

Staff Report of Investigation

South Branch Solar 138 kV Gen-Tie Transmission Line
South Branch Solar, LLC

Case No. 23-0373-EL-BTX

January 16, 2024



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

**In the Matter of the Application of South Branch Solar, LLC)
For a Certificate of Environmental Compatibility and Public)
Need for a Generation Tie Transmission Line)** **Case No. 23-0373-EL-BTX**

Staff Report of Investigation

Submitted to the
OHIO POWER SITING BOARD
BEFORE THE POWER SITING BOARD OF THE STATE OF OHIO

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I. EXECUTIVE SUMMARY

The authority of the OPSB is prescribed by Ohio Revised Code (R.C.) Chapter 4906. R.C. 4906.10 specifies that the Board shall not grant a certificate for the construction, operation, and maintenance of a major utility facility, either as proposed or as modified by the Board, unless it finds and determines eight specified criteria. Staff investigated the application presented by American Transmission Systems, Incorporated (Applicant) and recommends that the Board approve the Applicant's request for a certificate of environmental compatibility and public need subject to the proposed conditions contained in this report.

I. POWERS AND DUTIES

OHIO POWER SITING BOARD

The authority of the OPSB is prescribed by Ohio Revised Code (R.C.) Chapter 4906. R.C. 4906.03 and authorizes the Board to issue certificates of environmental compatibility and public need for the construction, operation, and maintenance of major utility facilities defined in R.C. 4906.01. Included within this definition of major utility facilities are: electric generating plants and associated facilities designed for, or capable of, operation at 50 megawatts (MW) or more; electric transmission lines and associated facilities of a design capacity of 100 kilovolts (kV) or more; and gas pipelines greater than 500 feet in length and more than nine inches in outside diameter, and associated facilities, designed for transporting gas at a maximum allowable operating pressure in excess of 125 pounds per square inch. In addition, pursuant to R.C. 4906.20, the Board authority applies to economically significant wind farms, defined in R.C. 4906.13(A) as wind turbines and associated facilities with a single interconnection to the electrical grid and designed for, or capable of, operation at an aggregate capacity of five MW or greater but less than 50 MW. R.C. 4906.13 excludes from economically significant wind farms, one or more wind turbines and associated facilities that are primarily dedicated to providing electricity to a single customer at a single location and that are designed for, or capable of, operational at an aggregate capacity of less than 20 MW, measured at the customer's point of interconnection (POI) to the electrical grid.

Membership of the Board is specified in R.C. 4906.02(A). The voting members include: the Chairperson of the Public Utilities Commission of Ohio (PUCO or Commission) who serves as Chairperson of the Board; the directors of the Ohio EPA, the ODH, the ODOD, the Ohio ODA, and the 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. In addition, the Board shall include four legislative members who may participate fully in all the board's deliberations and activities except that they shall serve as nonvoting members. The speaker of the Ohio house of representatives shall appoint one legislative member, and the president of the Ohio senate and minority leader of each house of the Ohio General Assembly shall each appoint one legislative member. In all cases involving an application for a certificate or a material amendment to an existing certificate for a utility facility, as defined in R.C. 303.57, the Board shall include two voting ad hoc members, as described in R.C. 4906.021

NATURE OF INVESTIGATION

The Board has promulgated rules and regulations, found in Ohio Administrative Code (Ohio Adm.Code) 4906 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.¹ 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.²

Within 60 days of receiving an application, the Chairperson must determine whether the application is sufficiently complete to begin an investigation.³ 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.⁴ At the public hearing, any person may provide written or oral testimony and may be examined by the parties.⁵ Not later than three days after an application for a certificate, or a material amendment to an existing certificate, for a utility facility, as defined in R.C. 303.57, is found to be in compliance with R.C. 4906.06(A), is accepted by the Board, and the filing fee is paid by the Applicant, the board shall provide a copy of the application to each board of trustees and each board of county commissioners of the townships or counties in which the facility is to be located.⁶

Staff Investigation and Report

The Chairperson 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.⁷ The report sets forth the nature of the investigation and contains the findings and conditions recommended by Staff.⁸ 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 ODOT, the OHPO, and the USFWS.

The technical investigations and evaluations are conducted pursuant to Ohio Adm.Code 4906-1-01 et seq. The recommended findings resulting from the 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

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1. R.C. 4906.04 and 4906.20.
 2. R.C. 4906.06(A) and 4906.20(B)(1).
 3. Ohio Adm.Code 4906-3-06(A).
 4. R.C. 4906.07(A) and Ohio Adm.Code 4906-3-08.
 5. R.C. 4906.08(C).
 6. See R.C. 4906.31(A).
 7. R.C. 4906.07.
 8. Ohio Adm.Code 4906-3-06(C).

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.⁹ A record of the public hearings and all evidence, including the Staff Report, may be examined by the public at any time.¹⁰

Board Decision

The Board may approve or deny an application for a certificate of environmental compatibility and public need as filed, or modify and approve it upon such terms, conditions, or modifications as the board considers appropriate.¹¹ The certificate shall be subject to R.C. 4906.101, 4906.102, and 4906.103 and is also conditioned upon the facility being in compliance with applicable standards and rules adopted under the Ohio Revised Code.¹²

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.¹³ 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.¹⁴ Any party to the proceeding that believes its issues were not adequately addressed by the Board may submit within 30 days an application for rehearing.¹⁵ An entry on rehearing would then be issued by the Board within 30 days and may be appealed within 60 days to the Supreme Court of Ohio.¹⁶

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;

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

10. R.C. 4906.09 and 4906.12.

11. R.C. 4906.10(A).

12. R.C. 4906.10.

13. R.C. 4906.11.

14. R.C. 4906.10(C).

15. See R.C. 4903.10 and 4906.12.

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

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

South Branch Solar, LLC, the Applicant, is a wholly owned subsidiary of Leeward Renewable Energy, LLC (Leeward). Leeward is headquartered in Dallas, TX, United States and is part of the renewable energy industry. Leeward is a portfolio company of OMERS Infrastructure, an investment arm of OMERS, a Canadian public pension fund, headquartered in Toronto, Ontario, Canada. Leeward is a renewable energy company that owns and operates utility-scale renewable energy projects across nine states. Leeward has developed 2,000 MW of renewable projects and plans to develop, construct, own, and operate the proposed project throughout its operating life.

HISTORY OF THE APPLICATION

On May 3, 2023, the Applicant held a public informational meeting.

On June 7, 2023, the Applicant filed its application for a certificate of environmental compatibility and public need to construct the project.

On August 4, 2023, the Executive Director of the OPSB issued a letter of compliance regarding the application to the Applicant.

A local public hearing has been scheduled for January 31, 2024.

The adjudicatory hearing is scheduled to commence on February 14, 2024.

This summary of the history of the application does not include every filing in case number 23-0373-EL-BTX. 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

South Branch Solar, LLC (Applicant) proposes to construct an approximately 2.4-mile 138 kV generation interconnect (gen-tie) electric transmission line in Washington township in Hancock County, Ohio. The gen-tie line would connect the South Branch Solar electric generating facility (solar facility) to the existing American Electric Power (AEP) Fostoria Central Substation and the bulk electric power system.

The Ohio Power Siting Board (Board) issued an Opinion, Order, and Certificate on February 16, 2023, in Case No. 21-0669-EL-BGN (Original Certificate) authorizing construction, operation, and maintenance of the South Branch solar facility and a gen-tie line. In this current case, the Applicant would construct, own, operate, and maintain a gen-tie transmission line on a separate route from the previously approved line.

In the Original Certificate, the Board authorized the construction of a gen-tie line, project facility collection substation, and utility switchyard. In this Application, the Applicant seeks the flexibility to relocate project facility collection substation and connect through this new gen-tie route. If this new proposed gen-tie is selected, the currently authorized interconnection would not be

used, and the need for a utility switchyard at the solar facility would be eliminated. Also, the project facility collection substation would be relocated as depicted in this Application.

The gen-tie line would connect the Solar Facility's collection substation with the interconnect up to 129.6 MW of electricity. The Applicant may pursue an increase in electric generation of the proposed solar facility from 129.6 MW to 205 MW in a future separate filing with the Board.

This proposed project involves the (1) installation of a new collector substation for the solar facility and (2) construction of a new electric transmission line between that new proposed collector substation and the existing AEP Fostoria Central Substation. The Applicant has proposed an approximately 50-foot right-of-way for the new transmission line. The line would use a combination of wood and steel structures for support. The Applicant utilized field survey data to further identify route alternatives and to ultimately select its Preferred and Alternate routes.

Preferred Gen-Tie Route

The Preferred Route is approximately 2.38 miles long. The Preferred Route begins at the southeastern corner of the solar facility at the proposed collector substation as an overhead electric transmission line. The Preferred Route travels northeast along the north side of the existing Norfolk Southern railroad until it reaches County Road 261. At that point, the proposed gen-tie line would be installed underground via trenching or horizontal directional drilling (HDD) construction methods until it connects with a dead-end structure just outside the AEP Fostoria Central Substation.

Alternate Gen-Tie Route

The Alternate Route is approximately 2.46 miles long. The gen-tie Alternate Route also begins at the southeastern corner of the solar facility at the proposed collector substation as an overhead electric transmission line and crosses the railroad tracks. The Alternate Route then travels northeast along the south side of the existing Norfolk Southern railroad until it reaches County Road 261. At that point, the proposed gen-tie Alternate Route crosses the railroad tracks and continues overhead to connect with a dead-end structure just outside the AEP Fostoria Central Substation.

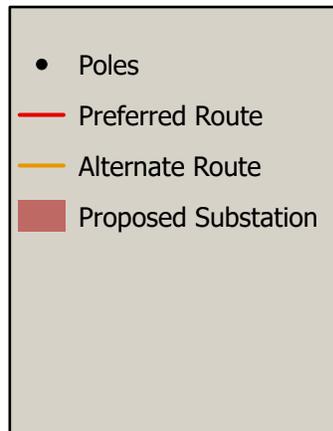
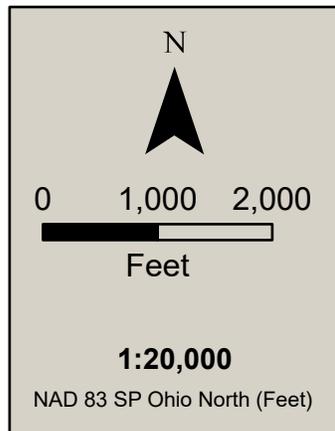
Project Collection Substation

The Applicant plans to construct and install a new collection substation, which was originally authorized in Case No. 21-0669-EL-BGN. In this Application, the Applicant proposes a new location on the southeastern corner of the solar facility footprint for the project collection substation. The major components of the Applicant's project collection substation would include a 138 kV circuit breaker, main power transformer(s), bus work, dead-end terminal structures, concrete foundations, switches, control house, surge arrestors, and perimeter fencing.

Both the project Collection Substation, Preferred and Alternate routes are shown on the maps in this report.

Project Schedule

The Applicant anticipates construction to begin third quarter of 2024 and be completed within eight to 12 months. The project would then be placed in service in the third quarter of 2025.



Overview Map

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**South Branch Solar
138kV Generation Tie**

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.

III. CONSIDERATIONS AND RECOMMENDED FINDINGS

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

Purpose of Proposed Facility

The Applicant proposes to construct a 2.38-mile 138 kV transmission line and project substation in Hancock County, Ohio. The proposed transmission line and project substation would interconnect South Branch Solar to the bulk power system (BPS) through AEP's existing Fostoria Central Substation.¹⁷

Long Term Forecast

The Applicant is neither an owner nor an operator of a "Major Utility Facility" as defined by the Ohio Revised Code and, as such, is not required to file a Long-Term Forecast Report with the PUCO.¹⁸

System Economy and Reliability

PJM Interconnection, LLC (PJM) completed all the applicable studies and filed a signed Interconnection Service Agreement with the Federal Energy Regulatory Commission for two queue positions. The remaining queue position is in the feasibility study stage to increase the capacity component.¹⁹ Additional details related to the queue positions can be found in the Electric Grid section of this report. The proposed project is an integral part of South Branch Solar, and, without it, energy would be unable to reach the BPS.

¹⁷. In the Matter of the Application of South Branch Solar, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Hancock County, Ohio, Case No. 21-0669-EL-BGN, Opinion, Order, And Certificate, February 16, 2023.

¹⁸. R.C. 4935.04(C) and Ohio Adm.Code. 4901:5-5.

¹⁹. PJM Interconnection, "Services Request Status," for Queue IDs: AD1-070/AG1-076/AG2-579, accessed December 6, 2023, <https://pjm.com/planning/service-requests/services-request-status>.

Recommended Findings

Staff recommends that the Board find that the basis of need for the project has been demonstrated and therefore complies with the requirements specified in R.C. 4906.10(A)(1), 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)(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.

Community Impacts²⁰

Land Use

This project would be located in Wahington Township in Hancock County. Land use in the area surrounding the proposed transmission line is predominately agricultural, with some residential, commercial, and industrial uses. The Preferred and Alternate routes would cross agricultural land for 75 and 75.5 percent of its length, respectively. The Preferred and Alternate routes right-of-way would encompass 495 acres and 500 acres of agricultural land, respectively. The Preferred and Alternate routes would each cross residential land for 7.5 percent of its length. The Preferred and Alternate routes right-of-way would each encompass 50 acres of residential land. Both routes parallel an existing railroad for a majority of the proposed routes. Land use impacts are therefore minimized by condensing impacts into an existing transportation corridor. There would be 16 structures within 200 feet of the proposed right-of-way of the Preferred Route and 17 within 200 feet of the proposed right-of-way of the Alternate Route. The disturbance area would be contained to the 200-foot-wide right-of-way and mostly in a 20 by 50 square foot area at each pole location.

Impacts to land use from construction would be contained to the right-of-way, which would be restored after construction is complete, through road paving, soil grading, seeding, and mulching. Staff asserts the project would not have a significant effect upon surrounding land uses, as those uses would continue without significant restrictions.

Regional Planning

The proposed electric transmission line would support increased regional growth by providing increased reliability and availability of electric power in the area. The project would not impact or hinder adjacent development on public and private properties. The transmission line would

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

foster increased reliability and availability of electric power to residential, commercial, institutional, and industrial users in the region.

Recreation

The project is located on railroad property adjacent to railroad tracks. No parks, churches, cemeteries, wildlife management areas, or nature preserves are located within 1,000 feet of the project. No impacts to these resources are expected.

Aesthetics

The project would have a limited visual impact on the surrounding area. A majority of the Preferred and Alternate routes runs adjacent to a railroad. A small number of residences would have a new visual impact due to the project, however this would be mitigated by installing 0.2 miles of transmission line underground in the area of a cluster of nearby residences in the northern section of the transmission line. Visual impacts have been reduced by the site selection of both proposed routes.

Cultural Resources²¹

The Applicant's consultant conducted a literature review and Phase I cultural resource survey to determine potential impacts to historical properties and archaeological sites. The survey included a review of the National Register of Historic Places (NRHP) and analysis of sites that may be eligible for inclusion in the NRHP, OHPO files, Ohio Archeological Inventory and Ohio Historic Inventory files, and other sources of data. No previously identified or newly identified archeological sites were identified. 35 historic resources were identified within the area of potential effect and the consultant recommended that all of the historic resources are ineligible for listing on the National Register of Historic Places. These results were submitted to OHPO. OHPO concurred that no further archaeological work is necessary for the project and recommends a finding of no adverse effect to historical properties. Staff agrees with these findings.

Economics

The project substation and generation-tie line would be constructed to allow energy produced by the solar facility to reach the electric interconnection. The Applicant states that the construction, employment, direct and ancillary purchases, and leases, easement payments, or purchases of adjacent land needed to support the solar facility would also be linked to the transmission line project and would have a positive economic impact on the local community. Staff agrees with this observation.

²¹. According to RC 149.53, "[a]ll departments, agencies, units, instrumentalities, and political subdivisions of the state shall cooperate with the Ohio history connection and the Ohio historic site preservation advisory board in the preservation of archaeological and historic sites and in recovery of scientific information from such sites, and for such purposes shall, whenever practical, by contract or otherwise provide for archaeological and historic survey and salvage work during the planning phases, before work on a public improvement begins or at other appropriate times." In Ohio, the Ohio Historic Preservation Office (OHPO) is part of the Ohio History Connection. (See, Ohio History Connection, About Section 106 Review, <<https://www.ohiohistory.org/preserve/state-historic-preservation-office/hpreviews/about-section-106-review>>).

The capital and intangible costs for the project substation would be approximately \$9,000,000 using a Class 3 estimate. The estimated capital and intangible costs for the preferred right-of-way would be \$4,876,420, while the same for the Alternate Route would be approximately \$213,000 more, with the cost of acquiring additional land and land rights not yet being determined. In its response to a data request the Applicant stated that no confidential costs were omitted from Table 06-1 of the Application. The Applicant estimates the cost of delays would be approximately \$1,000,000 per month, possibly greater, based upon knowledge of similar solar facilities.

Taxes

In a response to a data request, the Applicant stated that the tax revenue estimate associated with the South Branch Solar generation facility would not be materially affected by the South Branch Gen-Tie Line project. The project's PILOT payments are connected to or determined by the solar panel arrays and the gen-tie line as an associated facility. The solar facility and related substation and gen-tie line would provide annual revenues to the community, including local school districts. The Applicant provided an estimate of \$1,845,000 in annual revenue to Washington Township, Hancock County, and other beneficiaries, using an assumption of \$9000/MW per year for the solar facility capable of 205 MW generation. Staff notes that the Applicant may pursue an increase in electric generation of the proposed solar facility from 129.6 MW to 205 MW in a future separate filing with the Board.

Liability Insurance

Responding to a data request, the Applicant states that it will obtain and maintain insurance policies, in accordance with the insurance section of the License Agreement, against claims and liabilities arising out of personal injury, death, and property damage arising from the operation of the facility, substation, and gen-tie line. These would include a commercial general liability policy with a combined single limit of not less than \$2,000,000 for each occurrence, automobile liability insurance providing minimal annual limits of \$1,000,000 per occurrence, Worker's Compensation insurance in accordance with the law, and Employers' Liability Insurance with limits not less than \$1,000,000 per accident / employee deceased.

Public Services, Facilities, and Safety

Safety

The Applicant stated that it would comply with all applicable safety standards set by the Occupational Safety and Health Administration (OSHA), safety standards of the PUCO, the North American Electric Reliability Corporation (NERC) Reliability Standards, and industry best practices for construction. The Applicant also intends to utilize and maintain an approximately 50 feet wide right-of-way for the proposed project. The Applicant's design would meet the requirements of the National Electric Safety Code.

Communications

The Applicant has designed the facility to minimize interference with communications systems, the Applicant does not expect AM radio, FM radio, or television interference to occur.

Specifically, it's been designed and modeled to meet industry requirements for conductor tensions, sags, and electrical clearances.

The Applicant has performed an analysis of the potential effect on communications systems (i.e., radio or television) and found that no effect would occur within approximately 60 to 100 feet of the proposed gen-tie transmission line project centerline. Staff has found that typically any likely source of radio or television interference would be localized, and due to defective hardware, which could be easily detected and replaced. The Applicant indicates that it will maintain the transmission line in good condition, which should avoid impacts to radio and television reception. Also, once detected, the Applicant would repair or replace the defective hardware to eliminate the interference.

Traffic, Roads and Bridges²²

Construction is expected to utilize equipment on the adjacent rail line via rail cart, as well as through use of equipment traveling within the railroad property within the pole locations. The workspace is estimated to be approximately 20 feet by 50 feet around each pole location. Construction of the underground portion from County Road 261 to the point of interconnection would be done either HDD methods or open cut trenching. Disturbance would be limited to the width of the excavated trench. Work plans will be refined pending final design and coordination with Norfolk Southern. No temporary or permanent access roads are proposed for the Gen-Tie Line. Staging and laydown for the Gen-Tie Line is expected to occur off site in a railroad siding or within the generating facility site, with equipment and materials delivery to installation locations in coordination with Norfolk Southern. Staging and laydown areas for the project substation are expected to be entirely within the generating facility site. Therefore, construction of the proposed Gen-Tie Line is not expected to have a significant impact on the traveling public. Staff recommends that the Applicant coordinate with Norfolk Southern and all appropriate authorities to ensure minimal transportation related impacts.

Noise

Construction noise would include the use of a digger derrick and a crane. The Applicant does not anticipate using pile-driving or rock hammering/breaking. The total duration of construction of the line is expected to be 12 months. Construction activities would be limited primarily to daytime hours. The Applicant would notify property owners or tenants of the upcoming construction activities for the project in the same manner as required for the public information program, as stated in Ohio Adm.Code 4906-3-03(B)(2), including the potential for after-hours activities.

Most noise impacts associated with this project would occur during construction. The Applicant would mitigate noise impacts by using standard construction techniques and limiting construction activities to daylight hours, to the extent feasible. Occasional, short term, noise

²². The entity responsible for maintaining roads and bridges within Ohio depends on many factors. See, e.g., ODOT, Roadway Infrastructure Maintenance Responsibility Manual, <https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/maintenance-operations/rimr/rimr>. obtain and comply with appropriate road closure permitting agencies such as the Putnam and Hancock County Engineers and ODOT.

impacts associated with maintenance and repair activities would occur throughout the life of the facility. Although the Applicant states that construction activity would generally be limited to daylight hours, Staff recommends a condition that limits general construction activities to daylight hours unless the noise impact from the construction activities do not rise above ambient levels at sensitive receptors. If extraordinary circumstances require nighttime construction activities that include noise impacts above ambient levels at sensitive receptors, the Applicant shall notify Staff and affected property owners or tenants before the construction occurs.

Through incorporation of the Applicant's proposed practices and Staff's recommendations, noise impacts would be minimized.

Geology²³

The Lockport Dolomite is the uppermost bedrock along the proposed transmission routes. The bedrock depth in the area averages approximately 45-50 feet. No construction activities are expected to exceed depths where bedrock would be encountered as the deepest infrastructure would not exceed 20 feet.

The entire project area overlies an area of Ohio delineated to have karst geology.²⁴ The Lockport Dolomite has been documented as being susceptible to formation of sinkholes in Ohio. Conditions typically necessary for the formation of karst geology features include thin (<20 feet) to no glacial drift. As discussed above, the glacial drift thickness over bedrock throughout the majority of the project area is significantly above the 20 feet or less conditions that are conducive to formation of karst features. The nearest documented karst features are in excess of eight miles from the project area.²⁵ For these reasons, karst geology conditions are not expected to impact the proposed construction.

A total of 37 pole locations are proposed for the Preferred Route and 41 pole locations for the Alternate Route. All of the aboveground structures for both routes are anticipated to utilize a

²³. According, in part, to R.C. 1505.01, the ODNR's division of geological survey "[s]hall advise, consult, or collaborate with representatives of agencies of the state...on problems or issues of a geological nature when requested by such an agency..." One of the missions of the ODNR Division Geological Survey is "to provide geologic information and services needed for responsible management of Ohio's natural resources." (ODNR, Division of Geological Survey, *About the Division*, <<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/geologic-survey/division-of-geologic-survey/division-of-geologic-survey>>). This includes studying and investigating, among other things, glacial and surficial geology, bedrock geology, and geological hazards. According to ODNR a "geologic hazard or 'geohazard' is a geologic condition, either manmade or natural, that poses a potential danger to life and property. Ohio is home to a number of potential geohazards, including karst, mine subsidence, earthquakes, landslides, and shore erosion." (ODNR, *Geologic Hazards*, <<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/geologic-survey/geologic-hazards>>).

²⁴. Karst terrain is formed within carbonate (e.g., limestone or dolomite) or evaporite (e.g., anhydrite or gypsum) rocks through mineral dissolution caused by movement of water. Most common karst features include the formation of underground caves or channels, or the formation of depressions and sinkholes at the surface. Generally, karst features, and the likelihood of karst development are most prevalent in areas where the carbonate bedrock is overlain by 20 feet or less of glacial till material. Limestone and dolomite are the most common carbonate bedrock. Generally, Limestone is more prone to dissolution than dolomite.

²⁵. ODNR Interactive Karst Geology Map https://gis.ohiodnr.gov/website/dgs/karst_interactivemap/.

wood or tubular steel monopole design with either direct embedded foundations or drilled pier foundations. For the portion (approximately 1,430 feet) of the Preferred Route east of County Road (CR) 261, the electrical line would be installed underground in order to minimize impacts on a small cluster of nearby residences. Trenches or HDD (or equivalent) may be utilized for the underground portions of the Preferred Route, dependent upon soil condition requirements of Norfolk Southern Railroad. Where trenching may occur along the short segment of underground conduit, an excavator would be used to dig the trench. The conduit would be laid in the trench and concrete poured over and around the conduit. The trench would be backfilled and compacted per railroad requirements, and the topsoil preserved to restore to approximate original conditions.²⁶

The Applicant has provided a Preliminary Geotechnical Report summarizing the results of geotechnical investigation to date which consisted of geotechnical borings (4), standard penetration tests (SPT), split-spoon sampling, and laboratory testing. No known geohazards or unsuitable soil conditions were identified that would significantly impact the design or construction.²⁷ Prior to final design, additional geotechnical investigations would be conducted in specific locations where structure foundations are proposed and/or where underground elements are proposed, as well as for the project substation.²⁸

Based on the geotechnical information shared to date, it appears that both the Preferred and Alternate routes are suitable for the proposed project. The Applicant's commitment to further geotechnical studies will further assure suitability. Staff recommends that the Applicant conduct additional geotechnical exploration and provide a final report for Staff review prior to construction.

²⁶. Application at page 29.

²⁷. Application at page 74.

²⁸. Application at page 28.

Ecological Impacts

*Surface Waters*²⁹

The Applicant's consultant conducted a wetland and stream delineation of the project area on September 26 and 27, 2022. Between the Preferred and Alternate routes, six Category 1 wetlands totaling 7.4 acres were identified.³⁰ Due to restricted access to the railroad right-of-way, the consultant performed a reconnaissance-level investigation in some portions of the survey area. The consultant noted that several wooded areas were present within the survey area which could contain additional wetlands, however, these areas would not be impacted. Two intermittent streams were also identified. Streams and wetlands would be aerially spanned, thus avoiding impacts to these resources. The Applicant does not anticipate permanent or temporary impacts to wetlands or streams during construction at this time. Should temporary impacts become necessary, the Applicant has committed to performing the required coordination with the U.S. Army Corp of Engineers and the Ohio EPA to determine any permitting needs.

The Applicant would obtain coverage under the Ohio EPA National Pollutant Discharge Elimination System (NPDES) Construction General Permit OHC000006 for stormwater-related surface water impacts. The Applicant would prepare a stormwater pollution prevention plan (SWPPP), which would identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges associated with construction activities. The SWPPP would also describe and ensure the implementation of best management practices (BMPs) that reduce pollutants in stormwater discharges during construction.

This project does not overlap with any mapped Federal Emergency Management Agency floodplains.

*Threatened and Endangered Species*³¹

²⁹ The Ohio EPA website states: "The Division of Surface Water ensures compliance with the federal Clean Water Act and works to increase the number of water bodies that can be safely used for swimming and fishing. The division issues permits to regulate wastewater treatment plants, factories and storm water runoff; develops comprehensive watershed plans aimed at improving polluted streams; and samples streams, lakes and wetlands — including fish, aquatic insects and plants — to determine the health of Ohio's water bodies." (Ohio EPA, *About Us: Surface Water*, <https://www.epa.ohio.gov/About#127147228-surface-water>); The U.S. Army Corps of Engineers website states: "The U.S. Army Corps of Engineers (USACE) Regulatory Program involves the regulating of discharges of dredged or fill material into waters of the United States and structures or work in navigable waters of the United States, under section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act of 1899." (USACE, *Obtain a Permit*, <https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Obtain-a-Permit/>); The Ohio Department of Natural Resources (ODNR) website states: "The Division of Water Resources manages statewide oversight of dams & levees, floodplains, and the collection and management of data related to the state's water resources." (ODNR, *Division of Water Resources*, <https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-odnr/water-resources/water-resources>).

³⁰ Wetlands falling within the purview of the Clean Water Act are regulated within Ohio by R.C. 6111, et seq. and Ohio Adm.Code 3745-1-50, et seq. Ohio Adm.Code 3745-1-54 establishes wetland categories.

³¹ Based on agency coordination with the USFWS and ODNR, identified species of concern are, in general, defined as those species that are protected under the federal Endangered Species Act of 1973, as

The Applicant received environmental review of the project from the U.S. Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR) on April 10 and May 10, 2023, respectively. The following tables provide the results of these information requests.

| MAMMALS | | | | |
|-------------------------|-------------------------------|----------------|--------------|---|
| Common Name | Scientific Name | Federal Status | State Status | Presence in Project Area |
| Indiana bat | <i>Myotis sodalis</i> | Endangered | Endangered | No suitable winter hibernacula were observed in the project area. Potentially suitable summer foraging and roosting habitat was observed in the project area. |
| Northern Long-Eared bat | <i>Myotis septentrionalis</i> | Threatened | Endangered | No suitable winter hibernacula were observed in the project area. Potentially suitable summer foraging and roosting habitat was observed in the project area. |
| Little Brown bat | <i>Myotis lucifugus</i> | N/A | Endangered | No suitable winter hibernacula were observed in the project area. Potentially suitable summer foraging and roosting habitat was observed in the project area. |
| Tri-colored bat | <i>Perimyotis subflavus</i> | N/A | Endangered | No suitable winter hibernacula were observed in the project area. Potentially suitable summer foraging and roosting habitat was observed in the project area. |

INVERTEBRATES

amended (16 U.S.C. §§ 1531-1544) and/or according to the Conservation of Natural Resources within R.C. 1518.01-1518.99; 1531.25; and 1531.99. *See also e.g.*, R.C. 1531.08 states, in part: “In conformity with Section 36 of Article II, Ohio Constitution, providing for the passage of laws for the conservation of the natural resources of the state, including streams, lakes, submerged lands, and swamplands, and in conformity with this chapter and Chapter 1533. of the Revised Code, the chief of the division of wildlife has authority and control in all matters pertaining to the protection, preservation, propagation, possession, and management of wild animals and may adopt rules under section 1531.10 of the Revised Code for the management of wild animals.”

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

| Common Name | Scientific Name | Federal Status | State Status | Presence in Project Area |
|--------------------|------------------------------|-----------------------|---------------------|---|
| Clubshell | <i>Pleurobema clava</i> | Endangered | Endangered | No suitable habitat identified in the project area. |
| Rayed bean | <i>Villosa fabalis</i> | Endangered | Endangered | No suitable habitat identified in the project area. |
| Purple lilliput | <i>Toxolasma lividum</i> | N/A | Endangered | No suitable habitat identified in the project area. |
| Pondhorn | <i>Uniomerus tetralasmus</i> | N/A | Threatened | No suitable habitat identified in the project area. |
| Salamander mussel | <i>Simpsonaias ambigua</i> | N/A | Threatened | No suitable habitat identified in the project area. |

FISH

| Common Name | Scientific Name | Federal Status | State Status | Presence in Project Area |
|--------------------------|-----------------------------------|-----------------------|---------------------|---|
| Western banded killifish | <i>Fundulus diaphanous menona</i> | N/A | Endangered | No suitable habitat identified in the project area. |

REPTILES

| Common Name | Scientific Name | Federal Status | State Status | Presence in Project Area |
|--------------------|-----------------------------|-----------------------|---------------------|---|
| Kirtland's snake | <i>Clonophis kirtlandii</i> | N/A | Threatened | No suitable habitat identified in the project area. |

BIRDS

| Common Name | Scientific Name | Federal Status | State Status | Presence in Project Area |
|--------------------|-----------------------------|-----------------------|---------------------|---|
| Northern harrier | <i>Circus hudsonis</i> | N/A | Endangered | No suitable habitat identified in the project area. |
| Upland sandpiper | <i>Bartramia longicauda</i> | N/A | Endangered | No suitable habitat identified in the project area. |

This project is within range of the Indiana bat, northern long-eared bat, little brown bat, and the tricolored bat. The ODNR and USFWS have recommended that no clearing of trees greater than three inches diameter at breast height be conducted from April 1 through September 30 to prevent impacts to these species. The Applicant is not anticipating any tree clearing for this project. The Applicant has committed to the seasonal tree clearing restriction recommended by the ODNR and USFWS should tree trimming or clearing become necessary. The ODNR further recommended that the Applicant perform a desktop survey to identify any potential bat

hibernacula within or near the project area. The Applicant's consultant conducted this survey and found no potential hibernacula.

Due to lack of in-water work and lack of suitable habitat, impacts to listed species are not anticipated.

Vegetation

The project area is comprised predominantly of agricultural land. Scattered woodlots and areas of maintained lawn are also present. The Applicant is proposing a 50-foot-wide right-of-way for the gen-tie line. Both the Preferred and Alternate routes would result in 0.1 and 2.17 acres of temporary and permanent impacts to agricultural land, respectively. For either route, minimal impacts to forested land may occur should tree clearing become necessary.

The Applicant has stated that temporarily impacted areas would be restored to their pre-construction conditions. Restoration activities would include removal of aggregate from temporary laydown areas and temporary access roads, de-compacting the soil in disturbed agricultural fields and respreading of stockpiled topsoil and cleaning out of temporary stormwater management practices. Erosion control methods specified in the project SWPPP would be utilized along riparian areas to stabilize and restore vegetation.

Vegetation within the footprint of the project would be maintained primarily through mowing. Limited spot treatments of herbicides may be applied as needed.

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.

Route Selection

The Applicant identified and quantified sensitive land uses. The analysis evaluated ecological factors such as wetlands, protected species and plant habitats, streams, and preservation of existing woodlots. A geological study evaluated soil suitability and specific test borings were performed to determine proposed structure locations. Visual impact assessments and proximity to residences and road crossings were also quantified. Cultural resources were evaluated in consultation with the OHPO. Finally, engineering and maintenance costs were weighed. As part of its analysis, the Applicant solicited public feedback in finalizing potential routes. In summary, the “Preferred ROW and associated Project Substation were selected as the most direct and least impactful way to achieve this interconnection” (Application p. 12).

Staff finds the Applicant’s process to determine a Preferred and Alternate Route, and collector substation site, to be reasonable.

Minimizing Impacts

Geologic conditions are similar for both routes and no portion of either route appears to be precluded from construction due to geological features or soil condition concerns.

The Applicant has sited the facility such that neither route would result in temporary or permanent impacts to wetlands or streams. Applicant identified several listed species that could be present in the project area. Impacts to these species can be avoided by following seasonal restrictions for construction in certain habitat types, as detailed by the ODNR and USFWS.

The Applicant would mitigate noise impacts by limiting construction activities to daylight hours whenever feasible. Both routes follow an existing railroad corridor, reducing overall project impacts. Impacts to cultural and recreational resources are not anticipated. Visual impacts are limited due to the overall low population density, the selective utilization of underground construction when traversing away from the railroad corridor and installing the facility next to active agricultural land use.

Conclusion

While both routes are buildable, Staff concludes that the Preferred Route and collector substation site are a more efficient land use and best minimizes overall potential impacts.

Recommended Findings

Staff recommends that the Board find that the proposed facility 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 Applicant proposes to construct a 2.38-mile 138 kV transmission line and project substation in Hancock County, Ohio. The proposed project would interconnect South Branch Solar to the BPS through AEP's existing Fostoria Central Substation. The proposed project is an integral part of South Branch Solar, and, without it, energy would be unable to reach the BPS.

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).³²

PJM Interconnection

The South Branch Solar project was previously reviewed by Staff and approved by the Board in case number 21-0669-EL-BGN.³³ In proposing interconnection with the transmission grid, PJM assigned the project interconnection queue positions AD1-070, AG1-076, and AG2-579.³⁴ For these queue positions, the Applicant requested an energy injection of 205 MW, of which 123 MW could be available in the PJM capacity market.³⁵ The Applicant has fully executed the

³². PJM Interconnection, LLC is the regional transmission organization charged with planning for upgrades and administrating 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.

³³. In the Matter of the Application of South Branch Solar, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Hancock County, Ohio, Case No. 21-0669-EL-BGN, Opinion, Order, And Certificate, February 16, 2023.

³⁴. PJM Interconnection, "New Services Queue," for Queue ID: AD1-070/AG1-076/AG2-579, accessed December 6, 2023.

³⁵. The capacity market ensures the adequate availability of necessary generation resources can be called upon to meet current and future demand.

Interconnection Service Agreement for queue positions AD1-070 and AG1-076. Queue position AG2-579 is in the feasibility study stage to increase the capacity component.

Recommended Findings

Staff recommends that the Board find that the proposed facility is consistent with regional plans for expansion of the electrical power grid of the electric systems serving this state and interconnected utility systems, and that the facility would serve the interests of electric system economy and reliability. Therefore, Staff recommends that the Board find that the facility complies with the requirements specified in R.C. 4906.10(A)(4), provided that any certificate issued by the Board for the proposed 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*³⁶

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 facility. The Applicant would control temporary and localized fugitive dust by using BMPs, such as minimizing exposed/disturbed areas, containment of excavated material, the implementation of rock pads at construction exits, and the use of water or calcium carbonate as a dust suppressant.

*Water*³⁷

The Applicant would submit a Notice of Intent for coverage under the Ohio EPA NPDES construction stormwater general permit, Ohio EPA Permit No. OHC000006. This permit is required by the OEPA for facilities that wish to discharge water to a Surface Water of the State, including construction stormwater runoff. All construction sites which result in ground disturbance of one acre, or more, are required to obtain an NPDES permit. The permit regulates wastewater discharges by limiting the quantities of pollutants to be discharged and imposing monitoring requirements or conditions.³⁸ Coverage under the NPDES construction general permit also requires the development of a SWPPP, which outlines BMPs for soil erosion control. BMPs are outlined in the Rainwater and Land Development Manual, which defines Ohio's standards and specifications for stormwater management practices implemented during land development. The Rainwater and Land Development Manual includes pre-, during, and post-

³⁶ The Revised Code provides for the Ohio EPA to administer and enforce the provisions of R.C. Ch. 3704 with regards to air pollution control. See e.g., RC 3704.03, 3704.161. The Ohio EPA Division of Air Pollution Control ensures compliance with the federal Clean Air Act and the Emergency Planning and Community Right-to Know Act as part of its mission to attain and maintain air quality at a level that protects the environment and public health. (Ohio EPA, Division of Air Pollution Control, <https://www.epa.ohio.gov/dapc/-featuredtopics>). The Division of Air Pollution Control develops and enforces rules in the Ohio Administrative Code, which assist the state of Ohio to attain and maintain the National Ambient Air Quality Standards (NAAQS) contained in the Clean Air Act; fulfill the requirements set forth by the Ohio General Assembly in R.C. 3704; and protect and maintain healthy air quality for the citizens of the state of Ohio. (See, Ohio EPA, Division of Air Pollution Control Rules and Laws).

³⁷ The Revised Code provides for the Ohio EPA to be the lead agency in administering the provisions of Ch. 6111 with regards to water quality. See e.g., RC 6111.041. For example, the Ohio EPA, among other things, "ensures compliance with the federal Clean Water Act and works to restore and enhance the integrity of Ohio's waters." (Ohio EPA Website, Division of Surface Water, <https://epa.ohio.gov/divisions-and-offices/surface-water/surface-water>). The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. (US EPA, Summary of Clean Water Act, <https://www.epa.gov/laws-regulations/summary-clean-water-act>).

³⁸ OEPA, "NPDES General Permits", <https://epa.ohio.gov/divisions-and-offices/surface-water/permitting/npdes-general-permits>

construction practices and measures to be taken to ensure compliance with Ohio's water quality laws, rules, and regulations and policy.³⁹

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

*Solid Waste*⁴⁰

Debris generated from construction activities would include limited amounts of non-hazardous solid waste or debris, which would be reused, recycled, or disposed of in accordance with applicable state and federal requirements. Waste material and debris would be broken down into manageable sizes and stockpiled in designated locations. Each stockpile would be transported offsite to either a recycling center, when feasible, or to an approved landfill depending on the material type in accordance with state and federal requirements. The Applicant's solid waste disposal plans must comply with solid waste disposal requirements set forth in R.C. Chapter 3734.

Aviation⁴¹

The anticipated height of the gen-tie electric transmission support structures is expected to be approximately 60 to 75 feet tall. Those heights are under the height requirement from the Federal Aviation Administration (FAA), pursuant to 14 CFR Part 77.9(a), for filing a Form 7460-1. Staff has recommended as a condition that 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, including any permits necessary for aviation clearance. 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.

According to the Applicant, the nearest public-use airport is the Fostoria Community Hospital airport which is approximately 2.4 miles northeast of the proposed transmission line. The Applicant has also found that there is a private-use airport, Rutter Private airport, approximately 1.6 miles south of the proposed transmission line.

³⁹ OEPA, "Rainwater and Land Development", <https://epa.ohio.gov/divisions-and-offices/surface-water/guides-manuals/rainwater-and-land-development>

⁴⁰ The Revised Code generally provides for Ohio EPA to administer and enforce the provisions of Chapters 3714. and 3734., in particular with regard to solid waste facilities, infectious waste treatment facilities and construction and demolition debris facilities.

⁴¹ The FAA is the authority in the U.S. government responsible for regulating all aspects of civil aviation, including issuing determinations on petitions for objects that penetrate the nation's airspace. The FAA conducts aeronautical studies for new structures that will exceed 200 feet in height under the provisions of 49 U.S.C. 44718, and applicable 14 CFR Part 77. Pursuant to R.C. 4561.32, ODOT regulates the height and location of structures and objects within any airport's clear zone surface, horizontal surface, conical surface, primary surface, approach surface, or transitional surface.

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.

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.

Electromagnetic Fields

Electric transmission lines generate electromagnetic fields (EMF) around the conductors, when energized. Electric fields are produced by electric charges or voltage.⁴² The intensity of the electric field is a function of line voltage, the arrangement or configuration of the conductors on the transmission structure, and the distance from the transmission line.

Laboratory studies have failed to establish any strong correlation between exposure to EMF and detrimental effects on human health. Though no correlation has been established, there are still public concerns for the possibility of health effects due to exposure to the EMF of transmission lines.⁴³ Because these concerns exist, the Applicant has computed the EMF intensity associated with the new circuits.⁴⁴ The electric field intensities were computed using the anticipated maximum emergency loadings on the lines.

The maximum expected electric field intensity for this transmission line would be 0.4 kV/meter at the edge of the right-of-way. Normal operation or typical daily values of the EMF intensities would be lower than these computed maximum values thereby further reducing nominal EMF values. Additionally, physical structures and materials, such as walls of houses, provide shielding from electric fields.

Magnetic fields surrounding a conductor are a function of the current carried, the arrangement of the conductors, and the distance from the transmission line. The intensity of the maximum magnetic field for this project is expected to be 43 milligauss at the edge of the right-of-way. The Applicant states that the equipment including transmission facilities would be designed and installed according to best utility practices and standards of NESC.

Public Interaction and Participation

The Applicant hosted a public informational meeting for the project. Attendees were provided with the opportunity to review information about the project, ask questions, and provide comments. The Applicant also maintains a project website at <http://www.southbranchsolar.com>.

42. For example, a plugged-in lamp cord produces an electric field, even if the lamp is turned off.

43. Information on Staff's consideration of potential health impacts of EMF can be found in the ODH fact sheet entitled Electromagnetic Fields (EMF) Summary and Assessments available on the ODH website at <https://odh.ohio.gov/know-our-programs/health-assessment-section/media/summary-emf>

44. *In the Matter of the Application of South Branch Solar, LLC for a Certificate of Environmental Compatibility and Public Need for the South Branch Gen-Tie Transmission Line Project*, Case No. 23-0373-EL-BTX, Application at Appendix I EMF, Corona Effects, and Communications Interference Report on page 3 (June 7, 2023).

The Applicant has drafted a complaint resolution plan to handle complaints during the construction and operation of the facility. Staff recommends that a final version of the complaint resolution plan for construction and operation be filed on the docket no later than 30 days prior to the start of construction. The Applicant has committed to notify property owners and tenants within and adjacent to the project area, government officials, and emergency responders prior to the start of construction and prior to the start of commercial operation. Staff recommends that these notices be mailed to all residences, airports, schools, and libraries located within one mile of the project area; parties to this case; county commissioners, township trustees, and emergency responders; and any other person who requests updates regarding the project. Staff further recommends that the Applicant compile a quarterly complaint summary report about the nature and resolution of all complaints received in that quarter and submit the report to OPSB for the first five years of operation. Staff recommends that these reports be filed in the public docket.

The Administrative Law Judge scheduled a public hearing and an adjudicatory hearing for this proceeding. The local public hearing will be held on January 31, 2024, at 6:00 p.m., at the City of Findlay Municipal Building, Police Department, 318 Dorney Plaza, Findlay, OH 45840. The adjudicatory hearing is scheduled to commence on February 14, 2024, at 10:00 a.m. at the PUCO offices in Columbus, Ohio.

Public Comments

As of the filing date of this report, the OPSB has received four public comments, which can be viewed in the online case record.

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 existing agricultural district land within the Preferred and Alternate routes of the proposed major utility facility. The agricultural district program was established under R.C. Chapter 929. Agricultural district land is exempt from sewer, water, and 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 auditor's 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.

Both the Preferred and Alternate routes are expected to impact approximately 0.26 acres of agricultural land, reflecting the portion of the Gen-Tie right-of-way that extends within the generation facility project. As such, this does not reflect new impacts. Neither route would impact agricultural district land.

Construction of the Gen-Tie is not anticipated to result in impacts to drain tile systems in the area. Limited drain tiles have been identified in the adjacent area, which would be field located prior to and avoided during construction. Should inadvertent damage to drain tiles be caused, the Applicant would work with applicable landowners to reroute, repair, or replace the tiles, as appropriate.

Staff agrees the Applicant has an adequate plan to mitigate the impact of the project on agricultural lands.

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. Should the Board issue a Certificate for the proposed facility, Staff recommends adoption of the recommended 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.

During construction, the facility may require the use of minimal amounts of water for dust control on open soil surfaces and access roads. Responding to a data request the Applicant stated that water use would be limited to the greatest extent possible, and the use of water for horizontal directional drilling (HDD) would be negligible under the preferred route for the project. However, the project would require approximately 10,000 to 20,000 gallons of water for any route that might require the use of HDD underneath any railway.

Operation of the transmission facility would not require the use of significant amounts of water. Therefore, the facility would comply with and incorporate maximum feasible water conservation practices as specified under R.C. 4906.10(A)(8).

Recommended Findings

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

IV. RECOMMENDED CONDITIONS OF CERTIFICATE

Following a review of the application filed by South Branch Solar, 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 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:

General Conditions

Staff has generally listed the below conditions in chronological order for ease of reference and review. The inclusion of a condition within a specified section is not intended to waive its potential application to other stages of a project and the specific language of each condition controls its application within the project.

- (1) The Applicant shall install the Preferred Route and substation site utilizing the equipment and construction practices and implementing 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 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.
- (3) As the information becomes known, the Applicant shall file in the public docket the date on which construction will begin, the date on which construction was completed, and the date on which the facility begins commercial operation.
- (4) The certificate authority provided in this case shall not exempt the facility from any other applicable and lawful local, state, or federal rules or regulations nor be used to affect the exercise of discretion of any other local, state, or federal permitting or licensing authority with regard to areas subject to their supervision or control.

Preconstruction

- (5) The Applicant shall conduct a preconstruction conference prior to the commencement of any construction activities. The Applicant may conduct separate preconstruction conferences for each stage of construction. Notice of the date and location of the preconstruction conference shall be provided to Staff at least 30 days in advance. 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 planned phase of construction and the conditions of the certificate, the measures to be taken by the Applicant and contractors to ensure compliance with all conditions of the certificate, discussion of the procedures for on-site investigations by Staff during construction, summary of additional studies and surveys not specified by

conditions, and a summary of work done for previous phases of construction. At least 30 days prior to the conference, the Applicant shall provide Staff with a summary of the status of deliverables required within the conditions, and if the conference is for a phase of construction, the Applicant shall provide Staff with a list of the conditions which would apply to that applicable phase. Fourteen days prior to the conference, the Applicant shall provide a proposed conference agenda for Staff review and shall file a copy of the agenda on the case docket.

- (6) Prior to the commencement of construction activities in areas that require permits or authorizations by federal, state, or local laws and regulations, the Applicant shall obtain and comply with such permits or authorizations. The Applicant shall provide copies of permits and authorizations, including all supporting documentation, to Staff within seven days of issuance or receipt by the Applicant and shall file such permits or authorizations on the public docket. The Applicant shall provide a schedule of construction activities and acquisition of corresponding permits for each activity at the preconstruction conference(s). Any permit violation received by the Applicant from the permitting agency shall be provided on the case docket within seven days of receipt.
- (7) The Applicant shall conduct additional geotechnical investigations at specific locations where structure foundations are proposed and/or where underground elements are proposed, as well as for the project substation.
- (8) At least 30 days prior to the initial preconstruction conference, the Applicant shall provide Staff, for review and acceptance, a final geotechnical engineering report. This report shall include the results of the geotechnical testing results acquired at the structure locations not previously evaluated. In addition, the report shall include a final summary statement addressing the geologic and soil suitability and identification of any inadequacies found and proposed remedies if applicable.
- (9) At least 30 days prior to the start of construction, the Applicant shall file a copy of the final complaint resolution plan for construction and operation of the project on the public docket. At least seven days prior to the start of construction and at least seven days prior to the start of facility operations, the Applicant shall notify via mail affected property owners and tenants; all residents, airports, schools, and libraries located within one mile of the project Area; parties to this case; county commissioners, township trustees, and emergency responders; and any other person who requests updates regarding the project. These notices shall provide information about the project, including contact information and a copy of the complaint resolution program. The start of construction notice shall include written confirmation that the Applicant has complied with all pre-construction-related conditions of the Certificate, as well as a timeline for construction and restoration activities. The start of Facility operations notice shall include written confirmation that the Applicant has complied with all construction-related conditions of the Certificate, as well as a timeline for the start of operations. The Applicant shall file a copy of these notices on the public docket. 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 during construction and through the first five years of operation. The report shall include a list of all complaints received through the Applicant's complaint resolution program, a description of the actions taken toward the resolution of each complaint, and a status update if the complaint has yet to be resolved. The Applicant shall file a copy of these complaint summaries on the public docket.

- (10) The Applicant shall coordinate with the appropriate authorities regarding traffic and transportation requirements necessary for construction and operation of the proposed facility. To assure compliance with this condition, prior to the preconstruction conference, the Applicant shall file a final transportation management plan, this plan shall include (but not be limited to) the following:
- a. A summary of coordination with appropriate authorities regarding traffic and transportation requirements, including temporary road closures, road use agreements, driveway permits, lane closures, road access restrictions, and traffic control necessary for construction and operation of the proposed facility.
 - b. Documentation of this coordination, with copies of applicable permits or authorizations, or schedule for obtaining permits or authorizations not yet applicable.
 - c. A description of best management practices that would be implemented to maintain clean roads free of construction debris and excess mud.
 - d. Details summarizing signage and other best management practices that would ensure construction vehicles only use designated transportation routes.
 - e. Mapping of roads to be used for construction that includes identifying any anticipated permitting/authorization requirements in their respective locations.

- (11) At least 30 days prior to the initial preconstruction conference, the Applicant shall provide Staff, for review and acceptance, the final geotechnical engineering report. This report shall include the results and analyses of any additional geotechnical investigation studies not provided to OPSB Staff as of the date of issuance of this Staff Report. This report shall include a final summary statement addressing the geologic and soil suitability in addition to addressing any inadequacies found and proposed remedies if applicable.

Construction

- (12) The Applicant shall file on the public docket a complaint summary report by the fifteenth day of April, July, October, and January of each year during construction and through the first five years of operation. The report shall include a list of all complaints received through the Applicant's complaint resolution program, a description of the

actions taken toward the resolution of each complaint, and a status update if the complaint has yet to be resolved.

- (13) 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, if required, shall be limited to the hours between 10:00 a.m. to 5:00 p.m., Monday through Friday. Construction activities that do not involve noise increases above ambient levels or light pollution at sensitive receptors are permitted outside of daylight hours when necessary. The Applicant shall notify Staff and affected property owners or tenants of upcoming construction activities including potential for nighttime construction activities.
- (14) The Applicant shall remove all construction staging area and access road materials after completion of construction activities, as weather permits, unless otherwise directed by the landowner. Impacted areas shall be restored to preconstruction conditions in compliance with the Ohio EPA General NPDES permit(s) obtained for the project and the approved Stormwater Pollution Prevention Plan created for this project. All construction debris and any contaminated soil shall promptly be removed and properly disposed of in accordance with Ohio EPA regulations.
- (15) 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.
- (16) 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 listed bat species, unless coordination with the Ohio Department of Natural Resources and the U.S. Fish and Wildlife Service allows a different course of action. If coordination with these agencies allows clearing between April 1 and September 30, the Applicant shall docket proof of completed coordination on the case docket prior to clearing trees.
- (17) The Applicant shall coordinate with the U.S. Army Corps of Engineering and the Ohio Environmental Protection Agency should impacts to streams or wetlands become necessary to determine permitting requirements.
- (18) Should construction be delayed beyond five years of the date of the certificate, certain wildlife surveys may be required to be updated as determined by Staff and the ODNR.
- (19) 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.

- (20) The Applicant shall have a Staff-approved environmental specialist on site during construction activities that may affect sensitive areas. 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. Approval of the environmental specialist(s) is determined through submittal of a resume(s) showing applicable experience and/or credentials, which shall be submitted at least 14 days prior to the preconstruction conference. 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. Sensitive areas may include, but are not limited to, wetlands and streams, and locations of threatened or endangered species. At least 14 days prior to the preconstruction conference, a map shall be provided to Staff focusing on sensitive areas which would be impacted during construction with information on the construction activities and when the environmental specialist would be present.

Post Construction/Operation

- (21) 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 in both hard copy and as geographically referenced electronic data. 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.

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Mr. James S. O'Dell on behalf of Staff of OPSB.