

August 23, 2021

Ms. Tanowa Troupe, Secretary
Ohio Power Siting Board
Docketing Division
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3797

Re: Case No. 21-36-EL-BGN - In the Matter of the Application of Marion County Solar Project, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Marion County, Ohio.

Response to Fourth Data Request from Staff of the Ohio Power Siting Board

Dear Ms. Troupe:

Attached please find Marion County Solar Project, LLC's ("Applicant") Response to the Fourth Data Request from the staff of the Ohio Power Siting Board ("OPSB Staff"). The Applicant provided this response to OPSB Staff on August 23, 2021.

We are available, at your convenience, to answer any questions you may have.

Respectfully submitted,

/s/ Christine M.T. Pirik

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CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to these cases. In addition, the undersigned certifies that a copy of the foregoing document is also being served upon the persons below this 23rd day of August, 2021.

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4844-2485-3750 v1 [88534-4]

**BEFORE
THE OHIO POWER SITING BOARD**

In the Matter of the Application of Marion County)
Solar Project, LLC for a Certificate of)
Environmental Compatibility and Public Need to) Case No: 21-36-EL-BGN
Construct a Solar-Powered Electric Generation)
Facility in Marion County, Ohio.)

**MARION COUNTY SOLAR PROJECT, LLC 'S
RESPONSE TO THE FOURTH DATA REQUEST
FROM THE STAFF OF THE OHIO POWER SITING BOARD**

On March 5, 2021, as amended on March 31, 2021, Marion County Solar Project, LLC (“Applicant”), filed an application (“Application”) with the Ohio Power Siting Board (“OPSB”) proposing to construct a solar-powered electric generation facility in Marion County, Ohio.

On August 16, 2021, the Staff of the OPSB (“OPSB Staff”) provided the Applicant with OPSB Staff’s Fourth Data Request. Now comes the Applicant providing the following response to the Fourth Data Request from the OPSB Staff.

- 1. Staff is concerned about aesthetic impacts related to the project’s perimeter fencing. The application proposes a seven-foot perimeter fence without a description (p.14). Chain-link perimeter fencing designs have previously elicited many negative public comments and concerns from adjacent residents living near proposed solar facilities. These concerns center on the concepts that chain-link fences generally (especially with barbed wire on top) are more aesthetically intrusive, out-of-character in rural settings, and less wildlife friendly than other fencing options such as deer fences and wooden wire fences. Is the Applicant willing to commit to a solar panel perimeter fence type that is both small-wildlife permeable and aesthetically fitting for a rural location? (Note: this condition would not apply to substation fencing.) If so, please provide an illustration, description of material composition and general specifications for the perimeter fence.**

Response: The Applicant is considering the use of a fence type that is both small-wildlife permeable and aesthetically fitting for the Project location. The feasibility of utilizing alternative fencing types, rather than a chain-link fence, depends on market availability, requirements from Project investors and the Project Owner and Operator (i.e., utilities) for specific fencing types, and site specific determinations made during the final design

process. Details regarding the perimeter fence type will be provided to OPSB along with final design no later than 60 days prior to the start of construction.

Geology

- 2. No known karst features have been confirmed at this point in the application process. However, the vast majority of the project area overlies the Columbus Limestone with less than 20 feet of glacial overburden. In combination with water flow, these conditions have a direct correlation to the potential for the formation of karst features in Ohio. Should karst features be discovered during construction of the proposed project, what mitigation measures will the Applicant pursue? Particularly, in the event, avoidance as a mitigation measure be found impractical.**

Response: Should karst features be discovered during the construction of the proposed Project, the solution would likely involve finding alternative locations for the arrays within the Project Area and/or shrinking the row spacing to maintain the Project's direct current capacity. If avoidance of karst areas is not feasible, then the geotechnical engineer of record for the Project will be consulted on recommendations for construction in these locations.

- 3. Page 24 of the Geotechnical Recommendation Report (Exhibit L) indicates ground water occurs as shallow as 3.5 feet. The application discusses dewatering during construction of building foundations. Does the applicant anticipate a need for dewatering during the installation of solar racking support piles or for underground collection lines? Will dewatering activities be limited to the construction phase?**

Response: Dewatering will typically be limited to the construction phase of the Project. It will not be required during the installation of the solar support piles as they are driven directly into the ground. It may be required during the installation of underground collection lines.

Battery Energy Storage System (BESS)

- 4. Exhibit B mentions a fire suppression system for the battery. Please describe the fire suppression system that the BESS will utilize?**

Response: The Applicant has relationships with several BESS Original Equipment Manufacturers ("OEM") that each provide their own enclosure design with fire protection systems. These systems differ somewhat between OEMs. Some options include clean agent

suppression systems, dry pipe suppression systems, and/or an overpressure ventilation and sparking system to keep the atmosphere inside the enclosures below the lower flammability limit. Regardless of which OEM is selected for deployment at the site, the system being utilized will meet National Fire Protection Association (“NFPA”) -855 guidelines and Underwriter Laboratories (“UL”) -9540a fire testing requirements. Information regarding the BESS equipment procured for the Project will be provided to the OPSB along with final design no later than 60 days prior to the start of construction.

5. Please describe the firefighting equipment necessary to extinguish a fire at the BESS.

Response: Fire response could be conducted via a fire truck or fire hydrant. As mentioned in the response to item 4, there are some variations to the specific details of the BESS systems that could be deployed. Some systems have a dry pipe sprinkler system designed to accommodate connection from a fire hose. Other OEMs recommend spraying water onto the enclosure to reduce the external heating. Regardless of the specific type of firefighting utilized, the BESS enclosures will be sited in accordance with the UL-9540a testing results to ensure that collateral damage cannot propagate from one enclosure to an adjacent enclosure.

6. In the extreme case where the fire suppression system of the BESS malfunctions, please describe the back-up firefighting equipment located onsite, firefighting capability of onsite personnel, and briefly what equipment will be provided to local responders.

Response: The BESS enclosures will be designed and tested in accordance with UL-9540a such that fire suppression is not required to prevent fires from spreading to adjacent enclosures. If a BESS enclosure experiences an internal fire and simultaneously experiences a failure in the fire suppression system, the fire will eventually consume the contents of the enclosure, however it will not spread to adjacent enclosures. As part of the Emergency Response Plan and training, local responders will be equipped to any BESS malfunctions that may arise during operation of the Project.

7. Referring to page 2 of the application, the Marion County Solar Project, LLC proposes a BESS that will inject up to 20.3 MW into the power grid. Please list any

and all other purposes (e.g. load following, frequency regulation) of the BESS that it will be used for?

Response: The BESS will be able to inject up to 20.3 megawatts (“MW”) into the power grid based on specific operator dispatch or in response to other variables, such as to firm intermittent output of the solar facility to a certain setpoint. The system will be able to participate in slow frequency regulation responses as required, but is not anticipated to be designed for fast, power battery-style applications (PJM Reg D). The complete list of anticipated use cases and parameters will be developed during subsequent design phases and will be provided to OPSB along with final design no later than 60 days prior to the start of construction.

8. Pages 1, 25, and 48 of the Application indicate various lifespans of the facility. Please indicate what is the anticipated lifespan of the BESS?

Response: The BESS equipment will be designed to meet the same design life requirements of the solar facility. The BESS modules themselves will degrade with use and experience capacity loss over time. The financial details regarding augmentation strategy and anticipated annual capacity will be evaluated during subsequent design phases and have not been determined at this time.

Wind Velocity

9. Please explain how Marion County Solar Project, LLC will, during the detailed engineering phase, minimize any potential damage from high wind velocities by proper structural design of the project support equipment at sufficient depths based on the site-specific soil conditions to preclude any adverse influence from high wind velocities.

Response: The final Project design will identify the necessary pile type and pile depth across the Project Area to account for site specific structural loading requirements and inputs, including wind. The site will be designed to meet American Society of Civil Engineers (“ASCE”) standards for Minimum Design Loads and Associated Criteria for Buildings and Other Structures, ASCE/SEI 7-16 and will factor in wind speeds based on building code wind speed maps for the area. The facility will be designed using basic wind speeds for risk category I buildings with exposure Category C, as provided in ASCE 7.

10. **Please indicate any wind loading precautions or wind equipment ratings that will be included in the final project design.**

Response: All racking vendors being considered for the Project perform extensive wind loading testing on their systems and have third parties review and test their systems before bringing them to market. The site will be designed to meet ASCE standards for Minimum Design Loads and Associated Criteria for Buildings and Other Structures, ASCE/SEI 7-16 and a structural engineer, licensed in the state of Ohio, will seal all structural drawings pertaining to the racking system. Wind equipment ratings for the Project will be provided to the OPSB as part of final design no later than 60 days prior to the start of construction.

11. **Do the trackers under consideration have a stow mode?**

Response: Yes.

Emergency Action Plan

12. **Will the emergency response plan for the project referenced on page 49 of the Application be provided to OPSB Staff prior to the preconstruction conference?**

Response: Yes, the Emergency Response Plan will be provided to OPSB prior to the preconstruction conference.

13. **Please provide the current draft emergency response plan or an example emergency response plan.**

Response: The Applicant will draft an Emergency Response Plan based on final design and information specific to emergency response providers in Marion County and Marion Township. The Emergency Response Plan will be provided to OPSB prior to the preconstruction conference.

Water Conservation Practice

14. **For the O&M building as referenced on page 77 of the Application, would Marion County Solar Project, LLC install modern, efficient water fixtures for all water usage, and regular maintenance to keep water fixtures in proper working order?**

Response: Yes, as part of the operations and maintenance (“O&M”) building, Marion County Solar Project, LLC will install modern and efficient water fixtures for all water usage and will maintain the water fixtures to keep them in proper working order.

15. **Pages 10 and 72 of the Application seem to indicate that water will be required for panel cleaning, does Marion County Solar Project, LLC anticipate cleaning of the solar panels with water. How often would these be cleaned on an annual basis?**

Response: The frequency of panel cleaning is determined by performance indicators. With rainfall and snow in Ohio, annual cleaning is not anticipated to be required.

16. **What is the approximate volume of water that would be required to clean the solar farm?**

Response: As stated in response to item 15, annual cleaning is not anticipated to be required. In the event that a cleaning is necessary, the industry standard is approximately 6 liters per module, which would result in 431,000 gallons for the site as a whole.

Substation

17. **Please provide the following information for the substation support structure referenced on page 7 of the Application:**

- a. **Tower designs, pole structures, conductor size and number per phase, and insulator arrangement.**
- b. **Base and foundation design.**
- c. **Cable type and size, where underground.**
- d. **Other major equipment or special structures.**

Response: The final design for the substation has not been completed or finalized at this time. It will be designed to meet the regional utility practices, PJM standards, Reliability First Organization Standards, the National Electric Code (“NEC”), and the Rural Utility Service Code. Details regarding the substation support structure will be provided to OPSB along with final design no later than 60 days prior to the start of construction.

18. **Please confirm that the new project substation, referenced on page 12 of the Application, will be designed according to regional utility practices, PJM Standards,**

Reliability First Organization Standards, the National Electrical Code (NEC), and the Rural Utility Service Code.

Response: Yes, the new project substation will be designed to meet all regional utility practices, PJM Standards, Reliability First Organization Standards, the NEC, and the Rural Utility Service Code.

19. Has the Applicant evaluated the project area for the presence of agricultural drainage wells?

Response: There are no agricultural drainage wells within the Project area. Evaluation for agricultural drainage wells was included in the scope of the Drain Tile Assessment, which was provided as Exhibit AA of the Initial Application filed on March 5, 2021.

Respectfully submitted,

/s/ Christine M.T. Pirik
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Summary: Response to Fourth Data Request from OPSB Staff electronically filed by Christine M.T. Pirik on behalf of Marion County Solar Project, LLC