation to determine existing terrestrial and aquatic ecological characteristics in the project area. As appropriate, include this information on maps as requested in Item IV below.
 - a) General terrain.
 - b) Major hydrologic features (e.g., field, shrublands, hardwood forest, wetland, agricultural land).
 - c) Relative abundance of each habitat type.
 - d) Characteristic plant species associated with each habitat type.
 - e) Characteristic fish and wildlife (i.e., typical fish, mammal, bird, amphibian, and reptile species known or expected to occur in the project vicinity).
 - f) Determine presence or absence of endangered, threatened, or rare species within the project boundaries, assess potential impacts of each design alternative on such species and their habitats, and shall evaluate appropriate project modifications that would avoid, minimize and compensate for any harm to meet the concerns of State and Federal agencies.
 - g) APA-regulated wetlands in the project area. (See Item C below)
 - h) Determine the identity and extent of non-native, invasive species on the site. The consultant shall consider all appropriate measures to restrict the import or export of invasive species to or from the site, and the spread of invasive species on the site as well as measures to eradicate or otherwise control existing invasive species during the construction and operation phases of the project.
2. Evaluate the nature, extent, and significance of potential impacts (including impacts during construction and operation) of the proposal and each project alternative on fish, wildlife, and habitat. This analysis shall include general determinations of the amount and type of vegetation to be disturbed, special habitats that might be damaged, and possible interruption of fish and wildlife movements (e.g., blockage of fish movement through culverts, interruption of deer movement by fences).

3. Determine appropriate avoidance, minimization of harm, and mitigative measures to compensate for project impacts.
 - a) Provide an evaluation of the potential impacts to birds and bats using the New York State Department of Environmental Conservation Division of 'Fish, Wildlife and Marine Resources' January 2009 publication "GUIDELINES for CONDUCTING BIRD and BAT STUDIES" January 2009.
 - b) Provide a proposed post construction monitoring and mitigation plan to evaluate the bird and bat mortality to the Agency.
 - c) Describe how you will identify invasive species located on the project site and/or access roads. Describe all provisions to prevent importing invasive species to the site during construction, including details for equipment sanitization. Explain how invasive species will be eliminated from the construction site if already present. Provide a copy of any invasive species management policy or methodology..

B. Surface and Ground Water Identification and Evaluation

1. General Characteristics:

The Applicant's consultant shall conduct a field investigation to determine the General characteristics of all bodies of surface water within and adjacent to the project, including names and unnamed tributaries, streams, creeks, rivers, ponds, lakes, wetlands, and special aquatic sites.
2. The consultant shall determine the New York State Department of Environmental Conservation (NYSDEC) surface water classification for each body of water, Pursuant to 6 NYCRR Part 701.
3. For each project alternative, the consultant shall evaluate the effects of construction activities and project changes on surface water bodies, including (but not limited to):
 - a) discharge of dredged or fill material
 - b) dredging in stream bed or bank
 - c) fill
 - d) erosion and sedimentation
 - e) stream realignment
 - f) reduction of canopy cover
 - g) water temperature increases due to removal of stream bank vegetation
 - h) changes in runoff
 - i) accidental toxic spills
 - j) flow changes including restriction and over-widening
4. The consultant shall evaluate appropriate avoidance, minimization, mitigation measures to compensate for potential surface water quality impacts, including erosion and sediment control practices proposed in the vicinity of surface waters.

5. Surface Water Quality:
The consultant shall identify major drainage basins and sub-catchment areas existing within or adjacent to the project site. The consultant shall determine how the existing soils, vegetation, topography, climate, and seasonal nature of the proposed construction may affect the potential for erosion and sedimentation.
6. For each design alternative, the consultant shall assess potential sources of surface water pollution from construction activities and from motor vehicle use and other human uses of the completed project.
7. The consultant shall assess temporary and permanent measures and practices that may be used to avoid or minimize and control soil erosion, sedimentation, and surface water pollution during and after construction.
8. The consultant shall determine whether a DEC “SPDES General Permit for Stormwater Discharge from Construction Activities” will be required. Subdivisions involving the cumulative disturbance of more than one acre will require such a permit. If a permit will be required, the applicant shall file any required “Notice of Intent” with the NYSDEC and provide a copy to the Agency. A copy of the Stormwater Pollution Prevention Plan (SWPPP) shall also be provided to the Agency.

C. APA-regulated Wetlands

All wetlands studies for State-regulated freshwater wetland permit application purposes shall be performed to support findings required by Adirondack Park Agency Rules and Regulations, Part 578.

1. Investigate types, locations, and extent of APA-regulated wetlands in the project area. The consultant shall review APA Freshwater Wetlands Maps and other resources to identify potential locations of state-regulated wetlands in the project area. The applicant shall arrange for a consultant experienced in delineating wetlands in the Adirondack Park to conduct a field delineation of the APA-regulated wetland boundaries. APA staff will field review such delineations. The wetland field delineation shall be performed by an individual or individuals trained in the three-factor methodology adopted by the Adirondack Park Agency. (NYS DEC Freshwater Wetlands Delineation Manual 1995)
2. The field delineator(s) shall have at least two years of experience in wetland field delineations employing this method. The Applicant’s consultant shall submit documentation establishing these credentials to the Agency for concurrence prior to performing the wetland field delineation.
3. From field observations and wetland data sheets, determine wetland characteristics of each delineated wetland, including:
 - a) approximate total wetland area;
 - b) approximate wetland area within existing or proposed right-of-way ;
 - c) wetland cover types (e.g., forested wetland, scrub-shrub wetland, emergent marsh, wet meadow, bog);

- d) APA wetland classification(s);
 - e) dominant plant species; and
 - f) probable wetland functional values (e.g., flood flow alteration, nutrient removal, wildlife habitat).
4. Identify and determine the nature, extent, and significance of wetland impacts of each project alternative by identifying types(s) of impacts expected from construction activities and project changes, identifying affected acreage of regulated wetland area and assessing resultant potential impact on functional values.
5. Assess appropriate avoidance, minimization, and mitigation measures to compensate for losses to regulated wetlands. This analysis shall be sufficient to demonstrate that the proposed action includes all practicable measures to avoid and minimize harm to the regulated wetlands and their associated values. Delineated wetland boundaries must be accurately shown on all project base mapping. The wetland field delineation must be performed at a time of year when soil samples may be collected (i.e., when the upper 18” of soil is not frozen) and there is sufficient alive or persistent vegetation cover to reasonably make a wetland determination. In most regions of New York State, field delineation is limited to the period between March 15 and November 15; the applicant’s consultant shall submit justification to the Agency and obtain prior Agency approval for any field delineation work to be performed outside of this time frame. The applicant’s consultant shall delineate the wetland boundaries with survey flagging.
6. Wetland Mitigation Plan
- If wetland mitigation is required, mitigation plans shall be developed and Implemented in accordance with the “New York State Adirondack Park Agency Compensatory Mitigation Guidelines” (copy available from the Agency). The compensatory mitigation activities (restoration, creation, enhancement) should take place prior to the impacts to existing wetland.

D. Cultural Resources

- 1. Provide documentation from New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) that the project will not have an impact on historic resources or their recommendations for studies or surveys to be done and their recommendations for mitigation of any impacts to historic resources.
- 2. If directed by OPRHP to do so, the applicant shall conduct cultural resource field studies or surveys. The work shall comply with the New York State Historic Preservation Act (including associated guidance). All persons performing or supervising cultural resource survey work shall qualify under the appropriate professional qualification standards.
- 3. The final project plans shall include any identified measures to mitigate potential impacts to historic and cultural resources.

E. Visual Impact Assessment (VIA)

1. Provide a Visual Impact Assessment (VIA) of significant visual resources. The VIA shall be prepared by or under the direct guidance of a registered landscape architect licensed in the State of New York with at least five years of experience in VIA preparation. Prior to undertaking any VIA, a specific methodology which is designed to assess the project's impacts on public lands, roads and other public use areas (e.g., community structures, hiking trails, scenic vistas, etc.) and other sensitive view points (e.g., historic structures) should be developed for approval by Agency staff. Agency staff shall be invited to be present when field work is being undertaken, such as taking representative photographs from key viewpoints and conducting balloon tests to locate proposed development.
2. Prepare appropriate viewshed mapping for existing conditions, each design alternative, and the null alternative (wherever null alternative viewsheds at the design year would differ significantly from existing conditions) to define the physical limits of the affected visual environments.
3. Submit a draft of this report for review by the Agency and by the New York State Office of Parks, Recreation, and Historic Preservation. (OPRHP) (materials must be submitted as part of the materials reviewed by OPRHP in Item D. above). The final project plans shall include any identified measures to mitigate potential impacts to historic resources.
4. Identify the key views and the range of significant visual resources for each viewer group. Key views shall include the views of the project and from the project that best represent the visual environment for each design alternative and the null alternative.
5. Prepare digital photography based visual simulations to depict the existing and proposed conditions in order to compare them to the design alternatives as seen from key viewpoints. The type and number of simulations shall be discussed with and approved by Agency staff in advance.
6. Assess the visual impacts of each design alternative and the null alternative, including changes to significant visual resources and probable viewer response to these changes.

This assessment shall include measures to avoid, minimize, or mitigate negative visual impacts and to enhance positive impacts. Descriptions and costs of these measures shall be in sufficient detail for incorporation into the preliminary design and for use in evaluating relative advantages and disadvantages among the alternatives.

F. Shadow Flicker

1. Provide a Shadow Flicker Analysis that includes:
 - a) modeling methodology (including but not limited to specific software used and input data and resolution).
 - b) shadow flicker prediction map(s), analysis and discussion for potential maximum impacts assuming no intervening vegetation and 365 days of sun and wind.
 - c) shadow flicker prediction map(s), analysis and discussion for potential impacts which takes into consideration calm wind, and cloudy days and additional analysis intervening vegetation are taken into consideration.
 - d) discussion and evaluation of the limitations of the model(s) used.
 - e) specific analysis and discussion on impacts to residences, public use areas, (including but not limited to roads, parks, schools).
 - f) frequency of flicker (blade rotation), including an assessment of the frequency of flicker from multiple turbines on sensitive receptors.
 - g) mitigation.

G. Public Service/Fiscal Impacts

1. Provide letters from administrators of public service agencies indicating their knowledge of the service demands to be generated by this project, and any other development likely to occur including that which may be induced by this project in the future. These letters should state whether there is, at present, adequate service capacity to accommodate these projects as well as what system or program improvements may be required. Statements from administrators should be provided for each of the services noted above and should be as specific as possible.
2. Provide information on how any service capacity shortfalls for the project are proposed to be remedied by the project sponsor and/or service providers.
3. Discuss whether any local jurisdictions will need to provide revenue from general or dedicated funds to support construction and/or ongoing operation of any component of the project. If so, describe which components, the level of support that may be required, and the necessary timing of and arrangements for public investments.
4. Indicate the current real property tax assessments for the project site and the annual expected buildup of land and structural value that could be the basis for increased real property tax assessments. Provide an estimate of the buildup of potential real property tax revenues and user charges to involved local jurisdictions. Include any information on underlying assumptions that were factored into these estimates.

I. Economic Impacts

1. Identify the incremental build-up of economic impacts from the project in terms of direct full and part-time employment in project construction and operations, and the potential for secondary employment in local service, retail and wholesale establishments. To the extent possible, estimate the types of new businesses that could be expanded or established locally as a result of the local spending derived from the project. Include any information on underlying assumptions that were factored into these estimates.
2. Provide a written discussion of the short and long term worker housing implications of the subject. What is the expected area from which workers associated with the project will be derived? Will the project include any staff housing? If so, describe the type of staff housing which is to be associated with the project.
3. Assess the potential effect of the proposed project on surrounding housing values in the community.
4. Discuss how the proposed project relates to any revitalization plans for the local community.

J. Noise

1. Provide existing ambient background noise measurements in areas on and near the project site which are to be intensively developed. Measurements should be made at various times of the day and over several days to develop averages of sound levels. Identify nearby sensitive receptors and evaluate the impact of the project on such receptors. Identify measures to mitigate impacts to sensitive receptors and adjacent landowners.
2. Identify and characterize each on-site noise source anticipated during both the construction and operation phases of the project. For facility operation specifically discuss noise from transmission and substations, and each component of the wind turbine (e.g., blade rotation, generator gearing, motorized pitch and yaw equipment). Describe the sound level, discrete tones, time and duration of noise. Include equipment and vehicle noise sources.
3. Estimate decibel levels at the source, at the nearest property line and at the nearest off-site. Analyze the impacts of the noise generated on adjoining and nearby land uses.

4. Describe noise control measures to be employed, such as restricted hours of construction and operation, blast control techniques, location of loud noises away from receptors and use of sound absorbing enclosures, use of low decibel rated equipment, rental and deed use restrictions, etc.

K. Herbicides, Fertilizers and Classified Hazardous Substances

1. Describe the type and extent of vegetation to be controlled, and provide a map of areas proposed for pesticide or fertilizer use.
2. Provide a copy of Environmental Protection Agency (EPA) approved labels and Material safety data sheets for all pesticides to be used on-site.
3. Describe areas for storage, mixing, rinsing and disposal of herbicide products.
4. Estimate the annual quantity of each herbicide and fertilizer to be used. List the toxicological, degradation and environmental fate characteristics of each chemical and analyze how each pesticide or fertilizer may impact site specific resources of the area, particularly ground and surface water, wildlife, and human occupants of the site.
5. Indicate how cultural and non-herbicide management techniques, including integrated pest management, will or can be used to minimize or avoid the use of pesticides on site.
6. Provide a list of EPA and New York State Department of Environmental Conservation (DEC) classified hazardous substances which will be used in the construction and operation of the project. Provide specifications and procedures for the storage, handling, use and disposal of all classified substances.
7. Analyze and describe all impacts the project will have on ground water and surface water resources of not only the project site, but surrounding area as well. Include specifically a discussion of fertilizers and herbicides on wells to be Developed and on existing wells within 500 feet of the project site. Also discuss impacts of the same on lakes, ponds, rivers, streams, and wetlands on and within 500 feet of the project site.

L. Alternatives

Identify, assess and provide supporting plans for alternative sites, technologies, scales or magnitude of the project, project designs, project timing and phasing, uses, and types of actions: Specifically, address the following:

1. **Alternative Designs/Components:** Provide a description of and supporting plans for alternative project designs. (i.e., different tower type/height/number/location) which identifies benefits and environmental impacts. Provide a basis (with supporting documentation) for removing each alternative from consideration.

2. Alternative Technologies: Provide an assessment of alternate technologies for infrastructure facilities including, but not limited to transmission and substation facilities and stormwater management.

M. Adverse Environmental Impacts Which Cannot be Avoided if the Proposed Project is Implemented

Identify and discuss environmental impacts which cannot be avoided or mitigated.

N. Irreversible and Irretrievable Commitment of Environmental Resources

Identify and discuss short-term and long-term impacts on environmental resources, such as fuel used to construct and operate the project, the wood resources used to construct the project, the oil and stone used to construct roadways, wetland filled to construct the project, etc. Discuss both natural and man-made resources that are to be consumed, converted or made unavailable for further uses.

O. Growth Inducing, Secondary and Cumulative Impacts

Discuss the potential that the proposed project will provide the basis for further development in the community. For instance, the location of this project may create the market for other types of projects, whether or not developed by the project sponsor. Discuss what, if any, additional development may be expected to be induced in the community by this project. In addition, discuss the potential impact of any induced development on the character and appearance of the community as well on its local public service systems.

IV. MAPPING AND ANALYSIS REQUIREMENTS

Submit the maps as specified below. Technical considerations such as map scale, area coverage and reproduction capability should be discussed with Agency staff, in a pre-application meeting, prior to preparing these materials.

Mapping should be completed in two steps: first, developing the “Existing Features Mapping and Analysis” materials and second, preparing the “Project Plans and Construction Details”.

Each required map, plan or drawing must clearly show the following: scale; north arrow; name of preparer; date map prepared; maker, date and description of revisions to original map; and Professional certification, if applicable or required by the Adirondack Park Agency or NYS Law.

A. Resource and Existing Features Mapping

1. Project Site Base Map – at a scale appropriate to the project, showing:
 - a) Property boundary lines;
 - b) The boundaries of the project site;
 - c) Adjoining and adjacent landowners and owners of inholdings, if any
 - d) All Adirondack Park Land Use and Development Plan Map land use area boundaries;

- e) Local zoning boundaries;
 - f) All bodies of waters (rivers, ponds, and lakes) and permanent and intermittent streams (based on USGS planimetric maps and as designated by NYS DEC)
 - g) Boundaries of all wetlands (as delineated in the field by Agency staff or qualified wetlands biologist);
 - h) Existing buildings and structures on the site (labeled as to size and use)
 - i) Existing paved and unpaved roadways, driveways and parking areas; and
 - j) Existing water, wastewater, and electrical facilities;
 - k) Designated Agricultural Districts.
2. Soils Map – at the same scale as the project site base map, provide soils mapping in accordance with the Agency’s Soils Handbook. Consult with Agency staff prior to undertaking to determine the level of intensity required for the soils mapping (the size of the lots and type of development will determine the type of soil mapping needed).
3. Slope Map – at the same scale as the project site base map, provide five-foot contour topographic mapping that is shaded to show slope categories of 0-3%, 3-8%, 8-15%, 15-25% and greater than 25%.
4. **Critical Areas Map**
- 1. At the same scale as the project site base map, depicting:
 - a) Areas within 100 feet of lakes, ponds, rivers, streams and wetlands.
 - b) Critical Environmental Areas as identified in the Adirondack Park Agency Act.
 - c) 100-year flood plains based on HUD flood area maps.
 - d) Other natural hazard areas(landslide and rock fall areas, areas of unstable geological, ice or snow formations)
 - e) Designated Wild, Scenic and Recreational River “river areas” (generally within ¼ mile of the bank of a designated river or as otherwise described in Appendix Q-6 of the Agency’s Rules and Regulations)
 - f) Rare or valuable ecosystems and geological formations
 - g) Significant wildlife habitats (e.g. deer wintering areas, significant avian nesting areas)
 - h) Designated archeological areas, historic structures, historic districts or landscapes
 - i) Designated scenic vistas and other areas of local scenic significance
 - j) Areas of the site presently visible from public view locations (e.g., roads, trails, waterways); and
 - k) Any renewable resource lands such as aquifers and aquifer recharge areas, mineral resource areas, significant agricultural lands, public watershed lands.

B. Site Analysis Mapping

1. Site Limitations Composite Map- at the same scale as the project site base map. This map should be developed by overlaying the previous resource maps and, through the use of overlay shadings, identify those areas most suitable for development and those areas with cumulative limitations to development (e.g., wetlands, slopes over 25 percent, areas within 100 feet of water features and wetlands, flood plains, and other identified critical areas). This map should be done prior to any detailed engineering, site layout or design work.

V. PROJECT PLANS AND CONSTRUCTION DETAILS

- A. Submit the project plans and construction details specified below unless changes are agreed to with Agency staff in advance. Technical considerations such as plan scale, area coverage and reproduction capability should be discussed with Agency staff, in a pre-application meeting, prior to preparing these materials.

Each required plan or construction detail sheet must clearly show the following: scale; north arrow; name of preparer; date map prepared; maker, date and description of revisions to original map; and professional certification, if applicable or required by the Adirondack Park Agency or NYS law.

The proposed development should be placed in areas that are suitable for such use based on the Site Limitation Composite Map and protect those areas that are not suitable for development.

The development scheme should be based on the Agency's overall intensity guidelines, local zoning requirements, and be in conformance with the policies, purposes and objectives of the land use areas designated in the Adirondack Park Land Use and Development Plan Map.

1. Cover Sheet – clearly labeled with the name of the project, a list of the sheets in the set of plans with the number and description of each sheet, and date and descriptions of all revisions.
2. Overall Site Plan – at an appropriate scale agreed to with Agency staff (e.g., 1 inch = 400, 800, or 1,000) showing the boundaries of the entire landholding, the project site boundaries if different than the landholding, all proposed lots, (i.e., building lots, road lots, and open space parcels), existing public roads, and primary water features (i.e., lakes, ponds, rivers, and permanent streams).
3. Turbine Plans – at an appropriate scale agreed to with Agency staff that shows:
 - a) scale, north arrow and property boundary lines,
 - b) all bodies of water and permanent or intermittent streams,

- c) boundaries of all wetlands as identified or field verified by Agency staff,
- d) all turbines and foundation footprints,
- e) all existing and proposed roads, driveways, parking areas, and construction lay down areas.
- f) all existing structures (locations, sizes and uses),
- g) the proposed turbine locations with corresponding turbine numbers,
- h) all gathering and tower communication lines,
- i) all substations and transmission lines,
- j) provide the location of well and individual wastewater treatment system locations (the plan must show all components of each system and a 100% reserve area on each lot for replacement of the absorption area) for any building with water and bathroom facilities,
- k) all proposed structures with locations, sizes and uses (e.g., control facilities, garages, wood sheds, docks, decks, boathouses),
- l) existing and finished contours at two-foot intervals within 50 feet of any proposed disturbance, and
- m) changes in vegetative cover types on the site (e.g., fields, forests) and proposed vegetation clearing limits.

4. Transmission and Communication Infrastructure

- 1. Provide switchyard and substation design drawings and site plans, indicating:
 - a) Property lines and setbacks; access road location, width and gradient; site grading, cut and fill, drainage and environmental controls; all proposed improvements and equipment; fencing and gates; permanent erosion control measures:
 - b) Station lighting needs, and appropriate design criteria;
 - c) Provide a statement indicating that any future lighting will be designed to avoid off-site lighting effects (i.e., avoid up-light direction except for as-necessary maintenance task-lighting; avoid drop-down optics to minimize light trespass);
 - d) Listing of all electrical equipment and specifications for substation and switchyard facilities, and
 - e) Interconnection facility design plan and profile information.

- 5. Provide a utility plan at the same scale as the site plan(s). Details must include cross sections, for each system component (e.g., each type of transmission pole, each unique typical section view for underground utilities).

6. On-site Individual Water Supply and On-site Wastewater Treatment System Plans and Details –
- a) If you propose to expand or replace an existing on-site wastewater treatment system or if an existing system is failing or does not comply with current standards or if the proposal involves a new building where an on-site wastewater treatment system will be used, then

Provide detailed plans for the wastewater treatment systems that are prepared by a design professional (New York State licensed professional engineer, licensed architect, exempt licensed surveyor), showing at a minimum:

- a) soils test pit location and data
- b) percolation test hole location and results taken within the proposed absorption area(s)
- c) details on design of the system (application rate and demand, etc.)
- d) size and type of septic tank
- e) pumping station (if necessary)
- f) distribution box
- g) soil absorption system

7. Road and Driveway Construction Details – Provide subdivision road, driveway, and parking area scaled construction plans, details and specifications. Show at a minimum:

- a) typical road construction plans showing retaining walls, ditches, base, subbase, and surfacing details;
- b) centerline profiles showing existing and proposed grades;
- c) cross sections at 100-foot stations in areas where proposed roads traverse slopes greater than 15% or grading plan showing existing and proposed contours;
- d) limits of vegetative clearing;
- e) drainage control plans showing locations, type, materials, anticipated loading and capacity of drains, culverts, and catch basins; and
- f) all related temporary and permanent erosion control measures (e.g., rip-rapping, silt fences, vegetation).

8. Erosion and Sediment Control and Stormwater Management Plans -

1. Provide construction plans, details and specifications for erosion and sediment control and stormwater management for all on-site and off-site construction work areas, staging areas, on-site or off-site detours, borrow areas, and wetland mitigation sites. Describe installation and maintenance requirements.

The plans shall be prepared by a New York State licensed professional engineer or architect, a registered Landscape Architect or a certified erosion specialist. The plans shall include:

- a) an erosion and sediment control plan in accordance with the **“NYS GUIDELINES for URBAN EROSION and SEDIMENT CONTROL”**;
- b) a stormwater plan in accordance with the guidelines set forth in the **“NEW YORK STATE STORMWATER MANAGEMENT DESIGN MANUAL”**;
- c) a Stormwater Pollution Prevention Plan for the project site, including all hydrological calculations, which:
 - i. controls runoff, during and after development, such that peakoff for 1, 10 and 100 year 24-hour storm events does not exceed the peak runoff prior to development. Identification of all pre and post-development subcatchment areas located within or affecting the project site must be included in the analysis. Use TR-55 or equivalent methodology to calculate peak flows;
 - ii improves water quality by capturing and treating 90% of the average annual stormwater runoff volume, defined as the Water Quality Volume, WQv. The final WQv shall be treated by an acceptable practice from the list in Table 5.1 of DEC’s **Stormwater Management Design Manual**;
 - iii employs design criteria for stormwater treatment structures found in DEC’s **Stormwater Management Design Manual** or equivalent Reference, which must be cited in the report;
 - iv. includes and erosion and sediment control plan for all phases of the project which reduces or eliminates erosion and sediment loading to waterbodies (i.e., lakes, ponds, streams and wetlands) during and after construction;
 - v. includes a maintenance plan for stormwater controls during and after completion of construction.

9. Buildings and Structures:

1. Provide to-scale plans, elevations and details for all proposed structures (including accessory buildings). Show plans and elevations and label dimensions, construction Materials and exterior colors.

10. Landscape Development Plan:

1. For any proposed landscaping, provide scaled plans, details, and specifications prepared by a registered landscape architect licensed in the State of New York. A separate Landscape Development Plan sheet(s) shall be provided or the required Information may be shown on the Lot Development Plans. Proposed plantings should only include native species or proven Non-invasive ornamental plants commonly found in the vicinity of the project site. The landscape development plan shall include:
 - a) all existing vegetation to be cut or removed;
 - b) all construction clearing and grading limit lines;
 - c) all existing vegetation to be retained and the location of tree protection measures during construction;
 - d) all existing specimen trees greater than 12 inches in diameter at breast height;
 - e) the location of all proposed plantings;
 - f) a keyed list (planting schedule) that provides the species and common names, sizes, and whether the plants are nursery grown or field collected;
 - g) written specifications, typical planting details, and seed mixes for temporary and permanent grassed areas;
 - h) a plan for maintenance and care of all plantings during the initial period of establishment and during the post-construction warranty period; and
 - i) a site-specific invasive plant control plan including, but not limited, to construction vehicle sanitation, control of invasive plant propagules onto the site, weed-free mulch materials and weed-free fill.

11. Signage Plans:

1. Provide to-scale details and specifications for each proposed outdoor sign that includes at a minimum: width and height from ground surface to top of each sign, construction details and materials, proposed text, color scheme, logos or other graphics, and details of any lighting, raised foundations, planters or retaining walls.

The sign plan must comply with the Agency's "Sign Standards" (9 NYCRR Appendix Q-3). Show and label on the Site Development Map, or on a separate Sign Plan, the number, location, and orientation of all exterior signs.

12. Lighting Plan:

1. Provide details regarding tower lighting and compliance with the Federal Aviation Administration. For all ground lighting, provide the location of all exterior light fixtures. Provide plan and elevation views and construction details of all freestanding light standards. Show the foundation, the light standard, the light fixtures, and any shielding that will restrict projected light from being seen off-site such as cut-off fixtures.

Provide manufactures specifications and details describing: the size, color and type of light standards and light fixtures, bulb types and wattages, surface area lit by each light, shields and reflectors.

13. Previously Filed Plans.

1. Provide a copy of all previously filed plans for the project site.