

Our ref: 11227527

February 10, 2022

Mr. JD Downing, Chairperson
Town of Glen
7 Erie Street
Fultonville, NY 12072

Response to Comments – 411 Reynolds Road Wind Energy Project, Town of Glen, New York

Dear Mr. Downing:

On behalf of Borrego Solar and in connection with the Reynolds Road Wind Energy Project, GHD is writing this letter in response to the latest comment letter from Douglas Cole, PE (Prime AE Group of NY [Prime AE]) dated January 20, 2022, which was received via email.

Comments which were previously addressed or acknowledged now have a strikethrough for tracking purposes. We appreciate the time taken to review the documents and offer the following responses:

Building Permit Application

~~1. Application has been updated to identify the parcel as R-R Rural Residential.~~

FEAF Part 1

~~1. All previous comments have been satisfied.~~

Site Use Permit Plans – Based on the Plans submitted on January 12, 2022

- ~~1. Applicant acknowledged.~~
- ~~2. Plans have been revised to include survey information.~~
- ~~3. Applicant has removed reference to the Town of DeRuyter on this set of the plans.~~
- ~~4. Item 9 on Sheet C-0 under erosion and sediment control measures has been revised for clarity.~~
- ~~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 note the color of the turbine as white.**~~
- ~~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. Location and types of disturbances are now shown on sheet C-3-0.~~
12. Crane Pad details and dimensions have been provided. Drawings lack dimensions for the turbine pad. Applicant states that the turbine foundation is to be designed by licensed PE based in the geotechnical report. These will be submitted as part of the building permit application. We suggest that maximum pad dimensions be shown for review purposes. If these dimensions are exceeded, the project would come back to the Planning Board for approval of the increase.

GHD Response: The preliminary turbine foundation dimensions have been determined to be 70 foot diameter (octagonal shape) and 20 feet in depth, including the pedestal and base. These dimensions are being added to the Plans, which will be submitted tomorrow.

~~13. Existing culvert to be replaced has been identified on the revised plans.~~

14. ~~Proposed culvert at the site entryway on the north side of the proposed access route has been revised to protect existing wetlands.~~
15. ~~Overhead and underground wires have been identified on plans.~~
16. If site survey does not indicate bedrock outcroppings, EAF should be revised to match site specific details. We note that a geotechnical investigation is slated to occur at the site, however, no schedule has been provided. A copy of the geotechnical report will be required to be submitted for review.

GHD Response: The EAF is completed using data from the NYSDEC Environmental Mapper and the USGS soil data and identified the possibility of bedrock outcroppings. The site survey was not intended to specifically identify bedrock outcroppings. Therefore, it is still possible that they be located at the site during field work and we would recommend this remain as identified in the EAF.

17. ~~Applicant has more clearly identified the “temporary truck route” on the site.~~
 18. ~~Connection equipment and ground mounted equipment are shown on the updated plans.**~~
 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. ~~Traffic flow patterns in and around the site are shown on sheet C-3.0.~~
 22. Filter strips are said to be detailed in the revised SWPPP (SWPPP was not provided for review).
- GHD Response: SWPPP has been provided via email 1/31/2022 for review.*

23. ~~Applicant has verified that no guy wires are proposed for this work.**~~
24. ~~Proposed setback from the nearest residence is shown as 1,549'. This is in compliance with the recommended requirement of 1,500' from residences. A dimension has been 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'). Upon further evaluation of the project, it was realized that this put the proposed turbine closer to residences on Reynolds Road. Therefore, the turbine was moved back near the original planned location where the distance between homes and the turbine would be maximized. The Turbine is now shown 723' from the rear property line. The proposed turbine is closest to a residence on Reynolds Road at a distance of 1,549' which is 2.38x the height of the tower, which exceeds the NYSERDA recommendation.**~~
26. ~~A barrier gate has been added across the access road at about station 4+75 on sheet C-6.0 to deter unauthorized access.**~~
27. Subsequent to changing the location of the proposed turbine, an addition 0.01 acres of wetlands will be disturbed. Applicant should verify that this is acceptable to Army Corps of Engineers.

Borrego Response: The submittal of the application for wetland permit was delayed due to ongoing changes to the site layout. At this time, Borrego is prepared to submit this application and it will accurately show the wetland disturbance as shown in the latest site layout.

28. ~~Proposed tree clearing has decreased from 3.82 acres to 3.42 acres based on the latest turbine siting.~~
29. ~~We note that permanent impervious coverage has decreased from plans dated 9/2/2021 to plans dated 12/15/2021. The decreased coverage is in the amount of 0.07 acres.~~

SWPPP

GHD Response: Revised SWPPP was provided via email on 1/31/2022. We await updated comments per the letter.

General Wind Energy Based Comments

1. Applicant has provided a pre-construction avian study for the project site. Applicant should continue to follow NYSDEC protocol through the duration of the project. Applicant shall advise if additional state and federal permits are needed for the project (above those stated in FEAF Part I) now that the environmental studies has progressed and provide the status or timeline for each. **

Borrego Response: Borrego continues to coordinate with NYSDEC on the project status. No additional permits have been identified at this time.

- ~~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 have been submitted for review. Applicant shall advise if the study has been submitted to the FCC and what their timeline for review and comment is expected to be. *

Borrego Response: The project has been filed with the FAA, which disseminates the information to various federal agencies as part of their review. We are currently entering the public comment period of the aeronautical study. We anticipate completion of the FAA review in the next few months.

- ~~4. A visual impact analysis was performed in accordance with Wind Energy Guidebook for Local Governments as prepared by NYSERDA. * Additional visual simulations were provided on 1/5/2022 and will be reviewed at the Planning Board meeting.~~
5. A shadow flicker analysis has been performed and provided. The model results state that two (2) receptors (381 Reynolds Rd and 138 Severine Lane) will have between 10 hours and 30 hours of shadow flicker per year. The table in Appendix B should be updated with receptor addresses for clarity.*

Borrego Response: Please see revised report attached.

6. A noise analysis has been performed and provided. The table in Appendix B should be updated with receptor addresses for clarity. Existing sound levels at these receptors should be obtained, so that the potential impacts from the proposed project can be further assessed. The NYSDEC document "Assessing and Mitigating Noise Impacts" dated 10/6/2000, contains a table with which the change in sound pressure can be evaluated. *, **

Borrego Response: Existing sound levels at receptors will be taken. This data will be obtained and provided to the Board prior to construction, as a baseline for the post-construction sound report that will be provided. The report has been updated to show addresses.

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, however, the Town of Glen Planning Board may require this as a condition of project approval. **

Borrego Response: The project shall comply with any Planning Board conditions.

- ~~8. It is understood that this project is under 25 MW and therefore not required to seek permits through Article 10 process, or Office of Renewable Energy Siting through New York State.*~~
- ~~9. International Electrotechnical Commission (IEC) Certification has been 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. A draft Emergency Action Plan was submitted for review. 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. **

Borrego Response: Borrego is amenable to both these items being conditions of approval. Prior to a building permit, an updated Emergency Action Plan shall be provided based on coordination with emergency responders, and the

applicable operator contact information. Site specific fire department training will be provided at most annually as referenced in the Emergency Action Plan submitted 12/8/2021.

13. Applicant has supplied manufacturer's specifications of the proposed turbine model and they are under review. **

Borrego Response: We await any comments upon completion of this review.

14. Applicant has indicated that construction is planned to commence in Fall 2022, with complete operation by Summer 2023. The Planning Board should be notified of any changes to the anticipated schedule. Borrego's Transportation Standards have been provided. These include reference to a traffic analysis with a description of the routes to be used by construction and delivery vehicles that will be provided. We recommend this be submitted for review before a final decision is made by the Planning Board. **

Borrego Response: A route analysis has recently been completed identifying the turbine delivery route, please see attached.

15. Applicant has agreed to provide pre and post construction photos to the Town of the Town's public road system to verify that no damages have occurred. If damages are identified by the Town or its agents, applicant will be responsible for all repair costs associated with such damages. Borrego's Transportation Standards have been provided. These include references to bonds that will be secured in the case that roads are damaged and not properly repaired by applicant. When final agreement and bonds are agreed upon by applicant and Town, they should be submitted officially for the record. **

Borrego Response: Borrego agrees to this condition.

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 provided 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 be submitted for review before a final decision is made by the planning board. Borrego's Transportation Standards have been provided. These include references to a traffic study and bonds that will be secured in the case that roads are damaged and not properly repaired by applicant. When final study is conducted, and agreement and bonds are agreed upon by applicant and Town, they should be submitted officially for the record. **

Borrego Response: We ask that the detailed route improvement/upgrade plan be a condition of approval to be submitted prior to a building permit being issued. Due to the ever-changing nature of infrastructure, these detailed assessments need to be delayed until closer to construction, to reflect potential upgrades, road repairs, etc. To protect the Town, a road use agreement will be entered into prior to construction, as indicated in the Borrego Transportation Standards submitted 12/14/2021.

- ~~17. A preliminary O&M plan has been provided. See comments in the respective section of this letter. **~~

- ~~18. Applicant has provided an assessment of potentially impacted wetlands, surface and groundwater resources (via SWPPP), and the geology and land use of the site (via soil survey data and plans), as well as an assessment of construction phase impacts — which they expect to be minimal as it is a much smaller scale than a utility wind farm, traffic impacts (which will be forth coming when traffic study is performed) and adverse sound impacts that may arise from the project construction (via Sound report). **~~

- ~~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 has been updated to include the height of the turbine (394'). The Plan should indicate that blade length will be 246', and at the highest rotation, the overall height will be 640'.

GHD Response: Please see the updated Decommissioning Plan attached.

~~2. The Decommissioning Plan has been revised to include a general description of the removal process. We note that the demolition contractor will be responsible for actual 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. It appears that the bond for decommissioning is proposed to be made in the amount of \$321,559. A detailed analysis of the costs estimates is currently underway by PRIME AE.

GHD Response: We await Prime AE's review and concurrence with the cost estimate or additional comments.

~~5. The Decommissioning plan and associated costs will be updated every 5 years by a licensed professional engineer as per the revised decommissioning plan language. **~~

Borrego Transportation Standards

1. These standards verify that a transportation study will be conducted by a licensed, professional engineer when the route for material transportation has been selected. The study should be provided to the Planning Board.

2. A road use agreement is outlined to show what is proposed to be included in a formal agreement with the Town. A road bond will be described in the formal agreement which provides a level of insurance to the Town in the case that the applicant fails to complete work to a certain standard and timescale.

Borrego Response: A route analysis has recently been completed identifying the turbine delivery route, please see attached. We ask that the detailed route improvement/upgrade plan be a condition of approval to be submitted prior to a building permit being issued. Due to the ever-changing nature of infrastructure, these detailed assessments need to be delayed until closer to construction, to reflect potential upgrades, road repairs, etc.

Borrego Wind Turbine Sound Standards

1. This document states that Borrego will comply with International Electrotechnical Commission (IEC) 61400-11 when evaluating sound levels. "The adherence to this standard means that overseeing authorities can have a high degree of confidence in the published sound levels, and the resulting sound modelling."

2. Manufacturer will provide a warrantee if the proposed turbine begins to operate outside of the "stated Sound Level Performance Standard", the manufacturer will remedy the situation and ensure the turbine performs below the stated standard.

3. Borrego will have Epsilon Associates perform a Sound Level Modeling Report to minimize sound impacts on the community by proper siting of the turbine (see below).

Sound Level Modeling Report & Modeling Summary and Recommended Sound Level Limit Review

1. The summary and model provided by Epsilon Associates Inc. shows that the proposed turbine will produce noise below 50 dBA at all property lines and will be 40 dBA or lower at all nearby residences. We ask that the existing ambient sound levels be measured at the same receptors, so that a comparison of pre and post construction sound can be analysed.

Borrego Response: Existing sound levels at receptors will be taken. This data will be obtained and provided to the Board prior to construction, as a baseline for the post-construction sound report that will be provided. The report has been updated to show addresses.

2. From the report and summary dated 8/31/2021 to new report and summary dated 1/12/2022, hub height went from 123 m to 120 m. Which is correct? Is this consistent with all other materials submitted?

Borrego Response: 120 meters (394 feet) is the correct hub height and should be consistent in all current documents.

Shadow Flicker Modeling Report

- ~~1. A shadow flicker report was developed in accordance with the Wind Energy Guidebook for Local Governments by NYSERDA.~~
- ~~2. The shadow flicker report took into consideration 10 locations, most, if not all, being residences. Seven (7) of the 10 receptors were found to have no shadow flicker. The methodology assumed locations consisted of "greenhouses", meaning they would be made up of windows in all directions, and that all buildings and vegetation that could potentially obscure flicker were non-existent. These assumptions lead to conservative results of the report. The maximum result any property could experience from the proposed turbine would be less than 22 hours of flicker per year, or less than 0.25% of the year.~~

Preliminary Operations & Maintenance Plan

1. A preliminary O&M plan has been developed by Borrego and will be used as a basis for their final O&M Plan that will be implemented once the project becomes operational and is based on typical industry standards.
2. The O&M plan should, at a minimum, include regular periodic maintenance schedules, any special maintenance requirements and procedures, and notification requirements for restarts during icing events. We recommend the final O&M plan be submitted for review before a final decision is made by the planning board.

Borrego Response: We ask that the final O&M Plan be a condition of approval to be submitted prior to a building permit being issued.

Draft Emergency Action Plan

1. Emergency equipment is stated to be located on a map, but no map was provided.
2. Emergency contact information should be added to the plan.
3. Has local EMS, including fire response, been notified of the proposed facility? Will they be trained on potential site-specific response activities?

Borrego Response: Prior to a building permit, an updated Emergency Action Plan shall be provided based on coordination with emergency responders, and the applicable operator contact information. Borrego has reached out to Fire Chief Brisbane for comment and will provide him with any information requested. Training will be provided on site-specific response activities.

Wetland Report

1. Applicant should overlay Wetland and Stream Maps developed by LaBella with proposed construction maps of the site.
2. "Any Project-related filling or disturbances within the delineated boundaries of jurisdictional wetlands (as approved by USACE) will require Federal CWA Section 404 authorization through USACE. In addition, such activities would also require a CWA Section 401 Water Quality Certification, as administered by NYSDEC. Both authorizations may be obtained through the Joint Permit Application process." Applicant shall provide a copy of the permit application to the Town.

Borrego Response: The submittal of the application for wetland permit was delayed due to ongoing changes to the site layout. At this time, Borrego is prepared to submit this application and it will accurately show the wetland disturbance as shown in the latest site layout. Please see the attached draft Joint Permit Application that will be submitted to agencies shortly, along with supporting documentation.

Facts & Figures of Wind Turbine

- ~~1. No comments.~~

Communication Tower Study

1. A communication Tower Study has been performed and results were provided.
2. This study does not show any site-specific recommendations or degrees of acceptability based on placement of the proposed turbine in proximity to the existing tower and antennae.

Borrego Response: Borrego has requested that our subject expert address this question and is awaiting a detailed response.

Microwave Study

1. The study indicates that the 6 total microwave paths within the 2-mile radius of the proposed turbine will not be impacted by the installation of said turbine. Applicant should advise if the report has been provided to the FCC for review.

Borrego Response: The submittal to FCC was delayed due to ongoing changes to the site layout. No impacts were identified in the report. Borrego will advise once FCC concurrence is received.

Visual Impact Analysis

- ~~1. Visual Impact Analysis appears to be in conformance with requirements of the Wind Energy Guidebook for Local Governments by NYSEERDA. The NYSDEC document "Assessing and Mitigating Visual and Aesthetic Impacts" dated 12/13/2019 will be used to aid in the review of potential impacts to the community.~~

Avian and Bat Mitigation

1. This statement shows that Borrego plans to comply with all NYSDEC regulations and will have a pre-construction survey performed by EDR to show pre-construction qualities of the site. Borrego advises that they will provide the Town of Glen with documentation and determination from NYSDEC upon completion of consultation with NYSDEC on this topic.

Borrego Response: Confirmed. Documentation and determination from NYSDEC will be provided once available.

Summary of Avian Field Surveys

- ~~1. Two (2) state listed *threatened* species and three (3) state listed species of *special concern* were observed over the course of the study (Spring, Breeding Season, and Fall) in the site location.~~
- ~~2. It is believed that one threatened species (northern harrier) occupied breeding habitat on or adjacent to the project site. "Project related impacts to such habitat could potentially occur depending on locations of proposed Project components."~~
3. The document does not mention any state or federal permits that may be required or alternatives for mitigation of potential impacts.

Borrego Response: It is expected that a Part 182 Incidental Take Permit will be required and obtained from NYSDEC. No other permits have been identified.

4. Has the study been submitted to NYSDEC Fish and Wildlife or other agency for review and comment?

Borrego Response: This study has not yet been provided to NYSDEC. We have been in continued consultation with the DEC regarding what studies and material they would like to see to make a determination for community wind projects.

* - This comment is based on the Wind Energy Guidebook for Local Governments by NYSEERDA.

** - 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 or require additional information, please do not hesitate to call me at the number below.

Regards,



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Copy to: Douglas P. Cole, PE – Prime AE
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