

Staff Report of Investigation

South Field Energy Interconnection Facilities

Case Number 15-1717-EL-BTX

May 20, 2016



Power Siting
Board

John R. Kasich, Governor | Andre T. Porter, Chairman

**In the Matter of the Application of South Field Energy,)
LLC for a Certificate of Environmental Compatibility)
and Public Need to Construct an Electric Transmission)
Line in Columbiana County.)**

15-1717-EL-BTX

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 South Field Energy,)
LLC for a Certificate of Environmental Compatibility)
and Public Need to Construct an Electric Transmission) 15-1717-EL-BTX
Line in Columbiana County.)**

Chairman, Public Utilities Commission	Director, Department of Natural Resources
Director, Department of Agriculture	Public Member
Director, Development Services Agency	Ohio House of Representatives
Director, Environmental Protection Agency	Ohio Senate
Director, Department of Health	

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), 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 Staff of the Public Utilities Commission of Ohio (Staff) has prepared this *Staff Report of Investigation*. 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, the 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 Federal Aviation Administration.

In accordance with R.C. 4906.07 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 the main public libraries of the political subdivisions in the project area.

The staff report presents the results of the 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,



Patrick Donlon
Director, Rates and Analysis
Public Utilities Commission of Ohio

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I. POWERS AND DUTIES

OHIO POWER SITING BOARD

The Ohio Power Siting Board (Board) was created in 1972, by amended Substitute House Bill 694. The authority of the 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 greater than or equal to 125 kilovolts (kV); and gas and natural gas transmission lines and associated facilities designed for, or capable of, transporting gas or natural gas at pressures 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 5 MW or greater but less than 50 MW.

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) 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 Chapter 4906 of the Ohio Administrative Code (Ohio Adm.Code), which establish application procedures for major utility facilities and 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 Board may consider relevant.²

Within 60 days of receiving an application, the Board must determine whether the application is sufficiently complete to begin an investigation.³ If an application is considered complete, the Chairman of the Board will cause a public hearing to be held 60 to 90 days after the official filing

¹ R.C. 4906.04 and 4906.20.

² R.C. 4906.10(A) and 4906.20(B)(1).

³ Ohio Adm.Code 4906-5-05(A), effective for applications filed before December 11, 2015.

date of the completed application. At the public hearing, any person may provide written or oral testimony and may be examined by the parties.⁴

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.⁵ The report sets forth the nature of the investigation and contains the findings and conditions recommended by Staff. 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 Historical Society, and the U.S. Fish and Wildlife Service (USFWS).

The technical investigations and evaluations are conducted pursuant to Ohio Adm.Code Chapter 4906. 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.⁶ A record of the public hearings and all evidence, including the staff report, may be examined by the public at anytime.⁷

Board Decision

The Board may approve, modify and approve, or deny an application for a certificate of environmental compatibility and public need. 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.⁸

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.⁹ 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.¹⁰ 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.¹¹ 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.¹²

⁴ R.C. 4906.08(C).

⁵ R.C. 4906.07.

⁶ R.C. 4906.07(C) and 4906.10.

⁷ R.C. 4906.09 and 4906.12.

⁸ R.C. 4906.10.

⁹ R.C. 4906.11.

¹⁰ R.C. 4906.10(C).

¹¹ R.C. 4903.10 and 4906.12.

¹² R.C. 4903.11, 4903.12, and 4906.12.

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
- (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.

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II. APPLICATION

APPLICANT

South Field Energy, LLC (Applicant) falls within the corporate structure of Advanced Power AG, an international developer of independent power generation projects. Advanced Power, Incorporated in 2000 in Zug, Switzerland, has developed more than 15,000 MW of power generation projects in North America and Europe.¹³

HISTORY OF THE APPLICATION

Prior to formally submitting its application, the Applicant consulted with the Staff and representatives of the Board regarding application procedures.

On October 19, 2015, the Applicant filed a Motion for Waivers from the requirement to submit fully developed information on the Alternate Route and the requirement that the Preferred and Alternate route share no more than 20 percent in common. Staff did not oppose the waiver requests, and the Administrative Law Judge granted the waiver requests in an Entry dated December 1, 2015.

On October 20, 2015, the Applicant held a public information meeting regarding the proposed electric transmission line and switchyard in Wellsville, Ohio.

On January 15, 2016, the Applicant filed the South Field Energy Interconnection Facilities application.

On February 17, 2016, American Transmission Systems, Inc. (ATSI) filed a Motion to Intervene in the case.

On March 4, 2016, the Ohio Valley Jobs Alliance and Kenneth Johnson filed a Motion to Intervene in the case.

On March 7, 2016, the Director of Rates and Analysis, PUCO issued the Applicant a letter of compliance regarding the application.

On March 29, 2016, the Administrative Law Judge issued an Entry consolidating this case with the generation facility case (case number 15-1716-EL-BGN) and establishing a procedural schedule for the cases.

On May 12, 2016, the Columbiana County Development Department and Yellow Creek Township filed motions to intervene in the cases.

A local public hearing is scheduled for June 6, 2016 at 6:00 p.m., at the Wellsville High School, 1 Bengal Boulevard, Wellsville, Ohio 43968. The adjudicatory hearing will commence on June 21, 2016, at 10:00 a.m., in Hearing Room 11-D, at the offices of the PUCO, 180 East Broad Street, Columbus, Ohio, 43215.

¹³ "About," Advanced Power, accessed May 5, 2016, <http://advancedpowerna.com>.

This summary of the history of the application does not include every filing in case number 15-1717-EL-BTX. The docketing record for this case, which lists all documents filed to date, is accessible online at <http://dis.puc.state.oh.us>.

PROJECT DESCRIPTION

The Applicant proposes to construct the South Field Energy Interconnection Facilities, a 3.9-mile long 345 kV transmission line and an electrical switchyard, in Columbiana County, Ohio. The Applicant would construct, own, operate, and maintain the transmission line. The Applicant would construct the switchyard, and it is anticipated that the switchyard would be transferred to FirstEnergy to own and operate. The project is needed to deliver power from the South Field Energy Generation Facility (case number 15-1716-EL-BGN) to the electric grid. The Applicant plans to place the transmission line and switchyard in service by December 2018.

The proposed project would install a new 345 kV overhead electric transmission line between the proposed generation facility and proposed new switchyard substation to connect it to the electric grid. A 150-foot right-of-way would be needed for the new transmission line, which would incorporate steel poles for support. The Applicant conducted a route and site selection study for the proposed new transmission line and switchyard. The Applicant incorporated public input and field survey data to identify the Preferred and Alternate transmission line routes.

Preferred Transmission Line Route

The Preferred Route is approximately 3.9 miles long. The route would exit the proposed generation facility as a single circuit transmission line in a north and west direction for 2.1 miles to just south of Osbourne Road (this portion of the route is common to the Preferred and Alternate route). The route would continue for approximately 0.5 miles north to Osbourne Road. The then generally parallels Osbourne Road to just before the intersection with McCormick Run Road. At that point, the route travels north for approximately 0.5 mile as it enters the proposed switchyard site.

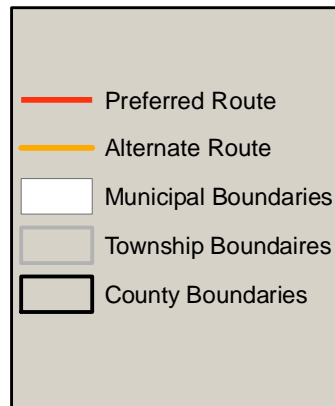
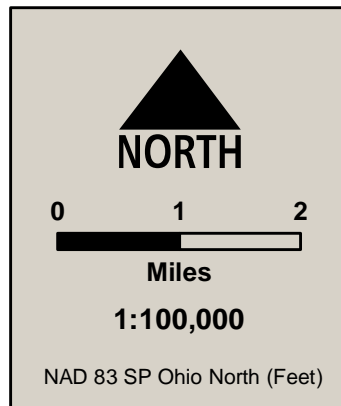
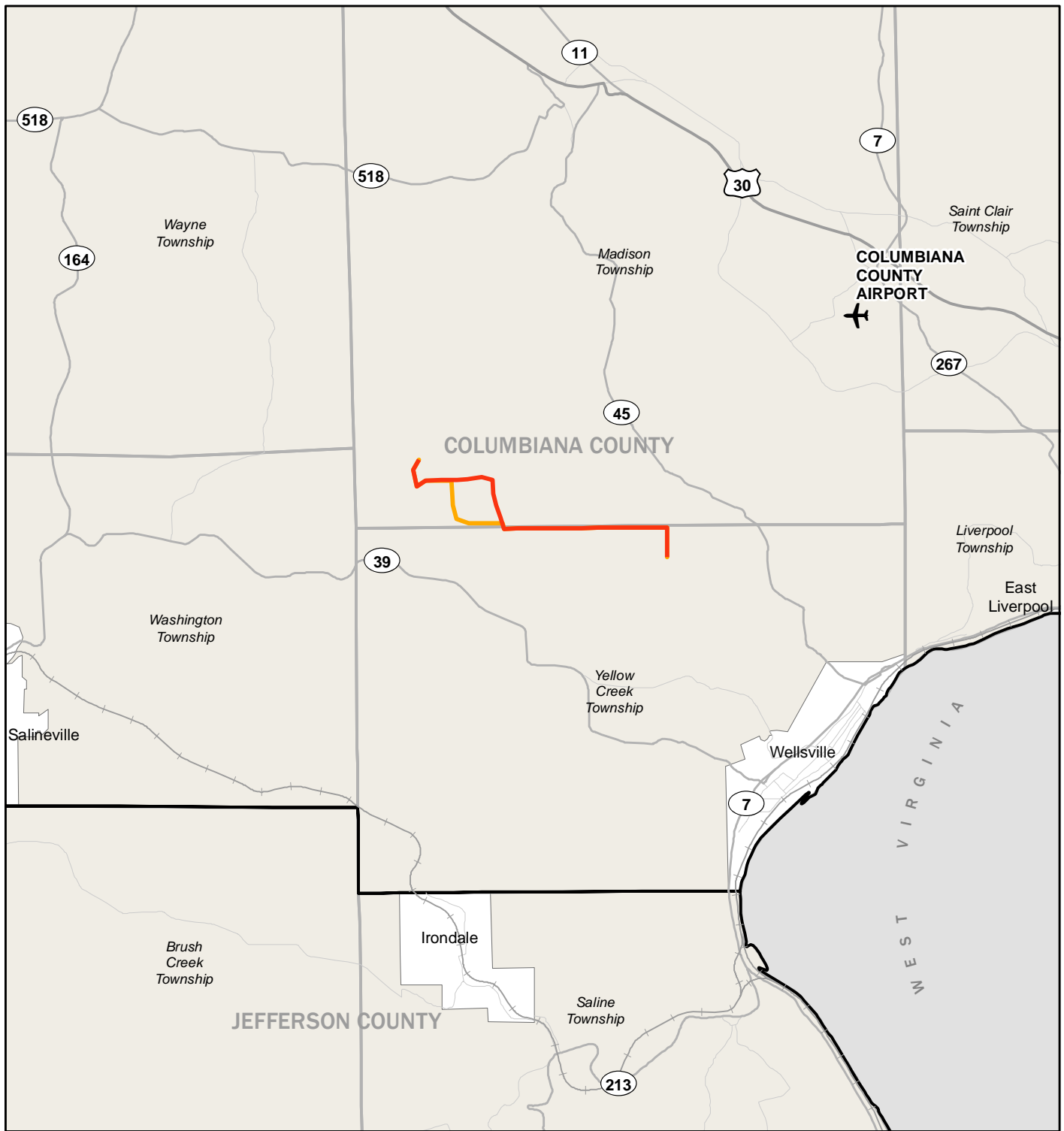
Alternate Transmission Line Route

The Alternate Route is also approximately 3.9 miles long and is identical to the Preferred Route for the first 1.9 miles until reaching the location of pole number 14 at the existing Dominion natural gas pipeline right-of-way. After pole number 14, the Preferred and Alternate routes diverge, with the Alternate Route crossing the Dominion natural gas pipeline corridor into Madison Township and traveling in a short northwesterly direction to pole number 15A. The Preferred and Alternate routes then rejoin one another at pole number 22. This rejoin is at the southeast corner of the intersection of Sines and Osbourne roads.

Switchyard Site

The switchyard site is located at the northeast corner of the intersection of McCormick Run and Osbourne roads on a 38-acre parcel optioned by the Applicant within Madison Township, Columbiana County. Access to the switchyard site would be from Sines Road just north of Osbourne Road.

The switchyard footprint is approximately 3.5 acres, and it would be fully enclosed by a chain link fence with dimensions of approximately 280 feet by 550 feet. The switchyard would include a 345 kV ring bus interconnection substation with a loop connection to FirstEnergy's Highland-Sammis 345 kV line. Supervisory control and data acquisition systems and associated equipment would be located in an on-site control building.



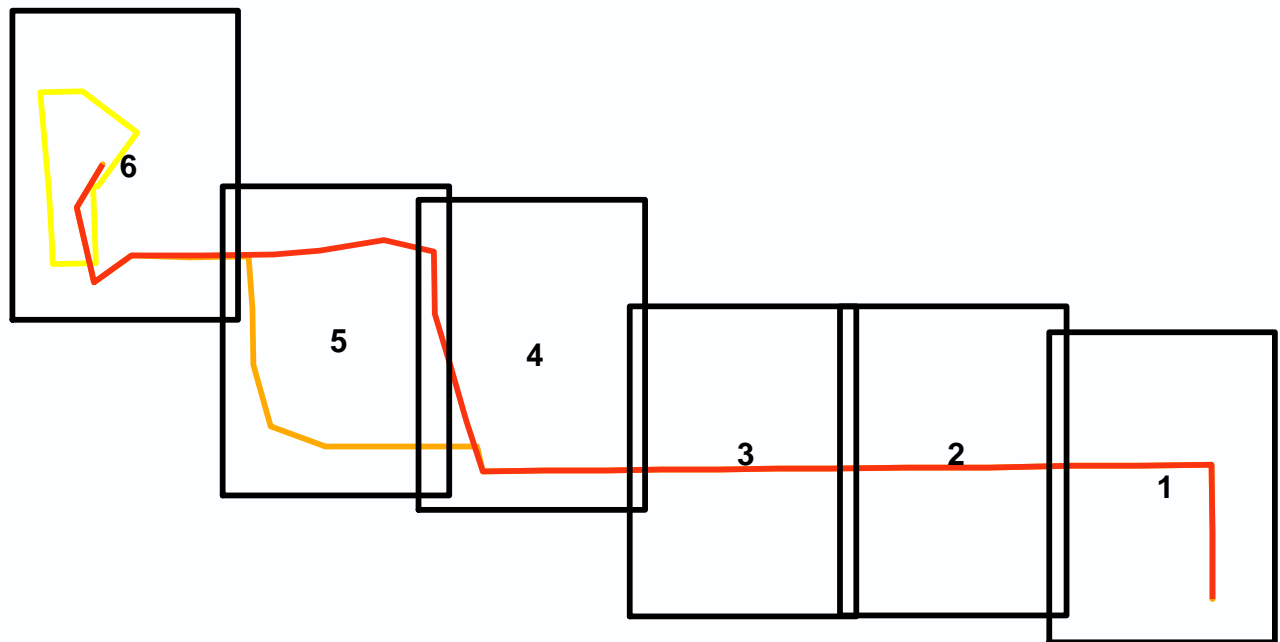
Overview Map

15-1717-EL-BTX

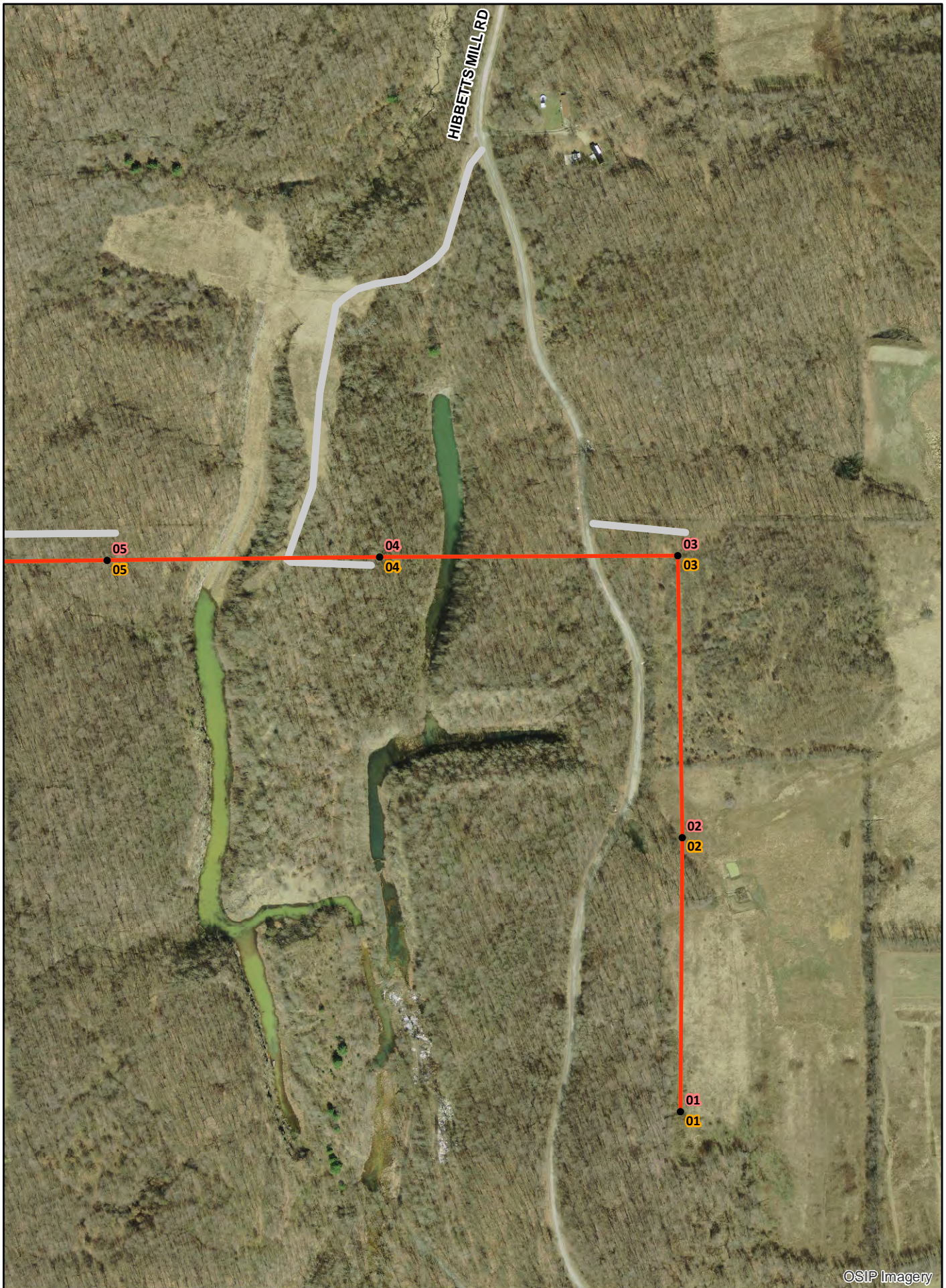
South Field Energy 345 kV Transmission Line

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 certificate application and supplemental materials.

Map Index and Legend



- Transmission Poles
- Preferred Route
- Alternate Route
- Switchyard Layout
- Switchyard Site
- Access Roads



1 inch equals 400 feet

Figure 1



Figure 2

1 inch equals 400 feet



1 inch equals 400 feet

Figure 3



Figure 4



1 inch equals 400 feet

Figure 5

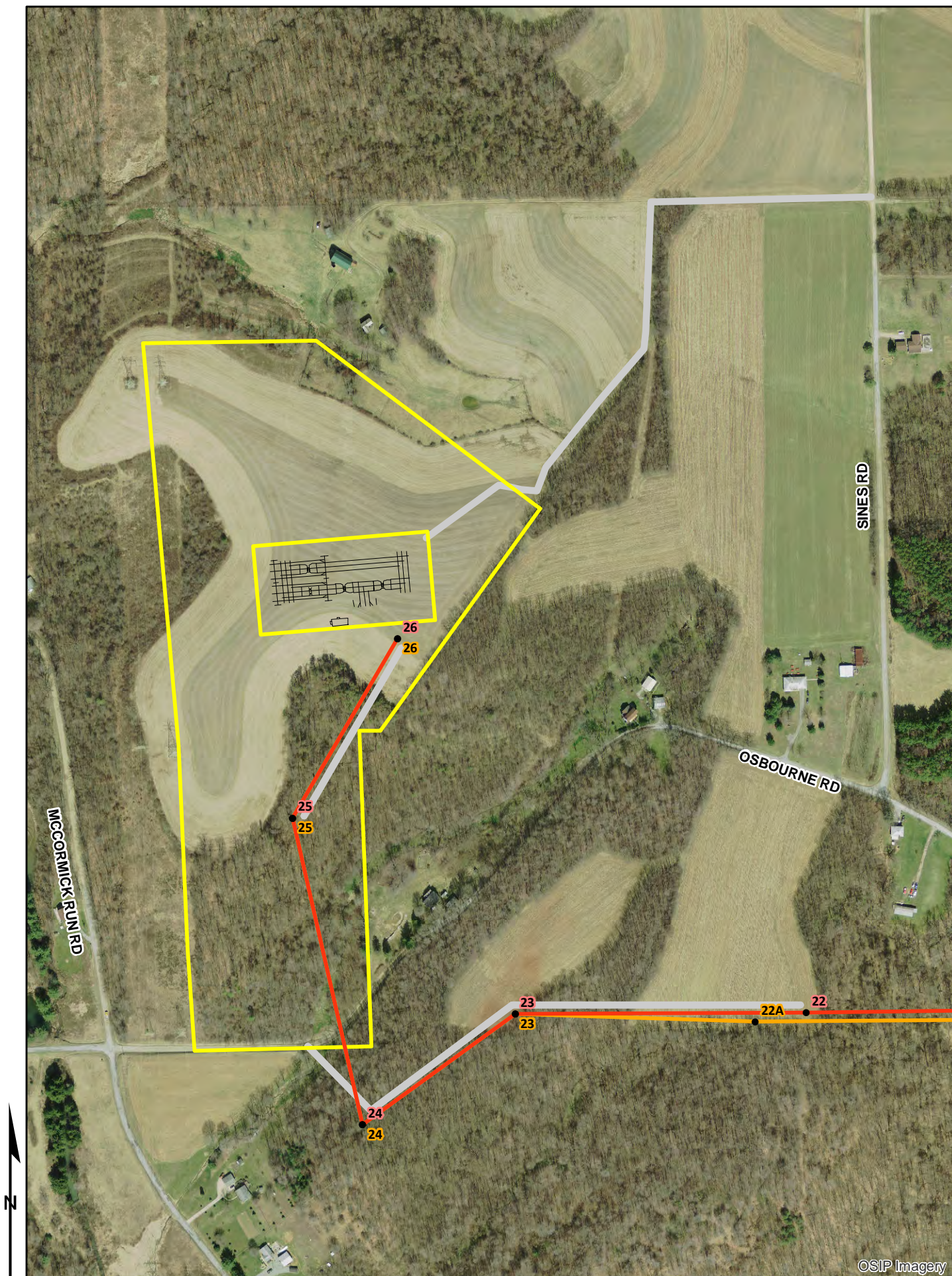


Figure 6

1 inch equals 400 feet

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III. CONSIDERATIONS AND RECOMMENDED FINDINGS

In the matter of the application of South Field Energy, LLC 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 purpose of the proposed transmission line and switchyard is to deliver energy from the South Field Energy Electric Generation Facility to the electric power grid. The proposed 345 kV transmission line would interconnect through the point of interconnection switchyard to ATSI's Sammis-Highland 345 kV line, allowing the generation output of the generation facility to reach the local and regional electric grid. The point of interconnection switchyard design includes a 345 kV three-breaker ring bus interconnection substation with a loop connection to the Sammis-Highland 345 kV line.

Long Term Forecast

The Ohio Administrative Code requires electric utilities and transmission owners to annually file a forecast report with the PUCO.¹⁴ The report requires a 10-year plan of committed or tentatively projected projects on the bulk power transmission network. The Applicant is not regulated by the PUCO, and therefore is not required to prepare a long-term forecast or regional expansion plans of transmission facilities.

System Economy and Reliability

PJM Interconnection, LLC (PJM) has completed several studies to show the reliability impacts the related generation facility would have on the electric grid, and these studies revealed several problems. The Applicant would be unable to supply energy through the proposed line to the local and regional electric system without signing an interconnection agreement. Reliability and the PJM System Impact Study are discussed in detail in section 4906.10(A)(4) of this report, entitled Electric Grid.

Conclusion

The proposed transmission line would not be constructed to relieve congestion or improve the electric grid. The project is an integral part of the South Field Energy Electric Generation Facility, and, without it, energy from the generation facility would be unable to reach the electric power grid.

Recommended Findings

Staff recommends that the Board find that the Applicant has demonstrated the basis of need for the project 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 facilities include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

¹⁴ Ohio Adm.Code. 4901:5-5 (2014).

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.

Socioeconomic Impacts

Demographics

Population density within the project vicinity is very limited. There are 41 residential structures located in the study area for the Preferred Route, while 31 houses are within the study area for the Alternate Route.

Land Use

Forest, agricultural, and pastureland uses dominate the project area. Approximately eight percent of the study area is reclaimed strip mine land, and five percent of the land use is residential. The village of Wellsville is located approximately four miles away from the project area. There are no sensitive land uses such as schools, churches, recreational facilities, parks, or cemeteries within two miles of either proposed route.

Cultural, Archaeological and Architectural Resources

The Applicant conducted archaeological and architectural surveys for the proposed switchyard site, as well as architectural surveys along both the Preferred and Alternate routes. The study showed that there are no archaeological resources within the switchyard boundaries. There are also no architectural impacts expected along either proposed route. Archaeological surveys of the transmission line route would be conducted once final engineering design is completed. Specific pole placement locations would be adjusted, if these studies determine that archaeological resources would be impacted.

Aesthetics

The rural nature of the proposed transmission line corridors is agricultural and not densely populated. The closest residences are participating land owners who have been compensated for the project's impacts. Forested buffers and hilly terrain limit potential viewpoints to observe the transmission line location. No sensitive land uses such as scenic highways, recreational areas, historic sites or undeveloped natural settings are present. The switchyard would be located adjacent to similar transmission structures and landscaping would be incorporated in the project design in order to mitigate aesthetic impacts.

Economics

The Applicant would construct, own, operate, and maintain the transmission line. The Applicant would construct the switchyard, and it plans to transfer the switchyard to FirstEnergy to own and operate.

The Applicant redacted and sealed estimates of capital and intangible costs for this project. The Applicant has communicated with the Columbiana County Economic Development Director in regards to tax revenues. The Wellsville School District and other taxing units would benefit from increases in local tax revenues. The Applicant has redacted the increase in tax revenues over the 15-year tax agreement.

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

Geology

The southern third of Columbiana County, which includes the location of the Preferred and Alternate routes, forms the boundary of the Unglaciaded Allegheny Plateau Province. The underlying bedrock in Columbiana County is sandstone, shale, and limestone.

Columbiana County has a history of coal mining. Several abandoned underground and surface mining operations have occurred along the Preferred and Alternate routes. The Applicant will perform additional exploratory drilling along the designated route. Information gathered will be used for design and engineering construction purposes, and, where possible, to avoid areas that may pose a geological hazard.

Since bedrock depths vary along the Preferred and Alternate routes, blasting may be necessary to assist in the removal of rock prior to construction. Preliminary results do not indicate that any geological issues exist that would restrict construction of the proposed transmission line. However, the Applicant will perform a more extensive geotechnical program for final design and construction engineering purposes.

Seismology

There is no recorded seismic activity in Columbiana County.

Soils and Test Borings

According to the *Soil Survey of Columbiana County*, the soil associations present at the switchyard site and along the Preferred and Alternate routes include the Berks channery silt loam, Gilpin silt loam, and Coshocton silt loam. Additional drilling would be required to determine site specific soil conditions prior to the construction of foundations at the transmission line poles and at the switchyard site.

Where there are slopes greater than 12 percent or soil properties that are indicative of highly erodible soils, the Applicant would design the transmission line to avoid structure placement in these areas to the extent possible. Structures would be constructed on stabilized locations to facilitate placement and reduce the possibility of erosion. The Applicant has not indicated any slope or soil conditions that would limit the construction of the proposed transmission line.

Surface Waters

The Applicant identified and delineated 25 streams within the project area totaling 5,952 linear feet. Eleven of the delineated streams occur along the shared route or within the switchyard, of which two are perennial streams, three are ephemeral streams, and six are intermittent streams. The Preferred Route right-of-way contains three intermittent streams and three ephemeral streams, totaling 3,034 linear feet. The Alternate Route right-of-way contains three intermittent streams and five ephemeral streams, totaling 3,775 linear feet. These streams were assessed using the Ohio EPA Qualitative Habitat Evaluation Index and Primary Headwater Habitat Evaluation Index scoring data forms.

No impacts to streams are anticipated from the construction and operation of the proposed switchyard. Project construction and operation activities for the Preferred and Alternate routes would require one stream crossing by construction equipment resulting in three linear feet of stream impacts. The Applicant proposes to install a culvert to cross the stream. No in-water work is proposed for the project. Except for the single stream crossing, the Applicant would utilize existing farm roads and crop areas to access either side of streams. The Applicant has sited poles outside of waterbodies to avoid temporary soil disturbance and permanent direct impacts. The proposed transmission line would aerially span all streams.

The Applicant identified and delineated 23 wetlands within the project area totaling 3.674 acres. Thirteen of the delineated wetlands occur along the common route: seven are Category 2 wetlands, three scored in the gray zone between Category 1 and 2 wetlands, and three are Category 1 wetlands. The Preferred Route right-of-way contains five Category 2 wetlands and one Category 1 wetland, with 2.301 total acres of wetland within the construction corridor. The Alternate Route right-of-way contains one Category 2 wetland and three wetlands that scored in the gray zone between Category 1 and 2 wetlands, with 2.034 acres of wetland within the construction corridor. The Applicant would avoid or minimize wetland filling and sedimentation that may occur as a result of construction activities.

All wetlands along either route would be spanned by new conductors and supported by new transmission structures that the Applicant would install on upland areas or outside of wetland boundaries. No direct wetland fill is proposed for this project. All wetlands associated with the proposed switchyard would be avoided. Selective clearing would be required to remove woody vegetation in wetlands that would otherwise interfere with the operation of the transmission line. The creation of the 150-foot right-of-way would require clearing of woody vegetation for safety reasons.

Wetland and stream impacts would be covered under the Nationwide Permit 12 from the U.S. Army Corps of Engineers (USACE). In order to minimize impacts to surface waters, Staff recommends that the Applicant be required to provide a construction access plan for Staff review prior to the preconstruction conference. The plan would consider the location of streams, wetlands, wooded areas, and sensitive plant species, as identified by the ODNR Division of Wildlife, and would explain how impacts to all sensitive resources would be avoided or minimized during construction, operation, and maintenance. The plan would include the measures the Applicant shall use to restore the area around all temporary access points, and a description of any long-term stabilization required along permanent access routes.

The Applicant has committed to use avoidance and mitigation measures during construction to minimize impacts to streams, including environmental training, environmental monitors, and site restoration. The required permit and the Stormwater Pollution Prevention Plan (SWPPP) that will be prepared for the project will identify additional controls and best management practices (BMP) to be followed during construction and operation. The Applicant will provide a copy of the SWPPP to Staff.

The Applicant will not conduct mechanized clearing within 25 feet of any stream channel. To limit impacts to these streams further, the Applicant will conduct tree clearing by hand, and will limit tree clearing to those trees that it perceives as posing an imminent risk to the construction and operation of the facility.

The shared route would cross portions of four open water ponds, totaling 0.47 acre. These ponds are associated with the inactive strip mine sites and are located at the bottom of steep gorges with rocky slopes. The Applicant did not observe any lakes or reservoirs along the construction corridor of the routes.

The Applicant anticipates submitting a Notice of Intent to the Ohio EPA for authorization of stormwater discharges associated with construction activity under the National Pollutant Discharge Elimination System (NPDES). It is anticipated that a Nationwide Permit will be required from the USACE.

Threatened and Endangered Species

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

BIRDS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
American bittern	<i>Botaurus lentiginosus</i>	N/A	Endangered	Due to the location and the type of habitat present at the project site, this project is not likely to impact this species.
FISH				
Channel darter	<i>Percina copelandi</i>	N/A	Threatened	Due to the type of work proposed, and no in-water work in a perennial stream, no impacts to this species are anticipated.
REPTILES AND AMPHIBIANS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Eastern massasauga	<i>Sistrurus catenatus</i>	Federal Candidate	Endangered	Due to the location, type of habitat present at the project site, and within the vicinity of the project area, and the type of work proposed, no impacts to this species are anticipated.
Eastern hellbender	<i>Cryptobranchus alleganiensis</i>	Federal Candidate	Endangered	Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, no impacts to this species are anticipated.

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.
Northern long-eared bat	<i>Myotis septentrionalis</i>	Threatened	Threatened	Historical range includes the project area.
Black bear	<i>Ursus americanus</i>	N/A	Endangered	Due to the mobility of the species, no impacts are expected to this species

MUSSELS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Threehorn wartyback	<i>Obliquaria reflexa</i>	N/A	Threatened	Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, no impacts to this species are anticipated.

With the exception of the Indiana bat and the Northern long-eared bat, neither the Applicant nor Staff expect the proposed project to negatively impact the species listed above. The Applicant states that approximately 25.8 acres of tree clearing would be required for the in common portion of the route. An additional 19.3 acres of tree clearing would be required for the Preferred Route, and an additional 20.5 acres for the Alternate Route.

The Indiana bat and Northern long-eared bat have a historical range that includes the project area. As tree-roosting species during the non-winter months, the Indiana bat and Northern long-eared bat, if present at the site, could be negatively impacted as a result of the tree clearing associated with construction and maintenance of the project. Limiting tree removal, particularly in the areas identified as potential Indiana bat and Northern long-eared bat habitat, would help reduce potential impacts to these species. In order to reduce potential negative impacts to these species, the ODNR and Staff recommend that the Applicant be required to adhere to seasonal cutting dates (October 1 through March 31) for the clearing of trees. The Applicant has committed to restricting tree clearing from October 1 through March 31 in order to avoid impacts to the Indiana bat and the Northern long-eared bat.

Vegetation

The Preferred and Alternate routes cross through several vegetative communities. The following table reflects the major vegetative communities present in the construction corridor and associated acres of impact for each route.

Vegetation Community Type	Preferred Route Impacts (Including Switchyard) (Acres)	Alternate Route Impacts (Including Switchyard) (Acres)
Agricultural	49	48.5
Forest	57.5	67

Staff recommends that the Applicant be required to provide a construction access plan and a vegetation management plan for Staff's review prior to the preconstruction conference. The plan should identify all areas of proposed vegetation clearing for the project, specify the extent of the clearing, and describe how it would conduct such clearing work to minimize removal of woody vegetation. The plan should also describe how the Applicant would protect trees and shrubs from damage around structures, along access routes, and at construction staging areas, including during maintenance operations. Where the Applicant cannot avoid extensive removal of existing woody riparian vegetation, the Applicant should include its plan for targeted replanting of site-appropriate, low-growing woody species.

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

Public Services, Facilities, and Safety

Public Services and Traffic

Construction of the transmission line would not place any major demands on local infrastructure and few if any demands on local government services. Easement purchase payments would be provided to local landowners on whose property the transmission line and interconnection facilities would be located. Workers would commute to the project area on a daily basis.

The principal impact on public services would be short-term increases in traffic on routes leading to and from the utility corridor due to deliveries of equipment and materials during construction. Workers arriving and departing during construction would also increase traffic. Some traffic management during the construction phase may be required in the immediate vicinity of the utility corridor where it crosses local roads to ensure safe and efficient maintenance of existing traffic patterns and usages. Once the transmission line is operational, related traffic would be minimal and would not be expected to significantly impact local roadways. Potential emergency service requirements would be coordinated with local officials. Local emergency response personnel would be trained to be familiar with the transmission lines emergency response system.

The Applicant would restrict public access to the transmission line and interconnection facilities with appropriately placed warning signs and other necessary measures.

Roads and Bridges

Access to the proposed facility is available from the interstate highway and state highway systems and then by county and township roads. The U.S. Interstate Highway and Ohio State Highway routes in the area allow vehicles up to 80,000 pounds gross weight to travel without an Ohio Special Hauling Permit. Any truck loaded in excess of 80,000 pounds gross weight traveling on the U.S. Interstate Highway and Ohio State Highway Systems would require an Ohio Special Hauling Permit. Road use of county and township roads would require local permits obtained from Columbiana County.

The proposed transmission line would cross no major highways. Both the Preferred and Alternate route would cross local roads in Yellow Creek and Madison townships. Neither the Preferred nor the Alternate route would cross any railroads.

The Applicant would construct gravel access roads along various points of the transmission line to allow for construction, operations, and maintenance. Access points would be constructed off public roadways and selected to minimize adverse effects to natural resources and landowners.

The Applicant would not dispose of gravel or any other construction material during or following construction of the facility by spreading such material on agricultural land. All construction debris and contaminated soil would be promptly removed and properly disposed of in accordance with Ohio EPA regulations.

Staff recommends the Applicant be required to develop a final transportation management plan that would include a road use agreement as outlined in the Recommended Conditions of the Certificate. Any damaged public roads and bridges would be repaired promptly to their previous condition by the Applicant under the guidance of the appropriate regulatory agency. Any temporary improvements would be removed unless the appropriate regulatory agency request that they remain.

Safety

The Applicant would design, construct, and operate the facilities to comply with safety standards or requirements set by the Occupational Safety and Health Administration, the PUCO, North American Electric Reliability Corporation (NERC) Mandatory Reliability Standards, the National Electric Safety Code, and equipment specifications.

Communications

The Applicant states that television interference is not expected to occur from the operation of the proposed transmission line. Any likely source of radio or television interference would be a localized effect primarily from defective hardware that should be easily detected and replaced.

Noise

The Applicant would confine most noise impacts associated with this project to the 18 to 24 month construction period. The Applicant proposes to mitigate noise impacts by properly maintaining construction equipment with installed mufflers and limiting construction activities to daylight hours, to the extent feasible.

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 and Route Selection

The Applicant studied various routing locations between the proposed generation facility and the switchyard interconnection point. Additionally, the Applicant was granted a waiver of the Board's requirement that no more than 20 percent of the Preferred and Alternate route be in common. The Applicant's rationale for the waiver was to co-locate portions of the proposed electric transmission line into the gas pipeline corridor, thereby condensing potential impacts into a smaller footprint. Critical criteria for the route selection study included engineering factors, socioeconomic impacts, and ecological constraints. Engineering factors included sufficient route width, limiting turns to reduce design complexity, and costs. Socioeconomic factors considered limiting the number of parcels crossed, disruption to road and railroad crossings, and the presence of sensitive land uses and proximity to residences. Ecological constraints centered on limiting vegetative and forest clearing, avoiding wetlands, streams and other water bodies, and avoiding impacts to sensitive animal and plant species. Additionally, routes were placed along property lines to facilitate the acquisition of easements and to avoid future land use disruption and conflicts.

Minimizing Impacts

Approximately 67 percent of the proposed Preferred and Alternate routes are shared and co-located in the natural gas pipeline corridor, reducing overall project impacts. Few homes are present throughout the project area, and significant aesthetic impacts are not expected as a result of the project. However, three residences within 150 feet of the Preferred Route are owned by participating landowners.

The proposed routes follow property lines, thus mitigating land use conflicts. Other sensitive land uses such as institutional facilities and recreational areas are not present in the project vicinity. Upon final route approval, the Applicant plans to prepare an archaeological survey of pole placement locations to determine if any significant historical resources are present.

The Applicant has attempted to limit forest clearing wherever practicable, limiting potential ecological impacts and preserving forested screening benefits. No direct wetland fill is proposed, and all wetlands are expected to be spanned and avoided. No in-water work is required for the project's single stream crossing. Potential impacts to threatened, endangered or sensitive species are expected to be avoided by adherence to seasonal clearing restrictions. Impacts to forests and vegetation would be further reduced by the Applicant's preparation of a construction access plan.

Conclusion

The Preferred and Alternate routes are both viable, and overall impacts for both routes are similar. The Alternate Route traverses more agricultural district land. However, neither route is expected to have a significant impact on farming operations. While the Preferred Route has several residences in close proximity, participating landowners own these residences. The Preferred Route would result in fewer potential land use conflicts and more efficient land lease acquisition.

Recommended Findings

Staff recommends that the Board find that the Preferred Route 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 is to evaluate the impact of integrating the proposed facility into the existing regional transmission grid. The Applicant proposes to construct a 345 kV transmission line and three circuit-breaker ring bus station. The proposed facility will interconnect through to ATSI's Sammis-Highland 345 kV transmission line.

NERC Planning Criteria

The NERC is responsible for the development and enforcement of federal government approved reliability standards, which are applicable to all owners, operators, and users of the bulk power system. As an owner, operator, and/or user of the bulk power system, the Applicant is subject to compliance with various NERC reliability standards, including but not limited to those related to transmission planning for contingency events.

PJM Interconnection

The Applicant submitted its generation interconnection request for the related generation facility to PJM on October 31, 2014. PJM gave the application a queue position of AA1-123.¹⁵ The System Impact Study was released by PJM in September 2015.

PJM analyzed the bulk electric system with the generation facility interconnected to the bulk power system. A 2018 summer peak power flow model was used to evaluate the regional reliability impacts. The only issues revealed during the PJM analysis was overloaded circuit breakers during the short circuit analysis.

The short circuit analysis study evaluates the interrupting capabilities of circuit breakers impacted by the proposed generation addition. The results identified 18 circuit breakers that would be overloaded. The generation facility will be responsible for replacing these breakers at a cost of \$13.3 million.

¹⁵ 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.

Conclusion

The proposed transmission line would not be constructed to relieve congestion or improve the electric grid. The system impact study revealed circuit breaker overloading issues, which the Applicant will be required to upgrade. The proposed project is an integral part of the generation facility, and, without it, energy from the generation facility would be unable to reach the electric power grid.

Recommended Findings

Staff recommends that the Board find that the proposed facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facility would serve the interests of electric system economy and reliability. Therefore, Staff recommends that the Board find that the facility complies with the requirements specified in R.C. 4906.10(A)(4), provided that any certificate issued by the Board for the proposed 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 of the proposed facility. However, fugitive dust rules adopted under R.C. Chapter 3704 may be applicable to the proposed facility. The Applicant would control fugitive dust through dust suppression techniques such as irrigation, mulching, or application of tackifier resins. These methods of dust control are sufficient to comply with fugitive dust rules.

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. No poles have been proposed for placement within streams or wetlands. Likewise, the substation would not impact surface water resources. However, culverted access roads may be needed to cross several streams. The Applicant would seek coverage, if needed, under the USACE Nationwide Permit 12 for surface water impacts associated with the proposed transmission line. The Applicant intends to submit a Notice of Intent for coverage under the Ohio EPA's NPDES general permit for stormwater discharges associated with construction activities. The Applicant would submit a SWPPP to the Ohio EPA as part of the NPDES permit. This SWPPP would include a detailed construction access plan and indicate BMP for construction activities that minimize erosion-related impacts to streams and wetlands. The Applicant will clearly identify wetlands, streams, and other environmentally sensitive areas before commencement of clearing or construction. No construction or access would be permitted in these areas unless clearly specified in the construction plans and specifications, thus minimizing any clearing-related disturbance to surface water bodies. With these provisions, construction of this facility would comply with the requirements set forth under R.C. Chapter 6111.

Solid Waste

Debris generated from construction activities would include conductor scrap, pallets, cartons, boxes, insulator crates, conductor reels and wrapping, and used stormwater erosion control materials. All construction-related debris would be disposed of in accordance with state and federal requirements. Staff recommends that if any contaminated soils are discovered or generated during construction, these soils would be handled in accordance with applicable regulations. The Applicant intends to have a spill prevention, control, and countermeasure plan in place, and it would follow manufacturer recommendations for any spill cleanup. The Applicant's solid waste disposal plans would comply with solid waste disposal requirements set forth in R.C. Chapter 3734.

Aviation

The closest airports are Columbiana County Airport (02G), Herron (7G1), and Eddie Dew Memorial Airpark (1G8) which are between 2 and 10 miles from the proposed transmission line. The closest heliport is Trinity Medical Center West (8OI4) approximately 16 miles away. The tallest anticipated structures associated with the project would be the 170-foot transmission towers.

The Applicant will consult with the Federal Aviation Administration and the ODOT Office of Aviation to determine if a Notice of Construction or Alteration is required.

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 Board Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Air, Water, Solid Waste, and Aviation Conditions** heading of the Recommended Conditions of Certificate section.

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.

The Applicant has submitted an application to the Board to construct the South Field Energy Generation Facility in case number 15-1716-EL-BGN. The purpose of the interconnection facilities project is to carry the energy from the generation facility to the electric power grid. The interconnection facilities would not be constructed unless the generation facility is constructed.

Public Interaction

The Applicant held a joint public informational meeting for this project and the generation facility on October 20, 2015. At this meeting, attendees were provided the opportunity to speak with representatives of the Applicant in an open house format. Additionally, the Applicant has participated in meetings with local public officials and neighbors of the proposed facility. The Applicant has committed to continue engaging the public prior to, during, and after construction of the facility.

The Applicant served copies of the application on officials representing Columbiana County, Yellow Creek Township, the Columbiana Public Library, and the Wellsville Carnegie Public Library.

Motions to intervene in this case have been filed by American Transmission Systems, Inc.; Kenneth Johnson and the Ohio Valley Jobs Alliance; the Columbiana County Development Department; and Yellow Creek Township.

The Administrative Law Judge issued an entry on March 29, 2016, scheduling a local public hearing and an adjudicatory hearing for this proceeding. The local public hearing, at which the Board will accept written or oral testimony from any person, is scheduled for June 6, 2016, at 6:00 p.m., at the Wellsville High School, 1 Bengal Boulevard, Wellsville, Ohio, 43968. The adjudicatory hearing is scheduled for June 21, 2016, at 10:00 a.m., in Hearing Room 11-D, at the offices of the PUCO, 180 East Broad Street, Columbus, Ohio 43215.

Electromagnetic Fields

Transmission lines, when energized, generate electromagnetic fields (EMF). Laboratory studies have failed to establish a strong correlation between exposure to EMF and effects on human health. However, there have been concerns that EMF may have impacts on human health.

Due to these concerns, the Applicant has computed the EMF associated with the new circuits. The Applicant computed the EMF based on the maximum loadings of the lines, which would lead to the highest EMF values that might exist along the proposed transmission line. Daily current load levels normally operate below the maximum load conditions, thereby further reducing nominal EMF values.

Electric fields are a function of the voltage, the line configuration, and the distance from a transmission line. Electric fields are produced by voltage or electric charge. The electric field for

this transmission line project would be less than 1.81 kilovolt/meter. Electric fields are easily shielded by physical structures such as the walls of a house, foliage, or other barriers.

Magnetic fields are a function of the electric current, the configuration of the conductors, and the distance from a transmission line. The Applicant estimated the magnetic fields at the center of the right-of-way to be 125 milligauss, dropping to less than 20 milligauss at the edge of the right-of-way, 75 feet away from the centerline. The Applicant states that the transmission facilities will be designed according to the requirements of the National Electric Safety Code.

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

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 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 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.

Significant impacts to agricultural district land are not expected. The Preferred Route traverses approximately 6 acres of agricultural district land, and the Alternate Route crosses approximately 21 acres of agricultural district land. Permanent impacts to agricultural lands are essentially limited to pole placement locations, allowing the resumption of agricultural activity after construction. Therefore, very little land is expected to be permanently removed from agricultural production.

Impacts to agricultural production include construction-related activities such as vehicle traffic and materials storage could lead to temporary reductions in farm productivity caused by direct crop damage, soil compaction, broken drainage tiles, and reduction of space available for planting. The Applicant intends 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. After construction, farm production could resume underneath the transmission line. The Applicant does not anticipate the loss of participation in agricultural district programs due to the minimal permanent impacts to agricultural land use from the project.

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.

Because the facility will not require the use of water for operation, water conservation practice as specified under R.C. 4906.10(A)(8) is satisfied by the facility.

Recommended Findings

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).

IV. RECOMMENDED CONDITIONS OF CERTIFICATE

Following a review of the application filed by Paulding Wind Farm III, 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 facility shall be installed at the Applicant's Preferred Route as presented in the application and as modified and/or clarified by supplemental filings and recommendations in this *Staff Report of Investigation*.
- (2) The Applicant shall utilize the equipment and construction practices 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*.
- (3) The Applicant shall implement the 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*.
- (4) The Applicant shall conduct a preconstruction conference prior to the start of any construction activities. Staff, the Applicant, and representatives of the prime 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 meetings for each stage of construction.
- (5) At least 30 days prior to the preconstruction conference, the Applicant shall have in place a complaint resolution procedure to address potential public grievances resulting from project construction and operation. The resolution procedure must provide that the Applicant will work to mitigate or resolve any issues with those who submit either a formal or informal complaint and that the Applicant will immediately forward all complaints to Staff. The Applicant shall provide the complaint resolution procedure to Staff, for review and confirmation that it complies with this condition, prior to the preconstruction conference.
- (6) At least 30 days before the preconstruction conference, the Applicant shall submit to Staff, for review to ensure compliance with this condition, one set of detailed engineering drawings of the final project design, including the facility, temporary and permanent access roads, any crane routes, construction staging areas, and any other associated facilities and access points, so that Staff can determine that the final project design is in compliance with the terms of the certificate. The final project layout shall be provided in hard copy and as geographically-

referenced electronic data. The final design shall include all conditions of the certificate and references at the locations where the Applicant and/or its contractors must adhere to a specific condition in order to comply with the certificate.

- (7) If the Applicant makes any changes to the project layout after the submission of final engineering drawings, the Applicant shall provide all such changes to Staff in hard copy and as geographically-referenced electronic data. All changes will be subject to Staff review to ensure compliance with all conditions of the certificate, prior to construction in those areas.
- (8) 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.
- (9) Prior to the commencement of construction activities 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.
- (10) 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.
- (11) As the information becomes known, the Applicant shall docket in the case record the date on which construction will begin, the date on which construction was completed, and the date on which the facility begins commercial operation.

SOCIOECONOMIC CONDITIONS

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

- (12) Prior to commencement of construction, the Applicant shall develop a public information program that informs affected property owners of the nature of the project, specific contact information of Applicant personnel who are familiar with the project, the proposed timeframe for project construction, and a schedule for restoration activities. The Applicant shall give notification to affected property owners at least 30 days prior to work on the affected property.
- (13) The Applicant shall avoid, where possible, or minimize to the maximum extent practicable, any damage to field tile drainage systems and soils resulting from construction, operation, and/or maintenance of the facility in agricultural areas. The Applicant shall promptly repair damaged field tile systems to at least original conditions at the Applicant's expense. If applicable, the Applicant shall segregate and restore excavated topsoil in accordance with the

Applicant's lease agreement with the landowner. The Applicant shall plow or otherwise de-compact severely compacted soils, if necessary, to restore them to original conditions, unless otherwise agreed to by the landowner.

- (14) The Applicant shall survey the planned location of new pole structures for archeological resources that could be eligible for inclusion in the National Register of Historic Places. If such resources are present, the Applicant shall either avoid the resource or develop a mitigation plan in consultation with the State Historic Preservation Office. Such a plan shall be submitted to Staff for review and confirmation that it complies with this condition.

ECOLOGICAL CONDITIONS

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

- (15) The Applicant shall adhere to seasonal cutting dates of October 1 through March 31 for removal of trees, unless coordination efforts with the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service allow a different course of action.
- (16) Should site-specific conditions warrant blasting, the Applicant shall submit a blasting plan at least 30 days prior to blasting, to Staff for review and confirmation that it complies with this condition. The Applicant shall submit the following information as part of its blasting plan:
 - (a) The name, address, and telephone number of the drilling and blasting company;
 - (b) A detailed blasting plan for dry and/ or wet holes for a typical shot. The blasting plan shall address blasting times, blasting signs, warnings, access control, control of adverse effects, and blast records; and
 - (c) A plan for liability protection and complaint resolution.
- (17) Prior to the use of explosives, the Applicant or explosive contractor shall obtain all required local, state, and federal licenses/permits. The Applicant shall submit a copy of the license or permit to Staff within seven days of obtaining it from the local authority.
- (18) The blasting contractor shall utilize two blasting seismographs that measure ground vibration and air blast for each blast. One seismograph shall be placed at the nearest dwelling and the other placed at the discretion of the blasting contractor.
- (19) At least 30 days prior to the initiation of blasting operations, the Applicant must notify, in writing, all residents or owners of dwellings or other structures within 1,000 feet of the blasting site. The Applicant or explosive contractor shall offer and conduct a pre-blast survey of each dwelling or structure within 1,000 feet of each blasting site, unless waived by the resident or property owner. The survey must be completed and submitted to Staff at least 10 days before blasting begins.
- (20) The Applicant shall complete a full detailed geotechnical exploration and evaluation to confirm that there are no issues to preclude development of the facility. The geotechnical exploration and evaluation shall include borings to provide subsurface soil properties, static water level, rock quality description, percent recovery, and depth and description of the bedrock contact and recommendations needed for the final design and construction of the

facility. The Applicant must fill all boreholes, and borehole abandonment must comply with state and local regulations. The Applicant shall provide copies of all geotechnical boring logs to Staff and to the ODNR Division of Geological Survey prior to construction.

PUBLIC SERVICES, FACILITIES, AND SAFETY CONDITIONS

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

- (21) The Applicant shall restrict public access to the facility with appropriately placed warning signs or other necessary measures.
- (22) 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 or permanent 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 (ODOT), 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 that it complies with this condition.
- (23) General construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m., or until dusk when sunset occurs after 7:00 p.m. Impact pile driving, hoe ram, and blasting operations, 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 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 4906-5-08(C)(3) (2014), of upcoming construction activities including potential for nighttime construction activities.

AIR, WATER, SOLID WASTE, AND AVIATION CONDITIONS

Staff recommends the following conditions to address the requirements discussed in the **Air, Water, Solid Waste, and Aviation** section of the Nature of Probable Environmental Impact:

- (24) The Applicant must meet all recommended and prescribed Federal Aviation Administration (FAA) and ODOT Office of Aviation requirements to construct an object that may affect navigable airspace. This includes submitting coordinates and heights for all towers exceeding 200 feet AGL for ODOT Office of Aviation and FAA review prior to construction, and the non-penetration of any FAA *Part 77* surfaces.
- (25) All applicable structures, including construction equipment, shall be lit in accordance with FAA circular 70/7460-1 K Change 2, *Obstruction Marking and Lighting*; or as otherwise prescribed by the FAA. This includes all cranes and construction equipment.
- (26) Within 30 days of construction completion, the Applicant shall file the as-built transmission structure coordinates and heights (above ground level) with the ODOT Office of Aviation and the FAA.



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