



Cassadaga Wind Project

Case No. 14-F-0490

1001.12 Exhibit 12

Construction

TABLE OF CONTENTS

EXHIBIT 12	CONSTRUCTION	1
(a)	Preliminary Quality Assurance and Control Plan	1
(b)	Conformance with Public Service Commission Requirements	7
(c)	Plans to Avoid Interference with Existing Utility Systems	7
(d)	Procedures for Addressing Public Complaints and Disputes.....	9
REFERENCES		12

EXHIBIT 12 CONSTRUCTION

(a) Preliminary Quality Assurance and Control Plan

The Applicant has developed a preliminary Quality Assurance and Quality Control Plan (QA/QC Plan) based on their experience and existing quality assurance and control plans for its operational wind farms. Please see Appendix S for a copy of the preliminary QA/QC Plan, which is designed to convey basic QA/QC procedures, guidelines, and instructions that must be followed by all employees, consultants, and contractors. Once a Balance of Plant (BOP) contractor is selected, the preliminary QA/QC Plan will be provided to the BOP contractor, who is responsible for the construction of the Facility and implementing the preliminary QA/QC Plan through the development of a final QA/QC Plan. The final QA/QC Plan is site specific and therefore will not be developed until the BOP has been selected and the Facility is proceeding with construction. The Applicant is willing to condition the Certificate on submission of the final QA/QC Plan to the Siting Board within 30 days prior to the start of construction.

(1) Statement of Authority and Responsibility

Effective quality systems are essential when developing, constructing, and operating wind powered electricity generating facilities. Therefore, it is the policy of the Applicant, its contractors, and affiliates to adhere strictly to this quality control program for the Facility. Full authority for the implementation and administration of the quality controls described below and in the preliminary QA/QC Plan (see Appendix S) has been delegated to the Quality Control Manager (QCM). The QCM has the responsibility and organizational freedom to identify quality control problems, stop work, recommend solutions and verify resolution of such problems. The QCM also has the responsibility of documenting the established QA/QC procedures and instructions that comply with generally accepted industry standards, federal, state, and local regulating authorities, and Facility-specific specifications and standards established by the Applicant.

Facility Managers are responsible for their assigned Facility's QA/QC activities. They may delegate the performance of their assigned duties to qualified individuals, but they retain full responsibility for completing the Facility in strict accordance with the preliminary QA/QC Plan set forth for this Facility.

The quality of all subcontractors and vendors will be the joint responsibility of the QCM and the applicable Facility Manager. The Facility will be executed in a manner that emphasizes safety, quality, schedule, and maximum cost effectiveness.

(2) Organization

The Applicant has the responsibility to define and document its policy and objectives for, and commitment to, quality. The Applicant will ensure that its policy is understood, implemented, and maintained at all levels of the organization. All employees have the responsibility and authority for implementation of established QA/QC activities. Resolution of conflicts in QA/QC policies will flow through the organizational chain of command as presented in the preliminary QA/QC Plan provided in Appendix S.

In addition, it is the responsibility of any employee that manages, performs, or verifies work affecting quality to initiate action to prevent the occurrence of work or service nonconformity; identify and record any quality problems; initiate, recommend, or provide solutions through designated channels; verify the implementation of solutions; and control further processing, delivery, or installation of non-conforming work until the efficiency or unsatisfactory condition has been corrected.

(3) Safety

The Applicant places safety at the highest priority and intends for construction of the Facility to be carried out accident and injury free. The contractor will be responsible for all aspects of health and safety of all its personnel and those of its subcontractors during the design, construction, commissioning and handover of the Facility. The preliminary QA/QC Plan requires that all contractors submit, prior to execution of a Construction Services Agreement (CSA), a preliminary site-specific safety and health plan.

Upon signing a CSA and prior to the commencement of construction, the Applicant requires that contractors produce a site-specific construction safety and health plan conforming to the requirements of the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), the Americans with Disabilities Act (ADA) and relevant regulations of New York State, and good industry practice. Such plans will be updated on a regular and frequent basis to reflect the progress and changes as the Facility progresses.

The preliminary QA/QC Plan stipulates that each construction contractor is required to safety train any and all personnel, including subcontractor employees, who work on the Facility jobsite. Contractors will maintain logs of the names of personnel who are safety trained on site. Contractors will provide a hard hat sticker or some other methodology for identifying personnel at the site who have been safety trained.

The Applicant and/or its contractors will erect and maintain such danger signs, signals, lights, guards, and notices as may be necessary to adequately protect all construction work and all site personnel against injury or property damage, as described in the preliminary QA/QC Plan (see Appendix S). In addition, the Facility

construction site will provide and maintain for the protection of its employees and the public such safety equipment, safety kits, guarding, and personal protective apparel as is prescribed for safety practices or as required by any law, ordinance, rules, or the exercise of ordinary prudence for the type of work being performed. The Applicant requires that all people, when out on the construction site, wear hard hats, safety glasses, and high-visibility vests (or other outer-layer) with reflective striping. In addition, the Applicant and/or a designated contractor, will strictly implement and enforce electrical safety requirements, including Lock Out-Tag Out program and Facility start up procedures for equipment, locks for isolators and circuit breakers, sufficient grounding straps/clamps and cables to allow the safe isolation of each electrical circuit, and a laminated electric schematic to assist with isolation and switching to be mounted in each wind turbine and substation.

Safety audits are a necessary and integral part of the safety component of the QA/QC Plan. The Applicant mandates that contractors conduct regular safety audits of the site in line with the best practice and guidelines from OSHA and New York State. Contractors will be responsible for all postings required by OSHA, EPA, New York State Department of Labor, and any other postings required by parties with jurisdiction. In addition, all contractors will be responsible for maintaining OSHA logs as required by OSHA regulations, and providing the logs to the Applicant at the completion of the work.

(4) Quality Assurance Program

The preliminary QA/QC Plan is designed to convey basic QA/QC procedures, guidelines, and instructions that must be followed by all employees, consultants, and contractors. The Preliminary QA/QC program and any program set forth by any approved BOP Contractor working on behalf of the Applicant will consist of the following key components;

- a) Established QA/QC procedures and instructions that comply with generally accepted industry standards, federal, state, and local regulating authorities, and Facility-specific specifications and standards established by the Applicant;
- b) The identification and timely issuance to the Facility team any required controls, processes, inspection equipment, fixtures, tools, materials and labor skills needed to properly execute the Facility;
- c) Updating, as necessary, of quality control, inspection, and testing techniques, including the development of new methods and procedures;
- d) Identification of any commitments made which exceeds available resources in sufficient time to properly acquire the required resources;

- e) Clarification of the standards of acceptability as required to support the overall QA/QC program and the Applicant's objectives;
- f) Review of the Facility process, construction, installation, inspection, and test procedures to ensure that applicable documentation reflects how activities are actually performed;
- g) Effective maintenance of quality records to document and track performance and improvement.

(5) Facility Communication

The Applicant will identify in-house requirements and provide adequate resources and trained personnel as needed to promote the communications of QA/QC plans and procedures through the organization.

The requirements for inspection, testing and monitoring of the construction and installation processes and audits of the QA/QC Plan will be communicated to all personnel independent of whether they have direct responsibility for the Facility being executed.

(6) Document Control

Facility specific QA/QC procedures and instructions for individual activities are maintained by the QCM and issued to Facility Managers as controlled documents. It is the Facility Manager's responsibility to ensure specific activity QA/QC procedures and instructions are conveyed to the individuals or subcontractors performing the specified tasks.

Prior to the commencement of construction, the Facility Manager will create a "Facility Job File". This file will contain a complete set of all Facility related contract documents, specifications, drawings, etc. All information generated during the life of the Facility will be maintained in this job file in both paper and electronic formats, in accordance with the preliminary QA/QC Plan (see Appendix S).

(7) Control of Client/Customer Supplied Material and Services

The preliminary QA/QC Plan provides a basis for the review of materials and services that are either delivered by, or provided to the Applicant. Conformance to specified requirements can easily be confirmed or refuted while providing certainty to management, agencies, and stakeholders. Proper control of materials and services will include:

- a) The requirements and acceptance specifications of the Applicant are adequately defined and documented.
- b) Documented quality system procedures and instructions to ensure that all activities are performed in accordance with established requirements.

- c) Effective management support to ensure compliance and the use of the QA/QC procedures and instructions.
- d) Interfaces with the Applicant, communications, and review meetings will be well defined, documented and maintained for future reference.

(8) Inspections and Testing Control

All materials and equipment will be inspected and tested to ensure conformance with the Facility requirements before it is released for use. Verification that all items conform to specified requirements of the QA/QC Plan will be documented and filed in the QA/QC file.

During Facility construction, the Facility Manager will ensure that:

- a) All inspection and testing activities are performed in accordance with the QA/QC Plan and documented procedures;
- b) Ensure specification and drawing conformance by the use of established process monitoring and control methods;
- c) Ensure that all required inspections and tests have been completed and necessary reports have been received and verified before the finished work is released to the client. Any site-specific special inspections and statements of special inspections will be addressed in the Final QA/QC Plan as these are not known until all the contractors and suppliers are known. For example, the concrete supplier will not be known until just before construction and the Applicant may want to have a special inspection depending on where the concrete is coming from to the Facility Site.
- d) Identify and correct any nonconforming work.

The QA/QC plan and any accepted Facility specific BOP contractor QA/QC programs will include documented procedures for final inspection and testing requirements including those specified either by established quality procedures or the Applicant.

The Facility Manager will ensure that all final inspections and testing activities are in accordance with the quality plan and documented procedures. Upon completion, all associated data and documentation will be properly filed in the Facility QA/QC file and submitted to the Applicant as required.

(9) Non-conformance Reporting

The Facility Manager will ensure that all materials, products, equipment, and workmanship that are furnished, installed, and/or delivered by the Applicant meet Facility specifications. Any such non-conforming products,

equipment, materials, or items of work will be documented, recorded and reported to the Applicant immediately. Proper notification to the Applicant of any unsuitable materials, equipment, or workmanship will be subject to non-conformance reporting procedures, which are further described in the QA/QC Plan (see Appendix S).

(10) Corrective and Preventative Action & Continual Improvement

The established QA/QC policies and procedures will be reviewed at appropriate intervals by management to ensure continuing suitability and effectiveness. These reviews will include assessment of the results of internal audits and will assess overall conformance to the Applicant requirements and expectations. Records of such reviews and audits will be maintained.

(11) Documentation

Specific QA/QC procedures and instructions for individual activities are maintained by the QCM and issued to Facility Managers as controlled documents. It is the Facility Manager's responsibility to ensure specific activity QA/QC procedures and instructions are conveyed to the individuals or subcontractors performing the specific activities.

(12) Field Audits and Surveillance

A critical element of the QA/QC Plan involves conducting field audits and surveillances. Conducting field audits provides a means of reviewing the established QA/QC procedures to ensure ongoing suitability and effectiveness. Additionally, field audits are necessary for establishing the following:

- a) Verifying the manner of executing the work to ensure that an acceptable level of safety and quality is maintained at all times.
- b) Monitoring and control of suitable process and work characteristics during execution of the work.
- c) Establishing or reviewing criteria for workmanship which shall be stipulated, to the greatest practicable extent, in written standards or by means of representative samples.
- d) Clear identification of the required approval of processes.

Field Surveillances are integral to the QA/QC process since certain aspects of work cannot be fully verified by subsequent inspection and testing. Accordingly, continuous monitoring through surveillance provides a means for verifying compliance with documented procedures and/or specifications.

(13) Security

The QA/QC Plan also emphasizes security. While it is impractical to protect a construction site against every conceivable threat, the security strategy employed by the Applicant is based on an assessment of the risk of each form of threat considered against the relative costs of protection. Generally, it is the Applicant's belief that the highest concentration of security measures employed at the construction site should reflect the time when the site is most at risk. Furthermore, the Applicant places the highest emphasis on deterrence and mitigation with respect to keeping any construction site secure.

While the QA/QC plan addresses security in a generalized fashion, upon selection of a BOP contractor, a site-specific security plan will be developed to ensure effective security measures that are relevant to the proposed Facility are employed. For more information, please see Exhibit 18 (Safety and Security).

(b) Conformance with Public Service Commission Requirements

(1) Protection of Underground Facilities

The Applicant affirms its intent and obligation of its contractors to conform to the requirements of the Public Service Commission's regulations regarding the protection of underground facilities (16 NYCRR Part 753) and that the Applicant will become a member of Dig Safely New York. The Applicant will require all contractors, excavators and operators associated with its facilities to comply with these requirements and comply with all requirements of the Commission's regulations regarding identification and numbering of above ground utility poles (16 NYCRR Part 217).

(2) Pole Numbering and Marking Requirements

The Applicant affirms its intent to require all contractors to comply with pole number and marking requirements, as implemented by 16 NYCRR Part 217.

(c) Plans to Avoid Interference with Existing Utility Systems

The first step in avoidance of interference with existing utility systems is to identify those entities that have utilities within the Facility Site. Certain known utilities have been included in the stakeholder list for the Public Involvement Program. These utilities have received and will continue to receive updates and notifications on the Facility. The Applicant has, and will continue to consult with landowners regarding utilities located on their properties. This

information on utilities has been taken into account during Facility component siting in order to avoid and minimize conflicts with utilities.

Due to the rural nature of the region, there are fewer existing utility systems with which the Facility may interfere than would be found in a more urban setting. However, natural gas collection is an important industry in western New York, and consequently, there are many natural gas wells and associated gas pipelines in the vicinity of the proposed Facility. The occurrence of natural gas wells and pipelines, and electrical transmission infrastructure within the Facility Site is summarized below.

According to the database maintained by the NYSDEC Division of Mineral Resources, there are 62 natural gas and oil wells within the Facility Site. The location of many of these wells has been field verified during the course of other natural resource evaluations for the proposed Facility. In addition to the gas wells themselves, there is a network of natural gas pipelines that transect the Facility Site. Information on natural gas pipelines was obtained from Platts, a division of McGraw Hill Financial, Inc. and the NYSDEC, which provided a shapefile of existing utilities in Boutwell State Forest. In addition, in response to an e-mail request from the Applicant for information regarding gas pipelines, the NYSDPS provided the Applicant with a set of scanned maps showing the location of gas gathering pipelines that were reviewed and certificated by the Public Service Commission under PSL 121-a. The locations of gas pipelines shown on these maps were digitized to determine the location of proposed Facility components relative to the pipelines. Based on the data from the NYSDPS, NYSDEC, and Platts, the Applicant has identified approximately 3.61 miles of existing gas pipeline within the Facility Site (see Figure 4-3 in Exhibit 4), the majority of which is located in the eastern portion of the Facility Site, in the Towns of Cherry Creek and Charlotte. However, it should be noted that this information likely does not represent an entirely comprehensive survey of all existing natural gas pipelines within the Facility Site.

In addition to natural gas infrastructure, the Facility Site also contains various existing electrical utility infrastructure, as well as cable and fiber optic communication lines. Information on the location of both overhead and underground electrical utility lines, and existing substations, was acquired from field surveys, Platts (see above), and the NYSDEC. The location of existing cable and fiber optic lines was acquired from GeoTel Communications LLC, which maintains databases of existing telecom infrastructure. The majority of the overhead electrical transmission line and buried communication cable in the vicinity of the proposed Facility occur to the west of the Facility Site in the Cassadaga Valley, or the east of the Facility Site along State Route 83. However, a network of overhead electrical utility lines runs along many of the county and town roads throughout the Facility Site. In addition, the proposed POI substation for the Facility is located adjacent to an existing substation (which will be removed following construction of the Facility's POI substation), and associated transmission line, which is owned and operated by National Grid.

The Applicant has committed to siting Facility wind turbines at minimum setback distances from various existing utilities. Adherence to these setbacks will ensure interference between Facility components and existing utilities are avoided. A list of these setbacks in relation to relevant utility infrastructure is provided in below.

- Substations: 750 feet
- Transmission Line (115 kV and greater): 750 feet
- Natural Gas Pipelines: 550 feet
- Wells: 500 feet

Based on a review of the above described data, construction of the proposed Facility will likely require the installation of multiple permanent crossings of existing gas pipelines, and the crossing of overhead electrical lines by access roads and buried collection line. Prior to construction, the BOP will be required to conduct a one-call service to verify the extent and known location of all utilities. This effort will include a confirmation of utility response through the Dig Safely New York system. The BOP will also be required to mark out any locations of planned excavation. This will ensure that both the Facility excavation and existing utilities are marked to determine any conflicts. Should conflicts with existing utilities arise during the one-call process, the Applicant will microsite Facility components in order to avoid and minimize any potential impact on existing utilities and/or work with the utility to ensure there are not impacts to existing utilities (i.e. install mats, dirt pads, or other protective materials for gas line crossings) .

Following construction, the Applicant will register with one-call to ensure that its utilities and any underground collection lines are registered so that they are not impacted by future utility work.

(d) Procedures for Addressing Public Complaints and Disputes

The Applicant has developed a Complaint Resolution Plan (see Appendix T) to establish a process for responding to complaints in a consistent and respectful manner. The complaint resolution process to be implemented by the Applicant will ensure the public and wind farm operators have a procedure to follow in response to registered complaints.

(1) Facility Communications

Prior to commencement of construction, the Applicant will communicate to neighboring residents, the Towns, the NYS Department of Public Service (DPS) and other permitting agencies the contact name and address of the Facility Development Manager and the Construction Manager (and, prior to the end of construction, the Operations Manager) through mailings and/or notice in local newspapers. The Applicant will also post and

publish in the local newspapers of record its 1-800 number. In addition to contact information, the Applicant will post Facility information, such as Facility construction schedule and milestones, the transportation routes, and traffic control measures, at various locations, which may include, but not be limited to, the respective Town Halls, Facility website, and Facility construction trailers/offices.

(2) Registering a Complaint

Complaints by neighboring residents or others may be made by calling the local O&M building or 1-800 number and speaking directly with construction and operations personnel in the field, writing to the Applicant at its local address or at its principal place of business, or making the complaint in person at the Applicant's construction or operations building.

In the event that the Towns or DPS receive complaints directly about unanticipated effects of construction or operations of the wind facility, the Towns or DPS will notify the Applicant within five (5) days in writing of the details of such complaint.

(3) Complaint Response Program

The Applicant will implement a 5-point complaint response program for all registered complaints. The complaint response program is summarized below, please see the Complaint Resolution Plan in Appendix T for further details.

1. Community Engagement: the Applicant will provide and advertise a general call-in number and/or email address that the public can use to contact company personnel. In addition, the Applicant will maintain open lines of communication with local and state officials to ensure it receives any complaints that are made directly to Towns, the County or the State
2. Gather information: It is essential that the Applicant know the characteristics, circumstances and facts giving rise to a complaint or issue. In particular, a description of the complaint, location, time of day, duration and any other defining circumstances is needed to further assess the issue. The Applicant will promptly investigate such complaints, and will contact the individual within 48 hours of receipt of a complaint, and work with them in good faith to resolve the issue.
3. Response: Once the Applicant has sufficient information on the nature of the complaint, they can work with any identified consultant and/or other Applicant personnel to diagnose any

potential problems and formulate a response, which may include, explanation of any applicable laws or regulations governing the wind farm and related Facility development/design process, impacts related to the particular issue, or correcting of the offending condition.

4. Follow up: If a response was offered, and after a reasonable time has passed, Applicant personnel should follow up to inquire if the matter has been resolved or if there are any continuing issues.
5. Further action: If there continue to be issues, the Facility may engage in more formal conflict resolution, including compliance monitoring. Further action will consider Facility specific factors and should be decided on a case-by-case basis, using input from outside consultants, legal counsel, and upper management of the Applicant, as appropriate.

During the site preparation and construction phases of the Facility, minor, temporary adverse impacts to air quality could result from the operation of construction equipment and vehicles. Such impacts could occur as a result of emissions from engine exhaust and from the generation of fugitive dust during earth moving activities and travel on unpaved roads. The increased dust and emissions will not be of a magnitude or duration that would significantly impact local air quality. Any impacts from fugitive dust emissions from travel on unpaved roads are anticipated to be short-term and localized and will be avoided or corrected quickly. Dust control procedures will be implemented to minimize the amount of dust generated by construction activities, in a manner consistent with the Standards and Specifications for Dust Control, as outlined in the *New York State Standards and Specifications for Erosion and Sediment Controls* (NYSDEC, 2005). In accordance with these procedures, the extent of exposed/disturbed areas on the site at any one time will be minimized and restored/stabilized as soon as possible. To assure compliance with various environmental protection commitments and permit conditions, the Applicant will provide funding for an independent, third party Environmental Monitor to oversee Facility construction and to ensure compliance with all applicable environmental conditions. The Environmental Monitor will identify dust problems caused by ground/vegetation disturbance from Facility construction and report them to the construction manager and the contractor. Water will be used to wet down dusty roads (public roads as well as Facility access roads) as needed throughout the duration of construction activities. In more severe cases, temporary paving (e.g. oil and stone) could be used to stabilize dusty road surfaces in certain locations.

REFERENCES

NYSDEC. 2005. *New York State Standards and Specifications for Erosion and Sediment Control*. Division of Water. August 2005.