

# Staff Report of Investigation

Atlanta Farms Solar Project  
Atlanta Farms Solar Project, LLC

Case No. 19-1880-EL-BGN

October 7, 2020



**Mike DeWine**, Governor | **Sam Randazzo**, Chairman

**In the Matter of the Application of Atlanta Farms Solar )**  
**Project, LLC for a Certificate of Environmental )**  
**Compatibility and Public Need to Construct a Solar ) Case No. 19-1880-EL-BGN**  
**Powered Electric Generation Facility in Pickaway )**  
**County, Ohio )**

## **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 Atlanta Farms Solar )**  
**Project, LLC for a Certificate of Environmental )**  
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Chairman, Public Utilities Commission  
Director, Department of Agriculture  
Director, Development Services Agency  
Director, Environmental Protection Agency  
Director, Department of Health

Director, Department of Natural Resources  
Public Member  
Ohio House of Representatives  
Ohio Senate

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 Development Services Agency, 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, the U.S. Army Corps of Engineers, and the U.S. Coast Guard.

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 and 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,



Theresa White  
Executive Director  
Ohio Power Siting Board

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## **I. POWERS AND DUTIES**

### **OHIO POWER SITING BOARD**

The authority of the Ohio Power Siting Board (Board) is prescribed by Ohio Revised Code (R.C.) Chapter 4906. 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 twenty MW, measured at the customer's point of interconnection to the electrical grid.

Membership of the Board is specified in R.C. 4906.02(A). The voting members include: the Chairman of the Public Utilities Commission of Ohio (PUCO or Commission) who serves as Chairman of the Board; the directors of the Ohio Environmental Protection Agency (Ohio EPA), the Ohio Department of Health, the Ohio Development Services Agency, the Ohio Department of Agriculture, 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. Ex-officio Board members include two members (with alternates) 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 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>

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1. R.C. 4906.04 and 4906.20.

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

Within 60 days of receiving an application, the Chairman 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 Chairman 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 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, modify and approve, or deny an application for a certificate of environmental compatibility and public need.<sup>10</sup> If the Board approves, or modifies and approves an application, it will issue a certificate subject to conditions. 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 proceeding that believes its issues were not adequately addressed by the Board may submit within

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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).

30 days an application for rehearing.<sup>14</sup> An entry on rehearing will 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 sections 1501.33, 1501.34, and 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 multi-modal 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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<sup>14</sup> R.C. 4903.10 and 4906.12.

<sup>15</sup> 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.

## **II. APPLICATION**

### **APPLICANT**

Atlanta Farms Solar Project, LLC (Applicant) is a wholly owned subsidiary of Savion, LLC. Savion team is comprised of utility scale solar and energy storage experts that have developed over 10 gigawatts of solar projects across 25 states that are either in operation, under construction, or in development. Savion has 75 employees and is headquartered in Kansas City, Missouri. The project would be constructed, operated, and maintained by the Applicant.

### **HISTORY OF THE APPLICATION**

On October 18, 2019, the Applicant filed a pre-application notification letter regarding the proposed solar electric generation project.

On November 4, 2019, the Applicant held a public informational meeting regarding the proposed solar electric generating project.

On January 31, 2020, the Applicant filed the Atlanta Farms Solar Project application as well as a motion for protective order to keep portions of its application confidential.

On February 3, 2020, the Applicant filed a motion for protective order and memorandum in support.

On February 25, 2020, the Administrative Law Judge filed an entry granting Atlanta's protective order; ordering the docketing division to maintain, under seal, the financial information contained on pages 23-25 of the application, the financial data contained on page 10/Exhibit and the certificate and policy numbers listed in Exhibit B; ordering the docketing division to move Exhibit B to the public docket 10 days after issuance of this Entry; ordering the docketing division to maintain confidential all information and documents afforded protective treatment by this Entry; and maintaining this protective order for a period of 24 months.

On March 3, 2020, the Applicant filed a supplement to the application including an update to the Visual Resources Assessment, Glint & Glare Analysis, and Ohio Department of Natural Resources Letter.

On March 17, 2020, the Applicant filed an addition to the application including Figures 08-7 and 08-8 of Application.

On March 27, 2020, the Applicant filed a response to the first set of data requests received from Staff.

On March 31, 2020, Staff filed a motion to suspend the finding of completeness and request for expedited consideration.

On April 1, 2020, the Administrative Law Judge filed an entry granting Staff until April 30, 2020 to make recommendation on completeness of the application.

On April 27, 2020, the Applicant filed a response to the second set of data requests received from Staff.

On April 29, 2020, the Applicant filed a motion for extension of completeness review and request for expedited ruling and memorandum in support.

On April 30, 2020, the Administrative Law Judge filed an entry granting the motion for extension of the completeness review and request for expedited ruling, extending the deadline for Staff to make its recommendation regarding the completeness of Atlanta's application until July 14, 2020.

On May 15, 2020, the Applicant filed a response to the third set of data requests received from Staff.

On June 16, 2020, the Applicant filed a supplemental response to the third set of data requests received from Staff.

On June 23, 2020, the Applicant filed a second supplemental response to the third set of data requests received from Staff.

On July 6, 2020, the Applicant filed a third supplemental response to the third set of data requests received from Staff.

On July 7, 2020, the Director of the Power Siting Department of the PUCO issued a letter of compliance regarding the application to the Applicant.

On August 7, 2020, the Ohio Farm Bureau Federation filed a motion to intervene.

On August 31, 2020, the Applicant filed a response to the fourth set of data requests received from Staff.

On September 15, 2020, the Applicant filed a supplemental response to the fourth set of data requests received from Staff.

On September 18, 2020, the Applicant filed a response to the fifth set of data requests received from Staff.

On September 25, 2020, the Applicant filed a response to the sixth set of data requests received from Staff.

A local public hearing has been scheduled for October 22, 2020 at 6:00 p.m. The adjudicatory hearing will commence on November 4, 2020, at 10:00 a.m.

This summary of the history of the application does not include every filing in case number 19-1880-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 build the Atlanta Farms Solar Project as a 199.6 MW solar-powered generating facility within Deer Creek and Perry Townships in Pickaway County. The project would consist of large arrays of ground-mounted photovoltaic (PV) modules, commonly referred to as solar panels. The project also includes associated support facilities, such as access roads, up to eight meteorological stations, buried electrical collection lines, inverter pads, and four substations. The project would occupy up to 1,375 acres within a 2,276-acre project area. The proposed layout is shown on the map in this report.

## **Solar Panels and Racking**

The solar panels would be attached to metal racking. The racking would include posts driven into the ground. The Applicant anticipates installing approximately 90,500 posts. The solar panel arrays would be grouped in large clusters that would be fenced, with gated entrances. The highest point of each module would not exceed 15 feet, and the fence would not exceed seven feet. For equipment security and public safety, the fencing would be topped with barbed wire.

The project's arrays would be mounted on a single-axis tracking system that would rotate approximately +/- 60-degrees east-west to track the sun as it moves through the sky each day. PV solar modules have not been procured for the project; however, it is anticipated that the facility would be composed of 385 to 410 watt panels, presumably Talesun, Hanwha Q Cells, Risen, Trina, Jinko, Canadian Solar modules, or other similar modules. Depending on the module selected, the facility would include approximately 635,000 to 676,000 modules. The Applicant estimates the modules would occupy a maximum of 350 acres of the project area.

## **DC Collector System, Inverters, and AC Collector 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. The Applicant proposes to install up to 35 miles of buried cable. Installation of the cable would require an approximately one-foot wide trench along its entire length.

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 an inverter. The facility would include approximately 80 inverters. Each inverter would deliver AC power to a substation through a system of buried electric lines and associated communication lines. The Applicant has committed that the buried portion of the AC collector system would be at least 36 inches below grade.

## **Substation and Transmission Line**

The facility would incorporate four separate substations. The substations would collectively occupy approximately three acres of land adjacent the existing Dayton Power and Light Company (DP&L) Atlanta substation. The major components of each of the Applicant's substations would be collection line feeders and breakers, a 69 kV bus, a main power transformer to step up the voltage to 69 kV, a high-voltage breaker, disconnect switches, and a common equipment enclosure containing power control electronics.

Each of the four substations would have an overhead 69 kV gen-tie line, approximately 1,000 feet in length, which would connect the project substations to the existing Atlanta substation.

## **Roads**

The Applicant proposes use up to 9.2 miles of access roads for construction, operation, and maintenance of the solar farm. The access roads would consist of aggregate material and/or grass. The access roads would not exceed 20 feet in width, with the exception of turning radii, which would not exceed 50 feet in width.

**Laydown Areas**

Facility mapping provided by the Applicant shows up to nine laydown areas. The Applicant proposes up to approximately 65 acres of temporary equipment laydown area total. Laydown yard areas would be restored, provided they are not used for other proposed project components.

**Meteorological Stations**

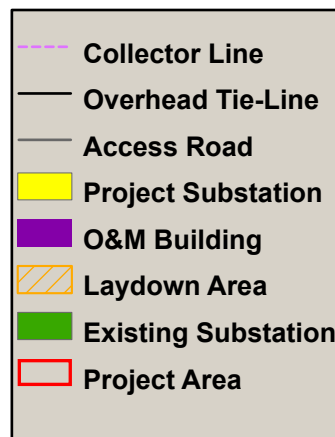
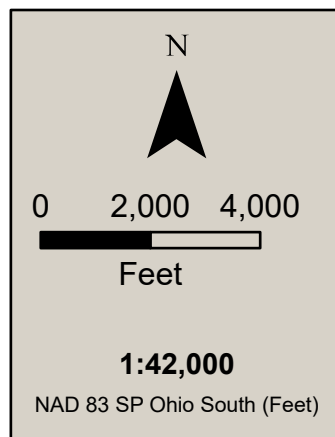
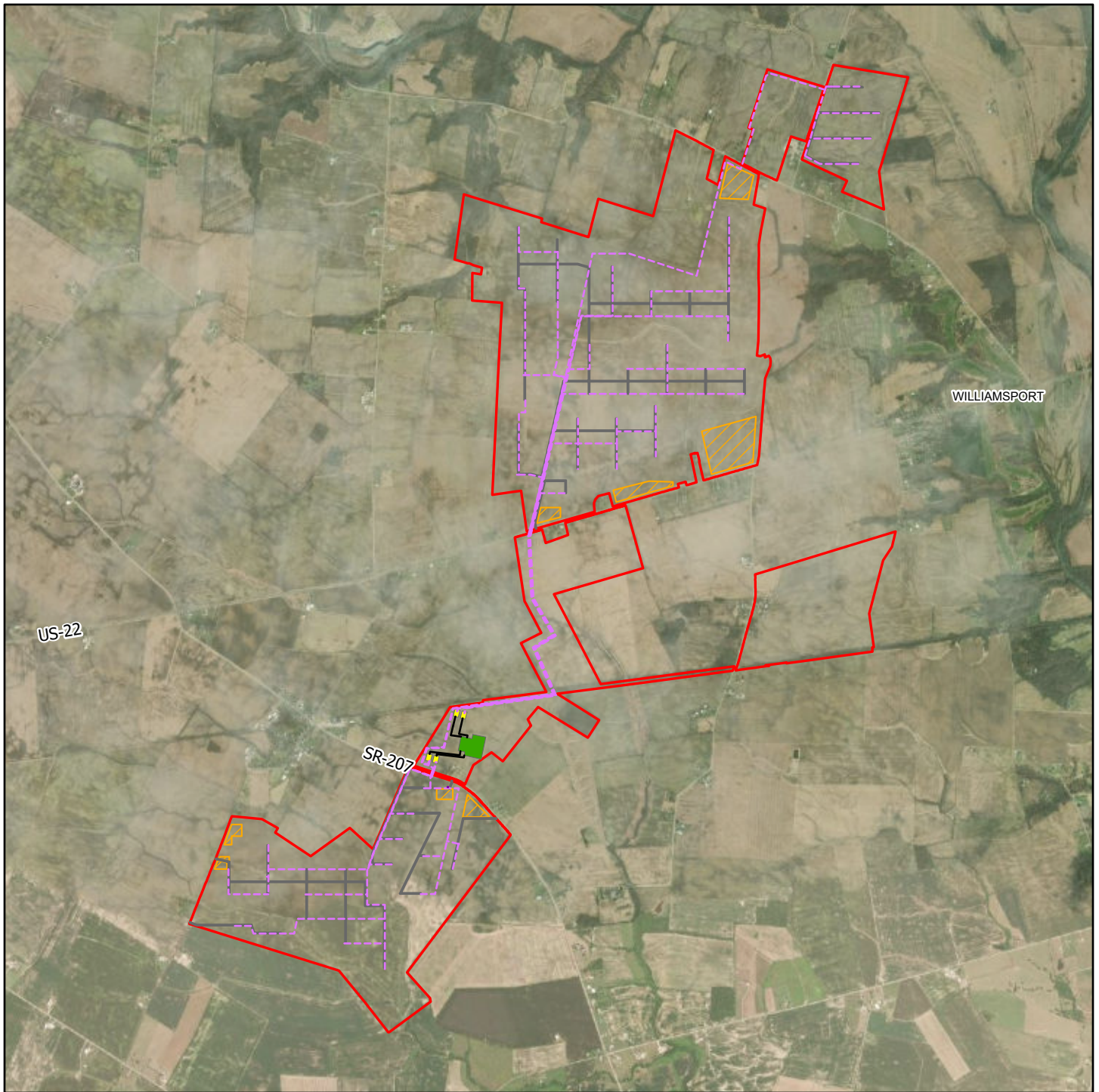
The project would include up to eight solar meteorological stations that would be up to 14 feet tall and installed on a concrete base adjacent to inverters. The meteorological stations would include pyranometers, which measure the solar resource; an anemometer to measure the wind speed and direction; and a thermometer.

**Lighting**

The project would include permanent lighting only near the Operations and Maintenance (O&M) facility and substations. Unless required for safety, all lights would be shielded, downward- or inward-facing and motion-activated. There would be no permanent lighting associated with the solar panels themselves, the access roads, or any other components of the project.

**Project Schedule**

The Applicant expects to finalize design and commence construction of the solar farm in the third quarter of 2021, and complete construction in the end of 2022. The Applicant stated that postponement of the start of construction could affect project financing, including the Applicant's ability to procure PV solar modules and other facility components. Such delays may push the in-service date back, which would cause significant financial burden to the Applicant.



## Overview Map

### 19-1880-EL-BGN

**Atlanta Farms Solar Project**

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.

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### **III. CONSIDERATIONS AND RECOMMENDED FINDINGS**

In the Matter of the Application of Atlanta Farms Solar Project, LLC for a Certificate of Environmental Compatibility and Public Need to Construct an Electric Generation Facility in Preble County, Ohio, 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.

#### **Socioeconomic Impacts**

##### *Regional Planning*

The Applicant reviewed the village of Williamsport and Deer Creek Township joint comprehensive plan. At present, Pickaway County and Perry Township do not have comprehensive land use plans. The proposed solar facility would be expected to aid long-term regional development by increasing tax revenues, enhancing employment opportunities and increasing economic contributions to the local economy.

The project is also consistent with agricultural industry support, in that the facility would provide supplemental income to farmers and the land could be returned to agricultural production upon decommissioning. Farming activities would require only minor modifications, aside from temporary disruptions that could occur during construction. Construction and operation of the project would not interfere with planned future uses identified in the Williamsport and Deer Creek Township local plan.

##### *Land Use*

The predominant land use within the project area is agriculture, with approximately 95% of land being used for agriculture purposes, four percent field and woods and less than one percent is residential. The Applicant does not intend to remove or relocate any existing structures. Significant impacts to commercial, industrial, residential, recreational, and institutional land uses are not anticipated. Significant impacts to agricultural and residential land uses are not anticipated as these uses would continue with minimal disruption.

##### *Recreation*

Construction and operation of the facility would not physically impact any recreational areas. There are no national parks, forests, wildlife refuges, natural landmarks or federally designated scenic rivers in the study area. Additionally, the study area is devoid of state nature preserves, state parks and state forests. Also, there are no scenic routes, byways or county parks within the study area.

Four recreational areas are located within two miles of the project area. These include a canoe launch, a golf course (Crown Hill Golf Club) and two ODNR wildlife production areas. However, adverse impacts to these areas are not anticipated.

##### *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.

An anti-glare coating would be installed on the solar panels to maximize the amount of solar energy captured by the panels, which would also have the aesthetic benefit of glare reduction. Typically, the solar panels would be installed no higher than 15 feet above ground level. Based on the results of the Applicant's visual resources report, the solar panels would not likely be visible at locations beyond two miles of the perimeter of the project.

Staff reviewed the Applicant's visual impact analysis and a mitigation plan memorandum filed in response to a Staff data request. The Applicant anticipates that based upon landowner preference, landscaping may be installed to mitigate viewshed impact. The Applicant intends to coordinate with Pickaway County and the ODNR to determine the best native vegetation to use in attempt to achieve maximum results.

Based on current design, there are approximately 40 residences near the project. Two residences are approximately 325 and 375 feet from potential solar panel locations. The remaining residences are over 500 feet away. The Applicant identified potential measures to mitigate residential viewshed impacts. The Applicant also proposes to utilize good neighbor agreements or non-participating landowner agreements. According to these agreements, landscaping could be installed on landowner property close to the residence or along a portion of the project fence line nearest the residence to minimize the viewshed impact.

Staff recommends that the Applicant incorporate a landscape and aesthetics plan 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. With implementation of Staff's condition, the overall expected aesthetic impact would be minimal.

### *Cultural Resources*

The Applicant enlisted a consultant to gather background information and complete a cultural resources records review for a 0.5-mile radius defined as the Area of Potential Effect for the project. This review was based on data provided by the Ohio Historic Preservation Office (OHPO) online geographic information system mapping, Ohio Historic Inventory, the Ohio Archaeological Inventory, and National Register of Historic Places (NRHP) files. The Applicant obtained information on historic cemeteries from the Ohio Genealogical Society.

The Applicant's architectural survey identified 66 new and three previously recorded resources over 50 years of age. However, none of these structures were determined to be eligible for the NRHP. There are also no historic districts or cemeteries located in within the project boundaries or within the survey radius.

To assess the potential for archaeological impacts, the Applicant performed a literature review, visual inspection, site surface collection and multiple shovel excavations. One previously identified archaeological site is located within the survey area. However, this site was not determined to be eligible for listing in the NRHP. Additionally, the Applicant identified 32 new archaeological sites; however, none of the sites were recommended to be eligible the NRHP. The OHPO recommended that no further archaeological surveys were required. Staff has reviewed the

Applicant's architectural and archaeological surveys and OHPO's recommendations. Staff concurs with the OHPO that the project is not expected to have any adverse effect to historic properties.

### *Economics*

The Applicant states that it would be responsible for the construction, operation, and maintenance of the proposed project. The Applicant currently owns all of the landowner agreements within the proposed project area. These agreements will not alter the ownership status of the properties within the proposed project area. However, the Applicant has the option to purchase specific properties as detailed in the application.

The Applicant chose to file its estimated capital and intangible costs, estimated operation and maintenance 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 farm applications.

Total cost comparisons between the proposed facility and other comparable facilities are to be provided in the application. The Applicant referenced *Lazard's Levelized Cost of Energy Analysis (2018)* which states that the average capital costs for thin-film utility scale solar PV projects range between \$950 to \$1,250 per kW and that its costs are below this range. Also, recent solar PV projects of comparable scale undertaken by Savion report similar capital costs. Staff verified the Applicant's assertion that the reported average cost of similar facilities is not substantially different from Applicant's estimated costs for the proposed facility and that the reported average cost of Savion's similar facilities is not substantially different from Applicant's estimated costs for the proposed facility.

Operation and maintenance expense comparisons between the proposed facility and other comparable facilities are to be provided in the application. The Applicant referenced a 2018 report published by the U.S Department of Energy's National Renewable Energy Laboratory (NREL) that stated that, on average, utility scale solar operations reported O&M costs totaling \$9.1/kW/year for fixed-tilt PV facilities and \$10.4/kW/year for facilities using tracking systems. These reported costs do not include inverter replacements, which, when factored in, could bring the estimated costs for fixed-tilt PV facilities to \$13/kW/year and \$14/kW/year for facilities using tracking systems. Staff verified that the figures put forth by the Applicant were contained in the report and also confirmed the Applicant's assertion that its O&M cost estimates were below this amount.

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 characterized permitting stage delay costs as being associated with an inability to procure necessary project components resulting in the facility's in-service date being pushed back. The Applicant's characterization of its estimated costs of delays appears reasonable to Staff.

The Applicant retained the services of Strategic Economic Research (SER) to report on the economic impact of the project.<sup>16</sup> SER used the National Renewable Energy Laboratory's (NREL) Jobs and Economic Development Impact (JEDI) model, as well as data from the Ohio Department of Taxation, to estimate the economic impact of the construction and operation of the solar farm.

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16. Strategic Economic Research is an economic consulting firm that conducts economic development analysis and studies the economic impact of energy projects at the national, state, and local level.

Staff verified that the methodology of the JEDI 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 JEDI model analysis conducted by the Economics Center, the project is expected to have the following impacts:

#### *Jobs*

- 573 new construction related job impacts for Pickaway County
- 23 long-term operational jobs for Pickaway County
- 880 construction related jobs for the State of Ohio
- 40 long-term operational jobs for the state of Ohio

#### *Earnings*

- \$32.1 million in local earnings during construction for Pickaway County
- \$53.4 million in local earnings during construction for the State of Ohio
- \$1.2 million in annual earnings during facility operations for Pickaway County
- \$2.6 million in annual earnings during facility operations for the State of Ohio

#### *Output*

- \$41.4 million in local output during construction for Pickaway County
- \$79.6 million in local output during construction for the State of Ohio
- \$2.6 million in local annual output during facility operations for Pickaway County
- \$5.3 million in local annual output during facility operation for the State of Ohio.

The project would generate an estimated \$1.4 million annually for Pickaway County taxing districts. This estimate is based on a Payment in Lieu of Taxes (PILOT) plan in which Savion would pay \$7000/MW annually for a 200 MW facility. The Applicant states that this revenue would be distributed to county and other local taxing districts according to millage.

#### *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 could be a brief reduction in visibility, afterimage, a safety risk to pilots, or a perceived nuisance to neighbors.

The Applicant’s consultant conducted a glint and glare analysis to identify any potential impacts to roads and nearby residents.<sup>17</sup> The Applicant found that no glare from the project is predicted to impact cars or large trucks using the roadways, adjacent residents (at both single or second story heights), and that the project would be compliant with the FAA’s interim policy for FAA review of Solar Energy System Projects on Federally Obligated Airports. Staff concurs 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.

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17. Application at Exhibit J.

### *Decommissioning*

The Applicant holds land rights to and expects to operate the solar farm for at least 30 years, but could operate up to 40 years. The Applicant has prepared a decommissioning plan and total decommissioning cost estimate of \$8,998,587.<sup>18</sup> Staff has reviewed that decommissioning plan. According to the Applicant's plan, at the end of the useful life of the facility, the solar farm would be decommissioned and the land be returned to its current use as agricultural land. Over a course of approximately 12 months, the Applicant would remove all solar components constructed above ground and any structures up to thirty-six (36) inches below-grade for disposal. Access roads, driveways on private property at landowner request, switchyard, interconnection facilities and other similar utility facilities not owned by the Applicant would be left in place. The Applicant would restore the land significantly to its original topography to allow for resumption of agricultural use.

The Applicant states it will repurpose, salvage, recycle or haul offsite to a licensed solid waste disposal facility all 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 would include solar modules, tracking system, steel piles, inverters, and transformers.

The Applicant would obtain all required approvals and necessary permits prior to the start of decommissioning. The decommissioning sequence consists of but is not limited to reinforce access roads, install temporary construction fencing and best management practices to protect sensitive environmental resources, de-energize solar arrays, dismantle panels and racking, remove inverters and transformers, grade site, de-compact subsoils and revegetate disturbed land to pre-construction conditions to the extent practicable.

The Applicant would also provide for financial security to ensure that funds are available for decommissioning/land-restoration. The Applicant states that thirty days prior to the preconstruction conference it would calculate the net decommissioning costs (total decommissioning cost less salvage/resale value of solar components) to decommission the solar farm as outlined in the plan.<sup>19</sup> The cost estimates would be recalculated in year 10 of operation and then every five years thereafter over the life of the project. The Applicant committed to posting a performance bond in the amount of the net decommissioning cost if that value is positive.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Socioeconomic Conditions** heading of the Recommended Conditions of Certificate section.

### **Ecological Impacts**

#### *Public and Private Water Supply*

There are no aquifers, water wells, or drinking water source protection areas located within one mile of the project area. There are no water wells within the project area. Therefore, the Applicant and Staff do not anticipate significant adverse impacts to public or private water supplies. Solar energy facilities are constructed and generate electricity without impacts to surface or

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18. Application at Exhibit W.

19. Application at p. 31 and Exhibit W.

groundwater. There are no Source Water Protection Areas (SWPAs) located within the project area.

The Applicant will implement a Stormwater Pollution Prevention Plan (SWPPP) and a spill prevention, control, and countermeasure plan (SPCC) during construction to minimize and prevent potential discharges to surface waters in the project area and surrounding area.

## **Site Geology**

### *Physiographic Province*

The proposed project area is in Perry and Deer Creek townships, Pickaway County. This area is in the Columbus Lowland physiographic region. This region is characterized by lowland terrain surrounded by relative uplands. There is a broad slope towards the Scioto Valley and many large streams throughout the region. The geology of the region consists of loamy Wisconsinan-age till and extensive outwash in the Scioto Valley covering underlying bedrock.<sup>20</sup>

### *Glacial/Surficial Geology*

The project area lies within the glaciated margin of the state and includes several Wisconsinan-aged glacial features. Features present include Late Woodfordian ice deposits, specifically ground moraines, as well as an intermediate-level outwash terrace in the northeast corner of the project area. The southeast corner of the study area is mapped as thin till over outwash with a high concentration of boulders.<sup>21</sup> Glacial drift throughout most of the study area is between 15 and 180 feet thick. The thinnest drift is to the northeast of the project area while the central portion of the area has the deepest drift.<sup>22</sup>

### *Bedrock Geology*

The uppermost bedrock unit in the project area is the Ohio and Olentangy Shales Undivided. This unit is Devonian-aged and consists of greenish gray to gray shale. The unit is clayey and often contains disseminated pyrite. Locally this unit may contain lenses or nodules of limestone as well as thin beds of brownish-black shale in the upper portion. This unit is in the northeast portion of the project area. Underlying the Ohio and Olentangy Shales Undivided is the Devonian-aged Columbus Limestone. This unit is characterized by bluish gray to brown fossiliferous limestone. The unit may be dolomitic in places and frequently contains solution features. This unit borders the Ohio and Olentangy Shales to the southwest. While the Columbus Limestone is known to yield karst features there are no known or suspected sinkholes in Pickaway County. Underlying the Columbus Limestone is the Silurian-aged Salina Undifferentiated. This unit is characterized by a gray to brown dolomite which contains argillaceous partings, brecciated intervals, algal laminations and anhydrite/gypsum zones. This unit is found in the furthest southwest portion of the study area. It should be noted that bedrock is not exposed at the surface within the boundaries of the project area due to significant glacial drift.<sup>23</sup>

### *Oil, Gas and Mining*

The ODNr has record of four oil and gas wells within one mile of the proposed project area. Most of these wells are listed as drilled but are noted to be dry and/or plugged and abandoned. One of

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20. Ohio Department of Natural Resources, Division of Geological Survey, 1998.

21. Pavey et al, 1999.

22. Powers and Swinford, 2004.

23. Slucher et al, 2006.

these four wells is located near the southern border of the study area and is listed as plugged. There are several more oil and gas wells drilled to the east nearer the Scioto River Valley.<sup>24</sup>

The ODNR does not have record of any mining operations within the project area. The Williamsport mine is the nearest mining operation to the project area. It is an active operation that mines limestone and is located approximately one mile to the northwest of the site.<sup>25</sup>

#### *Seismic*

Several small earthquakes have historically been recorded near the site. The three events closest to the site are listed in the chart below.<sup>26</sup>

SEISMIC ACTIVITY				
Date	Magnitude	Distance to site boundary	County	Township
October 21, 2013	2.0	5.5 miles	Pickaway	Jackson
March 17, 1985	1.9	15.6 miles	Fayette	Paint
November 12, 1899	3.1	19.2 miles	Ross	Scioto

#### *Soil and Slope Stability*

According to the USDA Web Soil Survey, the project area consists primarily of soils derived from glacial till deposits which cover the entire area. Miamian, Crosby and Kokomo are the most common soil series found within the boundaries of the project area. Miamian is characterized as a silt loam derived from loess over loamy till, Crosby is characterized as a silt loam and is derived from silty material or loess over loamy till and Kokomo is characterized as a silty clay loam derived from loamy glaciofluvial deposits over loamy till.<sup>27</sup>

There is a low to moderate risk of shrink-swell potential in these soils. Other limiting factors include frost action, potential for ponding and risk of corrosion to uncoated steel and concrete. Slope remains relatively flat throughout the project area, with slope seldom exceeding a six percent grade.<sup>28</sup>

#### *Groundwater*

Groundwater resources vary throughout the study area. Wells developed in bedrock are likely to yield between two and 100 gallons per minute. The bedrock consists of Devonian and Silurian shales, limestones and dolomites, with the low-yielding shale bedrock being primarily located in the northeast portion of the study area and the higher-yielding limestone and dolomite being the primary aquifers in the central and southern portions of the project area. Hydrogen sulfide present in limestone in the area make much of the bedrock undesirable as an aquifer and many wells are developed in the overlying till instead.<sup>29</sup> Wells developed in the unconsolidated sand and gravel

24. Ohio Department of Natural Resources, Division of Oil and Gas, Ohio Oil and Gas Wells Locator.

25. Ohio Department of Natural Resources, Division of Mineral Resources, Mines of Ohio.

26. Ohio Department of Natural Resources, Division of Geological Survey, Ohio Earthquake Epicenters.

27. USDA Web Soil Survey.

28. Kerr and Christman, 1980 and USDA Web Soil Survey.

29. Schmidt, 1991 and Ohio Department of Natural Resources, Division of Water, Bedrock Aquifer Map, 2000.

lenses interbedded within the till are likely to yield between five and 25 gallons per minute. This unconsolidated unit is known as the New Holland Complex Aquifer.<sup>30</sup>

The ODNR has record of 163 water wells drilled within one mile of the study area. These wells range in depth from 18 to 422 feet deep, with an average depth of 135 feet. The most common aquifer listed is sand, gravel, silt and clay in the glacial till. Limestone and shale were also listed as common aquifers, with over 50 wells developed in limestone and at least 20 wells developed into the shale bedrock. A sustainable yield of two to 100 gallons per minute is expected from wells drilled in this area based on well log records. The average sustainable yield from these records within one mile was 18.2 gallons per minute.<sup>31</sup>

### *Surface Waters*

The Applicant delineated thirty streams within the project area, including fourteen perennial streams, six ephemeral streams, and ten intermittent streams. Installation of collection lines may result in stream crossings. The Applicant states all collection line stream crossings would be conducted via horizontal directional drilling (HDD). Because the project would use HDD, the Applicant has provided a frac-out contingency plan detailing monitoring, containment measures, cleanup, and restoration in the event of an inadvertent return. Staff has reviewed the plan and finds it acceptable.

The Applicant delineated twenty-four wetlands within the project area, including six Category 2 wetlands and eighteen Category 1 wetlands. The Applicant states no wetlands would be impacted by the construction, operation, or maintenance of the project.

One pond is located within the project area. No impacts to the pond would occur by the facility during construction or operation.

Specifics about how surface waters would be further protected from indirect construction stormwater impacts using erosion and sedimentation controls would be outlined in the Applicant's SWPPP. The Applicant would obtain an Ohio National Pollutant Discharge Elimination System (NPDES) construction stormwater general permit through the Ohio EPA prior to the start of construction. The Applicant stated that it would apply Ohio EPA published Guidance on Post-Construction Storm Water Control for Solar Panel Arrays to project construction and operation. The project would not cross a 100-year floodplain.

### *Threatened and Endangered Species*

The Applicant requested information from the ODNR and the USFWS regarding state and federal listed threatened or endangered plant and animal species. Staff gathered additional information through field assessments and review of published ecological information. The following table provides the results of the information requests, field assessments, and document review.

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30. Ohio Department of Natural Resources, Division of Water, Statewide Unconsolidated Aquifer Map, 2000.

31. Ohio Department of Natural Resources, Division of Water, Ohio Water Wells.



MAMMALS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Indiana bat	<i>Myotis sodalis</i>	Endangered	Endangered	Historical range includes the project area. Presence within project area has been documented.
northern long-eared bat	<i>Myotis septentrionalis</i>	Threatened	Endangered	Historical range includes the project area. Presence within project area has been documented.
INVERTEBRATES				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Purple cat's paw	<i>Epioblasma o. obliquata</i>	Endangered	Endangered	Historical range includes the project area. No in-water work proposed
snuffbox	<i>Epioblasma triquetra</i>	Endangered	Endangered	Historical range includes the project area. No in-water work proposed
clubshell	<i>Pleurobema clava</i>	Endangered	Endangered	Historical range includes the project area. No in-water work proposed
fanshell	<i>Cyprogenia stegaria</i>	Endangered	Endangered	Historical range includes the project area. No in-water work proposed
Northern riffleshell	<i>Epioblasma torulosa rangiana</i>	Endangered	Endangered	Historical range includes the project area. No in-water work proposed
Rayed bean	<i>Villosa fabalis</i>	Endangered	Endangered	Historical range includes the project area. No in-water work proposed
rabbitsfoot	<i>Quadrula cylindrica cylindrica</i>	Endangered	Endangered	Historical range includes the project area. No in-water work proposed
washboard	<i>Megaloniaias nervosa</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
butterfly	<i>Ellipsaria lineolata</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
Long-solid	<i>Fusconaia maculata maculata</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
ebonyshell	<i>Fusconaia ebenus</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
Sharp-ridged pocketbook	<i>Lampsilis ovata</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
Pyramid pigtoe	<i>Pleurobema rubrum</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed

**INVERTEBRATES (continued)**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Presence in Project Area</b>
Ohio pigtoe	<i>Pleurobema cordatum</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
Elephant-ear	<i>Elliptio crassiden</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
Threehorn wartyback	<i>Obliquaria reflexa</i>	N/A	Threatened	Historical range includes the project area. No in-water work proposed
fawnsfoot	<i>Truncilla donaciformis</i>	N/A	Threatened	Historical range includes the project area. No in-water work proposed
pondhorn	<i>Uniomereus tetralasmus</i>	N/A	Threatened	Historical range includes the project area. No in-water work proposed
Black sandshell	<i>Ligumia recta</i>	N/A	Threatened	Historical range includes the project area. No in-water work proposed

**BIRDS**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Presence in Project Area</b>
Upland sandpiper	<i>Bartramia longicauda</i>	N/A	Endangered	Suitable habitat in project area. Construction must avoid suitable habitat during species' nesting period of April 15 to July 31

**FISH**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Presence in Project Area</b>
Scioto madtom	<i>Noturus trautmani</i>	Endangered	Endangered	Historical range includes the project area. No in-water work proposed
Spotted darter	<i>Etheostoma maculatum</i>	Species of Concern	Endangered	Historical range includes the project area. No in-water work proposed
Northern brook lamprey	<i>Ichthyomyzon fossor</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
Northern madtom	<i>Noturus stigmosus</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
goldeye	<i>Hiodon alosoides</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
Shortnose gar	<i>Lepisosteus platostomus</i>	N/A	Endangered	Historical range includes the project area. No in-water work proposed
Tippecanoe darter	<i>Etheostoma tippecanoe</i>	N/A	Threatened	Historical range includes the project area. No in-water work proposed
Paddlefish	<i>Polyodon spathula</i>	N/A	Threatened	Historical range includes the project area. No in-water work proposed

FISH (continued)				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Bigeye shiner	<i>Notropis boops</i>	N/A	Threatened	Historical range includes the project area. No in-water work proposed
Lake chubsucker	<i>Erimyzon sucetta</i>	N/A	Threatened	Historical range includes the project area. No in-water work proposed

The Applicant did not identify any listed plant or animal species during field surveys. Further, the ODNR and the USFWS did not identify any concerns regarding impacts to listed plant species. In the event that the Applicant encounters listed plant or animal species during construction, Staff recommends that the Applicant contact Staff, the ODNR, and the USFWS, as applicable. 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 a final access plan to be provided to Staff prior to the preconstruction conference.

The project area is within the range of state and federal endangered Indiana bat (*Myotis sodalis*) and the state and federal threatened northern long-eared bat (*Myotis septentrionalis*). As tree roosting species in the summer months, the habitat of these species may be impacted by the project. In order to avoid impacts to the Indiana bat and northern long-eared bat, Staff recommends the Applicant adhere to seasonal tree cutting dates of October 1 through March 31 for all trees three inches or greater in diameter, unless coordination efforts with the ODNR and the USFWS reflects a different course of action.

The project lies within the range of the state endangered upland sandpiper (*Bartramia longicauda*). In order to avoid impacts to this species, Staff and the ODNR recommend the Applicant avoid construction in upland sandpiper preferred nesting habitat types during the species' nesting period of April 15 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 ODNR allows a different course of action.

The Applicant states under one acre of tree clearing would be required for construction of the project. Tree clearing as proposed would lead to minimal forest fragmentation and wildlife habitat impacts.

Impacts to other listed species would be avoided as no in-water work is planned for the project.

### *Vegetation*

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

VEGETATION	
Vegetation Community Type	Total (Acres)
Agricultural Buffer	8.7
Forestland	155.8
Old Field	199.7
Agricultural Lands	2,652.5
Total	3,016.7

The estimated vegetative impact includes the entire project area presented within the application. However, the entire project area would not be developed as part of this project. As a result, permanent impacts associated with this project would be less than the amount shown. Permanent vegetative impacts would occur primarily within agricultural lands. Forestland impact is estimated to be less than one acre. Actual forest clearing may vary slightly. Further, Staff's recommendation to preserve wooded corridors would reduce total tree clearing.

Staff recommends the implementation and maintenance of native pollinator-friendly plantings in selected locations along the outside border of the solar fields and incorporate plantings of legumes and wildflowers in areas between the solar panels. Plantings should be selected in consultation with the Ohio Pollinator Habitat Initiative. These features would enhance the visual appeal of the project, enrich local wildlife habitat, and benefit the local farming community. Pollinator plantings would: help reduce erosion; reduce fertilizer, herbicide, and pesticide use; discourage invasive species; and improve water quality. The project would implement permanent vegetative cover, such as native grass seed mix under the solar array and a pollinator-friendly seed mix in select open areas outside of the array and within the project perimeter fence line, as this project has, would represent a reduced environmental impact when compared to the current land use of agricultural plant production. This is due to the elimination of frequent tilling, fertilizer and pesticide application, and increased plant diversity.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Ecological Conditions** heading of the Recommended Conditions of Certificate section.

## **Public Services, Facilities, and Safety**

### *Wind Velocity*

The Applicant analyzed historical wind velocities from the Ohio Agricultural Research and Development Center's closest weather station in Columbus, Ohio. The Applicant found that wind velocities were typically below five miles per hour for a significant majority of time. The Applicant has no extraordinary plans to mitigate for adverse consequences from high wind velocities. Staff recommends that during the detailed engineering phase, the Applicant would minimize any potential damage from high wind velocities by proper structural design of the project support equipment at sufficient depths based on the site-specific soil conditions to preclude any adverse influence from high wind velocities. Staff has found that components of the proposed facility are generally not susceptible to damage from high winds except for tornado-force winds, because generally the panels and racking systems proposed for solar facilities have wind speed design load ratings inherent in their design.

### *Roads and Bridges*

The Applicant has yet to finalize its delivery route, although it is expected that deliveries to the project site would be from the northwest by way of State Route 207 and US Route 22. From these corridors, several combinations of county and township roads have been identified as viable routes to access the site. Eight bridges and one culvert were identified in the transportation study and were determined to be in adequate condition. No load restriction postings were identified. One road, Township Route 118, is not in adequate condition to support construction traffic. The Applicant states this issue would be addressed in the Road Use Maintenance Agreement with Pickaway County.

Conventional heavy equipment which does not require special permitting would make up the majority of construction traffic. Four transformers would be delivered to the substation interconnection located adjacent to State Route 207. These loads are most likely to be overweight and would require special permitting and route coordination for delivery.

The Applicant did not identify any active railroads that would be crossed by construction material deliveries. The Applicant stated that an increase in truck traffic would be anticipated during construction for the purpose of project area equipment access and equipment and material deliveries. 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 its contractor would obtain all necessary permits from ODOT the County Engineer, and Perry and Deer Creek townships prior to construction. No road closures are to be expected.

Once the transportation permitting process has been completed, Staff recommends that the Applicant develop a final transportation management plan which would include the county required road use agreement. Any damaged public roads and bridges would be repaired promptly to their previous condition by the Applicant under the guidance of the appropriate regulatory authority. Any temporary improvements would be removed unless the appropriate regulatory authority requests that they remain in place.

### *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 18 months 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 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, the step-up transformer at the new substation, and tracking motors.

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 a representative inverter model. The model showed that operational noise impacts would be approximately the same as or less than ambient noise levels. 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. Once an inverter model is chosen, the Applicant will 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.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Public Services, Facilities, and Safety Conditions** heading of the Recommended Conditions of Certificate section.

### **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 initial site selection focused on four primary criteria: transmission proximity, geophysical and environmental review, landowner and community interest, and competition research. The Applicant selected the subject site for further development because of interest and positive feedback from landowners and local officials, positive results from initial transmission studies and compatibility for previously disturbed cultivated cropland for solar development.

During the public informational meeting, the Applicant solicited written comments from attendees. The Applicant states that many residents were excited about the opportunity and the idea of renewable energy in Pickaway County. Nine written comments were left, including comments about viewshed concerns, support for the project, future expansion of the project, concern about the use of farmland for the project, concerns with the meeting itself, and concerns about drainage tiles.

#### **Minimizing Impacts**

The OHPO recommended that no further archaeological surveys were required. Staff has reviewed the Applicant's architectural and archaeological surveys and OHPO's recommendations. Staff concurs with the OHPO that the project is not expected to have any adverse effect to historic properties.

The proposed facility would have an overall positive 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 present conditions that would limit or negatively impact the construction and future operation of this solar energy facility.

No direct wetland or stream impacts are anticipated and no in-water work is proposed. 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 project would not cross a 100-year floodplain.

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. Staff recommends that the Applicant limit the hours of construction to address potential construction and operational related concerns from any nearby residents. Staff has also recommended that the Applicant submit an updated noise study, using noise data from the inverter chosen for the project. The updated noise study would show that sound levels would not exceed the daytime ambient level at any non-participating sensitive receptor to assure that operation noise impacts are minimal. 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 components for the entire project would be delivered by truck. The transportation management plan would be finalized once the engineering layout is determined. 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 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 robust final landscape and lighting plan that addresses the potential impacts of the facility.

The Applicant has committed to take steps in order 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, and used engineering, such as GIS data, to determine the locations of drain tile mains. In order 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 promptly repair any drain tile found to be damaged by the project during the operational life of the project. Following decommissioning of the facility, land can be restored for agricultural use.

The Applicant has prepared a 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.

While the Applicant has not identified the precise final layout of the facility, it has identified an acceptable maximum extent of impacts. This has been accomplished through clearly identifying limits of disturbance and maximum dimensions of equipment such as fences, panels, and access roads. Ancillary impacts which may change as a result of final equipment selection, such as noise, would be minimized through Staff recommended conditions. The Applicant explained that given the time length of the certification process and market factors for utility-scale solar facilities it is not economically feasible to identify the models to be used and give the precise location within the fence of the various components at the time of submittal of the application. Utility scale solar components are a rapidly advancing technology, both in cost and performance, and final model selections must occur close to construction start. The financing for procurement and construction of a project is affected by the final model choices and the final engineering and design is based on those models. Submission of the final design with the Application would result in procurement decisions and final design and engineering that would likely be obsolete by the time of financing and construction start.

## **Conclusion**

Staff concludes that the proposed project would result in both temporary and permanent impacts to the project and surrounding areas. Due to the low potential to impact land use, cultural resources, surface water resources, wildlife, and Staff's recommended conditions to further mitigate these 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 bulk power system (BPS).

The facility proposed by the Applicant is a solar photovoltaic generating facility located in Pickaway County, capable of producing 199.6 MW. The proposed facility would interconnect to Dayton Power and Light's (DP&L) existing Atlanta 345/69 kV Substation at 69 kV.

### **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. NERC reliability standards are included as part of the system evaluations conducted by PJM Interconnection, LLC (PJM).<sup>32</sup>

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32. 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 criteria with the addition of generation in its footprint.

## PJM

The Applicant submitted four generation interconnection requests for the proposed facility to PJM. PJM has completed the Feasibility Studies, System Impact Studies, and Facilities Studies.<sup>33,34,35</sup> The Interconnection Service Agreement (ISA) and Construction Interconnection Service Agreements (CISA) were executed and filed with the Federal Energy Regulatory Commission.<sup>36</sup> The Applicant requested an energy injection of 199.6 MW, of which 134.4 MW could be available in the PJM capacity market. The capacity market ensures the adequate availability of necessary generation resources can be called upon to meet current and future demand.

The Applicant is in the process of amending its executed ISA and CISA to combine the energy output of its four queue IDs into two energy outputs of 99.8 MW. The Applicant anticipates the amended ISA and CISA will be executed in October 2020. The table below displays the queue positions assigned to the Applicants project by PJM.

<b>PJM QUEUES: ATLANTA FARMS SOLAR PROJECT</b>			
<b>Queue ID</b>	<b>Queue Date</b>	<b>Energy (MW)</b>	<b>Pending ISA/CISA Amendment Combined Energy (MW)</b>
AC1-068	9/26/2016	49.9	99.8
AC1-069	9/26/2016	49.9	
AC1-165	10/31/2016	49.9	99.8
AC1-166	10/31/2016	49.9	
<b>Total</b>		<b>199.6</b>	<b>199.6</b>

The Applicant proposes to build a 34.5 kV collection system which would collect direct current (DC) power from the solar panels and deliver it to one of the project collection stations. The collection stations would invert the DC power to 34.5 kV alternating current (AC) and transform the energy into 69 kV. The transformed energy would be injected into the BPS via DP&L's Atlanta 345/69 kV Substation.

## Network Impacts

PJM analyzed the proposed facility interconnected to the BPS. A 2020 summer peak power flow model was used to evaluate the regional reliability impacts. The studies revealed an overload on the American Electric Power (AEP) Adkins-Beatty 345 kV transmission line during a contingency event on the Killen-Don Marquis 345 kV transmission line. The ISA requires AEP to complete PJM network upgrade n5933.<sup>37</sup> The upgrade would alleviate the overload by replacing structures and upgrading the conductors leaving Adkins substation. The upgrade is required for the

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33. PJM Interconnection, "New Services Queue," Feasibility Study for Queue IDs: AC1-068, AC1-069, AC1-165, and AC1-166, accessed September 1, 2020, <https://pjm.com/planning/services-requests/interconnection-queues.aspx>.

34. Id.

35. Id.

36. Federal Energy Regulatory Commission, Docket number ER19-1133, ER19-1134, ER19-1138, and ER19-2113, <https://www.ferc.gov/ferc-online/elibrary>, accessed September 1, 2020.

37. Federal Energy Regulatory Commission, Docket number ER19-2113, <https://www.ferc.gov/ferc-online/elibrary>, accessed September 1, 2020.

Applicant's project to be placed in-service. The estimated cost of this upgrade is \$400,000 and would be paid for by the Applicant. The below chart displays the results of the PJM SIS for the PJM regional footprint.<sup>38</sup>

<b>PJM REGIONAL SYSTEM IMPACTS (Summer Peak)</b>	
<b>Generator Deliverability - System Normal &amp; Single Contingency Outage</b>	
<i>Plant Output: Capacity Level – 134.4 MW</i>	Single contingency on the Killen-Don Marquis 345 kV transmission line overloads the Adkins-Beatty 345 kV transmission line.
<b>Category C and D - Multiple Contingency Outages</b>	
<i>Plant Output: 199.6 MW</i>	No problems identified

### **Contribution to Previously Identified Overloads – Dayton Analysis**

DP&L studied overloads where the proposed facility may affect earlier projects in the PJM Queue. The results revealed a thermal overload on the New Holland-Robinson 69kV transmission line for the loss of Adkins-Beatty 345kV transmission line, which the AC1 queue projects contributes towards. The ISA requires DP&L to complete PJM network upgrade n5456.<sup>39</sup> The upgrade would relieve the overload by replacing a wave trap on the New Holland 69 kV terminal at Robinson Substation. The estimated cost of this upgrade is \$27,633 and would be paid for by the Applicant.<sup>40</sup>

### **Potential Congestion due to Local Energy Deliverability- Energy Delivery Impacts**

PJM studied the delivery of the energy portion. Network upgrades under this section would allow for the delivery of energy with operational restrictions. The upgrades are at the discretion of the Applicant. The results identified two overloads on the Adkins-Beatty 345 kV transmission line under no contingency and a single contingency.<sup>41</sup>

### **Short Circuit Analysis**

The short circuit analysis study, which is part of the System Impact Study, evaluates the interrupting capabilities of circuit breakers that would be impacted by the proposed generation addition. The results identified no circuit breaker problems.

### **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

38. Id.

39. Id.

40. Id.

41. PJM Interconnection, "New Services Queue," System Impact Study for Queue ID: AC1-166, accessed September 1, 2020, <https://pjm.com/planning/services-requests/interconnection-queues.aspx>.

for the proposed facilities 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)(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**

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. These methods of dust control are 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**

Neither construction nor operation of the proposed facility would require the use of significant amounts of water. Therefore, the requirements under R.C. 1501.33 and 1501.34 are not applicable to this project.

The Applicant anticipates obtaining environmental permits if necessary. The Applicant would mitigate potential water quality impacts associated with aquatic discharges by obtaining NPDES construction storm water general permits from the Ohio EPA with submittal of a SWPPP to direct the implementation of construction related storm water BMP.

Current project design and construction methods make the following permits unnecessary, but changes may precipitate the need for the following permits:

- The U.S. Army Corps of Engineers Section 404 or nationwide permit for stream crossings and wetland impacts.
- Ohio EPA Water Quality Certification under Section 401 of the Clean Water Act.
- Ohio EPA Isolated Wetland Permit

The Applicant will develop an SPCC to mitigate the unlikely release of hazardous substances.

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**

The project would require the removal of four grain silos and some woody vegetation debris. Debris generated from construction activities would include items such as plastic, wood, cardboard, metal packing/packaging materials, construction scrap, and general refuse. The amount of refuse generated during construction would be approximately 9,600 cubic yards. The Applicant stated that all construction-related debris would be disposed of at an authorized solid waste disposal facility.

Operation of the project would generate small amounts of non-hazardous solid waste, including trash associated with running the O&M facility, which would be reused, recycled, or disposed of in accordance with federal, state, and local requirements.

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

### **Aviation**

The height of the tallest above ground structures would be the gen-tie line poles which would be approximately 70 feet tall. That height is under the height requirement from the Federal Aviation Administration (FAA), pursuant to 14 CFR Part 77.9(a), for filing a Form 7460-1.

There are no airports, helicopter pads, or landing strips within five miles of the project area. According to the FAA, the closest public-use airport is the Pickaway County Memorial Airport (CYO) which is just over nine miles from the proposed solar farm project operation and maintenance building.

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. As of the date of this filing, no such concerns have been identified.

All Staff recommendations for the requirements discussed in this section can be found under the **Air, Water, Solid Waste, and Aviation Conditions** heading of the Recommended Conditions of Certificate.

### **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.

## **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 comply with those safety standards applicable to commercial scale solar farms set by the Occupational Safety and Health Administration. In addition, the Applicant has indicated that it would use equipment compliant with applicable Underwriters Laboratories, Institute of Electrical and Electronics Engineers, National Electrical Code, National Electrical Safety Code, and American National Standards Institute standards. The facility electrical system would be designed/certified by a licensed professional engineer. The Applicant intends that components would also be regularly inspected for safe and reliable operation.

The Applicant intends to use warning signs, fencing, and locked gates to restrict access to the potential hazards within the solar project area. Additionally, the Applicant intends to design its facility with setbacks from the fence to public roads, from the above-ground equipment to public roads, from its fence and adjacent property lines, from the above-ground equipment to public roads, and from above-ground equipment and habitable residences.

The Applicant would work with local fire departments and other emergency responders to provide training for response to emergencies related to a solar farm. The Applicant stated that it intends to restrict public access to the facility during construction by enclosing the project area with a plastic mesh fence during construction and seven feet tall chain-link fence during operation. The Applicant also intends to develop and implement an emergency response plan and consult with potentially affected local officials and emergency response personnel.

#### **Public Interaction and Participation**

The Applicant hosted a public informational meeting for this project. Attendees were provided the opportunity to view maps of the project, speak with representatives of the Applicant, and provide written comments.

The Applicant served copies of the complete application on the Pickaway County Commissioners, the Deer Creek and Perry township trustees, the Pickaway County Planning Commission, the Pickaway County Engineer, and the villages of New Holland and Williamsport. The Applicant sent a copy of the complete application to the Pickaway County Library and the Floyd E. Younkin Branch Library. Copies of the complete application are also available for public inspection at the offices of the PUCO and on the PUCO online Docketing Information System website.

The Applicant has developed a complaint resolution plan to handle complaints during the construction and operation of the facility. The Applicant has committed to notify, by mail, affected property owners and tenants, no later than seven days prior to the start of construction. The Applicant stated that this notice will include a copy of the complaint resolution plan. Staff recommends that a similar notice be mailed to these same individuals at least seven days prior to the start of facility operation. Staff also recommends that the Applicant submit to Staff a quarterly complaint summary report during construction and the first five years of operation.



The Administrative Law Judge scheduled a public hearing and an adjudicatory hearing for this proceeding. Due to the continued state of emergency, and given the passage of Am. Sub. H.B. 197, the hearings will be held using remote access technology that facilitates participation by telephone and/or live video on the internet.

The public hearing will be held on Oct. 22, 2020, beginning at 6 p.m. The purpose of the public hearing is to allow residents in the local community, who are not parties to the case, to provide testimony about the project. Testimony will be limited to five minutes per witness, and the hearing transcript will become part of the case record considered by the OPSB.

Individuals who wish to provide testimony must register with the OPSB by 12 p.m., on October 21, 2020, by completing the online registration form at <https://opsb.ohio.gov/wps/portal/gov/opsb/events/Atlanta-farms-public-hearing> or by calling (800) 686-7826. Individuals will be required to provide their full name and contact information and specify whether they plan to join the Webex event by internet or by telephone.

Individuals who wish to attend the hearing and not offer testimony may do so by dialing (408) 418-9388 at any time during the hearing and entering access code 173 031 1816. The hearing will also be live streamed [www.youtube.com/user/PUCOhio](http://www.youtube.com/user/PUCOhio).

The adjudicatory hearing is scheduled for Wednesday, November 4, 2020, at 10:00 a.m. As of October 7, 2020, five members of the public have filed public comments in the record for this case. Each commenter is opposed to the project citing concerns including potential impacts to agriculture and farmland preservation, the environment and water, and other impacts including glare and additional burden on local emergency responders. All public comments are made available for board members and the public to view online in the case record at <http://dis.puc.state.oh.us>. The Ohio Farm Bureau Federation has filed a motion to intervene in this case, which remains pending.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the Recommended Conditions of Certificate section.

### **Recommended Findings**

Staff recommends that the Board find that the proposed facility would serve the public interest, convenience, and necessity, and therefore complies with the requirements specified in R.C. 4906.10(A)(6), 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)(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 or produce a minimum average gross annual income of \$2,500.

Four agricultural district parcels would be impacted by the construction of the proposed facility. The construction of the proposed facility would result in the loss of 1,268.5 acres of agricultural lands and 67 acres of agricultural district land. However, the repurposed land could be restored for agricultural use when the project is decommissioned.

The construction and operation of the proposed facility would 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 damaging drain tile mains can help prevent the pooling of water on project parcels and adjacent parcels. When landowners lay down or repair drain tiles they often keep records of the location of the drain tiles. The Applicant has consulted landowners and county records, and used engineering, such as geographic information system (GIS) data, to determine the locations of drain tile mains. The Applicant asserts that laterals are typically spaced 30-50 feet apart and can be avoided during construction of the project. In order to avoid impacts to drain tiles, the Applicant stated that it would locate drain tiles as accurately as possible prior to construction. Also, the Applicant has committed to promptly 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 in order to address such potential impacts to farmland, including: repairing all drainage tiles damaged during construction and restoring temporarily impacted land to its original use. Excavated topsoil would be separated during construction and returned as topsoil after construction, unless otherwise requested by the landowner. Restored topsoil would be seeded after construction to prevent erosion.

The decommissioning plan for the proposed project calls for returning the affected land to original or similar conditions. This plan includes repairing any drainage tiles and the de-compaction of soil.

### **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.

Construction of the proposed facility would not require the use of significant amounts of water. Water may be utilized for dust control during earthwork activities as needed.

Operation of the proposed facility would not require the use of significant amounts of water, and nearly no water or wastewater discharge is expected. The project would use water for occasional cleaning of panels a few times each year as needed. Therefore, the requirements under R.C. 1501.33 and 1501.34 are not applicable to this project.

#### **Recommended Findings**

The Staff recommends that the Board find that the proposed facility would incorporate maximum feasible water conservation practices, and the requirements under R.C. 1501.33 and 1501.34 are not applicable to this project.

#### **IV. RECOMMENDED CONDITIONS OF CERTIFICATE**

Following a review of the application filed by the Atlanta Farms Solar Project, LLC, and the record compiled to date in this proceeding, Staff recommends that a number of conditions become part of any certificate issued for the proposed facility. 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:

##### **GENERAL CONDITIONS**

Staff recommends the following conditions to ensure conformance with the proposed plans and procedures as outlined in the case record to date, and to ensure compliance with all conditions listed in this Staff Report:

- (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. 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) 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.
- (5) As the information becomes known, the Applicant shall file in this proceeding the date on which construction will begin, the date on which construction was completed, and the date on which the facility begins commercial operation.
- (6) 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. The Applicant shall provide a schedule of construction activities and acquisition of corresponding permits for each activity at the preconstruction conference.

- (7) At least 30 days prior to the preconstruction conference, the Applicant shall submit to Staff, for review and acceptance, one set of detailed engineering drawings of the final project design 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.
- (8) All final geotechnical study results shall be submitted on the docket. The detailed engineering drawings of the final project design shall account for wind loads and geological features (including but not limited to karst topography) 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.
- (9) 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 including those individuals who were provided notice of the public informational meeting, residences located within one mile of the project area, parties to this case, county commissioners, township trustees, emergency responders, airports, schools, and libraries, as well as anyone who has requested updates regarding the project. These notices will provide information about the project, including contact information and a copy of the complaint resolution plan. The start of construction notice must also contain a timeline for construction and restoration activities, and the start of facility operations must also contain a timeline for the start of operations. The Applicant shall also file a copy of these notices on the public docket. During the construction and operation of the facility, the Applicant shall submit to Staff a complaint summary report by the fifteenth day of April, July, October, and January of each year for the first five years of operation. The report should include a list of all complaints received through the Applicant's complaint resolution process, a description of the actions taken toward a resolution of each complaint, and a status update if the complaint has yet to be resolved.

## **SOCIOECONOMIC CONDITIONS**

Staff recommends the following conditions to address the impacts discussed in the **Socioeconomic Impacts** section of the Nature of Probable Environmental Impact:

- (10) 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 7:00 p.m. or until dusk when sunset occurs after 7:00 p.m. Impact pile driving may occur between 7:00 a.m. and 9 a.m. if the noise impact at non-participating receptors is not greater than daytime ambient Leq plus 10 dBA. Hoe ram

and blasting 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.

- (11) Prior to commencement of 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 and also include a plan describing the methods to be used for fence repair. 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. 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 for review and confirmation that it complies with this condition.
- (12) 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 to at least original conditions or modern equivalent at the Applicant's expense. If the affected landowner agrees to not having the field tile system repaired, they may do so only if the field tile systems of adjacent landowners is unaffected by the non-repair of the landowner's field tile system.
- (13) At least 30 days prior to construction, the Applicant shall submit an updated noise study, using noise data from the inverter chosen for the project. 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.

### **ECOLOGICAL CONDITIONS**

Staff recommends the following conditions to address the impacts discussed in the **Ecological Impacts** section of the Nature of Probable Environmental Impact:

- (14) The Applicant shall adhere to seasonal cutting dates of October 1 through March 31 for the removal of trees three inches or greater in diameter to avoid impacts to Indiana bats and northern long-eared bats, unless coordination with the Ohio Department of Natural

Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) allows a different course of action.

- (15) Construction in upland sandpiper preferred nesting habitat types shall be avoided during the species' nesting period of April 15 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 ODNR allows a different course of action.
- (16) 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.
- (17) The Applicant shall contact Staff, the ODNR, and the USFWS 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.

### **PUBLIC SERVICES, FACILITIES, AND SAFETY CONDITIONS**

Staff recommends the following conditions to address the impacts discussed in the **Public Services, Facilities, and Safety** section of the Nature of Probable Environmental Impact:

- (18) Prior to commencement of construction activities that require transportation permits, the Applicant shall obtain all such permits. The Applicant shall coordinate with the appropriate authority regarding any temporary road closures, lane closures, road access restrictions, and traffic control necessary for construction and operation of the proposed facility. Coordination shall include, but not be limited to, the county engineer, the Ohio Department of Transportation, local law enforcement, and health and safety officials. The Applicant shall detail this coordination as part of a final traffic plan submitted to Staff prior to the preconstruction conference for review and confirmation by Staff that it complies with this condition.
- (19) The Applicant shall provide the Board's Staff a copy of the transportation management plan and any road use agreement(s) upon receipt or 30 days prior to the preconstruction conference.
- (20) The facility shall be operated in such a way as to assure that no more than 199.6 megawatts would at any time be injected into the Bulk Power System.



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