STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

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Petition of Cassadaga Wind LLC for Amendment of the Certificate of Environmental Compatibility & Public Need

Case No. 14-F-0490

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**PETITION OF CASSADAGA WIND LLC FOR AN AMENDMENT TO THE CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY & PUBLIC NEED FOR THE CASSADAGA WIND PROJECT**

Dated: January 29, 2021
Albany, New York

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## I. INTRODUCTION

On January 17, 2018, the Siting Board issued an Order granting a Certificate of Environmental Compatibility and Public Need, with Conditions ("Certificate") to Cassadaga Wind LLC ("Cassadaga Wind" or "Certificate Holder"). Cassadaga Wind has submitted the requisite compliance and informational filings required by the Certificate Conditions to commence construction and is in the process of compiling the requisite compliance and informational filings required to commence commercial operations. The Certificate authorizes construction of 48 wind turbines to be located in the Towns of Cherry Creek, Charlotte, and Arkwright, capable of producing up to 126 megawatts ("MW") of electricity (referred to herein as the "Facility").

Relevant to this Petition, the Certificate includes sound limits in Certificate Condition 80. Condition 80 requires the Facility to comply with both short-term sound limits (45 dBA Leq-8-hour at non participating and 55 dBA Leq-8-hour at participating residences) and long-term annual sound limits (40 dBA $L_{night}$ outside non-participating residences and 50 dBA $L_{night}$ outside at participating residences). These limits require post-construction sound monitoring to confirm the Facility is in compliance with the limits per Certificate Conditions 71 and 72.

Pursuant to 16 NYCRR § 1000.16, Cassadaga Wind respectfully requests an amendment to the Certificate to eliminate the long-term annual sound limits in Certificate Condition 80(b). Certificate Condition 80(b) requires that the Facility "[c]omply with a limit of 40 dBA L(night-outside), annual equivalent continuous average nighttime sound level from the Facility outside any existing permanent or seasonal non-participating residence, and a limit of 50 dBA L(night-outside), annual equivalent continuous average nighttime sound level from the Facility outside any existing participating residence."[1] Since the Siting Board issued the Cassadaga Wind Certificate on January 17, 2018, the Siting Board has not required annual sound limits for any other wind

[1] Certificate at p. 35.

project.[2] Cassadaga Wind is requesting that the Siting Board amend the Certificate to remove the annual sound limit from Cassadaga Wind's Certificate as explained further below. In addition, Cassadaga Wind requests that the Siting Board adopt Cassadaga Wind's Sound Monitoring and Compliance Protocol for short-term compliance testing prepared by the Resource Systems Group, Inc. ("RSG"). Attached as **Exhibit A** and **Exhibit B** to this Petition is testimony from Kenneth Kaliski, Senior Director with RSG and Sylvia Broneske, the Principal Acoustics Engineer for RWE Renewables which support why the annual sound limit should be removed from the Certificate.

The Amendment of the Certificate to remove the annual sound limit will not have a significant adverse impact on the environment and therefore, this Petition should not be considered a "revision" but instead should be considered a "modification" of the Certificate. The amendment would not increase any environmental impacts and would make the Cassadaga Wind Certificate Conditions on sound consistent with all other Article 10 Certificates issued to date. As such, this amendment can be authorized by the Siting Board or Commission pursuant to 16 NYCRR 1000.16 for modifications. Under 1000.16, no hearing is required for modifications to a Certificate. After a 30-day public comment period, the Siting Board/Commission can render a decision.

Previously, on November 20, 2020 Cassadaga Wind submitted a Petition requesting similar relief to this Petition, however on January 4, 2021, Cassadaga Wind withdrew that Petition without prejudice in an effort to resolve outstanding issues between Department of Public Service ("DPS") Staff and Cassadaga Wind with respect to sound monitoring. With the submission of this Petition, Cassadaga Wind has submitted a new sound monitoring protocol which is based on DPS Staff's

[2] Application of Eight Point Wind, Case No. 16-F-0062; Application of Baron Winds, Case No. 15-F-0122; Application of Number Three Wind, Case No. 16-F-0328; Application of Bluestone Wind, Case No. 16-F-0599; and Application of Canisteo Wind, Case No. 16-F-0205; Application of Alle-Catt Wind, 17-F-0282; Application of Atlantic Wind LLC, Case No. 16-F-0267.

most recently proposed Sound Testing Compliance Protocol from the High Bridge Wind Project (Case No. 18-F-0262).

## II. OVERVIEW

Cassadaga Wind is the first large-scale renewable wind facility approved by the Siting Board and issued an Article 10 Certificate. The sound design goals and regulatory sound limits were litigated and the parties' positions were part of the record before the Siting Board when it issued the Certificate. However, no party advocated for an annual regulatory sound limit in the proceeding, and the Recommended Decision ("RD") did not recommend any annual regulatory sound limits. Notwithstanding, the Siting Board found "it necessary to apply a longer-term standard consistent with NARUC [National Association of Regulatory Utility Commissioners] of 40 dBA $L_{90\text{-}10\ minute}$ standard as a long term multi week average" and added Condition 80(b) to the Certificate Conditions.[3] Notably, Condition 80(b) of the Certificate is 40 dBA $L_{night,}$ not 40 dBA $L_{90\text{-}10\ minute}$. With this finding, to the best of Cassadaga Wind's knowledge, Cassadaga Wind became the only wind energy facility in the ***world*** with an annual regulatory sound requirement. As no party advocated for an annual sound limit and the RD did not recommend an annual regulatory limit, the issue of applying such a standard was not fully briefed or explored in the record, and therefore the Siting Board was likely unaware of the implications of such a condition.

Subsequent to the issuance of the Cassadaga Wind Certificate, other Article 10 applicants have had the opportunity to present evidence to the Siting Board on the practical implications of requiring an annual regulatory limit like the one required by Cassadaga Wind's Certificate. None of the seven Certificates issued after Cassadaga Wind require the annual regulatory sound limit.

[3] Case No. 14-F-0490 "Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions for Cassadaga Wind LLC," issued January 17, 2018, p. 70.

**a) <u>Necessity of Modification</u>**

***i) Removal of Annual Regulatory Limit Requiring Long-Term Monitoring***

As recognized in the Baron Winds Order[4], no standard exists for measuring wind turbine sound as an average sound level for a year. Moreover, the basis stated by the Board for the annual regulatory limit is to minimize the potential for annoyance to and complaints of nearby residents. However, an annual regulatory standard has little effect on annoyance and complaints which are generally related to short-term sound events lasting minutes or hours, not years.[5] Thus, the annual sound limit does not address the potential claimed impact nor minimize the potential for annoyance and complaints.

Short-term regulatory sound limits are the standard method of regulating wind facilities across the world[6], and indeed Cassadaga Wind's Certificate has short-term sound limits in its Certificate. The short-term limits in the Cassadaga Wind Certificate (Condition 80(a)) make certain that sound impacts from the Facility will be avoided or minimized to the maximum extent practicable. Moreover, Cassadaga Wind has designed the project to meet a long-term design goal of 40 dBA $L_{(night\text{-}outside)}$ at night at non-participating homes. The short-term enforceable and measurable sound limits along with the long-term design goal of the Facility ensure sound impacts have been avoided or minimized. There is no need for an additional annual regulatory limit to address impacts, especially because demonstrating compliance with such a limit through post-construction monitoring is difficult and uncertain, as set forth in detail in the testimonies of Kenneth Kaliski and Sylvia Broneske, and has never been required at any other wind facility in the state—or for that matter, the globe.

[4] The Certificate Holder Baron Winds, LLC is affiliated with Cassadaga Wind LLC and their parent company RWE.
[5] Case 15-F-0122 "Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions for Baron Winds LLC," issued September 12, 2019, p. 120.
[6] *See* Case No. 15-F-0122 Application of Baron Winds LLC for a Certificate of Environmental Compatibility and Public Need, "Applicant's Post-Hearing Initial Brief" submitted April 16, 2019.

As described in detail in the accompanying testimony of Kenneth Kaliski and Sylvia Broneske, accurately monitoring sound emissions from wind turbines over the course of a year can be extremely difficult, time consuming and costly.[7] Sound emissions from wind turbines are constantly changing due to changes in wind speed and direction, and changing propagation characteristics such as temperature, humidity, and atmospheric pressure. An accurate annual sound level measurement from a wind turbine would require a significantly long-term sound monitoring campaign to determine the annual average because weather conditions vary over the year. Moreover, an accurate sound monitoring campaign necessarily involves shutting down turbines to assess turbine only sound levels. Broneske estimates the long-term monitoring protocol would cost between $150,000 to $312,000 to implement depending on the extensiveness of the monitoring conducted. However, this is not the full cost of the monitoring as Kaliski estimates that at least 112 shutdowns would be necessary to implement the monitoring, resulting in both, economic loss due to turbines not operating, as well as the loss of generating potential of renewable energy.[8]

RSG and RWE's internal sound experts, have studied, modeled, and monitored wind farms for over a decade, and are unaware of any jurisdiction in the world implementing an annual regulatory limit requiring long-term monitoring.[9]

Long-term monitoring is also impractical to enforce. Even if the first year of compliance tests were able to accurately demonstrate that the Facility was not in compliance with the annual limit, it could take years of additional compliance tests to demonstrate that measures have brought the Facility into compliance. Noise complaints at wind projects are usually related to certain time periods and weather conditions, all short-term events. Moreover, it is unlikely that Department of

[7] *See* Case No. 15-F-0122 Application of Baron Winds LLC for a Certificate of Environmental Compatibility and Public Need, "Applicant's Post-Hearing Initial Brief" submitted April 16, 2019.
[8] *Id.*
[9] *Id.*

Public Service staff would be able to undertake a long-term monitoring campaign to confirm the Applicant's monitoring results, which by its nature requires at least weeks – if not months – of monitoring time. Additionally, responding to a complaint regarding "annual or longer-term" sound is impractical. Presumably, responding to such a complaint would take months to a year, and then validating whether mitigation or other measures were effective if a violation has occurred could take another year. In theory, it could be years before a complaint allegedly relating to an annual sound condition is ever resolved.

The difficulty with creating a monitoring program to measure annual sound impacts is demonstrated in the attached testimony. Neither DPS Staff, RWE Renewables, nor RSG, who has extensive expertise in measurement of wind turbine sound and has published work in accredited scientific journals, have ever developed, implemented, or tested a long-term monitoring campaign like the one required for Cassadaga Wind. Again, Cassadaga Wind is the only wind energy facility in the world with an annual regulatory sound requirement.

Despite the complexities with creating a long-term monitoring protocol, in an effort to comply with the Certificate, on February 26, 2018, Cassadaga Wind submitted a Sound Monitoring and Compliance Protocol to DPS Staff for review. This protocol addressed issues identified in the Certificate Order, including adding a protocol for the annual regulatory limit consistent with NARUC's (National Association of Regulatory Utility Commissioners) long term multi week average monitoring methodology given the Siting Board's reference to NARUC's "longer-term" guidance[10]. DPS Staff objected to the use of the NARUC methodology and proposed a method based on ISO 9613-2 or CONCAWE meteorological categories with a "turn-on turn-off" approach to measuring background sound levels.

[10] Case No. 14-F-0490 "Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions for Cassadaga Wind LLC," issued January 17, 2018, p. 70.

Cassadaga Wind accepted DPS Staff's comment to use CONCAWE sound propagation meteorological categories with turbine-on turbine-off testing and filed the Cassadaga Wind Sound Monitoring and Compliance Protocol with the Secretary to the Commission on April 17, 2018 ("April Protocol"). Compliance with DPS Staff's suggestion required the Protocol to be changed to propose measurements under representative meteorological conditions and wind turbine shutdowns to assess background sound levels.

Cassadaga submitted the Protocol within 90 days of the Certificate Order as required by Certificate Condition 71. The Protocol was prepared by RSG and was consistent with the provisions and procedures for postconstruction sound performance evaluation indicated in the Application Protocol with edits to specifically address regulatory conditions of the Certificate, including the long-term monitoring requirement which had not previously been proposed to be included in the proceeding. However, DPS Staff indicated to Cassadaga Wind that they had new comments on the Protocol. Cassadaga and DPS staff have met several times since April 2018 to discuss the comments and finalize the protocol but have been unsuccessful in reaching a resolution in over two years. Much of the disagreement between Cassadaga Wind and DPS Staff involves the long-term monitoring provisions.

In the meantime, the Siting Board has issued another seven Article 10 Certificates to other wind facilities, including Baron Winds. In each of these proceedings the Siting Board has intentionally declined to require an annual sound limit. In the Baron Winds proceeding, the Siting Board specifically held "there is no need to impose a long-term regulatory limit" and "a long-term regulatory limit would be impractical to enforce."[11] The Siting Board's Orders in the other Article 10 proceedings confirms that this requirement should be removed from Cassadaga Wind's Certificate.

[11] Case 15-F-0122 "Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions for Baron Winds LLC," issued September 12, 2019, pp. 122-123.

### *ii) Sound Protocol*

Since the issuance of Cassadaga's Certificate and over the course of the other Article 10 proceedings, DPS Staff has developed a short-term sound testing compliance protocol, the most recent of which DPS Staff submitted in the High Bridge Wind proceeding, Case No. 18-F-0262 (the "DPS Protocol"). Therefore, RSG has taken the DPS Protocol and has developed a protocol for Cassadaga Wind (the "Cassadaga Protocol"). The Cassadaga Protocol generally follows the DPS Protocol but makes edits to clarify provisions and address site specific factors for Cassadaga Wind. For example, the Cassadaga Protocol does not include the addition of 1.5 dB when measuring sound representative of a two-story home. DPS has admitted that this correction is not needed for Cassadaga Wind. (See DPS Staff Initial Brief, Case 18-F-0262 pg. 16).

As explained in the testimony of Kenneth Kaliski the changes made to the DPS Protocol are necessary to ensure accurate, efficient, and reliable monitoring results for both the Certificate Holder and DPS Staff.

For these reasons, the Cassadaga Protocol submitted along with Kenneth Kaliski's testimony, should be adopted by the Siting Board.

## b) Impact Analysis

To determine whether a proposed amendment is a modification or a revision, 1000.16(a) states that the criteria for determining significance under 6 NYCRR 617.7(c) shall apply. This criterion includes "a substantial adverse change in existing air quality, ground or surface water quality or quantity, traffic or noise levels".[12] The elimination of the annual regulatory sound limit will not result in a substantial adverse change in noise levels, as the Facility will still be required to comply with the short-term sound levels and the Facility will still be designed to meet the annual sound levels. The elimination of the annual enforceable regulatory sound limits will not increase

[12] 6 NYCRR 617.7(c)(1)(i)

environmental impacts, at all. The Siting Board has held that a short-term limit of 45 dBA Leq-8-hour at non participating and 55 dBA Leq-8-hour at participating residences, and the long-term design goals of 40 dBA $L_{night}$ outside and 50 dBA $L_{night}$ outside at non-participating and participating residences is adequately protective of human health.[13] There is no need for an annual enforceable regulatory sound limit in addition to these standards. None of the criteria in 617(c) will be triggered by the Amendment. Accordingly, the Amendment is not a "revision" and the procedures applicable to modifications shall apply.

## III. CONCLUSION

Requiring Cassadaga Wind to comply with an annual regulatory standard is inconsistent with every other Article 10 Certificate and every other operating wind facility in the world. It is impracticable, unrealistic, time consuming and costly, and does little to minimize impacts. Therefore, Cassadaga Wind respectfully requests that the Certificate be modified to eliminate Condition 80(b) and that the Siting Board adopt Cassadaga Wind's Sound Testing Compliance Protocol as submitted along with Kenneth Kaliski's testimony.

Dated: January 29, 2021

Respectfully submitted,

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[13] Case 16-F-0559 "Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions for Bluestone Wind, LCC," issued December 16, 2019, p. 55.