November 16, 2021

Mr. Tim Reilly, Chairperson Town of Glen Planning Board 7 Erie Street Fultonville, NY 12072

Re: Town of Glen

Reynolds Road Wind Energy Project

Our Project No. 67-1901

Dear Mr. Reilly:

We are in receipt of the Full Environmental Assessment Form (FEAF) Part 1 revised October 25, 2021, as well as responses regarding the FEAF received via email from October 22nd through October 25th, 2021, the response letter from GHD dated October 21, 2021, as well as the Wetland and Stream Overview Map dated July 2021. From previous submission: we are in receipt of the Building Permit Application dated September 1, 2021, the Landowner Authorization from Lease dated June 8, 2021, the Site Use Plans dated September 2, 2021, the Decommissioning Plan dated August 31, 2021, and the Stormwater Pollution Prevention Plan (SWPPP) Report dated September 1, 2021. The project is located at 411 Reynolds Road, Fultonville, New York 12072 and involves the construction of a single 4.3 MW wind turbine, gravel pad, crane pad, and run of overhead electrical lines and poles off Reynolds Road on approximately 4.64 +/- acres of the total 191.60 +/- acres (tax map id 100.-5-8). Based on a review of the documents, we have the following comments:

Building Permit Application

1. We note that a zoning map was unable to be located at the time of response letter. When application is updated to identify the parcel as R-R Rural Residential, it shall be resubmitted to TDE for verification.

FEAF Part 1

- 1. Question B.h. the box has been ticked "yes". Additionally, the U.S. Fish and Wildlife Service (FWS) is in charge of enforcing the Migratory Bird Treaty Act and the Golden Eagle Protection Act. The applicant indicated that to their best knowledge no permit is required under this act. Applicant has indicated an avian study is underway. We find this response acceptable.
- 2. Question C.3. has been answered as rural residential.
- 3. Question C.4.d has been revised to include parks within a 10-mile vicinity of the project.
- 4. Question D.2.b.i has been revised to list wetlands to be affected on the site.
- 5. Questions D.2.b.ii-v have been revised. We find responses acceptable.
- 6. Question D.2.e.ii has been revised to describe the new types of point sources of stormwater runoff.
- 7. Question D.2.e.iii has been revised to describe the actual intent of the site's stormwater management.
- 8. Question D.2.f has been answered no.
- 9. The applicant has answered question E.1.a.ii and provided a general description in respect to the mix of uses.
- 10. Question E.2.h.iv has been completed.
- 11. Question E.2.m has been revised to identify the predominant wildlife species that occupy or use the project site.

12. Question E.3.h.iii has been revised to include the distance between the project and the resource identified in question E.3.h.i in miles.

Site Use Permit Plans

- 1. Applicant acknowledged.
- 2. Applicant has indicated they will update the plans with survey data. Applicant should resubmit plans for verification.
- 3. Applicant has indicated they will update the plans to remove references to DeRuyter. Applicant should resubmit plans for verification.
- 4. We acknowledge the explanation of comment 9, "sediment collected... shall be disposed of on the site on a regular basis." on Sheet C-0. Applicant has yet to submit revised plans showing the revision to this comment as stated.
- 5. Applicant acknowledged.
- 6. Applicant acknowledged.
- 7. External lighting is said to be solely for meeting aircraft warning requirements. Applicant states they will not be providing a lighting plan. **
- 8. Plans should include note of the color of the proposed turbine. **
- 9. Applicant states that no advertising signs will be installed on this property. **
- 10. We find response regarding Federal Aviation Administration (FAA) requirement lighting acceptable. **
- 11. Applicant states that location and types of disturbances will be included on revised plans. Applicant should resubmit plans for verification.
- 12. Applicant states they will revise plans to include dimensions of the crane pad and identify the details on revised drawings. Applicant should resubmit plans for verification. Applicant states that foundation is to be designed by licensed PE based on the geotechnical report. These will be submitted as part of the building permit application. We find this to be acceptable.
- 13. Applicant indicates they will label what they believe to be the existing culvert to be replaced on revised plans. Applicant should resubmit plans for verification.
- 14. Applicant has indicated they will be reviewing grading and intent at the site entry-way on the north side of the proposed access route further. Applicant should provide additional information regarding intent as it becomes more available.
- 15. Applicant indicates they will identify overhead and underground wires, linetypes, and other associated symbols with further detail on revised plans. Applicant should resubmit plans for verification.
- 16. If site survey does not include bedrock outcroppings, EAF should be revised to match site specific details. Applicant should resubmit EAF if revised. We note that a geotechnical investigation will occur at the site.
- 17. Applicant indicates they will revise plans to more clearly identify the "temporary truck route" versus the permanent access road. Applicant should resubmit plans for verification.
- 18. Applicant indicates that they will identify connection equipment and any ground mounted equipment at the turbine. Applicant should resubmit plans for verification. **
- 19. Applicant indicates they will not be planting any landscaping as part of this work apart from seeding done as part of site restoration. With this response, we do not believe the applicant needs to submit a landscaping plan.
- 20. Applicant has provided details for the proposed access road.
- 21. Applicant indicates they will revise plans to show traffic flow patterns in and around the site. Applicant should resubmit plans for verification.
- 22. Applicant indicates they will revise plans to include details for proposed filter strips. Applicant should resubmit plans for verification.

- 23. Applicant has verified that no guy wires are proposed for this work. **
- 24. Proposed setback from the nearest residence is 1,724'. This is in compliance with the recommended requirement of 1,500' from residences. A dimension should be added to the plans showing this setback.

 **
- 25. Per discussion between Planning Board and applicant at the October 21, 2021 meeting, The Board agreed that the applicant should try to get as close to a 1.5x the total height of the wind turbine from the off-site property boundaries and public roads as possible, but realize it may only be 1.2-1.3x. Submitted Sheet C-1.0, received on November 11, 2021, show a setback distance of 1.41x(918') the height of the tower (650'). We find this to be suitable to minimize disturbances to the site. **
- 26. Applicant indicates they will revise plans to include a gate at the access road to limit access. Applicant should resubmit plans for verification. **

SWPPP

- 1. Applicant has indicated they will revise the SWPPP to note 80% vegetation establishment prior to removing erosion and sediment control practices. However, in section 3.1 removal of *all* erosion and sediment control features should be specific to additional conditions that must be met before removal can occur. Applicant should resubmit SWPPP for verification.
- 2. Applicant has indicated they will revise the SWPPP to include maintenance of erosion and sediment control practices as required throughout construction. Applicant should resubmit SWPPP for verification.
- 3. Applicant has indicated that they will revise the last sentence of the first paragraph that is written as follows: "If, at any time, the disturbance drops below the 5-acre threshold, the Contractor shall advise the Regional Office in writing.". Applicant should resubmit SWPPP for verification.
- 4. Applicant has indicated they will revise plans to show the lease exclusion zone as indicated in SWPPP. Applicant should resubmit plans showing this change for verification.
- 5. Applicant has indicated they will revise plans to show the anticipated location of filter strip that is planned to be the post-construction stormwater management practice and the details for such practice. Applicant should resubmit plans showing this change for verification.
- 6. Applicant has indicated they will revise the SWPPP to address the prior comment. Applicant shall resubmit SWPPP when revisions are made.
- 7. Applicant has indicated that they will revise the SWPPP to address and clarify the following original comment: "Channel Protection Volume, Overbank Flood Control, and Extreme Flood Control were not designed for as it is stated on page 6 that "...this method of analysis is not in accordance with the requirements of the SWDM..." what method of analysis is being described here? If this is in regard to the design of the proposed filter strips, that should be mentioned here more explicitly." Applicant shall resubmit SWPPP when revisions are made.
- 8. Applicant has indicated that Section 3.6 will be revised to cover Operation and Maintenance of all Erosion and Sediment Control Practices that will be implemented for this SWPPP. Applicant shall resubmit SWPPP when revisions are made.
- 9. Applicant has indicated that Section 4 will be revised to properly identify the owner and operator. Applicant shall resubmit SWPPP when revisions are made.
- 10. We find the applicant's response regarding inspection schedule satisfactory.
- 11. Applicant has indicated that the standard Construction Duration Inspection from will be made part of the SWPPP Appendices. This should include all items listed in Part IV.C.4 of the General SPDES Permit. Applicant shall resubmit SWPPP when revisions are made.

- 12. The applicant has indicated they will revise the Contractor Certification to include specific elements of the SWPPP that each contractor will be responsible for implementing. Additionally, a separate subcontractor certification form will be copied as needed. Applicant shall resubmit SWPPP when revisions are made.
- 13. Applicant has indicated that the size of the proposed filter strips will be included in the revised SWPPP. Applicant shall resubmit SWPPP when revisions are made.
- 14. The applicant has indicated that Section 2.3 includes language that incorporates the plans as part of the SWPPP. The SWPPP will formally include the plans as part of the SWPPP via an appendix. Plans will include a site map/construction drawings for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns the could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater discharge(s) per *Part III.B.1.b.* Applicant shall resubmit SWPPP when revisions are made.
- 15. Applicant has indicated a schedule identifying the timing of implementation of each erosion and sediment control practice and the minimum time frames that each should remain in place or be implemented will be included in the revised SWPPP. Applicant shall resubmit SWPPP when revisions are made.
- 16. The applicant has indicated that the SWPPP will be revised to reference specific details in the plans regarding erosion and sediment control practices. Applicant shall resubmit SWPPP when revisions are made.
- 17. The SWPPP, in Section 3.3 includes a description of the pollution measures that will be used to control litter and construction debris, as to prevent it from becoming a pollutant source to stormwater discharge. We find this to be acceptable.
- 18. Applicant indicates Stormwater Modeling and Analysis Report will be revised to include maps showing pre and post development conditions including watershed/subcatchment boundaries, flow paths, routing and design points. Applicant shall resubmit SWPPP when revisions are made.
- 19. We acknowledge that no soil testing has been preformed and is not required for current design.

General Wind Energy Based Comments

- Applicant has completed a pre-construction avian study for the project site. This should be submitted to
 the Town for record. Applicant also describes that they will be complying with all of NYSDEC's
 requirements. Applicant should proceed and continue following NYSDEC protocol through the duration of
 the project. **
- 2. We appreciate the applicant's clarification regarding the location selection for the proposed wind turbine. We note that the location selection was made for a variety of reasons including resident setbacks, wind productivity, avian habitat consideration, and more. *
- 3. We note that communication and microwave studies were performed for this project and results will be submitted for review. *
- 4. A visual impact analysis is currently being performed. We recommend this should be submitted for review before a final decision is made by the planning board. We expect the analysis to include the following items:
 - a. Determine turbine locations and heights*
 - b. Mapping of scenic resources of statewide significance as defined by the NYS Department of Environmental Conservation Visual Policy, and of local significance**
 - c. Determine the viewshed*
 - d. Description of the character and quality of the affected landscape**

- e. Identify key viewpoints* Provide photographic simulations of what the proposed project will look like from a reasonable number of representative viewpoints within the 5-mile radius study to be selected in consultation with the Planning Board **
- f. Assess existing conditions*
- g. Document project changes*
- h. Analyze changes*
- i. Develop mitigation where needed*
- 5. Applicant has indicated a shadow flicker analysis will be provided. We recommend this should be submitted for review before a final decision is made by the planning board. *
- 6. Applicant has indicated a noise analysis will be provided. We recommend this should be submitted for review before a final decision is made by the planning board. We expect the analysis to include the following: the types of sound expected of the proposed turbine and the decibels expected from all proposed equipment at the surrounding property lines. * Such noise study should be prepared to determine predicted sound at off-site property lines and residences from operation of the proposed turbine. Such analysis should be referred to as "Wind Turbine Only Sound". "Wind Turbine Only Sound" shall be predicted based upon appropriate ambient sound levels obtained from field or lab measurements of the proposed wind turbine, as well as appropriate background sound levels of the site and nearby off-site areas. This analysis should show that the proposed location of the wind turbine will not exceed 50 dB(A) at off-site property lines and 45 dB(A) at surrounding residences. If the proposed wind turbine contains a pure tone component, it shall be located so that "Wind Turbine Only Sound" at off-site property lines shall not exceed 45 dB(A) at off-site property lines and 40 dB(A) at surrounding residences. **
 - a. A pure tone is defined to exist when 1/3 octave band noise level exceeds arithmetic average of the two adjacent 1/3 octave band levels by the following

Band Range	<u>Exceedance</u>
31.5-125 Hz	15 dB(A)
160-400 Hz	8 dB(A)
500-8,000 Hz	5 dB(A)

- 7. Applicant has indicated a post construction noise compliance report will be submitted to the town once construction is complete. Applicant has indicated that annual certification is not typical for community wind projects. **
- 8. Applicant agreed. *
- 9. International Electrotechnical Commission (IEC) Certification should be noted on plans. *
- 10. Applicant has indicated they will post signs on the site that warn of falling ice in applicable areas. We find this satisfactory. *
- 11. Applicant has agreed to post signs on the site that warn of any danger in regard to electrical equipment or other hazard. These signs will include a 24 hr emergency number. We find this satisfactory. *
- 12. Applicant has indicated a fire protection and emergency response plan to address emergency response will be provided at the time of application for a building permit. This plan should be submitted prior to the building permit phase. We recommend this should be submitted for review before a final decision is made by the planning board. Applicant should coordinate with local emergency response providers to provide an emergency response plan and training. As local fire department is volunteer based, applicant should provide site specific training annually. **
- 13. Applicant has indicated they will supply photos and manufacturer's specifications of the proposed turbine model Including decibel data, and material safety documentation for all materials used in the operation

- of the equipment. We recommend this should be submitted for review before a final decision is made by the planning board. **
- 14. Applicant has indicated that construction would commence in Fall 2022, with complete operation by Summer 2023. Planning Board should be notified of any changes to anticipated schedule. Applicant has indicated a traffic analysis with a description of the routes to be used by construction and delivery vehicles will be provided. We recommend this should be submitted for review before a final decision is made by the planning board. **
- 15. Applicant has agreed to provide photos to the town before and after construction of the Town's public road system to show that no damages have occurred. If damages have occurred, applicant will be responsible for costs and repair work to repair such damages. **
- 16. Applicant has indicated a transportation plan describing routes to be used in delivery of project components, equipment and building materials and those to be used to provide access to the Site during and after construction is underway and will be provide once complete. This plan should also describe any anticipated improvements to existing roads, bridges or other infrastructure, as well as measures which will be taken to restore damaged/disturbed access routes following construction. We recommend this should be submitted for review before a final decision is made by the planning board. **
- 17. Applicant has indicated they will provide an O&M plan. O&M plan should include regular periodic maintenance schedules, any special maintenance requirements and procedures, and notification requirements for restarts during icing events. We recommend this should be submitted for review before a final decision is made by the planning board. **
- 18. Applicant has indicated they will provide an assessment of potentially impacted wetland, surface and groundwater resources, and the geology and land use of the site, as well as an assessment of construction phase impacts, traffic impacts and adverse sound impacts that may arise from the project construction. We recommend this should be submitted for review before a final decision is made by the planning board.

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- 19. Applicant acknowledged. **
- 20. Applicant acknowledged. **
- 21. Applicant acknowledged. **
- 22. Applicant has indicated that there are manual braking and safety features to power down the turbine in case of emergency or maintenance. **
- 23. The distance between the ground and any part of the rotor or blade system exceeds 30'. **

Decommissioning Plan

- 1. The Decommissioning Plan is said to be updated and the SWPPP will provide further clarification that the height of the turbine will be 394' to the top of tower. The blade length will be 246'. And at the highest rotation, the overall height will be 640'. The Decommissioning Plan and SWPPP should be resubmitted and shall be consistent with these values.
- 2. The Decommissioning Plan is said to have been revised to include a general description of the removal process. This revised plan should be submitted for review. We note that the demolition contractor will be responsible for true means and methods at the time of disassembly.
- 3. Applicant has noted that the amount for the surety bond will be based on the Decommissioning costs before salvage.
- 4. The decommissioning plan will be updated to note that a surety bond will be provided. **
- 5. Decommissioning plan will be updated every 5 years by a licensed professional engineer. Applicant indicates the revised decommissioning plan will indicate this. **

- * This comment is based on the Wind Energy Guidebook for Local Governments by NYSERDA.
- ** This comment is based on the Town of Duanesburg Wind Energy Facility Law, as the Town of Glen does not currently have a local law for wind energy.

If you have any questions, please feel free to contact me.

Sincerely,

KB Group of NY, Inc. dba PRIME AE Group of NY

Douglas P. Cole, P.E.

Senior Director of Engineering

Dauglar P Cole

cc: Brandon Smith, Borrego Solar