

COMMONWEALTH OF KENTUCKY

BEFORE THE KENTUCKY STATE BOARD ON ELECTRIC GENERATION
AND TRANSMISSION SITING

In the Matter of:

ELECTRONIC APPLICATION OF NORTHERN)	
BOBWHITE SOLAR LLC FOR A CERTIFICATE)	
OF CONSTRUCTION FOR AN)	
APPROXIMATELY 96 MEGAWATT)	CASE NO.
MERCHANT SOLAR ELECTRIC)	2020-00208
GENERATING FACILITY IN MARION)	
COUNTY, KENTUCKY PURSUANT TO)	
KRS 278.700 AND 807 KAR 5:110)	

SITING BOARD STAFF'S SECOND REQUEST FOR INFORMATION
TO NORTHERN BOBWHITE SOLAR, LLC

Northern Bobwhite Solar, LLC (Northern Bobwhite Solar), pursuant to 807 KAR 5:001, is to file with the Siting Board an electronic version of the following information. The information requested herein is due on March 15, 2021. The Siting Board directs Northern Bobwhite Solar to the March 16, 2020 and March 24, 2020 Orders in Case No. 2020-00085¹ regarding filings with the Siting Board. The Siting Board expects the original documents to be filed with the Commission within 30 days of the lifting of the current state of emergency. All responses in paper medium shall be appropriately bound, tabbed, and indexed. Electronic documents shall be in portable document format (PDF), shall be searchable, and shall be appropriately bookmarked.

¹ Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC Mar. 16, 2020), Order at 5–6. Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC Mar. 24, 2020), Order at 1–3.

Each response shall include the name of the witness responsible for responding to the questions related to the information provided. Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or the person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

Northern Bobwhite Solar shall make timely amendment to any prior response if Northern Bobwhite Solar obtains information that indicates the response was incorrect when made or, though correct when made, is now incorrect in any material respect. For any request to which Northern Bobwhite Solar fails or refuses to furnish all or part of the requested information, Northern Bobwhite Solar shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request. When filing a paper containing personal information, Northern Bobwhite Solar shall, in accordance with 807 KAR 5:001, Section 4(10), encrypt or redact the paper so that personal information cannot be read.

1. Provide details on the safety protocols Northern Bobwhite Solar has in place for planned and unplanned outages that might occur on the utility's circuit Northern Bobwhite Solar facility is connecting to.

2. Refer to Northern Bobwhite's response to Harvey Economics' First Request for Information, XII Decommissioning. Explain whether decommissioning includes removal of subsurface structures such as foundations and steel piles for the racking systems. Describe any subsurface structures that might remain after decommissioning is completed, particularly those that would interfere with using agricultural equipment such as plows and harrows.

3. Refer to the questions propounded by Harvey Economics Consulting, which are attached as an Appendix to this information request, and provide responses to those questions.



Linda C. Bridwell, PE
Executive Director
Public Service Commission *on behalf*
of the Kentucky State Board on
Generation and Transmission Siting
P.O. Box 615
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DATED FEB 26 2021

cc: Parties of Record

APPENDIX

APPENDIX TO A REQUEST FOR INFORMATION OF THE KENTUCKY STATE
BOARD ON ELECTRIC GENERATION AND TRANSMISSION SITING IN CASE
NO. 2020-00208 DATED FEB 26 2021

SEVEN PAGES TO FOLLOW

**SECOND SET OF INQUIRIES ABOUT THE NORTHERN BOBWHITE SOLAR, LLC
APPLICATION FOR A CONSTRUCTION CERTIFICATE**

This second set of questions pursuant to our review of the Site Assessment Report (SAR) for the Northern Bobwhite Solar facility has been prepared as a follow-up to the responses provided by Northern Bobwhite Solar, LLC to the initial set of questions submitted on January 28, 2021 (RFI #1) and received on February 15, 2021. HE requests that responses to these questions be provided in writing, supplemented by attachments as needed. HE will clarify any questions which are unclear to the Applicant. HE will review the Applicant responses and seek a follow-up discussion confirming our understanding with the appropriate Northern Bobwhite Solar personnel.

I Construction phase activities

- A. In the response to Question IA of RFI #1, Northern Bobwhite states that a detailed description of construction activities cannot be provided at this time.

Given that response, HE must assume a “worst-case” scenario, based on information provided in the Application, unless otherwise indicated in response to this inquiry. For example, a “worst-case” scenario will assume a full 18-month construction period (40-week peak noise period) and higher-end estimates of traffic, noise and dust levels associated with construction activities over that duration.

As a result of the assumption of a “worst-case” scenario, HE’s analysis of impacts may reflect greater impact levels (for traffic, noise, dust) than would actually occur once a specific construction plan is developed. However, in the absence of detailed descriptions from Northern Bobwhite, HE must avoid understating project impacts to the Siting Board and PSC staff.¹ Estimated impacts provide the foundation for mitigation recommendations. Thus, it will be mutually beneficial to reconsider the response to Question IA from RFI #1.

1. Please provide any additional information about the schedule of work to be performed throughout construction activities. Information regarding the sequencing of work to be done throughout the site would be helpful.
- B. The construction worker numbers provided in various places appear to be inconsistent at best. The Applicant’s response to RFI #1 Question V-A-12 indicates commuter vehicles will carry an average of 2 workers per vehicle. After applying 2 workers per vehicle to the data included in Table 3 of Appendix E

¹ Traffic impacts provide an example of the effect of assuming a “worst-case” construction scenario. The Applicant shows that Simstown Road has an ADT of 121. Given the available data in the Traffic Assessment, HE might assume as many as 300 vehicles may be traveling on this road to get to the northeastern parcel of the Project (300 vehicles is a majority of the 350 vehicles during peak construction activities, as provided in Table 3 of the Traffic Assessment). Under this example, Simstown Road would experience a 248 percent increase in traffic volume.

(“Traffic Assessment”), HE concludes there would be 500 workers at the Project site during average construction activities and 700 workers at the Project site during peak construction activities. This appears to be inconsistent with the Traffic Assessment included in the SAR, which states “an anticipated 100 local workers and 150 non-local workers will commute to the site each day.” And all these construction worker numbers conflict with the economic impact section numbers of a 250 average workforce and a 350 peak workforce. And 400 FTE’s identified in that section relate to none of these figures. We will need consistency, clarification and reasonableness with construction workforce figures, perhaps through an oral explanation via a virtual meeting to be scheduled with Siting Board and the Applicant’s representatives.

II Site development plan

- A. We would like to include the Site Plan Overview map in our report. Please provide a revised site plan overview map (the main overview map that shows the entire Project boundary) that correctly locates the Marion County Substation outside the Project boundary and also removes the “Map Page 1-4” overlay.
- B. Will the Project substation and construction staging areas (main laydown yard and temporary staging areas) have their own separate security fences installed?
- C. The data provided by Kirkland includes the distance between homes and the closest solar panels specifically for the 60 adjacent properties – that data does not include other homes or other structures in the nearby area that are close to the Project, but not adjacent.
 - 1. Please provide a table indicating the total number of residential structures within 2,400 feet of the closest solar panels, in 300 foot intervals. For example, # of homes within 300 feet, number of homes between 300 and 600 feet, etc.
 - 2. Please provide a table indicating the number of non -residential structures within 2,400 feet of the closest solar panels, in 300 foot intervals, by type of structure (commercial, industrial, school, hospital, church, barns, etc.). For example, # of structures within 300 feet, number of structures between 300 and 600 feet, etc.
 - 3. Please provide a table indicating the total number of residential structures within 2,400 feet of the Project boundary line, in 300 foot intervals. For example, # of homes within 300 feet, number of homes between 300 and 600 feet, etc.
 - 4. Please provide a table indicating the number of non -residential structures within 2,400 feet of the Project boundary line, in 300 foot intervals, by type of structure (commercial, industrial, school, hospital, church, barns,

etc.). For example, # of structures within 300 feet, number of structures between 300 and 600 feet, etc.

5. Please provide a table indicating the total number of residential structures within 2,400 feet of the closest transformer, in 300 foot intervals. For example, # of homes within 300 feet, number of homes between 300 and 600 feet, etc.
6. Please provide a table indicating the number of non -residential structures within 2,400 feet of the closest transformer, in 300 foot intervals, by type of structure (commercial, industrial, school, hospital, church, barns, etc.). For example, # of structures within 300 feet, number of structures between 300 and 600 feet, etc.

D. Please confirm that the total acreage within the Project boundary is approximately 1,680.5 acres (according to Exhibit L included in the response to RFI #1) and that the Project facilities (solar panels, etc) will be situated on about 1,300 acres within that boundary.

E. Please confirm that the information provided in Exhibit L of the response to RFI #1 (Updated Land Control Map) is consistent with the legal boundary description provided in Appendix B of Exhibit O of the Application.

F. Please confirm that the 10 lease agreements noted in the Response to the Siting Boards Staffs' First Request for Information Question 2b reflect the 16 individual parcels identified in Exhibit L (Updated Land Control Map) of the response to HE's RFI #1.

1. Are there 10 lease agreements for 16 parcels because one person might own multiple parcels?

G. Utilities to Serve Facility - The Application addresses electricity needs during construction and operations and the Motion for Deviation from Setback Requirements addresses water for dust suppression. Will the Project require any other utility needs during construction or operations, such as water?

III Setback Deviation Request

A. HE has no follow-up questions related to the setback deviation request.

IV Property values and land use

A. Is the Substation identified as an adjoining use on Page 4 of the Property Value Impact Report (Appendix A of the SAR) as the Marion County 161 kV Substation, or is that the existing sub-station?

V Traffic

- A. After driving the area during our site visit, we are concerned about the capabilities of certain existing access roads and additional roads Northern Bobwhite might develop. Further discussion of this issue is needed and will be discussed at a virtual meeting to be scheduled with Siting Board and the Applicant's representatives.
- B. Table 3 of Appendix E ("Traffic Assessment") provides the number of trips for "Class 9" vehicles, but the Applicant's response to RFI #1 Question V-A-9 lists vehicle weights for "Class 8" vehicles.
 - 1. Are Class 9 and Class 8 vehicles the same? If not, please provide information about the Class 9 vehicles accessing the Project site.
- C. Table 3 of Appendix E ("Traffic Assessment") refers to "Class 2 and 3" vehicles, but the Applicant's response to RFI #1 Question V-B-1 lists vehicle weights for "Class 1 and 2" vehicles.
 - 1. Please provide the same information about Class 3 vehicles accessing the Project site.
- D. The Applicant's response to RFI #1 Question V-A-12 indicates commuter vehicles will carry an average of 2 workers per vehicle. After applying 2 workers per vehicle into the data included in Table 3 of Appendix E ("Traffic Assessment"), HE concludes there would be 500 workers at the Project site during average construction activities and 700 workers at the Project site during peak construction activities. This appears to be inconsistent with the Traffic Assessment included in the SAR, which states "an anticipated 100 local workers and 150 non-local workers will commute to the site each day."
 - 1. How many workers will be travelling to the Project site per day on average? During the peak period?
 - 2. How many vehicles will be traveling to the Project site per day on average? During the peak period?

VI Dust

- A. HE has no follow-up questions related to dust.

VII Noise

- A. Does the RSG Sound Study (Exhibit P: "NBW Sound Study" in RFI #1) replace or supplement the "Operational Noise Conditions" section of the SMG report? We are unsure about how to apply both these reports together, and this might need oral discussion.
 - 1. Did RSG and SMG utilize the same schematic layout of operational components in their noise analyses? I.e., did RSG and SMG utilize the

same distances residences would be from tracker motors, co-located transformers/ inverters, and the main substation transformer?

- B. In Appendix B (“Site Plan with propagated Noise Levels”) of Appendix D (“Noise Assessment”), HE counts 40 estimated inverters. In Exhibit P (“NBW Sound Study”) of the Applicant’s response to RFI #1, RSG evaluates 42 inverters. Please confirm the correct number of inverters.
- C. Assuming 325,000 solar panels (provided by the Applicant in response to RFI #1 Question II-D-4) and 210 tracker motors (estimated by RSG), each motor would be required to tilt 1,548 solar panels. In HE’s experience with solar facilities, the ratio of panels to tracking motors is commonly closer to 100 solar panels per tracking motor.
1. Please confirm and provide documentation that if the solar panels include tracker motors, 210 tracker motors would be sufficient to tilt 325,000 panels. Please provide more detailed information about the ATI motors, such as the manufacturer specifications which would prove the motors’ capabilities.
 2. How many tracker motors did SMG assume in their Noise Assessment (Appendix D of the SAR)?
- D. Will there be any residual power in inverters that would make noise during nighttime hours? The Kirkland report states that solar farms are silent at night, but the noise analysis performed by RSG says the inverters were modeled at night.
1. Did RSG mean to say the inverters were modeled “to produce constant levels of noise” at night. Is that correct, and what was that noise level?
 2. Did SMG assume inverters would be producing constant levels of noise at night, and what were their noise estimates?
- E. In “Table 1: Modeling Configurations” of the RSG Noise Assessment, how many feet away are the “Modeled Sound Power (dBA)” values measured for each of the five equipment types? For example, a transformer has a modeled sound power (dBA) of 102 at ___ feet away.
- F. The SMG noise analysis calculated a projected noise of 53-55 dBA at the property 300 feet away from the substation. The RSG noise analysis states “the highest sound levels at a residence are 42 dBA during night and day.” Please elaborate on this apparent discrepancy.
- G. Does the RSG noise analysis assume baseline noise levels? Many residences appear to have a day/night noise level of 13 dBA, which is much lower than the “quiet rural area” of 30 dBA shown in Figure 5 of RSG’s analysis.

- H. Please add a column to Table 5 of Appendix C the RSG noise analysis, showing the distance in feet from each residence to the closest tracking motor and inverter.
 - 1. For the eight residences near the substation, please include the distance in feet from each residence to the substation.

VIII Topography/ Scenery

- A. Is the Applicant committed to reseeding/ repairing all areas degraded by vehicles that do not park in laydown areas?
- B. Vegetative Buffers
 - 1. Relative to the construction schedule, when will the vegetative buffer be planted?
 - 2. What is the basis for planting vegetative buffers within 500 feet of residences?
 - a. How many residences would trigger the planting of a buffer?
 - 3. What is the basis for planting vegetative buffers within 300 feet from roadways?
 - a. How many miles of roadways would trigger the planting of a buffer?
- C. The Applicant has not performed any glare studies regarding glare impacts on traffic, residences, or businesses, nor are any studies planned for these groups.
 - 1. Will the Applicant guarantee there will be no glare effects for residences, traffic, businesses, etc.?
 - 2. Is the Applicant committed to ceasing operations or altering operations of solar panels if glare is experienced during operations?
 - 3. Is the Applicant planning on utilizing solar panels equipped with anti-glare technology?

IX Public meeting materials

- A. HE has no follow-up questions related to public meeting materials or public concerns.

X Other permitting activities

- A. The Applicant's response to RFI #1 provides an updated list of permits expected for the Project. Please provide copies of any submittals made to those agencies, other than anything already provided.

XI Economic Analysis

- A. The Economic Assessment indicated 400 FTEs and assumes 50 to 100 local hires.
 - 1. Are the 50 to 100 local hires FTEs or individual people?
 - 2. How many individual workers are reflected in the 400 FTEs of the Economic Assessment?
 - 3. How was the 400 FTE estimate developed, given that the Applicant has not yet developed a detailed construction schedule?
 - 4. The Applicant's response to RFI #1 Question V-A-12-C explains the apparent discrepancy between the 250 workers and 400 FTEs as due to construction workers working overtime (more than full time) and construction workers working only partial periods of the 18 month construction phase.
 - a. HE agrees that it is possible for a single worker to account for more than 1 FTE (due to working overtime); however, the amount of work accomplished by 250 workers to justify a 400 FTE estimate would be extraordinary. Typically, FTE estimates are lower than the number of estimated laborers required for a Project, because many workers are on site only a limited time. Please explain.

XII Decommissioning

- A. HE has no follow-up questions related to decommissioning.

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