

# Staff Report of Investigation

Scioto Farms Solar Project  
Scioto Farms Solar Project, LLC

Case No. 21-0868-EL-BGN

May 10, 2022



**Mike DeWine**, Governor | **Jenifer French**, Chair

<b>In the Matter of the Application of</b>	)	
<b>Scioto Farms Solar Project, LLC for a Certificate</b>	)	<b>Case No. 21-0868-EL-BGN</b>
<b>of Environmental Compatibility and Public Need</b>	)	

**Staff Report of Investigation**

Submitted to the  
OHIO POWER SITING BOARD

BEFORE THE POWER SITING BOARD OF THE STATE OF OHIO

**In the Matter of the Application of Scioto Farms Solar )  
Project, LLC for a Certificate of Environmental ) Case No. 21-0868-EL-BGN  
Compatibility and Public Need. )**

Chair, Public Utilities Commission  
Director, Department of Agriculture  
Director, Department of Development  
Director, Environmental Protection Agency  
Director, Department of Health

Director, Department of Natural Resources  
Public Member  
Ohio House of Representatives  
Ohio Senate  
Board of Pickaway County Commissioners  
Board of Trustees of Wayne Township

To the Honorable Power Siting Board:

In accordance with the Ohio Revised Code (R.C.) 4906.07(C) and rules of the Ohio Power Siting Board (Board), the staff of the Public Utilities Commission of Ohio (Staff) has completed its investigation in the above matter and submits its findings and recommendations in this Staff Report for consideration by the Board.

The findings and recommendations contained in this report are the result of Staff coordination with the following agencies that are members of the Board: Ohio Environmental Protection Agency, the Ohio Department of Health, the Ohio Department of Development, the Ohio Department of Natural Resources, and the Ohio Department of Agriculture. In addition, Staff coordinated with the Ohio Department of Transportation, the Ohio Historic Preservation Office, the U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers.

In accordance with R.C. 4906.07(C) and 4906.12, copies of this Staff Report have been filed with the Docketing Division of the Public Utilities Commission of Ohio to be served upon the Applicant or its authorized representative, the parties of record, and pursuant to Ohio Administrative Code 4906-3-06, the main public libraries of the political subdivisions in the project area.

The Staff Report presents the results of Staff's investigation conducted in accordance with R.C. Chapter 4906 and the rules of the Board, and does not purport to reflect the views of the Board nor should any party to the instant proceeding consider the Board in any manner constrained by the findings and recommendations set forth herein.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Theresa White". The signature is fluid and cursive, with the first name "Theresa" written in a larger, more prominent script than the last name "White".

Theresa White  
Executive Director  
Ohio Power Siting Board

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## **I. EXECUTIVE SUMMARY**

The authority of the Ohio Power Siting Board (Board or OPSB) is prescribed by Ohio Revised Code (R.C.) Chapter 4906. R.C. 4906.10 specifies that the Board shall not grant a certificate for the construction, operation, and maintenance of a major utility facility, either as proposed or as modified by the Board, unless it finds and determines eight specified criteria. Staff investigated the application presented by Scioto Farms Solar, LLC (Applicant) and recommends that the Board deny the Applicant's request for a certificate of environmental compatibility and public need, due to its inability to establish one of the eight statutory criteria.

Specifically, Staff recommends the Board find that the Applicant has failed to establish whether the facility will serve the public interest, convenience, and necessity as required under R.C. 4906.10(A)(6).

Although not recommended, in the event the Board determines that a certificate should be granted, Staff has proposed conditions for the Board's consideration in the certificate.

## **II. POWERS AND DUTIES**

### **OHIO POWER SITING BOARD**

R.C. 4906.03 authorizes the Board to issue certificates of environmental compatibility and public need for the construction, operation, and maintenance of major utility facilities defined in R.C. 4906.01. Included within this definition of major utility facilities are: electric generating plants and associated facilities designed for, or capable of, operation at 50 megawatts (MW) or more; electric transmission lines and associated facilities of a design capacity of 100 kilovolts (kV) or more; and gas pipelines greater than 500 feet in length and more than nine inches in outside diameter, and associated facilities, designed for transporting gas at a maximum allowable operating pressure in excess of 125 pounds per square inch. In addition, pursuant to R.C. 4906.20, the Board authority applies to economically significant wind farms, defined in R.C. 4906.13(A) as wind turbines and associated facilities with a single interconnection to the electrical grid and designed for, or capable of, operation at an aggregate capacity of five MW or greater but less than 50 MW. R.C. 4906.13 excludes from economically significant wind farms, one or more wind turbines and associated facilities that are primarily dedicated to providing electricity to a single customer at a single location and that are designed for, or capable of, operational at an aggregate capacity of less than 20 MW, measured at the customer's point of interconnection (POI) to the electrical grid.

Membership of the Board is specified in R.C. 4906.02(A). The voting members include: the Chairperson of the Public Utilities Commission of Ohio (PUCO or Commission) who serves as Chairperson of the Board; the directors of the Ohio Environmental Protection Agency (Ohio EPA), the Ohio Department of Health (ODH), the Ohio Department of Development (ODOD), the Ohio Department of Agriculture (ODA), and the Ohio Department of Natural Resources (ODNR); and a member of the public, specified as an engineer, appointed by the Governor from a list of three nominees provided by the Ohio Consumers' Counsel. Additionally, in certain cases including the present matter, voting members include two ad hoc members: one county commissioners or designee and one township trustee or designee. Non-voting Board members include four members of the Ohio General Assembly (with alternates) selected by leadership from each house of the Ohio General Assembly.

### **NATURE OF INVESTIGATION**

The Board has promulgated rules and regulations, found in Ohio Administrative Code (Ohio Adm.Code) 4906:1-01 et seq., which establish application procedures for major utility facilities and economically significant wind farms.

#### **Application Procedures**

Any person that wishes to construct a major utility facility or economically significant wind farm in this state must first submit to the Board an application for a certificate of environmental compatibility and public need.<sup>1</sup> The application must include a description of the facility and its location, a summary of environmental studies, a statement explaining the need for the facility and

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1. R.C. 4906.04 and 4906.20.

how it fits into the Applicant's energy forecasts (for transmission projects), and any other information the Applicant or Board may consider relevant.<sup>2</sup>

Within 60 days of receiving an application, the Chairperson must determine whether the application is sufficiently complete to begin an investigation.<sup>3</sup> If an application is considered complete, the Board or an administrative law judge will cause a public hearing to be held 60 to 90 days after the official filing date of the completed application.<sup>4</sup> At the public hearing, any person may provide written or oral testimony and may be examined by the parties.<sup>5</sup>

### **Staff Investigation and Report**

The Chair will also cause each application to be investigated and a report published by the Board's Staff not less than 15 days prior to the public hearing.<sup>6</sup> The report sets forth the nature of the investigation and contains the findings and, in the event the Board determines that a certificate should be granted, conditions recommended by Staff.<sup>7</sup> The Board's Staff, which consists of career professionals drawn from the staff of the PUCO and other member agencies of the Board, coordinates its investigation among the agencies represented on the Board and with other interested agencies such as the Ohio Department of Transportation (ODOT), the Ohio Historic Preservation Office (OHPO), and the U.S. Fish and Wildlife Service (USFWS).

The technical investigations and evaluations are conducted pursuant to Ohio Adm.Code 4906-1-01 et seq. The recommended findings resulting from Staff's investigation are described in the Staff Report pursuant to R.C. 4906.07(C). The report does not represent the views or opinions of the Board and is only one piece of evidence that the Board may consider when making its decision. Once published, the report becomes a part of the record, is served upon all parties to the proceeding and is made available to any person upon request.<sup>8</sup> A record of the public hearings and all evidence, including the Staff Report, may be examined by the public at any time.<sup>9</sup>

### **Board Decision**

The Board may approve or deny an application for a certificate of environmental compatibility and public need as filed, or modify and approve it upon such terms, conditions, or modifications as the board considers appropriate.<sup>10</sup> The certificate is also conditioned upon the facility being in compliance with applicable standards and rules adopted under the Ohio Revised Code.<sup>11</sup>

Upon rendering its decision, the Board must issue an opinion stating its reasons for approving, modifying and approving, or denying an application for a certificate of environmental compatibility and public need.<sup>12</sup> A copy of the Board's decision and its opinion is memorialized upon the record and must be served upon all parties to the proceeding.<sup>13</sup> Any party to the

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2. R.C. 4906.06(A) and 4906.20(B)(1).

3. Ohio Adm.Code 4906-3-06(A).

4. R.C. 4906.07(A) and Ohio Adm.Code 4906-3-08.

5. R.C. 4906.08(C).

6. R.C. 4906.07.

7. Ohio Adm.Code 4906-3-06(C).

8. R.C. 4906.07(C) and 4906.10.

9. R.C. 4906.09 and 4906.12.

10. R.C. 4906.10(A).

11. R.C. 4906.10.

12. R.C. 4906.11.

13. R.C. 4906.10(C).

proceeding that believes the Board decision to be unlawful or unreasonable may submit within 30 days an application for rehearing.<sup>14</sup> An entry on rehearing would then be issued by the Board within 30 days and may be appealed within 60 days to the Supreme Court of Ohio.<sup>15</sup>

### CRITERIA

Staff developed the recommendations and conditions in this *Staff Report of Investigation* pursuant to the criteria set forth in R.C. 4906.10(A), which reads, in part:

The board shall not grant a certificate for the construction, operation, and maintenance of a major utility facility, either as proposed or as modified by the board, unless it finds and determines all of the following:

- (1) The basis of the need for the facility if the facility is an electric transmission line or gas pipeline;
- (2) The nature of the probable environmental impact;
- (3) That the facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations;
- (4) In the case of an electric transmission line or generating facility, that the facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems and that the facility will serve the interests of electric system economy and reliability;
- (5) That the facility will comply with Chapters 3704, 3734, and 6111 of the Revised Code and all rules and standards adopted under those chapters and under section 4561.32 of the Revised Code. In determining whether the facility will comply with all rules and standards adopted under section 4561.32 of the Revised Code, the board shall consult with the office of aviation of the division of multimodal planning and programs of the department of transportation under section 4561.341 of the Revised Code;
- (6) That the facility will serve the public interest, convenience, and necessity;
- (7) In addition to the provisions contained in divisions (A)(1) to (6) of this section and rules adopted under those divisions, what its impact will be on the viability as agricultural land of any land in an existing agricultural district established under Chapter 929 of the Revised Code that is located within the site and alternative site of the proposed major utility facility. Rules adopted to evaluate impact under division (A)(7) of this section shall not require the compilation, creation, submission, or production of any information, document, or other data pertaining to land not located within the site and alternative site; and

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14. R.C. 4903.10 and 4906.12.

15. R.C. 4903.11, 4903.12, and 4906.12.



- (8) That the facility incorporates maximum feasible water conservation practices as determined by the board, considering available technology and the nature and economics of the various alternatives.

### **III. APPLICATION**

#### **APPLICANT**

The Application was submitted by Scioto Farms Solar Project, LLC (Applicant), which is a wholly owned subsidiary of Naturgy Candela Devco, LLC. Naturgy Candela Devco was originally founded as Hamel Renewables on June 5, 2018, and is headquartered in San Francisco, California. Members of the Candela team have developed more than seven gigawatts of solar projects across North America. The Scioto Farms Solar facility would be constructed, operated, and maintained by the Applicant.

#### **HISTORY OF THE APPLICATION**

On August 30, 2021, the Applicant filed a pre-application notification letter regarding the project.

On September 14, 2021, the Applicant held a public informational meeting for the project.

On December 13, 2021, the Applicant filed the Scioto Farms Solar Project application. The Applicant also filed a motion for protective order regarding certain information provided with the application

On February 11, 2022, the Executive Director of the OPSB issued a letter of compliance regarding the application to the Applicant.

On March 10, 2022, the Pickaway County Board of Commissioners filed Resolution No. PC-030822-24, appointing Commissioner Jay Wippel to the Board as an ad hoc voting member.

On March 11, 2022, the Board of Trustees of Wayne Township, Pickaway County, filed Resolution No. 3-2-22, appointing Chris Mullins to the Board as an ad hoc voting member.

Further, on March 11, 2022, Thomas E. and Scarlett Ebenhack, Wesley and Suzannah Ebenhack, and Thomas J. Ebenhack filed a motion to intervene. Wayne Township filed a notice of intervention.

On April 19, 2022, the Pickaway County Board of Commissioners filed a resolution against the project.

On April 22, 2022, Wayne Township filed a notice of resolution against the project.

On April 29, 2022, the Ohio Farm Bureau Federation, the International Brotherhood of Electrical Workers Local 575, and Ohio Partners for Affordable Energy filed motions to intervene.

A local public hearing has been scheduled for May 25, 2022, at 6:00 p.m. An evidentiary hearing is scheduled to commence on July 11, 2022, at 10:00 a.m.

This summary of the history of the application does not include every filing in case number 21-0868-EL-BGN. The docketing record for this case, which lists all documents filed to date, can be found online at <http://dis.puc.state.oh.us>.

## **PROJECT DESCRIPTION**

The Applicant intends to construct, own, operate, and maintain the Scioto Farms Solar Project, a 110 MW solar-powered generating facility in Wayne Township, Pickaway County. The project would consist of large arrays of photovoltaic (PV) modules, commonly referred to as solar panels, ground-mounted on a tracking rack system. The project would occupy approximately 750 acres within an approximate 1,070-acre project area comprised of private land secured by the Applicant through agreements with the landowners. The project would include associated facilities such as access roads, underground and overhead electric collection lines, weather stations, inverters and transformers, a collection substation, and a 138 kV gen-tie electric transmission line. The project would be secured by perimeter fencing which would be seven-feet tall and accessed through gated entrances.

### **Solar Panels and Racking**

The solar panels would be attached to metal racking. The racking would include approximately 48,000 steel piles driven into the ground to a depth of six to ten feet. The Applicant has currently designed the proposed solar facility to use bifacial monocrystalline solar panel modules with a nominal capacity of 540 to 600 Watts.<sup>16</sup> PV modules have not yet been procured for the project, but the Applicant is only considering leading suppliers, particularly a Tier 1 solar panel manufacturer.<sup>17</sup> The Applicant would follow the US EPA's safety procedures to ensure all panels are compliant with the US EPA's Toxicity Characteristics Leaching Procedure ("TCLP") testing protocol. The solar panel arrays would be grouped in large clusters that would be fenced in with gated entrances. The project's arrays would be mounted on a single-axis tracking system to track the sun as it moves through the sky each day.

### **Collection System**

The Applicant would install a collector system made up of a network of electric and communication lines that would transmit the electric power from the solar arrays to a central location. Some portions of the collector system would be buried while others would be above ground. The electricity from the solar panels would be generated in direct current (DC). DC power from the solar panels would be delivered to circuits, which would be routed through cable trays, then to combiner boxes. Power from the combiner boxes would be transmitted to groups of components, collectively called an inverter, which would include a DC-to-alternating current (AC) inverter, a step-up transformer that would increase the voltage to 34.5 kV, and a cabinet containing power control electronics. This would be housed in a power conversion station mounted on a concrete foundation.

### **Collection Substation and Transmission Line**

The facility collection substation would occupy land adjacent to a new point of interconnection switchyard, likely constructed, owned, or operated by AEP. The point of interconnection

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16. Current solar panel technology are one of two basic types: crystalline or thin-film. Crystalline modules are silicon-based. Thin-film modules use several alternative semi-conducting compositions (such as cadmium telluride or copper indium gallium selenide). When the selected panel is a thin-film module, the panels typically contain only exceedingly small amounts of potentially hazardous materials, all of which are safely encased in polymer and tempered glass within an aluminum frame.

17. The PV module vendors under consideration by the Applicant include, Longi Solar, Trina Solar, Jinko Solar, Canadian Solar, JA Solar, Moxeon, Risen, and VSUN.

switchyard would be a separate future filing with the OPSB. From there, the point of interconnection switchyard would connect to AEP's existing Biers Run-Circleville 138 kV transmission line. The major components of the Applicant's substation would include a 34.5 kV/138 kV step-up transformer, 34.5 kV feeder breaker, and communications equipment. The collection substation would be located at the northern end of the project area just north of Immell Road on the east side of Westfall Road. An approximately 500 foot long 138 kV electric transmission gen-tie line would connect the project substation to the future AEP point of interconnection switchyard. The collection substation and gen-tie electric transmission line are denoted on the maps in this report.

### **Access Roads**

The Applicant proposes to construct approximately 100,000 linear feet of new access roads for construction, operation, and maintenance of the solar facility. The access roads would range in width from 12 feet up to 24 feet depending on the intended use.

### **Construction Laydown Area**

The Applicant proposes to use three temporary construction laydown areas. The laydown areas would be utilized for material and equipment storage, construction parking, and construction trailers. The laydown areas would total a combined 15 acres. Two would be located at the southern end of the project and one would be located at the northern end of the project adjacent to the proposed substation and switchyard.

### **Weather Stations**

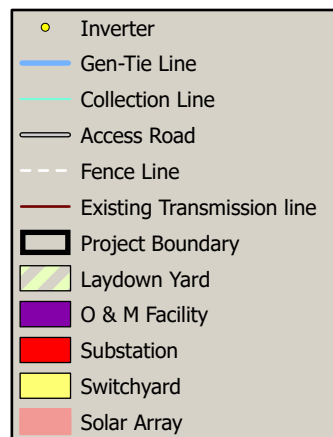
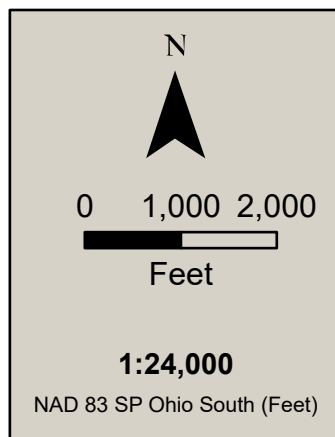
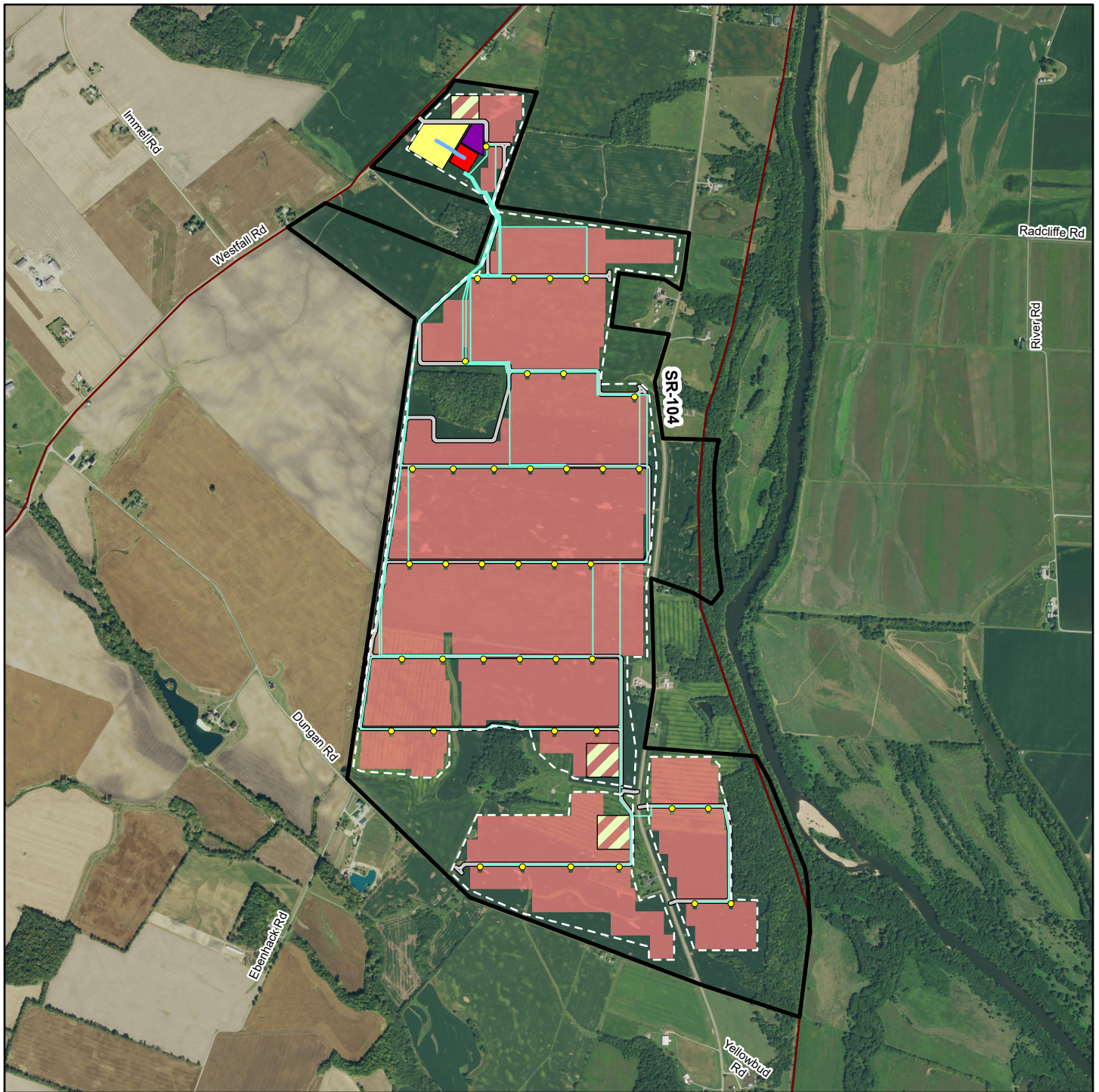
The project would include at least two weather stations. These stations would contain devices to measure solar irradiance, barometric pressure, rain gauge, temperature, and wind speed.<sup>18</sup> These stations would also contain communications equipment. The stations would be approximately the same height as the solar paneling, and their locations would be determined during the final design of the project.

### **Project Schedule**

Construction would start as early as late-2022 and is planned to be completed by the fourth quarter of 2023. The Applicant plans to place the facility in service upon its completion. The Applicant stated that delays to this timeline could impact project financing, including the Applicant's ability to procure PV modules and facility components. According to the Applicant, delays may push the in-service date back, causing it potential financial burden.

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18. Solar irradiance is the amount of solar energy per square meter received from the sun.



## Overview Map

### 21-0868-EL-BGN

#### Scioto Farms Solar

Maps are presented solely for the purpose of providing a visual representation of the project in the staff report, and are not intended to modify the project as presented by the Applicant in its certified application and supplemental materials.

#### **IV. CONSIDERATIONS AND RECOMMENDED FINDINGS**

In the Matter of the Application of Scioto Farms Solar Project LLC for a Certificate of Environmental Compatibility and Public Need, Staff submits the following considerations and recommended findings pursuant to R.C. 4906.07(C) and 4906.10(A).

##### **Considerations for R.C. 4906.10(A)(1)**

###### **BASIS OF NEED**

Pursuant to R.C. 4906.10(A)(1), the Board must determine the basis of the need for the facility only if the facility is an electric transmission line or gas pipeline. Therefore, Staff has found an analysis of R.C. 4906.10(A)(1) to be inapplicable to the facility in question.

##### **Recommended Findings**

Staff recommends that the Board find that the basis of need as specified under R.C. 4906.10(A)(1) is not applicable to this facility, as the facility is neither an electric transmission line nor a gas pipeline.



## **Considerations for R.C. 4906.10(A)(2)**

### **NATURE OF PROBABLE ENVIRONMENTAL IMPACT**

Pursuant to R.C. 4906.10(A)(2), the Board must determine the nature of the probable environmental impact of the proposed facility. Staff has found the following with regard to the nature of the probable environmental impact.

#### **Overview**

As described above, membership of the Board is specified in R.C. 4906.02(A) and its voting membership is comprised of leadership from the PUCO, Ohio EPA, ODH, ODOD, ODA, ODNR, as well as a member of the public specified as an engineer and two ad hoc members. Also as described above, the Board's Staff consists of career professionals from member agencies of the Board and their areas of expertise. Therefore, consideration of the nature of the probable environmental impact of a proposed facility incorporates such areas of expertise, as described below.

#### **Community Impacts<sup>19</sup>**

##### *Land Use*

The Applicant states the main land use type that would be impacted by this project is agricultural, at 87 percent of the project area and approximately 723 of 750 acres. The remaining land is fields, woodlands, and maintained lawn land. The Applicant states areas within the fence line that are wetlands and streams, and forested would be avoided and therefore left undisturbed by construction and operation of the facility. There would be two participating residences within 250 feet of a facility component. The Applicant implemented a minimum 300-foot setback of project infrastructure from non-participating residences. The nearest non-participating residence would be 326 feet from a solar panel. The Applicant states this project is compatible with nearby land uses. The Applicant asserts that upon the decommissioning of the project, the land would be able to be returned to agricultural land use if the landowners desire to do so. Staff asserts there would be minimal impacts to land uses outside the project area.

##### *Regional Planning*

Comprehensive land use plans provide citizens, elected officials, and developers with a conceptual planning framework. These plans may be utilized by governmental actors (such as planning

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19. "The Ohio Department of Development is committed to creating jobs and building strong communities, while ensuring accountability and transparency of taxpayer money and exceptional customer service." (Ohio.gov, Department of Development, <https://development.ohio.gov/feat/whatisdsa.htm>). R.C. 122.011(A)(6) states, in part, that the department of development shall develop and promote plans and programs designed to assure that state resources are efficiently used, economic growth is properly balanced, community growth is developed in an orderly manner, and local governments are coordinated with each other and the state, and for such purposes may, among other things, cooperate with and provide technical assistance to state departments, regional and local planning commissions, and other appropriate organizations for the solution of community problems. According to R.C. 122.01(B)(1), "'community problems' includes, but is not limited to, taxation, fiscal administration, governmental structure and organization, intergovernmental cooperation, education and training, employment needs, community planning and development, air and water pollution, public safety and the administration of justice, housing, mass transportation, community facilities and services, health, welfare, recreation, open space, and the development of human resources."

boards) to aid in land use decisions; however, it is important to note that comprehensive plans are primarily authored to provide generalized guidance on market-based growth trends and many areas of these plans are deliberately not written with any binding force.

There is not an adopted comprehensive plan for Pickaway County, nor are there adopted zoning regulations in Pickaway County or Wayne Township for unincorporated areas such as where the project is proposed. The Applicant states the solar facility would be compatible with nearby agricultural land uses and would not be likely to hinder any development on adjacent land. This project would not be expected to have any significant negative impacts on schools, housing, transportation, or public facilities.

### *Recreation*

In a study of recreation areas within 10 miles of the project area, the Applicant identified 23 recreation areas. These recreational resources include parks, wildlife areas, and nature preserves. The two nearest recreational resources are Martha Gunder Schneider Preserve and the Circleville Canal Wildlife Area, both located approximately 0.4 miles from the project area. There are two state parks eight miles or greater from the project area, Marion State Park and Great Seal State Park. There is one national park, Hopewell Culture National Historic Park, also greater than eight miles from the project area. In a response to a data request from Staff (filed January 14, 2022), the Applicant stated that Wildlife Habitat Restoration Area 65-2 is the only recreational area with the potential for visibility of the project. The Applicant states this facility would not be expected to have effects on recreational areas. Staff asserts this facility would not affect the ability to use any recreational resources.

### *Aesthetics*

Aesthetic impacts and considerations are always measured against the surrounding land use features and potential viewers' subjective opinions. The rural nature of the project vicinity limits the number of potential viewers. Transportation corridors typically are smaller and much more lightly traveled, which reduces the number of viewing impacts. Existing woodlots are also able to offer additional natural screening. The project area predominantly consists of agricultural land. Traffic volume on roads throughout the project area is typically light, thus abating the potential number of viewers.

The solar panels visibility of the Project appears relatively high within 2 miles.”<sup>20</sup>

To provide for aesthetic mitigation, the Applicant has committed to a setback of “at least 300 feet from non-participating residences to the project fenceline.”<sup>21</sup> Staff notes the presence of various recreational, institutional and transportation land uses in the vicinity of the project area as well. In addition to setbacks, the Applicant is also proposing selected vegetative screening for the project. Typically, vegetative screening for solar facilities has called for the installation of various planting modules. These planting modules are often categorized into tiers that are based upon the expected level of aesthetic impacts. These plans also increase overall vegetation density in relation to potentially greater aesthetic impacts. In this application, the Applicant has proposed a different planting methodology to soften viewshed impacts and to blend the facility into the existing vegetation. The Applicant proposes to install a “double row mix of evergreen species such as

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20. Application, Exhibit U, p. 5.

21. Application, Exhibit V, p. 1.



arborvitae (*Thuja* spp.), cedar (*Juniperus* spp), viburnum (*Viburnum* spp), and holly (*Ilex* spp.). The mature height of the plants would range from approximately 9 to 15 feet. The final details regarding location, tree height, and spacing will be determined based on community and landowner feedback.”<sup>22</sup>

In Staff’s opinion, in the event the Board determines that a certificate should be granted, the Applicant should (in consultation with a certified professional landscape architect) adjust its landscape mitigation proposal to include additional planting features of varying varieties, such as pollinator species, shrubs, and trees. Staff also specifically recommends that the Applicant’s landscape and lighting plans incorporate design features to reduce impacts in areas where an adjacent non-participating parcel contains a residence with a direct line of sight to the project’s infrastructure. Staff recommends that aesthetic impact mitigation include native vegetative plantings, alternate fencing, good neighbor agreements, or other methods in consultation with affected landowners and subject to Staff review.

The Applicant has committed to a perimeter fencing design that “includes agricultural, wildlife friendly fencing around the external areas of the Project rather than the typically proposed chain link fencing.”<sup>23</sup> With implementation of Staff’s landscape-lighting and fencing conditions, the overall expected aesthetic impact would be minimal.

#### *Cultural Resources*<sup>24</sup>

The Applicant enlisted a consultant, Commonwealth Heritage Group (Commonwealth), to gather background information and complete archaeological cultural resources studies for this project. As of the filing of this report, approximately 853 acres have been surveyed for archaeological resources. Approximately 100 acres remains to be surveyed but has not been surveyed due to seasonal and weather limitations. Commonwealth created an archaeological survey report based on the 853 acres surveyed and submitted the report to the OHPO. Commonwealth recommended that of the 44 identified archaeological sites identified, no sites are eligible for listing in the NHRP. OHPO, in a letter dated April 29, 2022, concurred with Commonwealth’s recommendation. Concerning the 100 acres left to be surveyed, the Applicant anticipates completing the survey by May 14, 2022 and has committed to avoid any archaeological resources recommended by Commonwealth or OHPO to be eligible for listing on the NHRP. In the event the Board grants a certificate to the Applicant, Staff recommends excluding the 100 acres from the project buildable area until such time that the 100 acres remaining to be surveyed are surveyed and that the Applicant avoid any sites recommended, by the Applicant’s cultural resource consultant or OHPO, to be eligible for listing in the National Register of Historic Places. Only if Applicant receives a

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22. Application, Exhibit V, p. 2.

23. Application, Exhibit V, p. 2.

24. According to R.C. 149.53, “[a]ll departments, agencies, units, instrumentalities, and political subdivisions of the state shall cooperate with the Ohio history connection and the Ohio historic site preservation advisory board in the preservation of archaeological and historic sites and in recovery of scientific information from such sites, and for such purposes shall, whenever practical, by contract or otherwise provide for archaeological and historic survey and salvage work during the planning phases, before work on a public improvement begins or at other appropriate times.” In Ohio, the Ohio Historic Preservation Office (OHPO) is part of the Ohio History Connection. (See, Ohio History Connection, About Section 106 Review, <<https://www.ohiohistory.org/preserve/state-historic-preservation-office/hpreviews/about-section-106-review>>).

concurrence from OHPO for either a finding of no adverse impacts or for no adverse impacts except for identified areas in need of avoidance, shall the Applicant construct in the 100 acres.

With OHPO's concurrence of Commonwealth's recommendation of a finding of no impacts on sites eligible for or listed in the NHRP, and the commitment to avoid any sites discovered and recommended to be eligible for listing in the NHRP Staff has determined that minimal adverse environmental impacts to archaeological cultural resources would be achieved.

Commonwealth also gathered background information and completed historical/architectural cultural resources studies for this project, which included a historic architecture survey of the area of potential effect. Commonwealth identified properties 50 years or older within the area of potential effect including 22 that were surveyed for the Yellowbud solar facility (case number 20-0972-EL-BGN) and 80 other properties. Of the 22 properties surveyed for the Yellowbud facility none are recommended as potentially having an adverse effect from the project. Of the 80 remaining properties, three are recommended as potentially having an adverse effect from the project. The Applicant plans to install and maintain screening for these properties which would minimize the adverse effect the project would have on these properties. The OHPO has reviewed these recommendations and minimization measures. The OHPO concurs with these findings and recommends the Applicant develop an MOU to ensure the minimization measures are put into place.

The OHPO and the Applicant are developing a memorandum of understanding (MOU) to mitigate for and/or avoid cultural resources with potential adverse effects due to the project. In the event the Board grants a certificate to the Applicant, Staff recommends that the Applicant finalize and execute the MOU with OHPO. With the development and implementation of the MOU, Staff has determined that minimal adverse environmental impacts to historical/architectural cultural resources would be achieved.

### *Economic Impact*

The Applicant states that it would be responsible for the ownership and operation of the proposed project. The Applicant will secure lease agreements or options to purchase all the land comprising the project area. The Applicant states that it will purchase and own the land where the substation will be located.

The Applicant chose to file its estimated capital and intangible costs, estimated operation and maintenance (O&M) expenses, and estimated delay costs, under seal, and filed a motion for protective order to keep the information confidential. Similar requests have been common practice in many, but not all, solar facility applications.

Total cost comparisons between the proposed facility and other comparable facilities are to be provided in the application. The Applicant referenced a 2021 study conducted by the U.S. Energy Information Administration (USEIA) which states that capital costs for comparable solar energy facilities in 2019 was \$1,497/kWAC. The Applicant also referenced a 2021 study conducted by the U.S. Department of Energy's National Renewable Energy Laboratory (NREL). The report states that benchmark costs of a utility scale solar project in the first half of 2020 was \$1,350/kWAC. The Applicant states that the costs for the proposed facility are in line with the costs reported by USEIA and NREL. Staff verified the Applicant's assertion that the average cost

of similar facilities contained in the reports are not substantially different from Applicant's estimated costs for the proposed facility.

O&M expense comparisons between the proposed facility and other comparable facilities are to be provided in the application. The Applicant referenced the NREL in its 2021 update on utility-scale solar costs which reports that O&M costs were \$16/kW/year for fixed-tilt PV facilities and \$17/kW/year for facilities using tracking systems. The Applicant states that the O&M costs for the proposed facility will be lower than those contained in the NREL report. However, the costs in the NREL report include equipment replacement like inverters and modules and include property taxes and lease payments while the Applicant's proposed costs do not consider these elements. When adding NREL's estimates for these costs to those reported by the Applicant, the Applicant's O&M costs fall in line with those reported in the NREL report.

The Applicant provided its estimates of the cost of delays in permitting and construction of the proposed facility, although the estimated costs were filed under seal. The Applicant stated that delays could prevent the project from securing components such as PV solar modules and push back the potential in-service date. The Applicant's characterization of its estimated costs of delays appears reasonable to Staff.

The Applicant retained the services of Stantec, Inc (Stantec) to report on the economic impact of the project.<sup>25</sup> Stantec used the IMPLAN regional economic modeling system, as well as data from the Ohio Department of Taxation, to estimate the economic impact of the construction and operation of the solar facility. Staff verified that the methodology of the IMPLAN model was appropriate for this study and that the estimated impacts reported by the Applicant are reasonable.

In this model, "earnings" are comprised of direct (on-site) wages, indirect (supply-chain labor) wages, and induced (through spending by persons in first two categories). "Output" in this model refers to the value of goods and services produced by direct, indirect, and induced labor. Based on the results of the IMPLAN model analysis conducted by Stantec, the project is expected to have the following impacts:

#### Jobs

- Between 456 and 477 construction related jobs for the state of Ohio
- 4 long-term operational jobs for the state of Ohio

#### Earnings

- Between \$28.7 and \$29.9 million in local earnings during construction for the state of Ohio
- \$630,584 in annual earnings during facility operations for the state of Ohio

#### Output

- Between \$74.1 and \$77.5 million in output during construction of the facility for the state of Ohio

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25. Stantec, Inc is a consulting firm specializing in engineering, architecture, environmental sciences, project management, and project economics for infrastructure and facilities projects.

- \$1.1 million in annual output during facility operations for the state of Ohio

The project is estimated to generate between \$770,000 and \$990,000 annually for Pickaway County taxing districts. This estimate is based on a proposed Payment in Lieu of Taxes (PILOT) plan in which the Applicant would pay between \$7,000/MW and \$9000/MW annually for a total of 110 MW. At this time, the Applicant has not entered into a PILOT agreement with Pickaway County.

### *Glare*

Glare is the phenomenon where sunlight reflects from a surface to create a duration of bright light. Glare also encompasses glint, which is a momentary flash of bright light. Potential impacts of this reflection from solar panel(s) could be a brief reduction in visibility, afterimage, a safety risk to pilots, or a perceived nuisance to neighbors. The Applicant considered the potential effects of glint and glare in the design of solar array layout and how the panels would be operated.

Solar panels are designed to absorb as much sunlight as possible with minimal reflectivity and include an anti-reflection coating. The Applicant conducted a glint and glare analysis to identify any potential impacts along local roads, at nearby residents, and the closest airport.<sup>26</sup> To perform the analysis of glare, the Applicant used the ForgeSolar formerly known as the Solar Glare Hazard Analysis Tool (SGHAT) which was developed by Sandia National Laboratories to analyze potential glare at sensitive receptor locations. This software is commonly used by solar facility developers to determine the effect of solar glare. Glare is classified in three categories in the SGHAT tool: (1) the green type, which is associated with a low potential for temporary after-image when observed prior to a typical blink response time; (2) the yellow type, which is associated with a potential for temporary after-image when observed prior to a typical blink response time; and (3) the red type, which is associated with the permanent retinal damage when observed prior to a typical blink response time. The Applicant found that no glare (i.e., no minutes of either green, yellow, or red type) from the project is predicted to vehicles using the roadways, nearby residences, or the closest airports and helipads. Staff agrees with the study results. Staff notes that aesthetic impact mitigation measures that include vegetative plantings may also further reduce potential impacts as part of a landscape and lighting plan, which Staff has recommended for this project.

### *Decommissioning*

The Applicant holds land rights to and estimates that the solar facility can operate for 40 years. The Applicant has prepared a decommissioning plan and total decommissioning cost estimate of \$6,190,711. Staff has reviewed that decommissioning plan.<sup>27</sup>

According to the Applicant's plan, at the end of the useful life of the facility, the solar facility would be decommissioned, and the land be returned to its current use as agricultural land. Prior to the start of any decommissioning activities, the Applicant would apply for and obtain applicable federal, state, and local permits. At this time, the Applicant has identified that during decommissioning, it may need to obtain, at the least, an Ohio EPA Construction Storm Water General Permit and US Army Corps of Engineers wetlands permits and authorizations. At the time

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26. Application at Exhibit M.

27. Application at Exhibit B and Applicant's (Attachment) to Scioto Farms Solar Project, LLC's Response to Staff's Third Data Request.

of decommissioning, panels would be reused, salvaged, recycled, or properly disposed in accord with regulations in effect at that time.

The decommissioning sequence consists of, but is not limited to reinforcing roads, installing sediment and erosion controls, dismantling panels and racking, removing inverters, removing electrical cables, removing access and internal roads, grading the site, removing the substation, removing overhead transmission lines and poles, and revegetating disturbed land to pre-construction conditions, to the extent practicable. The project's underground electrical collection system would be placed at a depth of at least 18 inches below the ground surface. According to the application, the decommissioning cost estimate accounts for and assumes that all subsurface cabling will be removed and salvaged.<sup>28</sup> At the request of the landowner, the Applicant may leave access roads or fencing in place. The Applicant has also committed to coordinate with the appropriate local agency to coordinate repair of any public roads if damaged during decommissioning; this would likely be done via a RUMA if required. The Applicant stated that it anticipates decommissioning activities and restoration to occur over and be completed in a twelve to 18 month period. The Applicant has clarified that minimal activity is expected to go beyond twelve months, and the Applicant expects that activities past the twelfth month would be minor tasks such as complying with landowner requests and seasonal planting and restoration work. Based on the weather dependent nature of site restoration, in the event the Board determines a certificate should be granted, Staff recommends that the Applicant monitor the site to ensure successful revegetation and rehabilitation.

The Applicant states it would repurpose, salvage, recycle or haul offsite to a licensed solid waste disposal facility solar components. Some of those solar components are anticipated to have a resale or salvage value and would be sold to offset the decommissioning cost. Those salvageable items typically are solar modules, tracking system, steel piles, inverters, electric cabling and conduit, and transformers. If solar modules are to be disposed, the Applicant intends to conduct the disposal in compliance with federal, state, and local laws and regulations. The Applicant is considering and expects that it would only utilize panels that have been certified to comply with the US EPA's toxicity characteristics leachate procedure (TCLP) test and meet U.S. EPA definition of non-hazardous waste. In the event the Board determines a certificate should be granted, Staff recommends that at the time of solar panel end of life disposal, any retired panel material that is not recycled and that is marked for disposal, shall be sent to an engineered landfill with various barriers and methods designed to prevent leaching of materials into soils and groundwater, or another appropriate disposal location at the time of decommissioning approved by Staff.

The Applicant would also provide for financial security to ensure that funds are available for decommissioning/land-restoration. Specifically, the Applicant states that it would employ a performance bond where the company is the principal, the insurance company is the surety, and the Ohio Power Siting Board is the obligee. The Applicant would review, update, and submit to OPSB every five years an updated decommissioning plan and financial assurance cost estimate. The Applicant would coordinate with the appropriate entities to recalculate the performance bond value every five years after the project's commercial operation date.

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28. Scioto Farms Solar Project, LLC Response to Staff's Third Data Request (Attachment, Section 2.5 and Table 3 "Estimated Decommissioning Expenses").

The Applicant has incorporated most of these items in its preliminary decommissioning plan but would finalize based on the final engineering design of the facility just prior to the construction start. In the event the Board determines a certificate should be granted, Staff recommends that at least 30 days prior to the preconstruction conference, the Applicant shall submit an updated final decommissioning plan and total decommissioning cost estimate without regard to salvage value on the public docket that includes: (a) a provision that the decommissioning financial assurance mechanism include a performance bond where the company is the principal, the insurance company is the surety, and the Ohio Power Siting Board is the obligee; (b) a timeline of up to one year for removal of the majority of equipment as defined by 60 percent of the panel and racking equipment quantities, with all decommissioning to be finished within 18 months after the Facility ceases operations;; (c) a provision to monitor the site for at least one additional year to ensure successful revegetation and rehabilitation; (d) a provision where the performance bond is posted prior to the commencement of construction; (e) a provision that the performance bond is for the total decommissioning cost and excludes salvage value; (f) a provision to coordinate repair of public roads damaged or modified during the decommissioning and reclamation process; (g) a provision that the decommissioning plan be prepared by a professional engineer registered with the state board of registration for professional engineers and surveyors; and (h) a provision stating that the bond shall be recalculated every five years by an engineer retained by the Applicant; and (i) a provision that underground equipment will be removed to the extent that allows for future drain tile repairs and installation to be completed. And lastly, Staff recommends that the Applicant implement and comply with the decommissioning plan as approved by Staff.

### *Wind Velocity*

In compliance with the Ohio Administrative Code, the Applicant has provided the probability of occurrence or frequency distribution of wind speeds for the project area. This tabulated data was obtained from the Ohio State University College of Food, Agriculture, and Environmental Science and from data sampled at the weather station nearest the project in Piketon, Ohio for the year 2020. Because it would be an unoccupied structure, the facility is constructed under Risk Category I for wind load design using a minimum design wind load of 100 miles per hour (mph). This corresponds to the ASCE 7-16 standard for the region of the facility. The Applicant stated that the facility would be engineered and installed to withstand typical high-wind occurrences, including 100-year Minimum Recurrence Interval (MRI) 96 mph, and the 50-year MRI 90 mph, all of Risk Category I; 3-second wind gust of 105 mph (Exposure C), ASCE 7-10. In response to a data request, the Applicant stated that an Ohio-licensed professional engineer stamp would be provided for all drawings and calculations issued for construction as required by the OPSB and local jurisdiction.

The Applicant states that there would be meteorological stations throughout the facility to monitor wind speed, and this data would be used for adjustments in the tracker system and the implementation of the stow mode during high wind events. The position of the stow mode would depend on the racking/tracker vendor selected for the project. A common stow mode would point the leading edge of the tracker towards the ground to brace against oncoming winds. The loads and forces exerted on the panels, racking, pilings, and tracking mechanisms would be calculated by the racking/tracker vendor, when one has been selected. The design of the system would account for the maximum allowable stresses allowed on the components, and the use of tracker stow algorithms would minimize the risk of exceeding the allowable stresses.

### *Roads and Bridges<sup>29</sup>*

During construction, local and state roads would experience a temporary increase in truck traffic due to deliveries of equipment and materials. Although the Applicant has yet to finalize its delivery route, the routes expected to be impacted include : State Route 104, Westfall Road, and Hickory Bend Road. Access to the site is planned to be from State Route 104, Hickory Bend Road, and Westfall Road. The Applicant has made a commitment to avoid Dungan Road during construction.

The Applicant conducted a field review of roads along the transportation routes to identify possible impacts from construction (Exhibit J). The Applicant expects some modifications to local roads, mainly at the access points to the project area. Road surface conditions and the location of culverts were noted. Stantec Consulting recommends an evaluation of all bridges within the project be reviewed by a structural engineer prior to planning the haul routes. No overhead obstructions were observed during the consult.

Conventional heavy equipment which does not require special permitting would make up the majority of construction traffic. The electrical transformer is likely to be overweight and would require special permitting and route coordination for delivery. Significant changes to traffic

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29. The entity responsible for maintaining roads and bridges within Ohio depends on many factors. See, e.g., ODOT, Roadway Infrastructure Maintenance Responsibility Manual, <https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/maintenance-operations/rimr/rimr>).

patterns is not anticipated. Post construction and operation of the solar facility, the Applicant does not anticipate any additional traffic for the project beyond routine maintenance.

The Applicant stated that, prior to commencement of construction activities that require transportation permits, it will obtain all such permits. The Applicant will coordinate with the appropriate authority regarding any temporary or permanent road closures, lane closures, road access restrictions, and traffic control necessary for construction and operation of the proposed facility. Coordination will include, but not be limited to, the county engineer, ODOT, local law enforcement, and health and safety officials. In the event the Board grants a certificate to the Applicant, Staff recommends a final Transportation Management Plan be submitted prior to the preconstruction meeting.

### *Noise*

Noise impacts from construction activities would include site clearing, installation of mechanical and electrical equipment, and commissioning and testing of equipment. Many of the construction activities would generate significant noise levels during the period of construction. However, the adverse impact of construction noise would be temporary and intermittent, would occur away from most residential structures, and would be limited to daytime working hours. The Applicant would use mitigation practices such as limiting construction activities to daylight hours, keeping equipment in good working condition and establishing a complaint resolution process.

Operational noise impacts for a solar generation facility would be relatively minor and occur only during the day. Operational noise sources include inverters and tracking motors. The step-up transformer at the new substation and the inverters may operate at night but the noise impact would also be relatively minor.

The Applicant conducted an ambient noise level study in order to understand the existing noise levels near the proposed facility. Noise impacts to non-participating receptors were modeled using the proposed inverter and transformer models.<sup>30</sup> The model showed that operational noise impacts would be less than ambient noise levels plus five dbA. No non-participating receptors were modeled to receive noise impacts greater than the daytime ambient noise level plus five dbA. Therefore, the project would be expected to have minimal adverse noise impacts on the adjacent community. If an inverter or transformer model different than the proposed inverter or transformer model is chosen, the Applicant would submit a noise report confirming that no non-participating receptors were modeled to receive noise impacts greater than the daytime ambient noise level plus five dbA.

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30. For the sound propagation model, the model used for the inverter/transformer is a Sungrow 3,150 kVA model, and for the substation transformer is a 175 MVA transformer. The Applicant is considering using one of the following inverter models Sungrow, TMEIC, Ingeteam, SMA, and Power Electronics or comparable models. The Applicant has not supplied possible substation transformer models.



## Geology<sup>31</sup>

### *Surficial/Glacial*<sup>32</sup>

The project area lies within the glaciated margin of the state and includes several Wisconsinan-age glacial features. Most of the project area is covered by a ground moraine feature that consists of flat to gently undulating terrain and a loam till with a thin loess cover. The eastern boundary of the project area overlies alluvium and alluvial terrace deposits consisting of fine to coarse sand, gravel and cobbles. Glacial drift throughout most of the study area is between 78 and 186 feet thick.

### *Bedrock*<sup>33</sup>

The uppermost bedrock unit throughout the entire project boundary is the Ohio and Olentangy Shales Undivided. Given the drift thickness cited above, bedrock is not expected to be encountered since no foundations are expected to exceed ten feet in depth.

### *Oil/Gas and Mining*<sup>34</sup>

ODNR records indicate 12 oil and gas wells are located within one mile of the project area and four of these well records are located within the project area. Two of these four wells are noted as permitted, but never drilled. Therefore, no oil and gas well feature exists. The two remaining wells (API #s 34129200400000 and 34129200770000) are listed as plugged and abandoned/final restoration. The current facility layout proposal shows solar project infrastructure

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31. According, in part, to R.C. 1505.01, the ODNR's division of geological survey "[s]hall advise, consult, or collaborate with representatives of agencies of the state...on problems or issues of a geological nature when requested by such an agency...." One of the missions of the ODNR Division Geological Survey is "to provide geologic information and services needed for responsible management of Ohio's natural resources." (ODNR, Division of Geological Survey, About the Division, <<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/geologic-survey/division-of-geologic-survey/division-of-geologic-survey>>). This includes studying and investigating, among other things, glacial and surficial geology, bedrock geology, and geological hazards. According to ODNR a "geologic hazard or 'geohazard' is a geologic condition, either manmade or natural, that poses a potential danger to life and property. Ohio is home to a number of potential geohazards, including karst, mine subsidence, earthquakes, landslides, and shore erosion." (ODNR, Geologic Hazards, <<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/geologic-survey/geologic-hazards>>).

32. "Since its inception in 1837, the ODNR Division of Geological Survey has researched and mapped the state's glacial and surficial geology. Today, highly detailed mapping and meticulous studies continue to inform and broaden our knowledge of Ohio's glacial past." (ODNR, Glacial Geology in Ohio <<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/geologic-survey/glacial-geology>>).

"Since collaborating with the U.S. Geological Survey to release the first statewide Glacial Map of Ohio in 1961, the ODNR Division of Geological Survey has mapped the unconsolidated geologic materials found at Ohio's surface with increasing detail." (ODNR, Glacial & Surficial Geologic Maps, <<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/geologic-survey/glacial-geology/glacial-surficial-geologic-maps>>).

33. "The ODNR Division of Geological Survey has had a long history of generating bedrock geologic maps for the state of Ohio since its inception in 1839. The most recent iteration of the geologic map of Ohio was created by seamlessly piecing together 788 individual 7.5-minute bedrock geologic quadrangles." (ODNR, Bedrock Geology, <<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-odnr/geologic-survey/bedrock-geology>>).

34. ODNR Division of Oil & Gas states: "[t]he Division is responsible for regulating Ohio's oil and natural gas industry and for the protection of all Ohioans and our environment while ensuring the state's abundant natural resources are managed properly." (ODNR, Division of Oil & Gas, <<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/oil-gas/division-of-oil-and-gas/division-of-oil-and-gas>>).

(panels/modules) within one foot and six feet of the respective wells.<sup>35</sup> A larger setback will be necessary to ensure these plugged wells are not inadvertently disturbed during construction.

No active mining occurs within project boundary.<sup>36</sup> The nearest mine is operated by Severson Environmental Services, Inc. This mine is a topsoil and clay extraction mine located approximately 0.3 miles north of the project area. No known abandoned underground mines are located within several miles of the project area.

#### *Seismic Activity*<sup>37</sup>

Recent geologic history shows Pickaway County to be at low risk for seismicity caused by earthquakes as only one small magnitude earthquake has been documented in the county.<sup>38</sup> The nearest event epicenter occurred in central Pickaway County, approximately nine miles from the project boundary. Based on soil properties evaluated during the geotechnical study, a Class C Seismic Site Classification was assigned in accordance with the International Building Code.<sup>39</sup>

The Applicant has indicated that no blasting activities are needed for the construction or operation of the proposed solar facility, and therefore no blasting-induced seismic activity is anticipated.<sup>40</sup>

#### *Soils*<sup>41</sup>

According to the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey, the project area consists primarily of soils derived from alluvium, glaciofluvial deposits, loess, outwash and till. Miamian, Kokomo and Crosby are the most common soil series found. Together, these soils make up over 95 percent of the project area. There is a low to moderate risk of shrink-swell potential in these soils. Other limiting factors include poor drainage and ponding in some soils. Slope remains relatively flat, with slope seldom exceeding a six percent grade. Slope is steeper along stream banks.

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35. Applicant's January 19, 2022 response to Staff's second data request.

36. ODNr Mines Viewer Interactive Map <https://gis.ohiodnr.gov/MapView/?config=OhioMines>

37. The ODNr Division of Geological Survey coordinates a 21-station network of seismograph stations throughout the state in order to continuously record earthquake activity. The Ohio Seismic Network (OhioSeis) went online in January 1999 to ensure Ohio has monitoring and coverage 24 hours a day, seven days a week by seismic stations with automatic detection, location and magnitude determination. (ODNR, The Ohio Seismic Network, <<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/geologic-survey/division-of-geologic-survey/ohio-seis>>).

38. ODNr Earthquake Epicenters <https://gis.ohiodnr.gov/MapView/?config=Earthquakes>.

<sup>39</sup> Class C generally corresponds to very dense soil and soft rock.

40. Application at page 46.

41. The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) conducts soil surveys and provides technical assistance to private landowners. (USDA NRCS, Ohio NRCS Soils, <<https://www.nrcs.usda.gov/wps/portal/nrcs/oh/soils/>>).

“Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world. NRCS has soil maps and data available online for more than 95 percent of the nation's counties and anticipates having 100 percent in the near future. The site is updated and maintained online as the single authoritative source of soil survey information. Soil surveys can be used for general farm, local, and wider area planning.” (USDA NRCS, USDA Web Soil Survey, <<https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>>).

### *Geotechnical Report*

The geotechnical report compiled by RRC Power and Energy, LLC discusses the geotechnical work performed to date. To further evaluate geologic properties of the project area and provide geotechnical engineering recommendations for facility design and construction, 20 soil borings, 11 test pits, and pile load testing were completed. The borings were advanced to 15 feet in depth with the exception of the substation boring that was advanced to 50 feet. Groundwater was encountered at 10 of the 31 sites where borings and test pits were done. Soils were analyzed for moisture content, plasticity, sieve analysis, compaction characteristics, compressive strengths, bearing ratio, thermal and electrical resistivity, and pH for use in corrosion testing. The soils are generally described as soft to hard lean and fat clays with varying amounts of sand and gravel, or loose to dense soils and sand with varying amounts of silt and clay. The plasticity index testing indicated ranges of six to 41 percent where values greater than 25 percent are considered indicative of high expansion potential. The average plasticity index found was 19 percent.

Table 4.5.1 provides a geohazard assessment of 12 potential hazards, all of which were assigned either a low, or low to moderate risk with the exception of soils potentially corrosive to steel where that was deemed moderate to high. Figure 8 of the report shows the entire project area is delineated as high corrosion potential to steel. The report recommends that a certified corrosion engineer be retained to evaluate the project design for corrosion protection needs.<sup>42</sup>

Access road design was performed as outlined by the 1993 AASHTO Design of Pavement Structures. The surficial materials encountered within a majority of the testing locations indicated native soils consisting of clay soils with varying amounts of sand and silt. These materials are generally considered to be poor in terms of supporting vehicular and construction traffic as defined by AASHTO when used for support of pavement structures.<sup>43</sup> Based on laboratory testing results, a California Bearing Ratio value of 1.5 is recommended for road section design purposes. If actual pavement design is based on wet subgrade without subgrade improvement, additional CBR tests are recommended. The Applicant's geotechnical report emphasizes proper drainage and removal and replacement of unsuitable soils and recommends consideration towards geotextile fabric and chemical stabilization for subgrade stabilization in wet or otherwise soft soil areas.

Pile load testing was conducted at 19 locations using wide flange W6X9 steel piles. Once installed (7-9 feet below ground), piles were tested for lateral (3,000 lbs.) and axial (10,000 lbs.) tension load capacities. Pile driving refusal or otherwise difficult pile driving conditions were not encountered.

### *Conclusion*

In the event the Board grants a certificate to the Applicant, Staff recommends that the final detailed engineering drawings of the final project design shall account for geological features and include the identity of the registered professional engineer(s), structural engineer(s), or engineering firm(s), licensed to practice engineering in the state of Ohio who reviewed and approved the

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42. Applicant's April 27, 2022 Geotechnical Report by RRC – page 16.

43. Applicant's April 27, 2022 Geotechnical Report by RRC – page 22.

AAHSTO - American Association of State Highway and Transportation Officials

designs. Additionally, In the event the Board grants a certificate to the Applicant, Staff recommends that the Applicant provide a final geotechnical engineering report to Staff at least 30 days prior to the preconstruction conference. In the event the Board grants a certificate to the Applicant, Staff also proposes a condition that a corrosion engineer be part of the final design team to account for the potentially corrosive soils identified. In the event the Board grants a certificate, Staff also recommends a final Unanticipated Discovery Plan which includes course(s) of action to be taken in the event of previously unidentified subsurface hazard/feature are encountered during construction (e.g., oil and gas well infrastructure, abandoned mines, contaminated soils, etc.). In the event the Board grants a certificate to the Applicant, Staff recommends a Grading Plan be submitted at least 30 days prior to the preconstruction meeting, and also recommends that all project infrastructure observe a minimum setback of 25 feet from the two plugged and abandoned oil and gas wells identified within the project area.

In the event the Board grants a certificate to the Applicant, based on the data and considerations provided within the application submittal to date, and based on Staff's assessment (with consideration and input from ODNR), and implementation of the recommended conditions, there appears to be no particular geological features within the project area that are incompatible with construction and operation of the proposed solar facility.

## **Ecological Impacts**

### *Public and Private Water Supplies*

Groundwater resources are limited throughout the project area. ODNR has record of 64 water wells drilled within one mile of the project area. These wells range in depth from 26 to 300 feet deep, with an average depth of 86 feet. These wells indicate a sustainable yield range of 15 to 100 gallons per minute based on well log records. The average sustainable yield from these records was 31.7 gallons per minute. This is based on records from six wells within one mile of the project area that contain sustainable yield data.<sup>44</sup>

Ohio EPA defines source water protection areas (SWPAs) as the area that supplies water to a public water supply (PWS) well within a five-year time-of-travel.<sup>45</sup> No public drinking water SWPAs occur within two miles of the project area.<sup>46</sup> In order to protect PWSs, Ohio EPA has established regulations that restrict certain activities which may impact groundwater quality. Construction and operation of solar power facilities is not among those restricted activities.

The Applicant has indicated Ohio EPA and ODNR records show 56 water wells exist within a one-mile radius of the project area and eight wells within the project area. The Applicant has indicated two water wells (Water Well ID #s 46721 and 95696) are located less than 50 feet from project infrastructure.<sup>47</sup> Although solar facilities are an unlikely potential source of contamination, a 50-foot "setback" or isolation radius from domestic use private water supply wells, as established by Ohio Admin. Code 3701-28-07(F), should be followed. This setback would require the Applicant to "ground-truth" all water well locations near project infrastructure in order to properly

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44. Application at Exhibit R - Agency Correspondence - ODNR Geologic Survey Review.

45. Ohio EPA Drinking Water Area Source Delineation Manual  
[https://epa.ohio.gov/static/Portals/28/documents/swap/swap\\_delin\\_guidance.pdf](https://epa.ohio.gov/static/Portals/28/documents/swap/swap_delin_guidance.pdf)

46. Ohio EPA Source Water Protection Areas Interactive Map  
<https://oea.maps.arcgis.com/apps/webappviewer/index.html?id=3b39e11ba7fc43c3b41801e3580e6d21>

47. Applicant's January 19, 2022 response to Staff's second data request.

ensure the setback condition has been met. “The Applicant will implement an SPCC and SWPPP during construction of the Project. Through this process the Applicant will create BMPs and other control measures, inspections, corrective actions, and notifications during both construction and operation of the Project to limit spills and reduce erosion and sedimentation. Implementing the SPCC and SWPPP minimizes any potential that Project related construction activities would impact water resources, including surface and groundwater.”<sup>48</sup> The Applicant concludes: “Given the non-toxic nature of solar energy facilities and the low impact construction has on soil and groundwater features, there are no anticipated impacts to public or private water supplies.”<sup>49</sup> In addition, the Applicant will obtain all necessary permits and coordinate with the OEPA Division of Drinking and Groundwater to ensure that any groundwater withdrawals will not impact existing water wells. Given the limited amount of excavation and the planned controls on discharges, no adverse impacts to public and private water supplies due to construction and operation of the proposed Facility are anticipated.”<sup>50</sup>

### *Conclusion*

In the event the Board grants a certificate to the Applicant, Staff has recommended conditions that include ensuring a 50-foot setback from domestic supply use water wells. Based on the data and considerations provided within the application submittal to date, including development and implementation of a Spill Prevention and Countermeasures Plan, a Storm Water Pollution Prevention Plan, an Unanticipated Discovery Plan, and implementation of the recommended conditions, Staff agrees with the Applicant in that construction or operation of the proposed solar facility is unlikely to adversely impact public or private drinking water supplies.

### *Surface Waters*<sup>51</sup>

The Applicant’s consultant Stantec delineated ten streams as well as four wetlands totaling 0.56 acres within the 1,070-acre project area.<sup>52</sup> Six of the streams were classified as ephemeral and the remaining four are classified as intermittent. One wetland was determined to be Category 1 and

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48. Application at page 46.

49. Application at page 50.

50. Application at page 51.

51. The Ohio EPA website states: “The Division of Surface Water ensures compliance with the federal Clean Water Act and works to increase the number of water bodies that can be safely used for swimming and fishing. The division issues permits to regulate wastewater treatment plants, factories and storm water runoff; develops comprehensive watershed plans aimed at improving polluted streams; and samples streams, lakes and wetlands — including fish, aquatic insects and plants — to determine the health of Ohio’s water bodies.” (Ohio EPA, About Us: Surface Water, <https://www.epa.ohio.gov/About#127147228-surface-water>); The U.S. Army Corps of Engineers website states: “The U.S. Army Corps of Engineers (USACE) Regulatory Program involves the regulating of discharges of dredged or fill material into waters of the United States and structures or work in navigable waters of the United States, under section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act of 1899.” (USACE, Obtain a Permit, <https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Obtain-a-Permit/>); The Ohio Department of Natural Resources (ODNR) website states: “The Division of Water Resources manages statewide oversight of dams & levees, floodplains, and the collection and management of data related to the state's water resources.” (ODNR, Division of Water Resources, <https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-odnr/water-resources/water-resources> ).

52. Wetlands falling within the purview of the Clean Water Act are regulated within Ohio by R.C. 6111, et seq. and Ohio Adm.Code 3745-1-50, et seq. Ohio ADM.Code 3745-1-54 establishes wetland categories.

the remaining three Category 2. The consultant also identified one open water body totaling 0.32 acres.

The Applicant does not anticipate any permanent impacts to surface waters as the project does not currently propose any wetland or stream crossings. The Applicant has committed to obtaining the appropriate permits should the avoidance of surface waters not be accommodated in the final site designs, including a USACE Section 404 permit, an OEPA Water Quality Certification, and/or an OEPA Isolated Wetland/Ephemeral Stream Permit. Should final site designs include any temporary or permanent impacts to surface waters, Staff recommends that details of the impacts be provided to the ODNR, USFWS, and Staff for review for potential impacts to protected species. Although no stream crossings are proposed at this time, the Applicant has submitted a Horizontal Directional Drilling (HDD) Inadvertent Return and Contingency Plan. A frac-out occurs when the drilling lubricant, typically water or a non-toxic, fine clay bentonite slurry, is forced through cracks in the bedrock and/or subsurface soil. The HDD Inadvertent Return and Contingency Plan would be implemented at any potential stream crossings where HDD or similar techniques are being utilized.

The Applicant has stated that the boundaries of streams, wetlands, and open water bodies will be field marked via flagging prior to the start of any construction. Further specifics about how surface waters would be protected from indirect construction stormwater impacts would be outlined in the Applicant's Stormwater Pollution Prevention Plan (SWPPP). The Applicant would obtain an Ohio National Pollutant Discharge Elimination System (NPDES) construction stormwater general permit through Ohio EPA prior to the start of construction. Staff does not anticipate issues with the Applicant's procurement of this permit. In the event the Board determines a certificate should be granted, Staff recommends the Applicant apply Ohio EPA published Guidelines for Post-Construction Storm Water Control for Solar Panel Arrays to project construction and operation.

### *Floodplain*

A very small portion of the far eastern project area falls within a Federal Emergency Management Agency (FEMA) designated Zone AE 100-year floodplain.<sup>53</sup> No preliminary or pending FEMA changes are proposed within the project area. All project infrastructure is proposed to be located outside the 100-year floodplain areas.<sup>54</sup>

A preliminary hydrology study which included modeling efforts was conducted for the purpose of analyzing the existing hydrology of the project area and determining any impacts the hydrology may have on the design and project layout. "The main potential hydrologic issue onsite is flooding."<sup>55</sup> The modeling indicated that there are low to moderate water depths and low velocities across the majority of the site. There are also scattered low-lying areas with localized ponding. Minimal velocities and scour are expected on site due to the flat terrain. The areas with higher flood depths and localized ponding will be further evaluated as part of the project final site

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53. A FEMA Zone AE flood hazard is defined as: a 100-year flood hazard with base flood elevations determined.

FEMA 100-year floodplain is defined as: Any area that has a one percent chance of experiencing a base flood in any given year.

54. Application at page 52.

55. Application at Exhibit P – Preliminary Hydrology Study by Westwood – page 5.

development. A flood analysis of pre-development and post development depths will need to be completed once civil design is finalized for permitting purposes.<sup>56</sup>

The Applicant's flood analysis indicates low to moderate water depths and velocities across the majority of the site. During a 100-year storm, the flood depths across the majority of the project area are less than one foot with velocities less than one foot/second with the exception of near the creeks and in depression areas where the depths can reach as high as 5.5 feet. The eastern project border has higher flood depths near the Scioto River of up to 15 feet. Minimal scour is expected.<sup>57</sup>

The Applicant concludes: "based on experience on similar projects, the site is suitable for the planned development and hydrologic concerns can be addressed by either avoiding areas of high flood depths or through detailed engineering design."<sup>58</sup> Staff has no objections to this assessment provided that, should the Board grant a certificate, the Applicant works with the appropriate local authorities regarding any applicable floodplain development permit prior to construction, and the final engineering design ensures minimum flood waters impact.

#### *Threatened and Endangered Species*<sup>59</sup>

The Applicant requested information from the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife (USFWS) regarding state and federal listed threatened and endangered plant and animal species. Staff gathered additional information through field assessments and review of published ecological information. The following tables provide the results of the information requests, field assessments, and document review.

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56. Application at Exhibit P – Preliminary Hydrology Study by Westwood – page 5.

57. Application at Exhibit P – Preliminary Hydrology Study by Westwood – page 8.

58. Application at Exhibit P – Preliminary Hydrology Study by Westwood – page 8.

59. Based on agency coordination with the USFWS and the ODNR, identified species of concern are, in general, defined as those species that are protected under the federal Endangered Species Act of 1973, as amended (16 U.S.C. §§ 1531-1544) and/or according to the Conservation of Natural Resources within R.C. 1518.01-1518.99; 1531.25; and 1531.99. See also e.g., R.C. 1531.08 states, in part: "In conformity with Section 36 of Article II, Ohio Constitution, providing for the passage of laws for the conservation of the natural resources of the state, including streams, lakes, submerged lands, and swamplands, and in conformity with this chapter and Chapter 1533. of the Revised Code, the chief of the division of wildlife has authority and control in all matters pertaining to the protection, preservation, propagation, possession, and management of wild animals and may adopt rules under section 1531.10 of the Revised Code for the management of wild animals."

One of the missions of the ODNR is to "conserve and improve the fish and wildlife resources and their habitats and promote their use and appreciation by the public so that these resources continue to enhance the quality of life for all Ohioans." In carrying out this mission, the ODNR considers the "status of native wildlife species [to be] very important" and therefore lists wildlife species needing protection. (ODNR, State Listed Species, <https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/wildlife/state-listed-species>).

MAMMALS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Indiana bat	<i>Myotis sodalis</i>	Endangered	Endangered	No suitable winter hibernacula were observed in or near the project area. Potentially suitable summer foraging and roosting habitat was observed in the project area.
Northern Long-Eared bat	<i>Myotis septentrionalis</i>	Threatened	Endangered	No suitable winter hibernacula were observed in or near the project area. Potentially suitable summer foraging and roosting habitat was observed in the project area.
Little Brown bat	<i>Myotis lucifugus</i>	N/A	Endangered	No suitable winter hibernacula were observed in or near project area. Potentially suitable summer foraging and roosting habitat was observed in the project area.
Tri-colored bat	<i>Perimyotis subflavus</i>	N/A	Endangered	No suitable winter hibernacula were observed in or near the project area. Potentially suitable summer foraging and roosting habitat was observed in the project area.
MUSSELS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Clubshell	<i>Pleurobema clava</i>	Endangered	Endangered	No suitable habitat was observed within the project area.
Northern riffleshell	<i>Epioblasma torulosa</i>	Endangered	Endangered	No suitable habitat was observed within the project area.
Rayed bean	<i>Villosa fabalis</i>	Endangered	Endangered	No suitable habitat was observed within the project area.
Round hickory nut	<i>Obovaria subrotunda</i>	Proposed threatened	N/A	No suitable habitat was observed within the project area.
Fanshell	<i>Cyprogenia stegaria</i>	Endangered	Endangered	No suitable habitat was observed within the project area.
Purple cat's paw	<i>Epioblasma o. obliquata</i>	Endangered	Endangered	No suitable habitat was observed within the project area.
Snuffbox	<i>Epioblasma triquetra</i>	Endangered	Endangered	No suitable habitat was observed within the project area.
Rabbitsfoot	<i>Quadrula cylindrica</i>	Threatened	Endangered	No suitable habitat was observed within the project area.
Butterfly	<i>Ellipsaria lineolata</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Ebonyshell	<i>Fusconaia ebenus</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Elephant-ear	<i>Elliptio crassidens</i>	N/A	Endangered	No suitable habitat was observed within the project area.



MUSSELS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Long-solid	<i>Fusconaia maculate</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Ohio pigtoe	<i>Pleurobema cordatum</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Sharp-ridged pocketbook	<i>Lampsilis ovata</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Washboard	<i>Mealoniaia nervosa</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Black sandshell	<i>Ligumia recta</i>	N/A	Threatened	No suitable habitat was observed within the project area.
Fawnsfoot	<i>Truncilla donaciformis</i>	N/A	Threatened	No suitable habitat was observed within the project area.
Pondhorn	<i>Unioerus tetralasmus</i>	N/A	Threatened	No suitable habitat was observed within the project area.
Threehorn wartyback	<i>Obliquaria reflexa</i>	N/A	Threatened	No suitable habitat was observed within the project area.

FISH				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Scioto madtom	<i>Noturus trautmani</i>	Endangered	Endangered	No suitable habitat was observed within the project area.
Bigeye shiner	<i>Notropis boops</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Goldeye	<i>Hiodon alosiodes</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Northern brook lamprey	<i>Ichthyomyzon fossor</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Northern madtom	<i>Noturus stigmosus</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Shortnose gar	<i>Lepisosteus platostomus</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Spotted darter	<i>Etheostoma maculatum</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Shovelnose sturgeon	<i>Scaphirhynchus platyrhynchus</i>	N/A	Endangered	No suitable habitat was observed within the project area.

FISH				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Blue sucker	<i>Cycoreptus elongatus</i>	N/A	Threatened	No suitable habitat was observed within the project area.
Lake chubsucker	<i>Eriomyzon sucetta</i>	N/A	Threatened	No suitable habitat was observed within the project area.
Paddlefish	<i>Polyodon spathula</i>	N/A	Threatened	No suitable habitat was observed within the project area.
Tippecanoe darter	<i>Etheostoma Tippecanoe</i>	N/A	Threatened	No suitable habitat was observed within the project area.
BIRDS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Lark sparrow	<i>Chondestes grammacus</i>	N/A	Endangered	Small, segmented areas of suitable habitat observed in project area.
Northern harrier	<i>Circus cyaneus</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Upland sandpiper	<i>Bartramia longicauda</i>	N/A	Endangered	No suitable habitat was observed within the project area.
Sandhill crane	<i>Grus canadensis</i>	N/A	Threatened	No suitable habitat was observed within the project area.
Least bittern	<i>Ixobrychus exilis</i>	N/A	Threatened	No suitable habitat was observed within the project area.
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA & MBTA <sup>60</sup>	N/A	Nearest nest 0.6 miles from project.
PLANTS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Pale Umbrella-sedge	<i>Cyperus acuminatus</i>	N/A	Species of Concern	No suitable habitat was observed within the project area.
Burhead	<i>Echinodorus berteroi</i>	N/A	Threatened	No suitable habitat was observed within the project area.

The USFWS stated their records indicated that a bald eagle (*Haliaeetus leucocephalus*) nest is located within approximately 0.6 miles of the project area. Bald eagles are protected under the Bald and Golden Eagle Protection Act. The USFWS recommended that the site and surrounding area be evaluated to determine if any additional nests are present in order to limit disturbance

60. Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act of 1940 and the Migratory Bird Treaty Act of 1918.

during construction of the project. Stantec performed this survey on November 17, 2021; one juvenile eagle was observed flying over the project area, however no additional nests were observed. An existing forested area and distance to the nest would suitably buffer the known eagle nest from the project area. No impacts to bald eagles are expected.

Approximately 32 acres of old field habitat were identified in the project area, which could serve as suitable habitat for the state endangered lark sparrow (*Chondestes grammacus*). The Applicant is currently proposing up to 8.7 acres of disturbance to old field habitat. The Applicant has committed to the ODNR recommended seasonal clearing restriction, which states that clearing of this habitat should be avoided between May 1 and July 31. The Applicant has also committed to coordinating further with the ODNR DOW to complete pre-construction nest identification surveys in areas where disturbance would occur should construction need to be completed during this restricted period.

The project area is within the range of state and federally endangered Indiana bat (*Myotis sodalis*), the state and federally threatened northern long-eared bat (*Myotis septentrionalis*), the state endangered little brown bat (*Myotis lucifugus*), and the state endangered tricolored bat (*Perimyotis subflavus*). As tree roosting species in the summer months, their habitat may be impacted by the project. Currently the Applicant does not propose to clear any trees. Should tree clearing be necessary due to any changes in the site layout, the trees will be clear between October 1 and March 31 as recommended by the ODNR and USFWS in order to avoid impacts to bat species. Staff also recommends that if tree clearing becomes necessary that the details of the clearing be sent to the ODNR and USFWS for review. During winter months bats hibernate in caves and abandoned mines, also known as hibernacula. The Applicant's consultant performed a desktop survey for potential hibernacula near the project area and found only one inactive surface mine within a 0.5-mile radius of the project. Therefore, impacts to listed bat species are not anticipated.

The Applicant's consultant did not observe any other listed species in the project area. The ODNR and the USFWS did not identify any concerns regarding impacts to listed plant or animal species. The ODNR Division of Wildlife (DOW) recommends that a small-wildlife permeable fence type be used as the solar site perimeter fencing. In the event the Board determines a certificate should be granted, Staff also recommends that if the Applicant encounters any listed plant or animal species prior to construction, the Applicant include the location and how impacts would be avoided in mapping based on final engineering drawings to be provided to Staff prior to the preconstruction conference.

Impacts to other listed species would be avoided as no impacts to suitable habitats are propose for the project.

### Vegetation

The following table reflects different vegetative communities present in the project area and associated impact for the facility.

VEGETATIVE COMMUNITIES WITHIN PROJECT AREA		
Vegetation Community Type	Total (Acres)	Permanent Disturbance (Acres)
Cultivated crop	919.5	723.5 <sup>a</sup>
Second Growth Deciduous Forest	104.0	N/A
Old Field	32.0	8.7 <sup>a</sup>
Maintained Lawn	6.2	N/A

\*120 acres of disturbance to cultivated crop and 2.4 acres of disturbance to old field would be attributed to areas within the fence line but without infrastructure present.

Permanent vegetative impacts would occur primarily within agricultural lands. There are no current proposed impacts to forestland.

The Applicant has developed a vegetation management plan in which it committed to incorporate pollinator-friendly habitat in accordance with the recommendations of the Ohio Pollinator Habitat Initiative. This habitat would enhance the visual appeal of the project, enrich local wildlife habitat, benefit the local farming community, increase plant diversity, and discourage invasive species. The vegetation would be incorporated under and between the panels and in open areas of the project. In a response to Staff's April 12, 2022 data request, the Applicant committed to planting a minimum of 70 percent of the project area in beneficial vegetation as well as establishing a goal to achieve a minimum score of 80 points on the Ohio Solar Site Pollinator Habitat Planning and Assessment Form. The Applicant also committed to limiting routine mowing to the fall and spring, as needed, to allow for natural reseeding of plantings and reduce impact to ground-nesting birds. Staff recommends the Applicant provide an updated vegetation management plan to the ODNR once the seed mix and areas to be established with pollinator-friendly vegetation have been finalized. The plan shall include a narrative on how the project proposes to establish and maintain beneficial vegetation and pollinator habitat in accordance with guidelines provided above.

This project would be expected to represent a reduced environmental impact when compared to the current land use of agricultural plant production. This is due to the reduction of frequent tilling leading to erosion and sedimentation, and reduced fertilizer and pesticide application. To further assure that these benefits would be realized, in the event the Board determines a certificate should be granted, Staff recommends that the Applicant take steps to prevent establishment and/or further propagation of noxious weeds identified in Ohio Adm. Code Chapter 901:5-37 and invasive plant species identified in Ohio Adm. Code 901:5-30-01 during implementation of any pollinator-friendly plantings. Staff notes that vegetation reestablishment and weed control may take several growing seasons.

### **Recommended Findings**

Staff recommends that the Board find that the Applicant has determined the nature of the probable environmental impact for the proposed facility, and therefore complies with the requirements specified in R.C. 4906.10(A)(2), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

## **Considerations for R.C. 4906.10(A)(3)**

### **MINIMUM ADVERSE ENVIRONMENTAL IMPACT**

Pursuant to R.C. 4906.10(A)(3), the proposed facility must represent the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, along with other pertinent considerations.

#### **Site Selection**

The Applicant's site selection process focused on the following criteria: strong solar resources, manageable access to the bulk power transmission system, landowner interest, compatible land use characteristics, and few environmentally sensitive areas. In preparation of the application, the Applicant engaged local officials and the public.

#### **Minimizing Impacts**

Several archaeological sites within the project area were identified as potentially eligible for listing on the NRHP. The Applicant has agreed to avoid all potentially eligible sites. With the implementation of the Applicant's avoidance plan, and existing and planned vegetative screening, Staff has determined that minimal adverse environmental impacts to cultural resources would be achieved.

The proposed facility would have an impact on the state and local economy due to the increase in construction spending, wages, purchasing of goods and services, annual lease payments to the local landowners, increased tax revenues and PILOT revenue.

The geology of the project site in Pickaway County does not appear to present conditions that would limit or negatively impact the construction and future operation of the proposed facility. In the event the Board determines a certificate should be granted, Staff recommends that the final detailed engineering drawings of the final project design shall account for geological features and that the Applicant develop a final Unanticipated Discovery Plan to account for any previously unknown conditions or features discovered during the proposed construction.

It appears unlikely that the proposed solar facility construction or operation would adversely impact public or private drinking water supplies.

The Applicant anticipates no temporary or permanent impacts to wetlands or streams due to construction of the project, including construction of access roads and collection lines. Although no stream crossings are proposed at this time, the Applicant has developed an HDD plan in case stream crossings cannot be avoided in the final site design. Impacts to any state or federal listed species can be avoided by following seasonal restrictions for construction in certain habitat types, as detailed by the USFWS and the ODNR. The Applicant did not identify any listed plant or animal species during field surveys. While the project is within range of several listed species, impacts would be avoided on suitable habitats.

Noise impacts are expected to be limited to construction activities. The adverse impact of construction noise would be temporary and intermittent and would occur away from most residential structures. In the event the Board determines a certificate should be granted, Staff recommends that the Applicant limit the hours of construction to address potential construction and operational related concerns from any nearby residents. No non-participating receptors were

modeled to receive noise impacts greater than the daytime ambient noise level. Further, the Applicant has developed a complaint resolution plan which would be implemented throughout construction and operation.

During the construction period, local, state, and county roads would experience a temporary increase in truck traffic due to deliveries of equipment and materials. Due to the location of the project, the Applicant anticipates that most components for the entire project would be delivered by using flatbed or tractor-trailer vehicles and multi-axle dump trucks. The transportation management plan would be finalized before the pre-construction conference. A final delivery route plan would be developed through discussions with local officials. The Applicant intends to enter into a road use agreement with the county engineer.

Due to the low profile of the project, combined with existing vegetation in the area, the visual impacts would be most prominent to landowners in the immediate vicinity of the infrastructure itself. In the event the Board determines a certificate should be granted, and in order to reduce impacts in areas where an adjacent, non-participating parcel contains a residence with a direct line of sight to the project, Staff has recommended a condition requiring a final landscape and lighting plan that addresses the potential impacts of the facility.

The Applicant has committed to take steps to address such potential impacts to farmland, including repairing all drainage tiles damaged during construction and restoring temporarily impacted land to its original use. The Applicant has consulted landowners and county records, to determine the locations of drain tile mains. To avoid impacts to drain tiles, the Applicant stated that it would locate drain tiles as accurately as possible prior to construction. The Applicant has committed to ensure that adverse impacts to drain tile systems will not extend outside the project area. Following decommissioning of the facility, land can be restored for agricultural use.

The Applicant has prepared a draft plan to decommission the solar facility. The Applicant would provide for financial security to ensure that funds are available for decommissioning/land restoration. The Applicant would restore the land significantly to its original topography to allow for resumption of agricultural use. In the event the Board determines a certificate should be granted, Staff has recommended a condition requiring that the draft decommissioning plan be updated to include improved financial assurance and a decommissioning cost estimate, among other things.

## **Conclusion**

Staff concludes that the proposed project would result in both temporary and permanent impacts to the project and surrounding areas. The project is unlikely to pose a significant adverse impact to existing land use, cultural resources, recreational resources, or wildlife. In the event the Board determines a certificate should be granted, with Staff's recommended conditions to further mitigate potential impacts, Staff concludes that the project represents the minimum adverse environmental impact.

## **Recommended Findings**

Staff recommends that the Board find that the proposed facility represents the minimum adverse environmental impact, and therefore complies with the requirements specified in R.C. 4906.10(A)(3), provided that any certificate issued by the Board for the proposed facility include

the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

## **CONSIDERATIONS FOR R.C. 4906.10(A)(4)**

### **ELECTRIC GRID**

Pursuant to R.C. 4906.10(A)(4), the Board must determine that the proposed electric facilities are consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facilities will serve the interests of electric system economy and reliability. The purpose of this section of the report is to evaluate the impact of integrating the proposed facility into the existing regional transmission grid and the bulk power system (BPS).

The Applicant proposed to construct a solar-powered electric generation facility, capable of producing 110 MW of clean and renewable energy for the existing electric grid. The proposed facility would interconnect from the collection substation to the American Electric Power (AEP) Biers Run-Circleville 138 kV Circuit which will be the point of interconnection (POI). The POI is the location on the specified transmission line where the facility would deliver its power to the electric grid. There will be a collector substation. A three circuit breaker 138 kV switching station, physically configured in the breaker and half arrangement, but operated as a ring bus, will be constructed to accommodate the interconnection. The project will also require associated protection and control equipment, 138 kV line risers, and revenue metering equipment. A short section of 138 kV gen-tie line will connect the Project to the POI and switchyard.

### **NERC Planning Criteria**

The North American Electric Reliability Corporation (NERC) is responsible for the development and enforcement of the federal government's approved reliability standards, which are applicable to all owners, operators, and users of the BPS. As an owner, operator, and/or user of the BPS, the Applicant is subject to compliance with various NERC reliability standards. The NERC reliability standards are included as part of the system evaluations conducted by PJM Interconnection, LLC (PJM).<sup>61</sup>

### **PJM Interconnection**

The Applicant submitted one generation interconnection request for the proposed facility to PJM. For the request of March 26, 2018, PJM has assigned the queue ID: AD2-162 under the name "Biers Run-Circleville 138 kV". PJM has completed and issued the Feasibility Study Report for AD2-162 in July 2018,<sup>62</sup> and the System Impact Study Report (SIS) in March 2022.<sup>63</sup>

The Table below shows the queue position assigned to the Applicant by PJM.

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61. PJM Interconnection, LLC is the regional transmission organization charged with planning for upgrades and administering the generation queue for the regional transmission system in Ohio. Generators wanting to interconnect to the bulk electric transmission system located in the PJM control area are required to submit an interconnection application for review of system impacts. The interconnection process provides for the construction of expansions and upgrades of the PJM transmission system, as needed to maintain compliance with reliability standards with the addition of generation in its footprint.

62. PJM Interconnection, "New Services Queue", Feasibility Study Report for Queue ID: AD2-162, [https://www.pjm.com/pub/planning/project-queues/feas\\_docs/ad2162.pdf](https://www.pjm.com/pub/planning/project-queues/feas_docs/ad2162.pdf) (Accessed November 8, 2021).

63. PJM Interconnection, "New Services Queue", System Impact Study Report for Queue ID: AD2-162, [https://www.pjm.com/pubplanning/project-queues/impact\\_studies/ad2162\\_imp.pdf](https://www.pjm.com/pubplanning/project-queues/impact_studies/ad2162_imp.pdf) (Accessed November 8, 2021).



PJM QUEUES: SCIOTO FARMS SOLAR FACILITY PROJECT			
Queue ID	Queue Date	Power Output (MW)	Capacity (MW)
AD2-162	3/26/2018	110	73.8
Totals		110	73.8

PJM studied the interconnection as an injection into the BPS via the AEP Biers Run-Circleville 138 kV transmission line. The Applicant requested a total injection of 110 MW, of which 73.8 MW could be available in the PJM capacity market. The capacity market ensures that there is an adequate availability of generation resources that can meet current and future demand. The project was studied with a commercial probability of 100 percent.

### **PJM Network Impacts**

PJM analyzed the proposed facility interconnected to the BPS. The 2021 summer peak power flow model was used by PJM to evaluate regional reliability impacts for AD2-162 as a 110 MW, 73.8 MW Capacity, injection into the Biers Run-Circleville 138 kV Circuit. The project was evaluated for compliance using a Feasibility Study with applicable reliability planning criteria (PJM, NERC, Transmission Owners, etc.). The study revealed that the project contributes to previously identified overload of the Harris-Zuber 138 kV transmission line. The developer can proceed with network upgrades to eliminate the operational restriction by submitting a Merchant Transmission Interconnection request.

### **Generation Deliverability**

PJM requires mitigation of contingencies that cause reliability violations which are initially caused by the addition of the Applicant's project. These would be single or N-1 contingencies for the capacity portion only of the interconnection. The 2021 summer peak power flow model was used by PJM to evaluate regional reliability impacts for queue project AD2-162, and no problems were identified.

### **Multiple Facility Contingency**

PJM reliability planning criteria requires that the system be tested for all bulk electric system single contingency outages and all common mode outages. These would consist of all line faults coupled with stuck breakers that result in multiple facility outages, double circuit tower line outages, and bus faults in the PJM system. The study identified an overload to the Harrison-Zuber 138 kV transmission line in the event of a stuck breaker contingency. The stuck breaker and overload item are tabulated and described in the PJM SIS report.<sup>64</sup>

### **New System Reinforcements**

PJM requires mitigation of contingencies that cause reliability violations which are initially caused by the addition of the Applicant's project. The PJM SIS identified no needs for new system reinforcements.

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64. Id. at page 6/16, (Accessed November 8, 2021).

### **Contribution to Previously Identified Overloads – Network Impacts**

PJM studied the project for possible overloading where the proposed facility may affect earlier generation or transmission projects in the PJM queue. No overloads were identified in the SIS Report of March 2020.

### **Potential Congestion due to Local Energy Deliverability**

PJM also studied the delivery of the energy portion of this interconnection request. Problems identified here would likely result in operational restrictions for the Project. The category of Potential Congestion due to Local Energy Deliverability was not specifically listed as an object of study in the PJM SIS for this queue position. However, the overload of various sections of the Harrison-Zuber 138 kV line would result in operational restrictions. This operation type means there could be real-time congestion or restrictions when operating the PJM grid that may restrict or limit delivery of generation to the PJM grid, depending on outages or other restrictions that may be present in the area. These are tabulated and described in the PJM SIS report.<sup>65</sup>

### **Short Circuit Analysis**

The short circuit analysis, which is part of the SIS, evaluates the interrupting capabilities of circuit breakers that would be impacted by the proposed generation addition. PJM performed a short circuit analysis and found no breakers to be overdutied.

### **Recommended Findings**

Staff recommends that the Board find that the proposed facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facility would serve the interests of electric system economy and reliability. Therefore, Staff recommends that the Board find that the facility complies with the requirements specified in R.C. 4906.10(A)(4), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

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65. Id. at page 8/16, (Accessed November 8, 2021).

## **Considerations for R.C. 4906.10(A)(5)**

### **AIR, WATER, SOLID WASTE AND AVIATION**

Pursuant to R.C. 4906.10(A)(5), the facility must comply with Ohio law regarding air and water pollution control, withdrawal of waters of the state, solid and hazardous wastes, and air navigation.

#### **Air<sup>66</sup>**

Air quality permits are not required for construction or operation of the proposed facility. However, fugitive dust rules adopted under R.C. Chapter 3704 may be applicable to the construction of the proposed facility. The Applicant would control temporary and localized fugitive dust by using best management practices (BMP) such as using water to wet soil to minimize dust during periods of high heat. This method of dust control is typically used to comply with fugitive dust rules.

This project would not include any stationary sources of air emissions and, therefore, would not require air pollution control equipment.

#### **Water<sup>67</sup>**

The Applicant anticipates obtaining environmental permits if and where necessary. The Applicant would mitigate potential water quality impacts associated with storm water runoff by obtaining NPDES construction storm water general permit (OHC00005) coverage from the Ohio EPA with submittal of a notice of intent for coverage under that permit. The construction storm water general permit also requires development of a Stormwater Pollution Prevention Plan (SWPPP) to direct the implementation of construction related storm water management and BMP for soil erosion control. According to the application, this is the only water permit that the Applicant anticipates needing based on current design, because the current design avoids impacts to stream and wetland features.

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66. The Revised Code provides for the Ohio EPA to administer and enforce the provisions of R.C. Ch. 3704 with regards to air pollution control. See e.g., RC 3704.03, 3704.161. The Ohio EPA Division of Air Pollution Control ensures compliance with the federal Clean Air Act and the Emergency Planning and Community Right-to-Know Act as part of its mission to attain and maintain air quality at a level that protects the environment and public health. (Ohio EPA, *Division of Air Pollution Control*, <https://www.epa.ohio.gov/dapc/#188913097-featured-topics>). The Division of Air Pollution Control develops and enforces rules in the Ohio Administrative Code, which assist the state of Ohio to: attain and maintain the National Ambient Air Quality Standards (NAAQS) contained in the Clean Air Act; fulfill the requirements set forth by the Ohio General Assembly in R.C. 3704; and protect and maintain healthy air quality for the citizens of the state of Ohio. (See, Ohio EPA, *Division of Air Pollution Control Rules and Laws*, <<https://www.epa.ohio.gov/dapc/DAPCrules>>).

67. The Revised Code provides for the Ohio EPA to be the lead agency in administering the provisions of Ch. 6111 with regards to water quality. See e.g., RC 6111.041. For example, the Ohio EPA, among other things, “ensures compliance with the federal Clean Water Act and works to restore and enhance the integrity of Ohio’s waters.” (Ohio EPA Website, *Division of Surface Water*, <https://www.epa.ohio.gov/dsw/Surface-Water/LiveTabId/113292#:~:text=Ensures%20compliance%20with%20the%20federal,the%20integrity%20of%20Ohio's%20waters.&text=We%20issue%20permits%20to%20regulate,aimed%20at%20improving%20polluted%20streams>). The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. (US EPA, *Summary of Clean Water Act*, <https://www.epa.gov/laws-regulations/summary-clean-water-act>).

However, if the final design changes, the Applicant would additionally obtain, if required, the following permits:

- An individual permit or nationwide permit under Section 404 of the Clean Water Act (CWA).
- A Water Quality Certification under Section 401 of the CWA from the Ohio EPA.
- An Ohio EPA Isolated Wetland Permit, if necessary.

An SWPPP would be developed by the Applicant to ensure compliance with the CWA. The SWPP would also detail the BMP's to be implemented during the construction and operation of the facility.

With these measures, construction and operation of this facility would comply with requirements of R.C. Chapter 6111, and the rules and laws adopted under that chapter.

### **Solid Waste<sup>68</sup>**

Debris generated from construction activities would include items such as plastic, wood, cardboard, metal packing/packaging materials, construction scrap, and general refuse. The Applicant stated that all construction-related debris that would be hauled from the project area by a waste disposal service and disposed of at an authorized solid waste disposal facility as needed. The Applicant estimates construction debris would fill a 30 cubic yard dumpster approximately every two weeks during the construction period. The Applicant also expects that it would demolish and dispose of an abandoned residence and barn in the project area; the debris would be disposed at an authorized solid waste disposal facility. The Applicant stated that all construction-related debris would be disposed of by a contractor.

During operation of the project, the Applicant anticipates small amounts of solid waste would be generated such as cardboard and plastic packaging, as part of regular O&M activities. The Applicant would recycle as much as possible; it would use a local solid waste disposal service to handle the waste. Further, the Applicant would only use top tier equipment suppliers and the Applicant is considering panels that have been certified to comply with the US EPA's toxicity characteristics leachate procedure (TCLP) test and meet U.S. EPA definition of non-hazardous waste.

The Applicant's solid waste disposal plans would comply with solid waste disposal requirements set forth in R.C. Chapter 3734.

### **Aviation<sup>69</sup>**

The height of the tallest above ground structure would be the gen tie transmission line support structures at approximately 60 feet tall; the Applicant utilized a conservative estimate of 100 feet

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68. The Revised Code generally provides for Ohio EPA to administer and enforce the provisions of Chapters 3714. and 3734., in particular with regard to solid waste facilities, infectious waste treatment facilities and construction and demolition debris facilities.

69. The FAA is the authority in the U.S. government responsible for regulating all aspects of civil aviation, including issuing determinations on petitions for objects that penetrate the nation's airspace. The FAA conducts aeronautical studies for new structures that will exceed 200 feet in height under the provisions of 49 U.S.C. 44718, and applicable 14 CFR Part 77. Pursuant to R.C. 4561.32, ODOT regulates the height and location of structures and objects within any airport's clear zone surface, horizontal surface, conical surface, primary surface, approach surface, or transitional surface.

tall for analysis with the Federal Aviation Administration (FAA).<sup>70</sup> Those heights are under the height requirement from the FAA, pursuant to 14 CFR Part 77.9(a), for filing a Form 7460-1. However, the Applicant intends to file those forms with FAA and forward those to Staff upon finalization of the final engineering design of the solar facility.<sup>71</sup> Formal determinations from the FAA will be received following the Applicant's intent to file FAA forms 7460-1 and -02 for the Project. The Applicant will provide this correspondence from FAA to the OPSB Staff once it is received.

The Applicant has not yet completed the collector substation design which would include support structures for a gen-tie transmission line and a lightning mast. Further refinement of the height details of substation equipment, gen-tie transmission line support structures, and the lightning mast would be included in final preconstruction engineering drawings.

According to the Applicant, there are two public use airports within five miles of the project area and no heliports within that distance.<sup>72</sup> Staff also confirmed through the FAA, that the closest public use airports are the Pickaway County Memorial (CYO) airport which is approximately 1.3 miles east of the proposed solar facility, and the Ross County (RZT) airport which is approximately 4.4 miles south of the proposed solar facility. The Applicant has notified these airports about the proposed solar facility project.

In accordance with R.C. 4906.10(A)(5), Staff contacted the ODOT Office of Aviation during the review of this application in order to coordinate review of potential impacts of the facility on local airports.<sup>73</sup> As of the date of this filing, no such concerns have been identified.

### **Recommended Findings**

Staff recommends that the Board find that the proposed facility complies with the requirements specified in R.C. 4906.10(A)(5), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

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70. Scioto Farms Solar Project, LLC's Response to Staff's Seventh Data Request, DR #2, DR #3, and Attachment.

71. Application at page 43.

72. Application at page 42 and Figure 7-1.

73. R.C. 4906.10(A)(5) states: "[i]n determining whether the facility will comply with all rules and standards adopted under section 4561.32 of the Revised Code, the board shall consult with the office of aviation of the division of multi-modal planning and programs of the department of transportation under section 4561.341 of the Revised Code." R.C. 4561.341 states: "[p]ursuant to any consultation with the power siting board regarding an application for certification under section 4906.03 or 4906.10 of the Revised Code, the office of aviation of the division of multi-modal planning and programs of the department of transportation shall review the application to determine whether the facility constitutes or will constitute an obstruction to air navigation based upon the rules adopted under section 4561.32 of the Revised Code. Upon review of the application, if the office determines that the facility constitutes or will constitute an obstruction to air navigation, it shall provide, in writing, this determination and either the terms, conditions, and modifications that are necessary for the applicant to eliminate the obstruction or a statement that compliance with the obstruction standards may be waived, to the power siting board under section 4906.03 or 4906.10 of the Revised Code, as appropriate."

## **Considerations for R.C. 4906.10(A)(6)**

### **PUBLIC INTEREST, CONVENIENCE, AND NECESSITY**

Pursuant to R.C. 4906.10(A)(6), the Board must determine that the facility will serve the public interest, convenience, and necessity.

#### **Safety**

The Applicant stated that it would use reliable and certified equipment compliant with applicable Underwriters Laboratories, Institute of Electrical and Electronics Engineers, National Electrical Code, and American National Standards Institute standards. Further, the Applicant would have a professional engineer certify the electrical system design for the solar facility. Additionally, the Applicant would perform regular inspections of all equipment components to ensure safe and proper operation.

The Applicant intends to use warning signs, fencing, and gates to restrict access to the potential hazards within the solar project area. Additionally, the Applicant intends to design its facility with setbacks to residences and public roads. Specifically, the Applicant would implement the following setbacks from the proposed solar facility fence line: 300 feet from non-participating residences, 50 feet to the public road right-of-way edge, 50 feet from the property line of any non-participating parcel, 50 feet to any drainage and wooded areas, 50 feet to overhead powerlines, and 20 feet to any participating property.

The Applicant stated that it intends to restrict public access to the facility by enclosing the project area with fencing that complies with National Electrical Safety Code (NESC) requirements. The Applicant has proposed security fencing that would be an agricultural and wildlife friendly fence with access through gates. The Applicant has proposed that the collector substation be secured with a six-foot tall chain link fence topped with an additional foot of barbed wire strands. Staff has recommended that, except for the substation fencing, the solar panel perimeter fence type be both wildlife permeable and aesthetically fitting for a rural location.

Prior to construction, the Applicant also intends to develop and implement a project specific emergency response plan for its construction and maintenance employees and contractors. The emergency response plan would be developed in consultation and coordination with potentially affected local and regional emergency response personnel. The Applicant would also include training for local responders to support a prompt response to emergencies at the solar facility. Typically, these emergency response plans will at a minimum describe the appropriate response level, principles to be applied during a response, and detailed steps for initial response and containment. The Applicant intends to provide this plan to OPSB at least 30 days prior to the start of construction. Staff recommends that this emergency response plan at least cover and include the following topics: purpose, scope, communication and training, roles and responsibilities, medical emergencies, fire/explosion, confined space incidents, falls/high angle emergency, weather related events or conditions, security incidents, and quantities and type of any specialized firefighting equipment necessary.

## **Electromagnetic Fields**

Electric transmission lines, when energized, generate electromagnetic fields (EMF). Laboratory studies have failed to establish a strong correlation between exposure to EMF and effects on human health. There have been concerns, however, that EMF may have impacts on human health. The gen-tie transmission line is not within 100 feet of an occupied structure, therefore calculation of the production of EMF during operation of the proposed gen-tie transmission line is not warranted per Ohio Adm.Code 4906-5-07(A)(2).<sup>74</sup> The Applicant states that the transmission facilities would be designed and installed according to the requirements of the National Electrical Safety Code.

## **Public Interaction and Participation**

The Applicant hosted a public informational meeting for the project. Attendees were provided the opportunity to review information about the project, ask questions, and provide written comments. A list of questions and comments received during the meeting is available in Exhibit E of the application. The Applicant maintains a project website at [www.sciotofarmssolarproject.com](http://www.sciotofarmssolarproject.com).

The Applicant has drafted a complaint resolution plan to handle complaints during the construction and operation of the facility.<sup>75</sup> In the event the Board determines a certificate should be granted, Staff recommends that a final version of the complaint resolution plan for construction and operation be filed on the docket no later than 30 days prior to the start of construction. The Applicant has committed to notify affected property owners and tenants prior to the start of construction. Staff recommends that these notices be mailed to all residences, airports, schools, and libraries located within one mile of the project area; parties to this case; county commissioners, township trustees, and emergency responders; and any other person who requests updates regarding the project. Staff further recommends that a similar notice be mailed to the same recipients prior to the start of facility operations. Staff also recommends that the Applicant prepare a quarterly complaint summary report about the nature and resolution of all complaints received in that quarter and file these reports on the public docket during the first five years of operation.

The Administrative Law Judge scheduled a public hearing and an adjudicatory hearing for this proceeding. The local public hearing will be held on May 25, 2022, at 6:00 p.m., at Circleville High School, 380 Clark Drive, Circleville, Ohio 43113. The adjudicatory hearing is scheduled to commence on June 11, 2022, at 10 a.m., at the offices of the Public Utilities Commission of Ohio, Hearing Room 11-A, 11th Floor, 180 East Broad Street, Columbus, Ohio 43215-3793. Wayne Township, the Ebenhack Family, the Ohio Farm Bureau Federation, the International Brotherhood of Electrical Workers Local 575, and Ohio Partners for Affordable Energy have filed to intervene in this proceeding. Wayne Township also filed notice of a resolution it passed in opposition to the project.<sup>76</sup>

## **Senate Bill 52**

The passage of Ohio Senate Bill 52 provides new opportunities for county commissioners and township trustees to participate in the siting of solar projects in their community. The Scioto Farms Solar Project is partially impacted by the new legislation; it is grandfathered under S.B. 52 except for the ad hoc board member provision. County commissioners may choose one commissioner, or a designee, to serve as an ad hoc board member. In addition, township trustees may choose one

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74. Scioto Farms Solar Project, LLC's Response to Staff's Third Data Request, DR #14.

75. Application at Exhibit H.

76. Notice of Wayne Township Resolution Against the Project filed April 22, 2022.

trustee, or a designee, to serve as their ad hoc board member representative. Local government boards must designate ad hoc members within 30 days of notice of application completion.

The Board of Pickaway County Commissioners appointed Commissioner Jay Wippel, and the Board of Trustees of Wayne Township appointed Chris Mullins, as the ad hoc board members for this project.

### **Public Comments**

As of the filing date of this report, 49 document records have been filed in the public comments of the case record. Each document record may include one or more public comments. Public comments include:

- A resolution from the Pickaway County Board of Commissioners expressing the County's opposition to the project.<sup>77</sup>
- A memorandum from the Pickaway County Emergency Management Agency Director to the Pickaway County Board of Commissioners sharing concerns regarding the development of solar projects in the county.<sup>78</sup>
- A letter from the Pickaway County Parks District expressing concerns with potential impacts to waterfowl migration, the historic Ohio-Erie Canal, and road traffic and wildlife crossings.<sup>79</sup>
- Letters from local residents in opposition to and in support of the project.

Commenters opposed to the proposed project expressed concerns about issues including impacts to agricultural land use, farmland preservation, and agricultural production and livestock; fire hazard; impacts to wildlife; impacts to drinking water; erosion and flooding; runoff and drainage; construction traffic, noise, and dust; operational noise; property values; cultural resources; decommissioning; public health; aesthetics; recreation; and fencing. Those supportive of the project emphasized the benefits of additional tax revenue for local government and schools, economic investment in the community, job creation, and renewable energy. All public comments are available for Board members and the public to view online in the case record at <http://dis.puc.state.oh.us>.

### **Conclusion**

With respect to R.C. 4906.10(A)(6), Staff finds that the project will not serve the public interest, convenience and necessity. Public interest, convenience and necessity should be examined with respect to many considerations. Simultaneously, this statutory criterion regarding public interest, convenience and necessity, must also encompass the local public interest, ensuring a process that allows for local citizen input, considering local government perspective.

As explained above, Staff notes that there is general opposition to the project from the local citizens and local governmental bodies. A resolution in opposition to the project was filed, in the public comments, on behalf of the Pickaway County Board of Commissioners. In addition, the Pickaway

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77. Resolution from Pickaway County Board of Commissioners filed April 19, 2022.

78. Memo from Pickaway County Emergency Management Agency Director to the Pickaway County Board of Commissioners filed April 19, 2022.

79. Letter from the Pickaway County Parks District filed October 13, 2021.



County director of Emergency Management filed, in the public comments, a letter detailing the negative effects to the environment and human health the project would have on the community. In addition, Wayne Township has intervened in this proceeding and filed a notice that the township opposes the project. These entities have the responsibility for preserving the health, safety, and welfare within their respective communities, and their documented opposition to the project is especially compelling. While some local opposition is common in many siting projects, considering the above opposition filed in the docket and expressed at the local public meetings, Staff believes that any benefits to the local community are outweighed by this public opposition and, therefore, the project would not serve the public interest, convenience, and necessity.

### **Recommended Findings**

Staff recommends that the Board find that the proposed facility would not serve the public interest, convenience, and necessity, and therefore does not comply with the requirements specified in R.C. 4906.10(A)(6). Should the Board determine the Applicant has met the requirements specified in R.C. 4906.10(A)(6) subject to modification, Staff recommends that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

## **Considerations for R.C. 4906.10(A)(7)**

### **AGRICULTURAL DISTRICTS AND AGRICULTURAL LAND**

Pursuant to R.C. 4906.10(A)(7), the Board must determine the facility's impact on the agricultural viability of any land in an existing agricultural district within the project area of the proposed facility. The agricultural district program was established under R.C. Chapter 929. Agricultural district land is exempt from sewer, water, or electrical service tax assessments.

Agricultural land can be classified as an agricultural district through an application and approval process that is administered through local county auditors' offices. Eligible land must be devoted exclusively to agricultural production or be qualified for compensation under a land conservation program for the preceding three calendar years. Furthermore, eligible land must be at least 10 acres in size or produce a minimum average gross annual income of \$2,500.

Approximately 723 acres of agricultural land will be disturbed by the proposed project. Approximately 277 of those acres are currently enrolled in the Agricultural District program. No Agricultural structures will be removed because of the project. The Applicant States the repurposed land could be restored for agricultural use when the project is decommissioned.

The construction and operation of the proposed facility will disturb the existing soil and could lead to broken drainage tiles. A drain tile system consists of laterals, which are branches off a main, and main lines. Main lines can allow water to flow into or out of one parcel to another. The locating and avoiding of damaging drain tile mains can help prevent the pooling of water on project parcels and adjacent parcels.

The Applicant conducted a desktop review to identify the locations existing drain tiles within the project area. The Applicant has supplied a Drainage Tile Assessment and Construction Impact Report with its OPSB application (Exhibit W). This report discusses avoidance, repair, and mitigation details of all known drain tile locations. The report would serve as the basis for locating crews to discover and map the real location and depth of drain tiles within the project. The Applicant has committed to repair any drain tile found to be damaged by the project during the operational life of the project.

The Applicant has committed to take steps to address potential impacts to farmland, including repairing drainage tiles damaged during construction and restoring temporarily impacted land to its original use. Excavated topsoil will be separated during construction and returned as topsoil after construction unless otherwise specified by landowners. Disturbed areas upon decommissioning will be restored for agricultural use.

### **Recommended Findings**

Staff recommends that the Board find that the impact of the proposed facility on the viability of existing agricultural land in an agricultural district has been determined, and therefore complies with the requirements specified in R.C. 4906.10(A)(7) provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

### **Considerations for R.C. 4906.10(A)(8)**

#### **WATER CONSERVATION PRACTICE**

Pursuant to R.C. 4906.10(A)(8), the proposed facility must incorporate maximum feasible water conservation practices, considering available technology and the nature and economics of the various alternatives.

The proposed facility would not require the use of significant amounts of water. Construction and operations will require a water supply either from existing water wells, drilling a new well, or having water delivered. Water will be needed for dust control, construction trailers, and O&M building use. Natural precipitation is expected to be sufficient for cleaning panels. However, should water be required for manually cleaning solar panels, less than a pint of water would be needed to clean each module.

#### **Recommended Findings**

In the event the Board grants a certificate to the Applicant, Staff recommends that the Board find that the proposed facility would incorporate maximum feasible water conservation practices, and therefore complies with the requirements specified in R.C. 4906.10(A)(8), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

## **V. RECOMMENDED CONDITIONS OF CERTIFICATE**

Following a review of the application filed by the Applicant and the record compiled to date in this proceeding, Staff recommends that a certificate not be issued for the proposed facility. However, should the Board choose to issue a certificate for the proposed facility, Staff recommends that a number of conditions become part of such certificate. These recommended conditions may be modified as a result of public or other input received subsequent to the issuance of this report. At this time, Staff recommends the following conditions:

- (1) The Applicant shall install the facility, utilize equipment and construction practices, and implement mitigation measures as described in the application and as modified and/or clarified in supplemental filings, replies to data requests, and recommendations in this *Staff Report of Investigation*.
- (2) The Applicant shall conduct a preconstruction conference prior to the commencement of any construction activities. Staff, the Applicant, and representatives of the primary contractor and all subcontractors for the project shall attend the preconstruction conference. The conference shall include a presentation of the measures to be taken by the Applicant and contractors to ensure compliance with all conditions of the certificate, and discussion of the procedures for on-site investigations by Staff during construction. Prior to the conference, the Applicant shall provide a proposed conference agenda for Staff review and shall file a copy of the agenda on the case docket. The Applicant may conduct separate preconstruction conferences for each stage of construction.
- (3) Within 60 days after the commencement of commercial operation, the Applicant shall submit to Staff a copy of the as-built specifications for the entire facility. If the Applicant demonstrates that good cause prevents it from submitting a copy of the as-built specifications for the entire facility within 60 days after commencement of commercial operation, it may request an extension of time for the filing of such as-built specifications. The Applicant shall use reasonable efforts to provide as-built drawings in both hard copy and as geographically referenced electronic data.
- (4) Separate preconstruction conferences may be held for the different phases of civil construction and equipment installation. At least 30 days prior to each preconstruction conference, the Applicant shall submit to Staff, for review and acceptance, one set of detailed engineering drawings of the final project design for that phase of construction and mapping in the form of PDF, which the Applicant shall also file on the docket of this case, and geographically referenced data (such as shapefiles or KMZ files) based on final engineering drawings to confirm that the final design is in conformance with the certificate. Mapping shall include the limits of disturbance, permanent and temporary infrastructure locations, areas of vegetation removal and vegetative restoration as applicable, and specifically denote any adjustments made from the siting detailed in the application. The detailed engineering drawings of the final project design for each phase of construction shall account for geological features and include the identity of the registered professional engineer(s), structural engineer(s), or engineering firm(s), licensed to practice engineering in the state of Ohio who reviewed and approved the designs. All applicable geotechnical study results shall be included in the submission of the final project design to Staff.

- (5) At least 30 days prior to the preconstruction conference, the Applicant shall provide Staff, for review and acceptance, the final geotechnical engineering report. This shall include a summary statement addressing the geologic and soil suitability.
- (6) If any changes are made to the facility layout after the submission of final engineering drawings, the Applicant shall provide all such changes to Staff in hard copy and as geographically-referenced electronic data. All changes are subject to Staff review for compliance with all conditions of the certificate, prior to construction in those areas.
- (7) The Applicant's final project design shall include input from a qualified corrosion engineer to account for potentially corrosive soils.
- (8) The Applicant shall take all reasonable steps to identify the precise locations of the plugged oil and gas wells (API #s 34129200400000 and 34129200770000) and observe a minimum setback of 25 feet between all project infrastructure and the wells.
- (9) At least 30 days prior to the preconstruction conference, the Applicant shall provide Staff, for review and acceptance, the final Unanticipated Discovery Plan.
- (10) At least 30 days prior to the preconstruction conference, the Applicant shall file a final grading plan which demonstrates, in compliance with the decommissioning condition, that the project would not obstruct future agricultural land use or a land use otherwise specified by the landowner. The plan shall include, but is not limited to the following:
  - a. Preconstruction and proposed one foot contours referenced to U.S. Geological Survey datum.
  - b. Drainage arrows which delineate preconstruction and proposed drainage patterns
  - c. Estimated earthwork quantities including the amount of cut and fill and the amount of soil to be exported or imported (in cubic yards)
  - d. Location of proposed areas of cut and fill, including the extent and maximum depth of cut and fill
  - e. Location of proposed project infrastructure
  - f. Location of existing surface water locations
- (11) At least 30 days prior to the preconstruction conference, the Applicant shall submit its emergency response plan that includes and addresses, but is not limited to, the following: scope of the plan, communication and training, roles and responsibilities, medical emergencies, fire/explosion, confined space incidents, falls and high angle emergencies, weather related events or conditions, security incidents, and quantities and type of any specialized firefighting equipment necessary.
- (12) At least seven days before the preconstruction conference, the Applicant shall submit to Staff, for review and acceptance, a copy of all National Pollutant Discharge Elimination System permits including its approved Stormwater Pollution Prevention Plan, approved Spill Prevention, Control, and Countermeasure procedures, and its erosion and sediment control plan. The Applicant must address any erosion related issues through proper design

and adherence to Ohio EPA best management practices related to erosion and sedimentation control.

- (13) If any changes are made to the facility layout after the submission of final engineering drawings, the Applicant shall provide all such changes to Staff in hard copy and as geographically-referenced electronic data. All changes are subject to Staff review for compliance with all conditions of the certificate, prior to construction in those areas.
- (14) The certificate shall become invalid if the Applicant has not commenced a continuous course of construction of the proposed facility within five years of the date of journalization of the certificate unless the Board grants a waiver or extension of time.
- (15) As the information becomes known, the Applicant shall file on the public docket the date on which construction will begin, the date on which construction was completed, and the date on which the facility begins commercial operation.
- (16) The Applicant shall obtain transportation permits prior to the commencement of construction activities that require them. The Applicant shall coordinate with the appropriate authority regarding any temporary road closures, road use agreements, driveway permits, lane closures, road access restrictions, and traffic control necessary for construction and operation of the proposed facility. The Applicant shall detail this coordination as part of a final transportation management plan submitted to Staff prior to the preconstruction conference for review and confirmation by Staff that it complies with this condition. That Applicant shall also submit the completed Transportation Study as part of the final transportation management plan.
- (17) Prior to the commencement of construction activities in areas that require permits or authorizations by federal or state laws and regulations, the Applicant shall obtain and comply with such permits or authorizations. The Applicant shall provide copies of permits and authorizations, including all supporting documentation, to Staff within seven days of issuance or receipt by the Applicant and shall file such permits or authorizations on the public docket. The Applicant shall provide a schedule of construction activities and acquisition of corresponding permits for each activity at the preconstruction conference(s). Any permit violation received by the Applicant shall be provided on the case docket within seven days of receipt.
- (18) The certificate authority provided in this case shall not exempt the facility from any other applicable and lawful local, state, or federal rules or regulations nor be used to affect the exercise of discretion of any other local, state, or federal permitting or licensing authority with regard to areas subject to their supervision or control.
- (19) The facility shall be operated in such a way as to assure that no more than 110 megawatts would be injected into the Bulk Power System at any time.
- (20) The Applicant shall not commence any construction of the facility until it has executed an Interconnection Service Agreement and Interconnection Construction Service Agreement with PJM Interconnection, which includes construction, operation, and maintenance of system upgrades necessary to integrate the proposed generating facility into the regional

transmission system reliably and safely. The Applicant shall docket in the case record a letter stating that the Agreement has been signed or a copy of the executed Interconnection Service Agreement and Interconnection Construction Service Agreement.

- (21) Prior to commencement of any construction, the Applicant shall prepare a landscape and lighting plan in consultation with a landscape architect licensed by the Ohio Landscape Architects Board that addresses the aesthetic and lighting impacts of the facility with an emphasis on any locations where an adjacent non-participating parcel contains a residence with a direct line of sight to the project area. The plan shall also address potential aesthetic impacts to nearby communities, the travelling public, and recreationalists by incorporating appropriate landscaping measures such as shrub plantings or enhanced pollinator plantings. The plan shall include measures such as fencing, vegetative screening, or good neighbor agreements. Unless alternative mitigation is agreed upon with the owner of any such adjacent, non-participating parcel containing a residence with a direct line of sight to the fence of the facility, the plan shall provide for the planting of vegetative screening designed by the landscape architect to enhance the view from the residence and be in harmony with the existing vegetation and viewshed in the area. The Applicant shall maintain vegetative screening for the life of the facility and the Applicant shall replace any failed plantings so that, after five years, at least 90 percent of the vegetation has survived. Prior to commencement of construction, the Applicant shall submit to Staff for approval a solar panel perimeter fence type that is both small-wildlife permeable and aesthetically fitting for a rural location. This condition shall not apply to substation fencing. The Applicant shall maintain all fencing along the perimeter of the project in good repair for the term of the project and shall promptly repair any damage as needed. Lights shall be motion-activated and designed to narrowly focus light inward toward the facility, such as being downward facing and/or fitted with side shields. The Applicant shall provide the plan to Staff and file it on the public docket for review and confirmation that it complies with this condition.
- (22) Prior to commencement of construction, the Applicant shall submit to Staff for approval a solar panel perimeter fence type that is both small-wildlife permeable and aesthetically fitting for a rural location. Fencing around panels should incorporate gaps or spaces of at least 6 inches x 6 inches to allow passage of small mammals. This condition shall not apply to substation fencing.
- (23) General construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m., or until dusk when sunset occurs after 7:00 p.m. Impact pile driving shall be limited to the hours between 9:00 a.m. and 6:00 p.m. Impact pile driving may occur between 7:00 a.m. and 9:00 a.m., and after 6:00 p.m. or until dusk when sunset occurs after 6:00 p.m., if the noise impact at non-participating receptors is not greater than daytime ambient Leq plus 10 dBA. If impact pile driving is required between 7:00 a.m. and 9:00 a.m., and after 6:00 p.m. or until dusk when sunset occurs after 6:00 p.m., the Applicant shall install a noise monitor in a representative location to catalog that this threshold is not being exceeded. Hoe ram operations, if required, shall be limited to the hours between 10:00 a.m. and 4:00 p.m., Monday through Friday. Construction activities that do not involve noise increases above ambient levels at sensitive receptors are permitted outside of daylight hours when necessary. The Applicant shall notify property owners or affected tenants within the

meaning of Ohio Adm.Code 4906-3-03(B)(2) of upcoming construction activities including potential for nighttime construction.

- (24) Operational sound levels shall not exceed ambient sound levels plus five dBA, as listed in table 7.1 of the Pre-Construction Sound Report and Predictive Operational Sound Assessment, at non-participating receptors. If the inverters and/or substation transformer chosen for the project have a higher sound power level than the representative inverter and transformer used in the Noise Evaluation, the Applicant shall, if noise data is available, submit an updated noise study, at least 30 days prior to construction, using noise data from the inverter and substation transformer chosen for the project. If noise data is unavailable an operation test shall be conducted to show that sound levels will not exceed the daytime ambient level plus five dBA at any non-participating sensitive receptor. The test must be conducted at approximately the maximum sound generation level measuring at a distance equal or closer than the closest non-participating receptor. The updated noise study shall show that sound levels will not exceed the daytime ambient level plus five dBA at any non-participating sensitive receptor.
- (25) The Applicant shall avoid, where possible, or minimize to the extent practicable, any damage to functioning field tile drainage systems and soils resulting from the construction, operation, and/or maintenance of the facility in agricultural areas. Damaged field tile systems shall be promptly repaired or rerouted to at least original conditions or modern equivalent at the Applicant's expense to ensure proper drainage. However, if the affected landowner(s) agrees to not having the damaged field tile system repaired, they may do so only if: i) the field tile systems of adjacent landowners remain unaffected by the non-repair of the landowner's field tile system; and ii) the damaged field tile does not route directly onto or into an adjacent parcel. The Applicant shall design the project to ensure that nearby parcels are protected from unwanted drainage problems due to construction and operation of the project. The Applicant shall document benchmark conditions of surface and subsurface drainage systems prior to construction, including the location of laterals, mains, grassed waterways, and county maintenance/repair ditches. The Applicant shall consult with owners of all parcels adjacent to the property, the county soil and water conservation district, and the county to request drainage system information over those parcels. The Applicant shall consult with the county engineer for tile located in a county maintenance/repair ditch. A map of discovered and repaired drain tile systems shall be filed in the case docket once construction is complete.
- (26) At least 30 days prior to the preconstruction conference, the Applicant shall submit an updated decommissioning plan and total decommissioning cost estimate without regard to salvage value on the public docket that includes: (a) a provision that the decommissioning financial assurance mechanism include a performance bond where the company is the principal, the insurance company is the surety, and the Ohio Power Siting Board is the obligee; (b) a timeline of up to one year for removal of the majority of equipment as defined by 60 percent of the panel and racking equipment quantities, with all decommissioning to be finished within 18 months after the facility ceases operations; (c) a provision to monitor the site for at least one additional year to ensure successful revegetation and rehabilitation; (d) a provision where the performance bond is posted prior to the commencement of construction; (e) a provision that the performance bond is for the total decommissioning



cost and excludes salvage value; (f) a provision to coordinate repair of public roads damaged or modified during the decommissioning and reclamation process; (g) a provision that the decommissioning plan be prepared by a professional engineer registered with the state board of registration for professional engineers and surveyors; (h) a provision stating that the bond shall be recalculated every five years by an engineer retained by the Applicant; and (i) a provision that underground equipment will be removed to the extent that allows for future drain tile repairs and installation to be completed. The Applicant shall implement and comply with the decommissioning plan as approved by Staff.

- (27) At the time of solar panel end of life disposal, retired panels marked for disposal shall be sent to an engineered landfill with various barriers and methods designed to prevent leaching of materials into soils and groundwater.
- (28) All water wells within the project area shall be “ground-truthed” to determine the exact locations prior to construction. The Applicant shall adhere to a minimum project infrastructure setback of 50 feet from any existing domestic use water supply well.
- (29) Prior to construction, the Applicant shall file a copy of any floodplain permit required for construction of this project, or a copy of correspondence with the floodplain administrator showing that no permit is required.
- (30) The Applicant shall construct the facility in a manner that incorporates post construction stormwater management under OHC00005 (Part III.G.2.e, pp. 19-27) in accordance with the Ohio Environmental Protection Agency’s Guidance on Post-Construction Storm Water Controls for Solar Panel Arrays.
- (31) The Applicant shall take steps to prevent establishment and/or further propagation of noxious weeds identified in Ohio Adm.Code Chapter 901:5-37 and invasive plant species identified in Ohio Adm.Code 901:5-30-01 during implementation of any pollinator-friendly plantings, as well as during construction, operation, and decommissioning. This would be achieved through appropriate seed selection, and annual vegetative surveys. If noxious weeds and/or invasive plants are found to be present, the Applicant shall remove and treat them with herbicide pursuant to Ohio Revised Code (“R.C.”) Section 921.06a as necessary, and shall follow all applicable state laws regarding noxious weeds and invasive plant species.
- (32) The Applicant shall contact Staff, the Ohio Department of Natural Resources, and the U.S. Fish and Wildlife Service within 24 hours if state or federal listed species are encountered during construction activities. Construction activities that could adversely impact the identified plants or animals shall be immediately halted until an appropriate course of action has been agreed upon by the Applicant, Staff, and the appropriate agencies.
- (33) Should tree clearing become necessary for this project, the Applicant shall submit details of the extent and areas to be clearing to the ODNR and USFWS for review prior to the start of clearing.
- (34) Should final site designs include any stream crossings or temporary or permanent impacts to surface water, details of the stream crossings and/or impacts shall be submitted to the

Ohio Department of Natural Resources, U.S. Fish and Wildlife Service, and Staff for review for potential impacts to protected species.

- (35) Construction in lark sparrow preferred nesting habitat type (old field) shall be avoided during the species' nesting period of May 1 through July 31. Mapping of these habitat areas shall be provided to the construction contractor along with instructions to avoid these areas during the restricted dates, unless coordination with the Ohio Department of Natural Resources allows a different course of action.
- (36) Prior to commencement of any construction, the Applicant shall prepare an updated vegetation management plan in consultation with ODNR. The goals of the plan shall include planting approximately 70 percent of the project area in beneficial vegetation, utilizing plant species listed in Attachment A of ODNR Recommended Requirements for Proposed Solar Energy Facilities in Ohio or other suitable species as approved by ODNR, and to follow the Ohio Solar Site Pollinator Habitat Planning and Assessment Form with a minimum score of 80 points. The plan shall include a narrative on how the project proposes to establish and maintain beneficial vegetation and pollinator habitat in accordance with the guidelines provided above. The plan shall include mapping of the areas where pollinator habitat would be established and maintained. The plan shall include that routine mowing would be limited to fall/spring seasons, as needed, to allow for natural reseeding of plantings and reduce impacts to ground-nesting birds.
- (37) The Applicant shall have a Staff-approved environmental specialist on site during construction activities that may affect sensitive areas. Sensitive areas may include, but are not limited to, wetlands and streams, and locations of threatened or endangered species. The environmental specialist shall be familiar with water quality protection issues and potential threatened or endangered species of plants and animals that may be encountered during project construction. The environmental specialist shall have authority to stop construction to assure that unforeseen environmental impacts do not progress and recommend procedures to resolve the impact. A map shall be provided to Staff showing sensitive areas which would be impacted during construction with information on when the environmental specialist would be present.
- (38) At least 30 days prior to the start of construction, the Applicant shall file a copy of the final complaint resolution plan for construction and operation of the project on the public docket. At least seven days prior to the start of construction and at least seven days prior to the start of facility operations, the Applicant shall notify via mail affected property owners and tenants; all residents, airports, schools, and libraries located within one mile of the project area; parties to this case; county commissioners, township trustees, and emergency responders; and any other person who requests updates regarding the project. These notices shall provide information about the project, including contact information and a copy of the complaint resolution program. The start of construction notice shall include written confirmation that the Applicant has complied with all preconstruction-related conditions of the certificate, as well as a timeline for construction and restoration activities. The start of facility operations notice shall include written confirmation that the Applicant has complied with all construction-related conditions of the certificate, as well as a timeline for the start of operations. The Applicant shall file a copy of these notices on the public docket.

The Applicant shall file on the public docket a complaint summary report by the fifteenth day of April, July, October, and January of each year during construction and through the first five years of operation. The report shall include a list of all complaints received through the Applicant's complaint resolution program, a description of the actions taken toward the resolution of each complaint, and a status update if the complaint has yet to be resolved.

- (39) With respect to the 100-acre area(s) identified within the eleventh data request response filed on May 3, 2022 where potential archaeological resources remain to be surveyed, the Applicant shall complete the archaeological survey by May 31, 2022, and avoid any sites recommended, by the Applicant's cultural resource consultant or OHPO, to be eligible for listing in the National Register of Historic Places. If the archaeological survey is not completed by May 31, 2022, the Applicant shall not construct in the 100 acres identified within the eleventh data request. For the 100-acre area(s), until the Applicant receives a concurrence from OHPO for either a finding of no adverse impacts or for no adverse impacts except for identified areas in need of avoidance, the Applicant shall not construct in the 100 acres identified within the eleventh data request. Prior to the commencement of construction, the Applicant shall finalize a MOU with OHPO to avoid and/or minimize cultural resources with potential adverse effects due to the project. The Applicant shall submit the MOU to Staff and file the MOU on the docket of this case.



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**Case No(s). 21-0868-EL-BGN**

Summary: Staff Report of Investigation electronically filed by Mr. Matt Butler on  
behalf of Staff of OPSB