

Staff Report of Investigation

Knox Transmission Substation Project

Case Number
12-0864-EL-BSB

October 22, 2012



John Kasich, Governor

Power Siting
Board

Todd Snitchler, Chairman

In the Matter of the Application by ATSI for a)	
Certificate of Environmental Compatibility and Public)	Case Number
Need for the Knox Transmission Substation Project)	12-0864-EL-BSB

Staff Report of Investigation

Submitted to the
OHIO POWER SITING BOARD

TABLE OF CONTENTS

ACRONYMS	iv
I. POWERS AND DUTIES	1
Ohio Power Siting Board	1
Nature of Investigation.....	1
Criteria.....	3
II. APPLICATION.....	4
Applicant	4
History of the Application.....	4
Project Description	5
Project Map	6
III. CONSIDERATIONS AND RECOMMENDED FINDINGS	9
Basis of Need	9
Nature of Probable Environmental Impact.....	11
Minimum Adverse Environmental Impact.....	15
Electric Grid	16
Air, Water, Solid Waste, and Aviation.....	19
Public Interest, Convenience, and Necessity	21
Agricultural Districts	23
Water Conservation Practice	24
IV. RECOMMENDED CONDITIONS OF CERTIFICATE.....	25
General Conditions.....	25
Socioeconomic Conditions.....	26
Ecological Conditions	26
Air, Water, Solid Waste, and Aviation Conditions	27
APPENDIX.....	29
1. Docketing Record.....	29

BEFORE THE POWER SITING BOARD OF THE STATE OF OHIO

In the Matter of the Application by ATSI for a)	Case Number
Certificate of Environmental Compatibility and Public)	12-0864-EL-BSB
Need for the Knox Transmission Substation Project)	

Members of the Board:

Todd Snitchler, Chairman, PUCO
Christiane Schmenk, Director, ODSA
Dr. Ted Wymyslo, Director, ODH
David Daniels, Director, ODA
Scott Nally, Director, Ohio EPA
Jim Zehringer, Director, ODNR
Jeffery J. Lechak, PE, Public Member

Louis Blessing, Jr., State Representative
Sandra Williams, State Representative
Tom Sawyer, State Senator
Shannon Jones, State Senator

To the Honorable Power Siting Board:

In accordance with provisions of the Ohio Revised Code (ORC) Section 4906.07(C), and the Commission's rules, the Staff has completed its investigation in the above matter and submits its findings and recommendations in this staff report for consideration by the Ohio Power Siting Board (Board).

The *Staff Report of Investigation* has been prepared by the Staff of the Public Utilities Commission of Ohio. The findings and recommendations contained in this report are the result of Staff coordination with the 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 ORC Sections 4906.07 and 4906.12, copies of this staff report have been filed with the Docketing Division of the Public Utilities Commission of Ohio on behalf of the Ohio Power Siting Board 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 ORC 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,


Klaus Lambeck, Chief
Facilities, Siting, & Environmental Analysis Division

ACRONYMS

BMP	best management practices
DOW	ODNR Division of Wildlife
FAA	Federal Aviation Administration
kV	kilovolts
MW	megawatts
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OAC	Ohio Administrative Code
ODA	Ohio Department of Agriculture
ODSA	Ohio Development Services Agency
ODH	Ohio Department of Health
ODNR	Ohio Department of Natural Resources
ODOT	Ohio Department of Transportation
Ohio EPA	Ohio Environmental Protection Agency
OHPO	Ohio Historic Preservation Office
OPSB	Ohio Power Siting Board
ORC	Ohio Revised Code
PUCO	Public Utilities Commission of Ohio
SPCC	Spill Prevention, Containment, and Countermeasure
SWPPP	Storm Water Pollution Prevention Plan
USFWS	U.S. Fish and Wildlife Service

I. POWERS AND DUTIES

OHIO POWER SITING BOARD

The Ohio Power Siting Board (Board or OPSB) was created in 1972. The Board is a separate entity within the Public Utilities Commission of Ohio (PUCO). The authority of the Board is outlined in Ohio Revised Code (ORC) Chapter 4906.

The Board is authorized to issue certificates of environmental compatibility and public need for the construction, operation, and maintenance of major utility facilities as defined in ORC Section 4906.01. Included within this definition 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, per ORC Section 4906.20, the Board authority applies to economically significant wind farms, defined in ORC 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.

Membership of the Board is specified in ORC Section 4906.02(A). The voting members include: the Chairman of the PUCO who serves as Chairman of the Board; the directors of the Ohio Environmental Protection Agency (Ohio EPA), the Ohio Department of Health (ODH), the Ohio Development Services Agency (ODSA), the Ohio Department of Agriculture (ODA), and the Ohio Department of Natural Resources (ODNR); and a member of the public, specified as an engineer, appointed by the Governor from a list of three nominees provided by the Ohio Consumers' Counsel. Ex-officio Board members include two members (with alternates) from each house of the Ohio General Assembly.

NATURE OF INVESTIGATION

The OPSB has promulgated rules and regulations, found in Chapter 4906 of the Ohio Administrative Code (OAC), 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 OPSB an application for a certificate of environmental compatibility and public need.¹ The application must include a description of the facility and its location, 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 OPSB may consider relevant.²

Within 60 days of receiving an application, the OPSB must determine whether the application is sufficiently complete to begin an investigation.³ If an application is considered complete, the Chairman of the OPSB will cause a public hearing to be held 60 to 90 days after the official filing date of the completed application. At the public hearing, any person may provide written

¹ ORC 4906.04 and 4906.20

² ORC 4906.10(A)(1) and 4906.20(B)(1)

³ OAC 4906-5-05(A)

or oral testimony and may be examined by the parties.⁴ Parties include the Applicant, public officials, and any person who has been granted a motion of leave for intervention.⁵

Staff Investigation and Report

The Chairman will also cause each application to be investigated and a report published not less than 15 days prior to the public hearing. 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 OPSB, 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 under guidance of the OPSB rules and regulations in OAC Chapter 4906. The recommended findings resulting from the Staff's investigation are described in the staff report pursuant to ORC Section 4906.07(C). The report does not represent the views or opinions of the OPSB 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 and 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 any time.⁷

Board Decision

The OPSB may approve, modify and approve, or deny an application for a certificate of environmental compatibility and public need. If the OPSB 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 standards and rules adopted under the ORC.⁸

Upon rendering its decision, the OPSB 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 OPSB'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 OPSB may submit within 30 days an application for rehearing.¹¹ An entry on rehearing will be issued by the OPSB within 30 days and may be appealed within 60 days to the Supreme Court of Ohio.¹²

⁴ ORC 4906.07

⁵ ORC 4906.08(A)

⁶ ORC 4906.07(C) and 4906.10

⁷ ORC 4906.09 and 4906.12

⁸ ORC 4906.10(A) and (B)

⁹ ORC 4906.11

¹⁰ ORC 4906.10(C)

¹¹ ORC 4903.10 and 4906.12

¹² ORC 4903.11, 4903.12, and 4906.12

CRITERIA

The recommendations and conditions in this *Staff Report of Investigation* were developed pursuant to the criteria set forth in ORC Section 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 or natural gas transmission line;
- (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 generation 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 ODOT 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) through (A)(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 alternate site.
- (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

American Transmission Systems, Inc. (ATSI or Applicant) is seeking authority to expand the existing Knox Substation, installing a storm-water detention basin and connecting the nearby East Akron-Sammis 138 kV Transmission Line to the substation. The additional transmission line connections would change the function of the substation from a distribution substation to both a distribution substation and a switching substation. ATSI would construct, own, operate, and maintain the proposed equipment related to the project.

ATSI is a wholly-owned subsidiary of the FirstEnergy Corporation. FirstEnergy was formed in 1997 through the merger of Ohio Edison Company and Centerior Energy Corporation. Through this merger, FirstEnergy became the holding company for Ohio Edison and its Pennsylvania Power Company subsidiary, as well as the Cleveland Electric Illuminating Company and the Toledo Edison Company.

In 2011, FirstEnergy completed a merger with Allegheny Energy, a Greensburg, PA-based company that served 1.6 million customers in Pennsylvania, West Virginia, Maryland, and Virginia. The merger more than doubled FirstEnergy's highly efficient, supercritical coal capacity and provided opportunities for the company to grow and expand into new markets with a stronger, more focused competitive operation. Today, FirstEnergy is one of the nation's largest investor-owned electric systems based on the number of customers served.

HISTORY OF THE APPLICATION

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

On May 8, 2012, the Applicant held a public information meeting regarding the proposed electric substation expansion.

On June 8, 2012, the Applicant filed a motion for waiver of the one-year notice provision and of the requirements to submit fully-developed information for the alternate substation site. Staff did not object to these waivers.

On August 3, 2012, the Applicant filed the Knox Transmission Substation Project application.

On September 11, 2012, the Applicant was issued a letter of compliance regarding the application from the Chairman of the Board.

A local public hearing has been scheduled for November 7, 2012, at 6:00 p.m., at the West Township Administration Building, 8610 Knox School Road, Minerva, Ohio, 44657. The adjudicatory hearing will commence on November 16, 2012, at 10:00 a.m., in Hearing Room 11-D, at the offices of the PUCO, 180 East Broad Street, Columbus, Ohio.

This summary of the history of the application does not include every filing in case number 12-0864-EL-BSB. The docketing record for this case, which lists all documents filed to date, can be found in the Appendix to this report and online at <http://dis.puc.state.oh.us>.

PROJECT DESCRIPTION

ATSI is seeking approval for a conversion and expansion of an existing distribution substation to a transmission switching substation in order to reinforce the 138 kV transmission system in the Canton, Ohio area.

The Applicant proposes to do this by expanding the Knox Substation to the west and southwest approximately 30 feet and 100 feet, respectively. The project also involves installing a stormwater detention basin and connecting the nearby East Akron-Sammis 138 kV Transmission Line to the substation. Soil from a nearby borrow area would be needed for site grading. The project area and proposed facilities are shown on the maps in this report.

The project adds two 138 kV transmission line connections to the two 138 kV connections already existing at the substation. The proposed alignments and details for the new East Akron-Sammis 138 kV Transmission Line loop to the Knox Substation will be provided in a Letter of Notification to be submitted to the Board separately at a later date. The additional transmission line connections would change the function of the substation from a distribution substation to both a distribution substation and a transmission switching substation. ATSI would construct, maintain, operate, and own the proposed expanded substation.

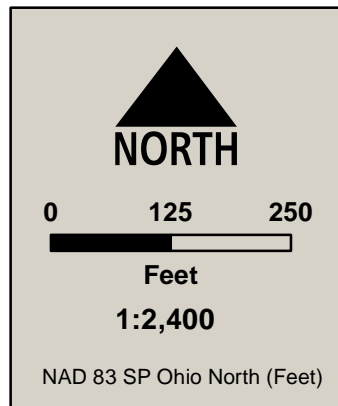
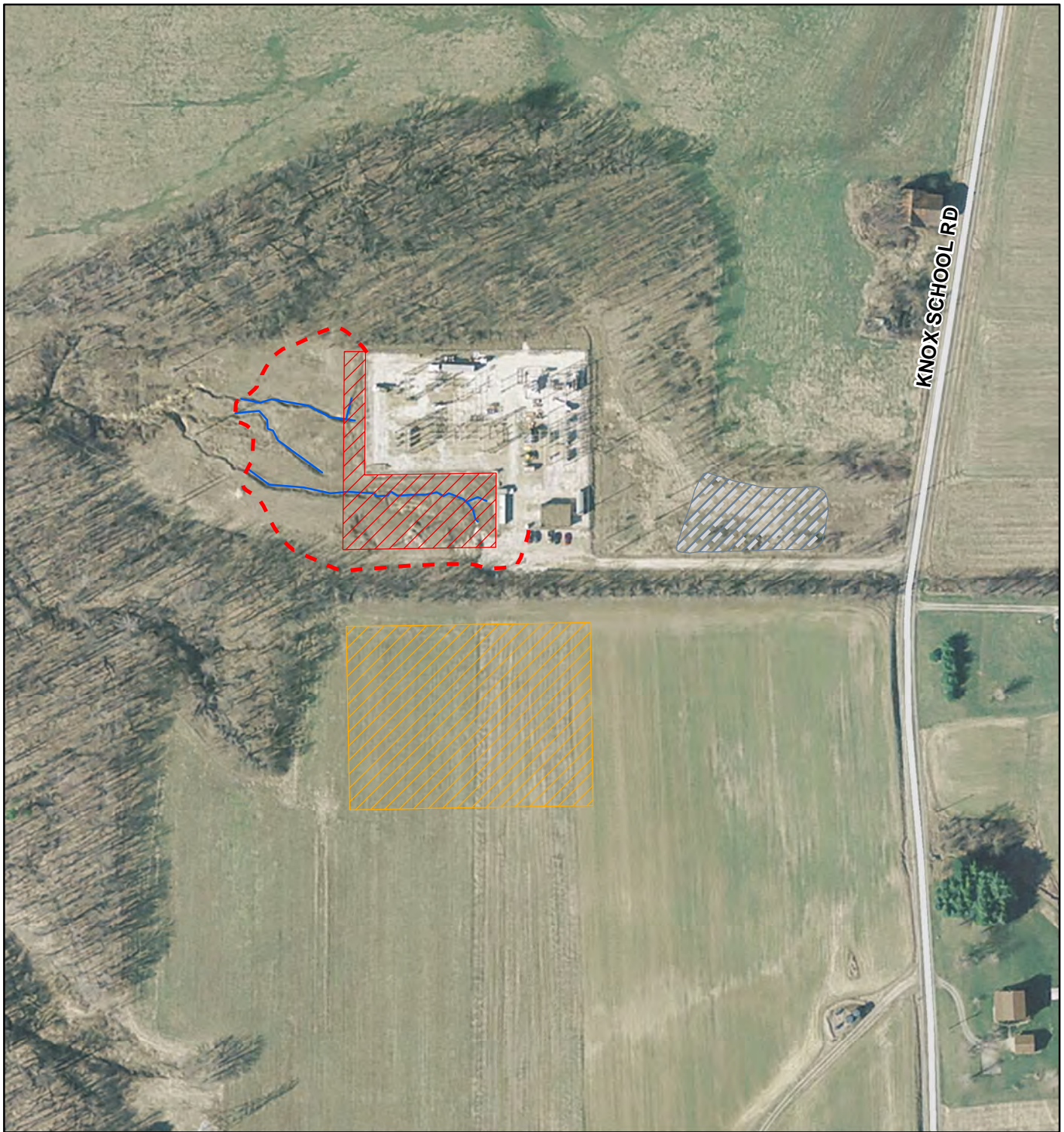
ATSI has asked the Board to waive the requirement for fully-developed information on an alternate site for the project, because, according to ATSI, expanding the existing Knox Substation does not cause significant ecological or social impacts, is the most economically feasible option, and any alternate site would create more impacts than the Preferred Site option.

A Preferred Site for the project is proposed in the Application. An Alternate Site is described, but fully-developed information on the Alternate Site is not provided. The Preferred Site is the site of the existing Knox Substation, which is located at 6551 Knox School Road, West Township, Columbiana County, Ohio. The existing Knox Substation is owned by ATSI and is located on land owned by Ohio Edison (a FirstEnergy subsidiary).

The fence line would be increased to enclose the additional substation equipment. The area within and approximately five feet beyond the fence line would be graded and covered in gravel. The proposed project also involves installation of a stormwater detention basin adjacent to the west side of the substation that will accept stormwater from both the existing and expanded area of the substation. The total configuration for the existing and proposed expansion of the Knox Substation would require approximately 2.1 acres. Access to the substation would continue to be from Knox School Road to the east via the existing permanent access drive. The Applicant plans to begin construction in December 2012 and place the facility in service by July 2013.

PROJECT MAP

This page intentionally left blank



Overview Map

12-0864-EL-BSB

Knox Substation

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.

This page intentionally left blank

III. CONSIDERATIONS AND RECOMMENDED FINDINGS

In the matter of the application of ATSI, the following considerations and recommended findings are submitted pursuant to ORC Section 4906.07(C) and ORC Section 4906.10(A).

Considerations for ORC Section 4906.10(A)(1)

BASIS OF NEED

Purpose of Proposed Facility

The purpose of the Knox Transmission Substation Project is to expand the existing Knox Substation by adding 138 kV transmission. The Knox Substation serves distribution and customer load and other substations in the area. The reinforcements would improve quality of electric service and operational reliability, which is required by planning criteria used by FirstEnergy, PJM Interconnection, and the North American Electric Reliability Corporation. The existing Knox Substation is currently being utilized as a distribution substation. The proposed expansion of the distribution substation would loop ATSI's 138 kV transmission system into the Knox Substation by adding space to allow two additional connections from the East Akron-Sammis 138 kV Transmission Line. With the addition of the two transmission connections, the current substation configuration would be reconfigured to include transmission switching. This section of the staff report focuses on reviewing the need of the proposed substation expansion.

Long Term Forecast

The proposed substation project has been identified in the 2012 *American Transmission Systems, Incorporated Long-Term Forecast Report to the Public Utilities Commission of Ohio*. The Public Utilities Commission assigned this document case number 12-0504-EL-FOR.

PJM Regional Transmission Expansion Plan

PJM Interconnection LLC (PJM), a Regional Transmission Organization, is charged with the operation of the regional transmission system and maintaining the reliability of their footprint. PJM issues an annual Regional Transmission Expansion Plan (RTEP) report that explains the rationale behind transmission upgrades that are needed to maintain reliability. The proposed substation project was identified in the 2011 PJM RTEP¹³ and approved by the PJM Board for construction.

System Economy and Reliability

The existing Knox and Bluebell substations provide service to nine Ohio Edison local area distribution substations and eight customer substations. Currently, system voltage levels at the local substations are in jeopardy of falling below reliability criteria under certain contingency outage conditions. The December 31, 2010 retirement of the R.E. Burger Power Plant removed all 138 kV sources to the Knox Substation, except one, the Bluebell bus. With this loss of voltage support and certain outage contingency conditions, the 69 kV and 138 kV bus voltages at the Knox, Bluebell, and Washington substations fall below reliability criteria. More detailed investigation of voltage and electric grid concerns may be found in the Electric Grid section of this report.

¹³ PJM 2011 Regional Transmission Expansion Plan, February 28, 2012. Retrieved September 13, 2012, from <http://pjm.com/documents/reports/rtep-report.aspx>, pp. 91-92.

Conclusion

ATSI has demonstrated the basis of need. The retirement of the R.E. Burger Power Plant and certain contingencies could cause reliability problems on the local and regional grid. PJM has identified this project in their transmission explanation plan and the PJM Board approved the project for construction.

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 ORC Section 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 report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(2)

NATURE OF PROBABLE ENVIRONMENTAL IMPACT

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

Socioeconomic Impacts

Demographics

The project is located within the unincorporated portion of West Township in Columbiana County, a predominantly rural area that contains large agricultural tracts, wooded areas, and scattered residences. Over the last ten years, the population of this region has been gradually declining. According to the U.S. Census, the population of Columbiana County has decreased between the years of 2000 and 2010 by 3.9 percent, from 112,075 to 107,841.¹⁴ Likewise, over the same period, the population of West Township has declined by 1.3 percent, from 3,351 to 3,307.¹⁵ In 2010, West Township had an average population density of 94 persons per square mile, compared to 202 persons per square mile in Columbiana County.¹⁶ The populations of both West Township and Columbiana County decreased by 0.2 percent between 2010 and 2011.¹⁷ The project is not expected to impact the demographics of the region.

Land Use

A total of three residences are within 1,000 feet of the Preferred Site, all of which are along Knox School Road. The minimum residential distance from the Preferred Site is approximately 650 feet.

No residences would be removed during the construction of the substation at either the Preferred or Alternate site, and the majority of residential impacts would be temporary, associated with construction of the facilities. Construction of the substation is not expected to affect residential land use patterns in the vicinity of the project.

No commercial, industrial, institutional, or recreational land uses are located within 1,000 feet of either the Preferred or Alternate site. No adverse impacts to these land uses are expected as a result of construction or operation of the proposed substation expansion.

The Preferred Site for substation expansion is not used for agricultural production, and construction of the project there would not permanently impact nearby agricultural land. However, construction of the substation at the Alternate Site would permanently remove agricultural land within its footprint from use.

As a means of mitigating the potential for erosion or sedimentation on nearby agricultural land that may result during project construction, the Applicant would develop a Storm Water Pollution Prevention Plan for the project that would include silt fencing and other erosion and

¹⁴ United States Census. American Factfinder. *Profile of General Demographic Characteristics: 2010 Census 2010 Summary File 1 (SF1) 100 Percent Data and General Demographic Characteristics*. Retrieved September 18, 2012, from the U.S. Census Bureau website, <http://factfinder2.census.gov>

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ohio Department of Development. July 2011. *2011 Population Estimates by County, City, Village, and Township*. Retrieved, September 18, 2012, from the ODOD website, <http://development.ohio.gov/files/research/P5027.pdf>

sedimentation management practices. Following project construction and final grading, disturbed land would be restored to its original condition.

Cultural and Archaeological Resources

No previously-recorded archaeological sites, National Register of Historic Places (NRHP) structures, or Ohio Historic Inventory (OHI) structures were identified within 1,000 feet of the project. The Applicant retained a contractor to conduct a Phase I cultural resources study within an Area of Potential Effect (APE), consisting of an archaeological field survey and a viewshed assessment. The APE was defined to include the 1.6-acre substation expansion area, the 0.4-acre borrow area, and seven wooden pole locations totaling approximately two acres.

The archaeological field survey identified two lithic artifacts in the expansion area and prehistoric lithic scatter in the borrow area. None of these archaeological resources is considered eligible for listing in the NRHP, and the consultant recommends no further archaeological investigations within the APE. Furthermore, no historic structures were documented in the vicinity of the APE, and no further cultural resources study is recommended for the project.

Aesthetics

The aesthetic character of the Preferred Site would not be significantly altered by the proposed substation expansion. Nearby residences are located to the east of the substation, and the Applicant proposes expanding the substation to the west. Consequently, existing substation components would partially screen structural additions from residences and public vantage points along Knox School Road. Tree cover surrounding the existing substation would further obscure the project from view. Construction of a new substation at the Alternate Site would create greater visual impacts than the expansion of the existing substation.

Economics

The estimates of applicable intangible and capital costs for the Preferred Site are \$1,653,957. The approximate increase in annual property taxes for Columbiana County, Ohio would be \$85,255 in the first year after completion of the project.

All Staff recommendations for the requirements discussed in this section can be found under the **Socioeconomic Conditions** heading of the Recommended Conditions of Certificate.

Ecological Impacts

The Applicant was granted a waiver from providing fully-developed information for the Alternate Site. Therefore, the discussion of ecological impacts is limited to the Preferred Site. According to the Applicant's site selection analysis, surface waters and threatened and endangered species, including habitat, are not located at the Alternate Site. Additionally, the Alternate Site is located in an agricultural field and would not require the clearing of any trees.

Surface Waters

Five streams totaling approximately 739 linear feet, and 1,367 square feet, would be filled if the substation expansion is constructed on the Preferred Site. To control erosion during installation of the project, the Applicant indicates that a Storm Water Pollution Prevention Plan (SWPPP) and best management practices (BMPs) will be implemented.

The Applicant has indicated that no wetland or pond crossings are anticipated during construction activities at the Preferred Site. No wetlands were identified within the footprint of the Preferred Site. Therefore, no impacts to wetlands are anticipated.

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. Additional information was provided 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
bald eagle	<i>Haliaeetus leucocephalus</i>	None	Endangered	Known range, not found in Biodiversity Database near the project area.
American bittern	<i>Botaurus lentiginosus</i>	None	Endangered	Known range, no wetlands within project area to support species, species not observed during field survey
REPTILES & AMPHIBIANS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Eastern hellbender	<i>Cryptobranchus alleganiensis alleganiensis</i>	Species of Concern	Endangered	Known range, no streams within project area to support species
Eastern massasauga	<i>Sistrurus catenatus</i>	Candidate Species	Endangered	Known range, no wetlands within project area to support species
MAMMALS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
Indiana bat	<i>Myotis sodalis</i>	Endangered	Endangered	Known range, no habitat trees would be cut
black bear	<i>Ursus americanus</i>	None	Endangered	Known range, if present would not be impacted due to mobility
FRESH WATER MUSSELS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
sheepnose	<i>Plethobasus cyphus</i>	Endangered	Endangered	Known range, no streams within project area to support species
snuffbox	<i>Epioblasma triquetra</i>	Endangered	Endangered	Known range, no streams within project area to support species

Most of these species are not expected to be negatively impacted by the proposed project. However, the loss of suitable habitat may introduce the potential for the project to negatively impact the Indiana bat.

The Indiana bat has a historical range that includes the project area. As a tree-roosting species during the non-winter months, the Indiana bat, if present at the sites, 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 habitat, would help reduce potential impacts to this species. In the event that any unforeseen tree clearing becomes necessary, Staff recommends a requirement that the Applicant adhere to seasonal cutting dates (September 30 to April 1) for the clearing of any trees that exhibit suitable Indiana bat summer habitat, such as roosting and maternity roost trees.

Vegetation

The Applicant indicates that, because the Preferred Site is currently utilized as a maintained substation and upland field, no wooded areas are located within the expanded fence line of the Preferred Site. However, there may be impacts to woody vegetation for access to the site. To prevent erosion and possible sedimentation, seeding will be included as part of the construction stormwater BMPs.

All Staff recommendations for the requirements discussed in this section can be found under the **Ecological Conditions** of the Recommended Conditions of Certificate.

Recommended Findings

The Staff recommends that the Board find that the nature of the probable environmental impact has been determined for the proposed facility, and therefore complies with the requirements specified in ORC Section 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 report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(3)

MINIMUM ADVERSE ENVIRONMENTAL IMPACT

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

Site Selection

While the Applicant has proposed both a Preferred and Alternate site for the project, the Board has recognized that the preferred option to expand the existing Knox Substation is the most practical approach, ruling that detailed discussion of alternatives is not necessary. On June 29, 2012, the Applicant received a waiver of Rules 4906-5-04(A) of the ORC, which removed the requirement that fully-developed information be provided for both a Preferred and Alternate site. Consequently, the Applicant has provided detailed information on the preferred substation expansion only.

Minimizing Impacts

The Preferred Site expansion requires the use of only 2.1 additional acres. A 30 by 100-foot section would be added to the existing fence line. This proposed expansion presents the best option to maximize existing utility land use benefits, while removing the need to unnecessarily acquire and convert nearby agricultural land. The Preferred Site presents less aesthetic impact, as transmission equipment would be installed adjacent to existing utility facilities. The routing of transmission line interconnections is streamlined and the overall construction process is simplified at the Preferred Site. With the utilization of best management practices, the expansion presents no significant ecological impacts.

Conclusion

While the Preferred and Alternate Sites are viable options, the Preferred Site minimizes overall land use impacts. Staff concludes that the selection of the Preferred Site represents the minimum adverse environmental impact.

Recommended Findings

The Staff recommends that the Board find that the proposed facility represents the minimum adverse environmental impact, and therefore complies with the requirements specified in ORC Section 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 report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(4)

ELECTRIC GRID

Pursuant to ORC Section 4906.10(A)(4), the Board must determine that the proposed electric 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.

The purpose of this section is to evaluate the impact of integrating the proposed Knox Transmission Substation Project into the existing regional transmission grid. The Knox Transmission Substation Project would reinforce the existing transmission system serving distribution and customer load to local substations in the area and improve reliability during certain outage contingencies. The reinforcements would ensure quality of electric service and operational reliability which is required by FirstEnergy, PJM Interconnection, and North American Electric Reliability Corporation planning criteria. The existing Knox Substation is currently being utilized as a distribution substation. The proposed expansion of the distribution substation would loop ATSI's 138 kV transmission system into the Knox Substation by adding space to allow two additional connections from the East Akron-Sammis 138 kV Transmission Line. With the addition of the two transmission connections, the current substation configuration would be reconfigured to include transmission switching.

PJM Interconnection

PJM annually publishes the Regional Transmission Expansion Plan (RTEP). The RTEP summarizes the results of planning studies and explains the rationale behind system upgrades that are needed to maintain reliability within the PJM footprint. Stakeholders are encouraged to participate in the Transmission Expansion Advisory Committee (TEAC), which provides advice and recommendations to aid in the development of the RTEP.

The Knox Transmission Substation Project was identified in the 2011 PJM RTEP as an upgrade that must occur due to the retirement of R.E. Burger Power Plant unit three. The project was approved by the PJM Board for construction. The proposed project was also discussed at the April 12, 2012 TEAC meeting.¹⁸ Staff reviewed the 2011 RTEP and attended the April 12, 2012 TEAC meeting via conference call.

Transmission Planning Requirements

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 bulk power system. NERC requires planners of the bulk electric transmission system to meet Reliability Standards¹⁹ TPL-001-0.1 through TPL-004-0 under transmission outage conditions for categories A, B, C, and D contingencies. According to NERC, a contingency is an unexpected failure or outage of a system component, such as a generator, transmission line, circuit breaker, switch, or other electrical element. ATSI used NERC categories A through C for contingency planning of the Knox Transmission Substation Project. Below is a partial list of the NERC categories and their meanings:

¹⁸ Transmission Expansion Advisory Committee Meeting. April 12, 2012. Presentation retrieved September 9, 2012, from <http://pjm.com/home.aspx>

¹⁹ North American Electric Reliability Corporation, Reliability Standards, Transmission Planning (TPL-001-0.1-TPL-004-0). Retrieved September 9, 2012, from <http://www.nerc.com/page.php?cid=2|20>

- Category A (no contingencies, normal system conditions);
- Category B (single contingency outage, n-1), the planning authority and transmission planner shall demonstrate that the interconnected transmission system can operate to supply projected customer demands and firm transmission service at all demand levels over the range of forecast system demand; and,
- Category C (multiple contingency outages, n-1-1), the planning authority shall demonstrate that the interconnected transmission system can operate to supply projected customer demands and firm transmission service at all demand levels over the range of forecast system demand and may rely upon the controlled interruption of customers or curtailment of firm transmission service.

During system normal conditions and categories B and C system outages, transmission lines shall not exceed their conductor thermal rating, and substation bus voltages must range from 0.95 per unit to 1.05 per unit, with a minimum contingency voltage of .092 per unit. Transformer ratings are specific to each transformer and are based on seasonal conditions, considering loss of life and thermal stresses, and ratings should not be exceeded during normal conditions or emergency conditions.

Load Flow Analysis

ATSI performed a load flow study using the PJM 2013 RTEP case, with loads scaled to 2011 load levels. The load flow case was used to analyze the project area with and without the proposed project and R.E. Burger Power Plant. Analysis shows that without the Knox Transmission Substation Project, the existing transmission and distribution system is unable to adequately provide voltage support under certain contingency conditions.

The tables below show the overloads and voltage problems with and without the Knox Transmission Substation Project in-service.

Category A & B - Load Flow Analysis WITHOUT Knox Transmission Substation Project and R.E. Burger Power Plant Units 3-5 Retired.			
Base Case	Condition/Contingency/Outage	Voltage & Loading Issue	Line Voltage²⁰
-Normal Operations -2011 Summer Peak	Normal Operations	None	Acceptable Levels
	Loss of Bluebell 138 kV bus	Washington CEC 138 kV Knox 138 kV Knox 69 kV Bluebell 69kV	120.1 kV (0.87 pu) 113.9 kV (0.83 pu) 57.7 kV (0.83 pu) 56 kV (0.81 pu)
	Loss of Bluebell-Canton Central 138 kV line	Commerce-Highland 138 kV	Loads to 104% of Summer Normal Rating and 83% of Summer Emergency Rating
-Normal Operations -2011 Summer Peak -Capacitor Bank at Burger Substation	Loss of Knox side of Burger-Knox 138 kV line	Washington CEC 138 kV	145.7 kV (1.056 pu)

²⁰ pu = per unit

Category A & B - Load Flow Analysis WITH Knox Transmission Substation Project and R.E. Burger Power Plant Units 3-5 Retired.			
Base Case	Condition/Contingency/Outage	Voltage & Loading Issue	Line Voltage
-Normal Operations 2011 Summer Peak	None	None	Acceptable Levels
	Loss of Bluebell 138 kV bus	None	Acceptable Levels

The load flow studies show that without the proposed Knox Transmission Substation Project in-service, the system would not operate within the limits of the reliability criteria during certain outage contingencies.

Conclusion

The Applicant provided load flow details that demonstrated the power flows on the system with and without the proposed substation. Without the Knox Transmission Substation Project, during certain outage contingencies, the system will become unstable. PJM has identified this project in their transmission expansion plan and the PJM Board approved the project for construction. The proposed facility is consistent with plans for expansion of the regional power system, and serves the interests of electric system economy and reliability.

Recommended Findings

The 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, the facility complies with the requirements specified in ORC Section 4906.10(A)(4), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(5)

AIR, WATER, SOLID WASTE, AND AVIATION

Pursuant to ORC Section 4906.10(A)(5), the facility must comply with specific sections of the ORC 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 pursuant to the requirements of ORC Chapter 3704 (air pollution control laws) may be applicable to the proposed facility. The Applicant will 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, so requirements under ORC 1503.33 and 1501.34 are not applicable to this project.

The Applicant states that it will submit a Pre-Construction Notification (PCN) to the U.S. Army Corps of Engineers (USACE) for coverage under the USACE Nationwide Permit No. 12 for stream impacts associated with construction at the Preferred Site. No water permits would be required to construct the project at the Alternate Site.

The Applicant has indicated that it intends to submit a Notice of Intent (NOI) for coverage under the Ohio EPA's National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity, and a related Storm Water Pollution Prevention Plan (SWPPP). This SWPPP will be developed for the project pursuant to Ohio EPA regulations and will conform to the ODNr's Rainwater and Land Development Manual. It will include a detailed construction access plan. Following the SWPPP, as well as using BMPs for construction activities, would help minimize any erosion-related impacts to streams and wetlands. Wetlands, streams, and other environmentally-sensitive areas shall be clearly identified before commencement of clearing or construction. No construction or access will be permitted in these areas unless clearly specified in the constructions plans and specifications, thus minimizing any clearing-related disturbance to surface water bodies. Construction of this facility will comply with requirements of ORC Chapter 6111, and the rules and laws adopted under this chapter.

Solid Waste

The Applicant indicates that solid waste generated from construction activities would include items such as conductor scrap, construction material packaging including cartons, insulator crates, conductor reels and wrapping, and used storm water erosion control materials. Applicant estimates that approximately 40 cubic yards of construction debris would be generated from the project. All construction-related debris would be disposed of in Ohio EPA-approved landfills, or other appropriately-licensed and operated facilities.

Any contaminated soils discovered or generated during construction would be handled in accordance with applicable regulations. Vegetation waste from clearing activities will be removed. The Applicant's solid waste disposal plans comply with solid waste disposal requirements in ORC Chapter 3734, and the rules and laws adopted under this chapter.

Aviation

Because of the distance from the nearest airport and the absence of structures for the substation that would be greater than 200 feet above ground level, the construction and operation of the proposed facility is not expected to have an impact on airport facilities.

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

Recommended Findings

The Staff finds that the proposed facility complies with the requirements specified in ORC Section 4906.10(A)(5), provided that any certificate issued by the Board for the certification of the proposed facility include the conditions specified in the section of this report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(6)

PUBLIC INTEREST, CONVENIENCE, AND NECESSITY

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

The Knox Transmission Substation Project is part of an overall effort to improve the area's electric transmission system and provide a reliable electricity supply for multiple distribution and customer substations. This project would ensure that the system is operated within PJM, FirstEnergy, and NERC planning criteria.

The Applicant will comply with safety standards set by the Occupational Safety and Health Administration, the Public Utilities Commission of Ohio, and equipment specifications. The Applicant has designed the facility to meet or exceed the requirements of the National Electric Safety Code.

Any radio and television interference would be a localized effect primarily from defective hardware that should be easily detected and replaced. Radio or television interference is not expected to occur from the operation of the substation at either the Preferred or Alternate site.

EMF

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.

Because these concerns exist, the Applicant is required to compute the EMF associated with the new circuits. The fields were computed based on the maximum loadings of the lines, which would lead to the highest EMF values that might exist at the proposed substation. The magnetic fields are a function of the electric current, the configuration of the conductors, and the distance from transmission lines. The electric field is a function of the voltage, the line configuration, and the distance from transmission lines.

The magnetic fields were estimated at the substation fence to be less than 91.4 milligauss, and the electric field would be less than 1.43 kilovolt/meter. The magnetic field output is comparable to that of common household appliances; for example, a corded power tool has a magnetic field output of 123 milligauss. The maximum magnetic field scenarios for the proposed substation are listed in the application (Table 06-2). Electric fields are produced by voltage or electric charge. For example, a plugged in lamp cord produces an electric field, even if the lamp is turned off.

Daily current load levels would normally operate below the maximum load conditions, thereby further reducing nominal EMF values. The electric fields are easily shielded by physical structures such as the walls of a house, foliage, or earthen berms. The magnetic fields generated by the substation are attenuated very rapidly as the distance from them increases. Past experience has shown that within 100 feet of the fence line of the substation, the magnetic field is not of sufficient strength to be measureable because the background effects overwhelm the measurements. The nearest residence is over 800 feet from the Preferred Site, and about 625 feet from the Alternate Site. Therefore, it is expected that magnetic fields would not be measurable at any residence near the Knox Substation.

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 ORC Section 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 report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(7)

AGRICULTURAL DISTRICTS

Pursuant to ORC Section 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 Preferred and Alternate site of the proposed utility facility. The agricultural district program was established under ORC Chapter 929. Agricultural district land is exempt from sewer, water, or electrical service tax assessments. Agricultural land can be classified as an agricultural district through an application and approval process that is administered through local county auditors' offices. Eligible land must be devoted exclusively to agricultural production or be qualified for compensation under a land conservation program for the preceding three calendar years. Furthermore, eligible land must be at least ten acres or produce a minimum average gross annual income of \$2,500.

The Applicant has indicated that two agricultural district parcels exist within 1,000 feet of the Preferred Site. Neither of the two agricultural district parcels is within 100 feet of the site. Additionally, no currently utilized agricultural land would be removed as a result of construction at the Preferred Site. Therefore, there would be no impact on agricultural districts or agricultural land.

Recommended Findings

The 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 ORC Section 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 report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(8)

WATER CONSERVATION PRACTICE

Pursuant to ORC Section 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 would not require the use of water for operation, water conservation practice as specified under ORC 4906.10(A)(8) is not applicable to the project.

Recommended Findings

The Staff recommends that the Board find that the requirements specified in ORC Section 4906.10(A)(8) are not applicable to this project.

IV. RECOMMENDED CONDITIONS OF CERTIFICATE

Following a review of the application filed by ATSI 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 issuance of this report.

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 Site as presented in the application, and as modified and/or clarified by the Applicant's supplemental filings and further clarified by 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 stage separate preconstruction meetings for grading versus clearing work.
- (5) At least 30 days before the preconstruction conference, the Applicant shall submit to Staff, for review and acceptance, one set of detailed engineering drawings of the final project design, including the substation, temporary and permanent access roads, 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.
- (6) If any changes are made to the project layout after the submission of final engineering drawings, all changes shall be provided to Staff in hard copy and as geographically-referenced electronic data. All changes outside the environmental survey areas and any changes within environmentally-sensitive areas will be subject to Staff review and acceptance, to ensure compliance with all conditions of the certificate, prior to construction in those areas.

- (7) 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.
- (8) 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.
- (9) As the information becomes known, the Applicant shall provide to Staff 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:

- (10) General construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m., or until dusk when sunset occurs after 7:00 p.m. Impact pile driving and hoe ram 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 Rule 4906-5-08(C)(3), O.A.C., of upcoming construction activities including potential for nighttime construction activities.

ECOLOGICAL CONDITIONS

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

- (11) The Applicant shall have a construction and maintenance access plan based on final plans for the access roads, substation, and types of equipment to be used. Prior to commencement of construction, the Applicant shall submit the plan to Staff, for review and confirmation that it complies with this condition. The plan shall consider the location of streams, wetlands, wooded areas, and sensitive plant species, as identified by the ODNR, Division of Wildlife (ODNR-DOW), and explain how impacts to all sensitive resources will be avoided or minimized during construction, operation, and maintenance. The plan shall provide specific details on all wetlands, streams, and/or ditches to be crossed by the substation, including those where construction or maintenance vehicles and/or facility components such as access roads cannot avoid crossing the waterbody. In such cases, specific discussion of the proposed crossing methodology for each wetland and stream crossing (such as culverts), and post-construction site restoration, must be included. The plan shall include the measures to be used for restoring the area around all temporary access points, and a description of any long-term stabilization required along permanent access routes.

- (12) The Applicant shall have a vegetation management plan. Prior to commencement of construction, the Applicant shall submit this plan to Staff, for review and confirmation that it complies with this condition. The plan must identify all areas of proposed vegetation clearing for the project, specifying the extent of the clearing, and describing how such clearing work will be done so as to minimize removal of woody vegetation. The plan must also describe how trees and shrubs around structures, along access routes, at construction staging areas, during maintenance operations, and in proximity to any other project facilities will be protected from damage. Priority should be given to protecting mature trees throughout the project area, and all woody vegetation in wetlands and riparian areas, both during construction and during subsequent operation and maintenance of all facilities; low-growing trees and shrubs in particular should be protected wherever possible within the proposed right-of-way. The vegetation management plan should also explore various options for disposing of downed trees, brush, and other vegetation during initial clearing for the project, and recommend methods that minimize the movement of heavy equipment and other vehicles within the right-of-way that would otherwise be required for removing all trees and other woody debris off site.
- (13) The Applicant shall contact Staff, ODNR, and the USFWS within 24 hours if state or federal threatened or endangered species are encountered during construction activities. Construction activities that could adversely impact the identified plants or animals shall be halted until an appropriate course of action has been agreed upon by the Applicant, Staff, and ODNR in coordination with the USFWS. Nothing in this condition shall preclude agencies having jurisdiction over the facility with respect to threatened or endangered species from exercising their legal authority over the facility consistent with law.
- (14) The Applicant shall adhere to seasonal cutting dates of September 30 through April 1 for removal of suitable Indiana bat habitat trees, if avoidance measures cannot be achieved. If suitable Indiana bat habitat trees must be cut during the summer season of April 2 through September 29, a mist-netting survey must be conducted in May or June prior to cutting. Net surveys shall incorporate either two net sites per square kilometer of project area, with each net site containing a minimum of two nets used for two consecutive nights, or one net site per kilometer of stream within the project limits, with each net site containing a minimum of two nets used for two consecutive nights. Staff and ODNR shall be contacted to discuss methodologies prior to commencement of any mist-netting surveys proposed by the Applicant. All mist-netting results shall be submitted to Staff and ODNR. If the results of the survey indicate the presence of Indiana bats, then further coordination with Staff and ODNR shall be required prior to the cutting of trees in order to avoid impacts to the Indiana bat.

AIR, WATER, SOLID WASTE, AND AVIATION CONDITIONS

Staff recommends the following conditions to address the requirements discussed in Air, Water, Solid Waste, and Aviation:

- (15) 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.

- (16) At least seven days before the preconstruction conference, the Applicant shall submit to Staff, for review and acceptance, a copy of all NPDES permits including its approved SWPPP, approved SPCC procedures, and its erosion and sediment control plan. Any soil issues must be addressed through proper design and adherence to the Ohio EPA BMPs related to erosion and sedimentation control.
- (17) The Applicant shall employ the following erosion and sedimentation control measures, construction methods, and BMPs when working near environmentally-sensitive areas and/or when in close proximity to any watercourses, in accordance with the Ohio NPDES permit(s) and SWPPP obtained for the project:
- (a) During construction of the facility, seed all disturbed soil, except within actively cultivated agricultural fields, within seven days of final grading with a seed mixture acceptable to the appropriate County Cooperative Extension Service. Denuded areas, including spoils piles, shall be seeded and stabilized within seven days, if they will be undisturbed for more than 21 days. Re-seeding shall be done within seven days of emergence of seedlings as necessary until sufficient vegetation in all areas has been established.
 - (b) Inspect and repair all erosion control measures after each rainfall event of one-half of an inch or greater over a 24-hour period, and maintain controls until permanent vegetative cover has been established on disturbed areas.
 - (c) Delineate all watercourses, including wetlands, by fencing, flagging, or other prominent means.
 - (d) Avoid entry of construction equipment into watercourses, including wetlands, except at specific locations where construction has been approved.
 - (e) Prohibit storage, stockpiling, and/or disposal of equipment and materials in these sensitive areas.
 - (f) Locate structures outside of identified watercourses, including wetlands, except at specific locations where construction has been approved.
 - (g) Divert all storm water runoff away from fill slopes and other exposed surfaces to the greatest extent possible, and direct instead to appropriate catchment structures, sediment ponds, etc., using diversion berms, temporary ditches, check dams, or similar measures.
- (18) The Applicant shall comply with fugitive dust rules by the use of water spray or other appropriate dust suppressant measures whenever necessary.

APPENDIX

1. DOCKETING RECORD

CASE NUMBER: 12-0864-EL-BSB

DESCRIPTION: Knox Transmission Substation Project

FILINGS AS OF: 10/22/2012

10/11/2012	Affidavit and Supporting Documents for Proof of Mailing of Notification Letters and Proof of Mailing of Address List to Local Officials electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
10/05/2012	Proof of Publication. (Columbiana County)
10/05/2012	Proof of Pub First Notice of Public and Adjudicatory Hearings in News Leader, Sep 27 2012 electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
10/02/2012	Correspondence of FirstEnergy Service Company on behalf of the applicant, American Transmission Systems Incorporated in regard to check submitted for payment of application fee for the Knox Project, filed by S. Humphrys.
09/14/2012	Attorney Examiner Entry scheduling hearings and establishing procedural schedule electronically filed by Vesta R Miller on behalf of Jeffrey R. Jones, Administrative Law Judge, Ohio Power Siting Board.
09/14/2012	Service Notice
09/14/2012	Attorney Examiner Entry scheduling hearings and establishing procedural schedule electronically filed by Vesta R Miller on behalf of Jeffrey R. Jones, Administrative Law Judge, Ohio Power Siting Board.
09/13/2012	Affidavit of Proof of Service of Complete and Accepted Application electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
09/11/2012	Letter of compliance to Morgan Parke, ATSI from T. Snitchler, OPSB Staff.
08/10/2012	Service Notice
08/10/2012	Attorney Examiner Entry granting a motion for protective order filed by American Transmission Systems, Incorporated electronically filed by Vesta R Miller on behalf of Jeffrey R. Jones, Administrative Law Judge, Ohio Power Siting Board
08/06/2012	Motion to seal portions of record of these proceedings and Memorandum in Support filed by Robert J. Schmidt, Jr on behalf of American Transmission Systems, Inc.
08/06/2012	Confidential treatment of document: Exhibits 02-1, 02-2, 02-3, 02-4, 02-5, 02-6, 02-7, 02-08 and 02-9 filed by Christopher R. Schraff on behalf of American Transmission Systems Incorporated.
08/06/2012	Application Section 2 (resubmittal) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Executive Officer Affidavit electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 7 (file 18 of 18) electronically filed by Mr. Robert J. Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 7 (file 17 of 18) electronically filed by Mr. Robert J. Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 7 Fig 2 (file 16 of 18) electronically filed by Mr. Robert J. Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 7 Fig 1 (file 15 of 18) electronically filed by Mr. Robert J. Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 7 (file 14 of 18) electronically filed by Mr. Robert J. Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 6 App 4 (file 13 of 18) electronically filed by Mr. Robert J. Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 6 App 3 (file 12 of 18) electronically filed by Mr. Robert J. Schmidt on behalf of American Transmission Systems Inc.

08/03/2012	Application Section 6 App 2 (file 11 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Section 6 App 1 (file 10 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 6 (file 9 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 5 (File 8 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 4 Figures (File 7 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 4 (File 6 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 3 Figure (File 5 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 3 (File 4 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Section 2 Project Schedule (File 3 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Section 2 (File 2 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application Section 1 (file 1 of 18) electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Table of Contents electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
08/03/2012	Application cover letter for submittal electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
07/02/2012	Service Notice
06/29/2012	Entry ordering that in accordance with finding (4), ATSI's waiver requests be granted. (JRJ)
06/26/2012	Response to letter stating that Staff reserves the right to investigate and contest all other issues presented in the application filed by PUCO Staff.
06/08/2012	Motion and memorandum in support for Certain Waivers electronically filed by Mr. Robert J. Schmidt on behalf of American Transmission Systems Inc.
05/04/2012	Proof of Pub of Public Notice for Public Information Meeting electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.
04/23/2012	In the matter of the Application by American Transmission Systems Inc. for Certification in regard to the Knox Substation Expansion Project electronically filed by Mr. Robert J Schmidt.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

10/22/2012 3:56:15 PM

in

Case No(s). 12-0864-EL-BSB

Summary: Staff Report Filed electronically filed by Mr. James S. O'Dell on behalf of Staff of OPSB