Bluestone Wind Project

Case No. 16-F-0559

1001.29 Exhibit 29

Site Restoration and Decommissioning

EXHIBIT 29 SITE RESTORATION AND DECOMMISSIONING

(a) Performance Criteria

The Applicant anticipates the project life-span for the Facility is 25 or more years with the potential for repowering the turbines. In the event the Facility reaches end of life and ceases operations without expectation of returning to operation, or if the initial construction cannot be completed, the Facility will be decommissioned per the Decommissioning Plan and Decommissioning Obligation Cost Evaluation (Decommissioning Plan), a draft of which is included with this Application as Appendix MMM.

Should decommissioning be required, it will be conducted in accordance with the following performance standards/criteria:

Table 29-1: Decommissioning Performance Criteria

Consideration	Performance Standard or Criteria
Site Safety	Decommissioning will be conducted in accordance with the construction-related Health and Safety Plan, Emergency Action Plan and Site Security Plan, as relevant, to ensure the safe removal of Facility components.
Environmental Impacts	The Applicant commits to using existing roads and infrastructure at the Facility Site to the maximum extent practicable. As a result, no or minimal new environmental impacts are anticipated from decommissioning. To address stormwater concerns, the Applicant will comply, as needed, with State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity, GP-0-15-002, or its successor, and will implement appropriate soil and erosion control best management practices to avoid impacts to local surface waters. The Applicant also will implement appropriate dust control measures to minimize impacts from fugitive dust.
Aesthetics	Upon decommissioning, the landscape character of the Facility Site will be restored by removing the aboveground structures as detailed in this Exhibit 29 to the maximum extent practicable. As such, no specific criteria are required.

Consideration	Performance Standard or Criteria
Salvage and Recycling	Turbines and other major wind energy facility components are constructed of various metals and so have a significant salvage value. Under certain circumstances, these components also can be sold for reuse. The Applicant will sell for reuse or salvage/recycle Facility components to the maximum extent practicable. See Section (b) below for an additional discussion of salvage issues.
Potential Future Uses for the Site	The Applicant will perform decommissioning in a manner consistent with the allowed future intended use of the parcels within the Facility Site. All components will be removed to 48-inches. This is consistent with New York State Department of Agriculture and Markets (NYSDAM) requirements/guidelines.
Useful Life of the Facility	Life span is assumed to be 25 or more years.

(b) Decommissioning and Restoration Plan

The Decommissioning Plan addressing the decommissioning process, and schedule and funding, including a detailed cost estimate, is included as Appendix MMM. As previously stated, megawatt-scale wind turbine generators typically have a life expectancy of approximately 25 years or longer. The current trend in the wind energy industry has been to replace or "re-power" older wind energy projects by upgrading existing equipment with newer, more efficient turbines. Performance criteria applicable to decommissioning would also be applicable to re-powering (see discussion of performance criteria above in Section (a)).

If the Facility is not re-powered via upgrading or if one or more turbines are non-operational for 18 months with no expectation of their returning to operation, the non-operational turbines will be decommissioned within 12 months of that determination in accordance with the Decommissioning Plan.

Decommissioning will consist of the following activities:

- Decommissioning is triggered if a wind turbine is non-operational for a continuous 18-month period, unless a longer period is otherwise agreed to by the Towns and New York State Department of Public Service (DPS)

staff or unless the Applicant demonstrates to the Towns and DPS staff that it has been making good faith efforts to restore the turbine to an operable condition.

- All aboveground structures, including turbines, blades, nacelles, towers, transformers, aboveground collection cables and poles, permanent meteorological towers, the collection substation, including the storage batteries, will be disassembled and transported off-site for reuse, recycling, reclamation, or sale. The point of interconnection (POI) substation will remain in place and will be owned and operated by NYSEG following construction. Foundations buried above a depth of 48 inches will be removed. Components buried lower than these depths will remain in place provided the decision does not violate any permits or legal requirements. The Applicant may allow access roads to remain in place upon receipt of written approval by the landowner. The Applicant will own the property on which the O&M building will be located and may elect to retain the building or sell it with the land. Batteries, transformers, and other equipment and materials will be removed and disposed of in accordance with applicable federal, State and local requirements. Final removal of all machinery, equipment, and all other materials related to decommissioning activities is to be completed within 12 months of decommissioning initiation, unless otherwise agreed to by the Town(s) and DPS staff.
- Ground disturbance during decommissioning will be minimized to the extent practicable and the site will be restored to its original ground contours to the extent practicable. Soils stockpiled during site restoration will be used in the restoration and not transported off site. Vegetation will be re-established using a native seed mix.

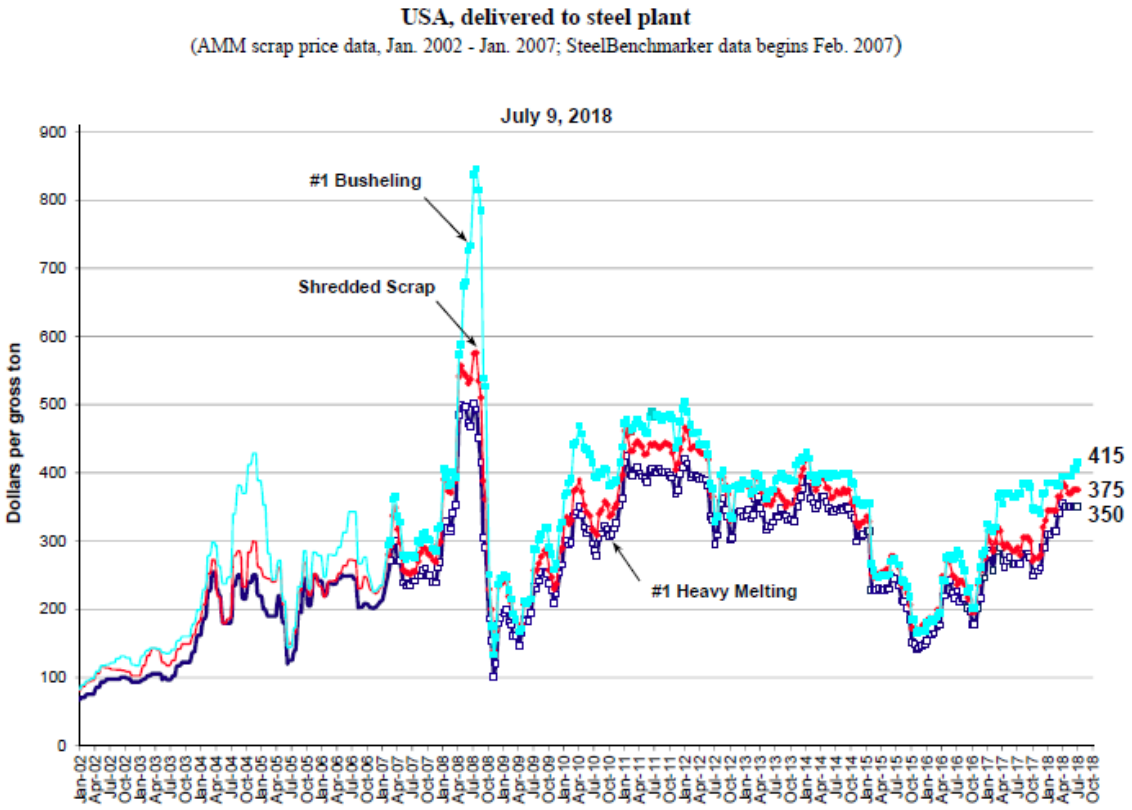
In addition to providing detailed information concerning the site decommissioning process, the Decommissioning Plan includes:

- A detailed estimate to support proposed decommissioning site restoration and funding upon cessation of operation of the Facility based on the expected turbine model(s) to be used and actual decommissioning costs from other similar projects, to the extent available.
- A procedure and timeframe for notifying the Towns of Windsor and Sanford and potentially impacted landowners concerning site decommissioning and restoration activities.
- A schedule for completion of site decommissioning and restoration activities.

The Applicant proposes that financial assurance be provided in the form of letters of credit to be held by the Towns of Windsor and Sanford. The letters of credit will cover the amount of the decommissioning and site restoration costs for the portion of the Facility located in the respective Towns plus a contingency of 10%. Additional information concerning how the amount of the letters of credit will be established is contained in the Decommissioning Plan included as Appendix MMM.

In estimating site decommissioning costs, the Applicant has considered the salvage value of the turbines and certain other equipment. Each turbine contains a significant amount of salvageable metals and other materials/equipment. Accordingly, salvage value has been included in the estimates to offset the cost of decommissioning and demolishing the Project. The Decommissioning Plan included at Appendix MMM includes scrap data from the American Metal Market (AMM), which was applied to the steel, copper and aluminum quantities estimated to be generated from decommissioning the Project to obtain an approximate salvage value. Figure 29-1 below shows data collected from January 2002 through June 2018 by Steel Benchmarker for #1 heavy melt steel. The lowest scrap price within the last 16 years was approximately $100/gross ton. Currently, scrap pricing is on the rise, and although pricing is subject to variability, there will always be value in scrap steel, copper and aluminum. Therefore, this value has been accounted for in the decommissioning estimate included at Appendix MMM.

Figure 29-1:



Burns & McDonnell—the consultant retained by the Applicant to prepare the Decommissioning Plan—has provided professional services for decommissioning and demolition projects for over 10 plants since 2013. In each of these projects, scrap credit was included to offset the price of the decommissioning effort. In preparing the cost estimate for the Bluestone Wind project, the scrap value used was based on an average of monthly AMM prices for March 2017

through February 2018 (i.e., one year). These values include the cost to haul the scrap via truck and/or rail to the major market which provided the best price.

To further ensure that the estimate is sufficiently conservative, it includes a 10% contingency factor and an additional 5% for owner indirect costs on top of the cost estimate. The contingency is included to address variability in pricing based on scrap pricing, labor rates, and unit pricing. The owner indirect costs include costs required for demolition such as permitting and engineering fees.

An updated cost estimate will be prepared as a compliance filing and condition of the Article 10 certificate prior to commencing construction of the Facility based on the final Facility design and turbine selected. The decommissioning estimate will be prepared on a per-turbine basis by an independent and registered engineer, licensed to practice engineering in the State of New York. The estimate will be submitted to DPS staff and the Towns for review to ensure consistency with the methodology approved in this Application. After the first year of operation, an independent and registered engineer will prepare an updated cost estimate. A new updated cost estimate will be prepared every five years thereafter until the Facility is decommissioned and site restoration is complete. New letters of credit will be issued based on the cost estimates.

In light of the significant salvage value of the turbines, letters of credit will be based on the costs of decommissioning and restoration less the salvage value of the turbines. To address the potential fluctuations in the value of the salvaged materials, the Applicant will deduct the average salvage value for each of the metals measured over the 5-year period preceding the preparation of the cost estimate from the total decommissioning and site restoration costs. In addition, the Applicant will add an additional contingency factor of 10% to the net cost as well as an additional 5% for owner indirect costs. Although other materials may also have scrap value (most notably the substation and O&M building), the scrap value of these materials will not be included in estimating decommissioning costs for purposes of establishing the value for the letter of credit.

As the above summary shows, even during times when scrap prices are comparatively low, the metals in the turbines have significant value. The conservative approach to determining future costs outlined above will ensure that the costs of decommissioning and restoration are fully covered by the letters of credit issued to the Towns.

(c) Description of Decommissioning/Restoration Agreements between Applicant and Landowners

All Facility components will be located on private land under lease agreement with the landowners, and all leases with private landowners contain a provision on decommissioning. Although the specific terms of these lease agreements,

including the decommissioning provisions, are confidential, decommissioning will involve the removal of all above and below ground Facility components consistent with the discussion in Section (a) above. The Applicant may allow access roads to remain in place upon receipt of written approval by the landowner. Also, the POI substation will remain in place and will be owned and operated by NYSEG following construction. Finally, the Applicant will own the property on which the O&M building will be located and may elect to retain the building or sell it with the land. A description of site decommissioning and restoration activities, projected costs and financial assurance commitments between the Applicant and the Towns of Windsor and Sanford are contained in the draft Decommissioning Plan included as Appendix MMM.

(d) Nuclear Power Facilities

This section is not applicable and therefore is not addressed in this Article 10 Application.