

# Staff Report of Investigation

Biers Run Station Project

Case Number  
12-1361-EL-BSB

May 23, 2013



John Kasich, Governor

Power Siting  
Board

Todd Snitchler, Chairman

**In the Matter of the Application by AEP Ohio Transmission  
Company for a Certificate of Environmental Compatibility and  
Public Need for the Biers Run Station Project**

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**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 by AEP Ohio Transmission Company for a Certificate of Environmental Compatibility and Public Need for the Biers Run Station Project** ) **Case Number**  
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Members of the Board:

Todd Snitchler, Chairman, PUCO  
David Goodman, 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

Peter Stautberg, State Representative  
Sandra Williams, State Representative  
Michael Skindell, State Senator  
Bill Seitz, 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

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## ACRONYMS

<b>FAA</b>	Federal Aviation Administration
<b>kV</b>	kilovolts
<b>MW</b>	megawatts
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NRHP</b>	National Register of Historic Places
<b>OAC</b>	Ohio Administrative Code
<b>ODA</b>	Ohio Department of Agriculture
<b>ODSA</b>	Ohio Development Services Agency
<b>ODH</b>	Ohio Department of Health
<b>ODNR</b>	Ohio Department of Natural Resources
<b>ODOT</b>	Ohio Department of Transportation
<b>Ohio EPA</b>	Ohio Environmental Protection Agency
<b>OHPO</b>	Ohio Historic Preservation Office
<b>OPSB</b>	Ohio Power Siting Board
<b>ORC</b>	Ohio Revised Code
<b>PUCO</b>	Public Utilities Commission of Ohio
<b>SWPPP</b>	Storm Water Pollution Prevention Plan
<b>USFWS</b>	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 (ORC 4906.04 and 4906.20). 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 (ORC 4906.10(A)(1) and 4906.20(B)(1)).

Within 60 days of receiving an application, the OPSB must determine whether the application is sufficiently complete to begin an investigation (OAC 4906-5-05(A)). 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 or oral testimony and may be examined by the parties (ORC 4906.07).

Parties include the Applicant, public officials, and any person who has been granted a motion of leave for intervention (ORC 4906.08(A)).

### **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 (4906.07(C) and 4906.10). A record of the public hearings and all evidence, including the staff report, may be examined by the public at any time (ORC 4906.09 and 4906.12).

### **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 (ORC 4906.10(A) and (B)).

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 (ORC 4906.11). 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 (ORC 4906.10(C)). 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 (ORC 4903.10 and 4906.12). 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 (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 preferred site and alternate 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 preferred site and alternate site; and
- (8) That the facility incorporates maximum feasible water conservation practices as determined by the Board, considering available technology and the nature and economics of the various alternatives.



## **II. APPLICATION**

### **APPLICANT**

American Electric Power (AEP) was founded in 1906, and is based in Columbus, Ohio. With nearly 38,000 MW of generating capacity, AEP is one of America's largest electric utilities. AEP provides service to 11 states and over 5 million customers. AEP's utility units operate as AEP Ohio, AEP Texas, Appalachian Power (in Virginia and West Virginia), Kentucky Power, Public Service Company of Oklahoma, and Southwestern Electric Power Company (in Arkansas, Louisiana, and east Texas).

AEP also owns the largest transmission system in the nation, and is tied in with Eastern Interconnection, a transmission system that provides electricity to 38 states and eastern Canada. The certificate for the project is being sought by AEP Ohio Transmission Company (AEP Transco), a wholly-owned subsidiary of American Electric Power, created in 2009. AEP Transco focuses on interstate transmission and the exploration of new transmission opportunities within the 11 states where AEP currently provides service.

### **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 June 25, 2012, the Applicant held a public information meeting regarding the proposed electric substation.

On December 20, 2012, the Applicant filed the Biers Run Station Project application.

On February 13, 2013, the Applicant was issued a letter of compliance regarding the application from the Chairman of the PUCO.

A local public hearing has been scheduled for June 11, 2013, at 6:00 p.m., at the Pioneer School of Developmental Disabilities, 11268 County Road 550, Chillicothe, Ohio, 45601. The adjudicatory hearing will commence on June 25, 2013, at 10:00 a.m., in Hearing Room 11-C, at the offices of the PUCO, 180 East Broad Street, Columbus, Ohio, 43215.

This summary of the history of the application does not include every filing in case number 12-1361-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**

AEP Transmission Company (Applicant) proposes to construct the 345/138/69 kV Biers Run Station Project and associated electric transmission line interconnections in Union Township of Ross County, Ohio. The project is a major transmission reinforcement effort designed to help AEP maintain an adequate level of transmission reliability and availability of electric power to residential, commercial, institutional, and industrial users in southern Ohio.

The Preferred and Alternate sites of the Biers Run Station Project and the associated interconnection is located on an approximately 102-acre property situated between U.S. Route 35 and Biers Run Road in Ross County. A 345 kV interconnection to the new substation will be provided from the adjacent existing Don Marquis–Bixby 345 kV line. A permanent access drive to the substation is proposed from Biers Run Road to the northeast. The Applicant owns this predominantly agricultural property.

The total fenced footprint at either substation site is approximately seven acres. The Applicant would own and operate the substation facility, structures, and equipment, including the parcel of land containing the substation. The associated interconnection lines would also be constructed and operated by the Applicant. All interconnections would tie-in to the existing 345 kV Don Marquis-Bixby transmission line.

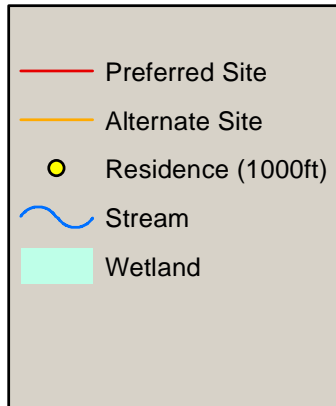
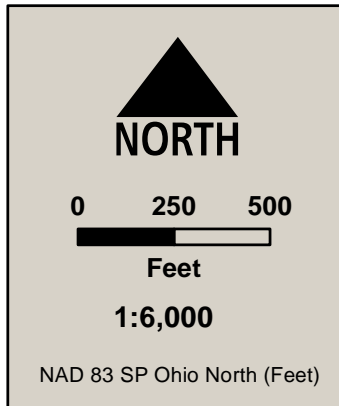
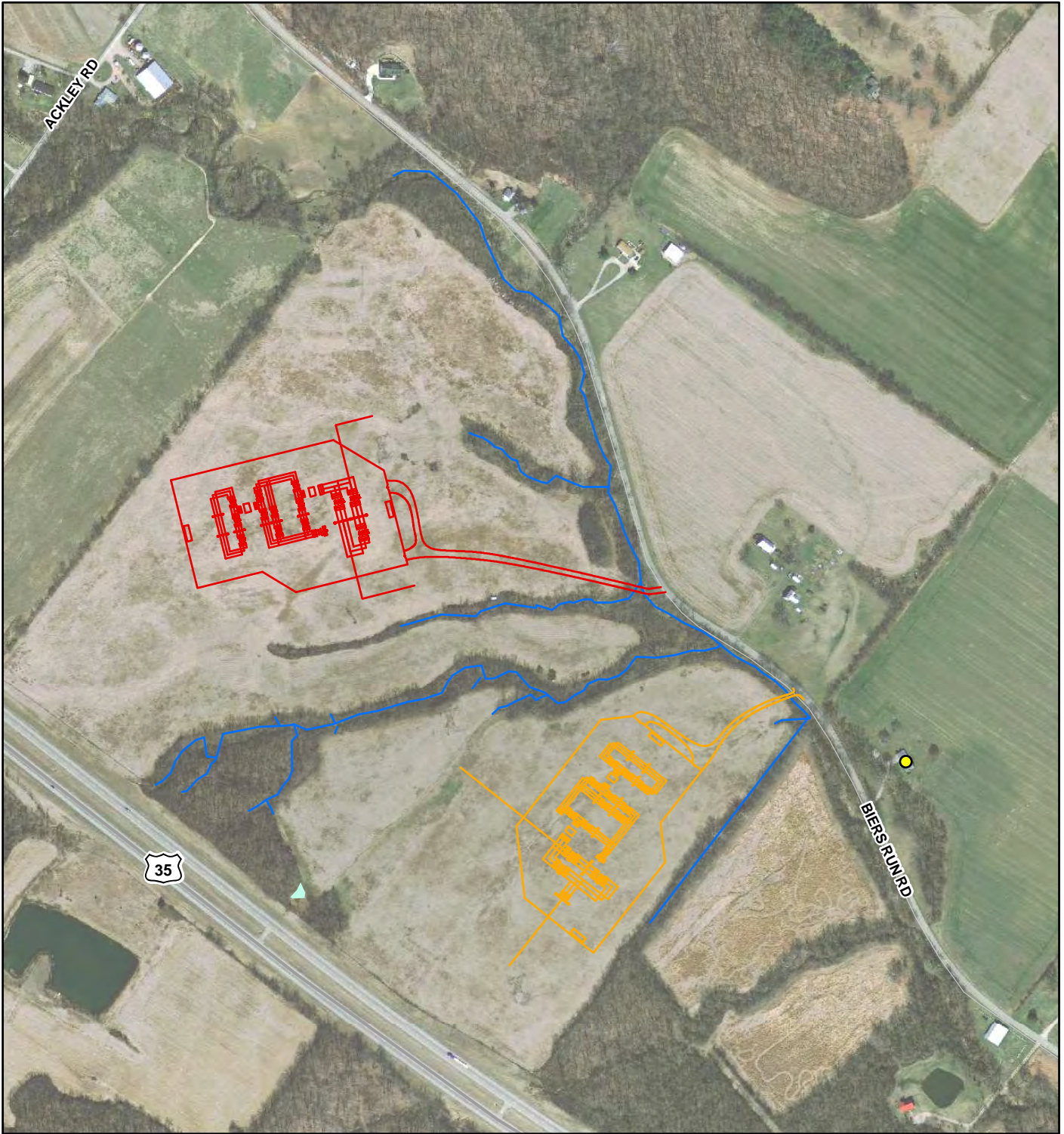
The Applicant has adequate available land for an equipment laydown yard at either site. The Applicant had indicated a willingness to allow continued farming of the undeveloped portions of the site.

A new 138 kV line may be built to the east out of this substation, and is the subject of a separate OPSB application (case number 13-0429-EL-BTX). A case number for a new transmission line running north out of this substation to Circleville has been opened, but Staff has not received an application for the new line (case number 13-0430-EL-BTX).

The Preferred and Alternate sites, as well as the associated transmission interconnection, are shown on the map in this report.

## **PROJECT MAP**

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**Overview Map**  
**12-1361-EL-BSB**  
**Biers Run**  
**Substation Project**

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

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

In the matter of the application of AEP Ohio Transmission Company, 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 Biers Run Station is to reinforce the transmission system in south central Ohio, ensuring reliability of the local and regional grid. The proposed substation project is part of an overall reliability improvement program in south central Ohio which includes other system enhancements. Without this project, AEP would be unable to maintain compliance with the North American Electric Reliability Corporation (NERC) planning criteria and AEP's internal transmission planning criteria for the transmission system. This section of the staff report focuses on reviewing the need for the proposed substation and transmission line.

###### **Long Term Forecast**

The Ohio Administrative Code requires electric utilities and transmission owners to annually file a forecast report with the PUCO (OAC 4901-5-5). The report requires a 10-year plan of committed or tentatively projected projects on the bulk power transmission network. The proposed substation and transmission line projects were identified in the 2011 *AEP Ohio Transmission Company Long-Term Forecast Report to the Public Utilities Commission of Ohio*. The PUCO assigned this document case number 12-1501-EL-FOR.

###### **PJM Regional Transmission Expansion Plan**

PJM Interconnection LLC (PJM) is the Regional Transmission Organization charged with planning for upgrades to the regional transmission system in Ohio. PJM annually issues the Regional Transmission Expansion Plan (RTEP) report. The RTEP analyzes reliability criteria, operational performance of the transmission system, and economic and environmental factors. The RTEP provides for the construction of expansions and upgrades of the PJM transmission system as needed to maintain compliance with reliability criteria and, when appropriate, to enhance the economic and operational efficiency of wholesale electricity markets in the PJM Region.

The proposed project was identified as a baseline upgrade in the 2012 PJM RTEP and approved by the PJM Board (PJM, 2013, February 28). The Applicant's project was assigned upgrade ID b1032.1. Status of the project can be tracked on PJM's website (PJM, n.d.).

###### **System Economy and Reliability**

The proposed Biers Run Station and other area improvements would improve system reliability by allowing additional transformer capacity, improving system voltages, and rectifying forecasted thermal overloads in the south central Ohio area. AEP load flow studies verified that the construction of the proposed transmission substation would improve reliability during N-1-1

contingencies. A more-detailed investigation of voltage and thermal concerns is found in the Electric Grid section of this report.

### **Conclusion**

Staff concludes that AEP has demonstrated the basis of need due to the reliability problems caused by certain contingencies in the project area. PJM listed this project as a required baseline upgrade, meaning that if this project were not constructed, AEP would be unable to comply with the required PJM and NERC planning criteria, making the system unstable and unreliable, resulting in possible penalties from NERC. The proposed project would allow the transmission system to provide safe, reliable electric service, while meeting all the applicable AEP, NERC, and PJM reliability criteria.

### **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 a predominantly rural area in Union Township in Ross County. The project area contains large agricultural tracts and small wooded areas. According to the U.S. Census, the population of Ross County in 2010 was approximately 78,064, a 6.4 percent increase over the county population in 2000 and a 12.6 percent increase since the 1990 Census. The population of Union Township was 13,345 in 2010, a 13.6 percent increase since the 2000 Census and a 63.5 percent increase since the 1990 Census. As of 2011, the population in Union Township is expected to increase by an average of 0.1 percent annually, compared to a 0.2 percent annual population increase for the entire county (Ohio Department of Development, 2011, July). In 2011, Union Township had an average estimated population density of 200 persons per square mile, compared to 113 persons per square mile in Ross County (Ohio Department of Development, 2011, July). The project would facilitate regional economic development by reinforcing electrical supply and is not expected to have an impact on the demographics of the region as a whole.

##### *Land Use*

The property containing the Preferred and Alternate sites is approximately 102 acres of mostly agricultural field. The Applicant has indicated that more than half of the land would be reserved for agricultural use by the seller once the project is operational.

No residences are located within 1,000 feet of the Preferred Site. One residence is located approximately 700 feet from the Alternate Site footprint. This residence is located to the east of the site across Biers Run Road. Land use around the proposed project includes U.S. Highway 35 to the west of the property, with agricultural and rural residential uses predominately within a half mile around the project area. The project site itself is used mainly for agricultural purposes and is bisected by a 345 kV transmission line utility corridor.

No residences would be removed for 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 significantly affect residential land use patterns in the vicinity of the project. Staff did not identify any township or county land use plan that might conflict with development of this property as an electric utility substation.

There are no commercial or industrial facilities located within 1,000 feet of the Preferred and Alternate sites.

No recreational or institutional land uses exist within 1,000 feet of the project area. The Yoctangee Park recreation complex, which is located in the city of Chillicothe, is approximately 6.5 miles from the project. The Hopewell Cultural National Historical Park is 1.7 miles from the



project, with the Great Seal State Park approximately seven miles away. The Ross County Alternative Center is approximately one mile away, and Pioneer School of Developmental Disabilities is nearly two miles away from the project. None of these facilities should be impacted by the construction and operation of the substation facility.

#### *Cultural and Archaeological Resources*

The Applicant had a cultural resource management investigation performed for the site in the Fall of 2012. This investigation included a literature review as well as a Phase I archaeological survey of the proposed substation project area. No previously recorded archaeological sites, National Register of Historic Places (NRHP) structures or districts, or Ohio Historic Inventory (OHI) structures were identified within 1,000 feet of either the Preferred or Alternate site.

The Phase I field work identified five previously unrecorded archaeological sites, two at the Preferred Site and three at the Alternate Site. None of these sites were regarded as significant, and no further cultural resources work was deemed necessary for the substation project.

No known cultural resources should be impacted by the construction and operation of this substation project.

#### *Aesthetics*

Both the Preferred and Alternate sites are located on a remote agricultural property. Existing 345 kV transmission infrastructure is present on the property. Both sites would be partly visible from several nearby residences. However, existing vegetation would provide partial screening to all residences. Both the Preferred and Alternate sites would also be visible from State Route 35. The character of the surrounding countryside from this perspective is shaped by the existing transportation and utility infrastructure. The aesthetic impacts would be similar at either site, and would not dramatically transform the aesthetic context of the surrounding landscape from any perspective.

### **Ecological Impacts**

#### *Surface Waters*

Two streams, one of which is Biers Run, a warmwater habitat stream, would be crossed by a proposed bridge/road to access the Preferred Site. The proposed access point would be located near the confluence of Biers Run and an unnamed ephemeral headwater tributary to Biers Run at an existing agricultural ford across Biers Run. Biers Run would be the only stream crossed to access the Alternate Site.

The Applicant would utilize a pre-cast concrete bridge system to access either site. Concrete support foundations are expected to be located outside of stream channels and above the ordinary high water mark of all streams. Two ephemeral headwater streams are located within 100 feet of the Alternate Site and would not be impacted.

No wetlands or ponds were identified within 100 feet of the proposed fenced substation area of the Preferred or Alternate site.

For both construction and future maintenance, the Applicant would limit, to the greatest extent possible, the use of herbicides in proximity to surface waters. Individual treatment of tall-

growing woody plant species is preferred, while general widespread use of herbicides during initial clearing or future maintenance should only be used where no other options exist.

*Vegetation*

The substation footprints of the Preferred and Alternate sites are located in agricultural fields. Tree clearing would be limited to less than 20 trees for the construction of the proposed access bridge/road for either site. The Applicant would not conduct mechanized clearing within 25 feet of any stream channel. Stumps would be left in place to help maintain bank stability. Some of the vegetative wastes, such as tree limbs and trunks, that is generated during the construction may be harvested and removed from the site. The remaining vegetative waste would be chipped and disposed of appropriately, although some vegetative waste materials may be used on site for erosion control.

*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 published ecological information. The following table reflects the results of the information requests, field assessments, and document review.

<b>BIRDS</b>				
<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Presence in Project Area</b>
bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA & MBTA <sup>1</sup>	N/A	Known range, due to project type, location, and onsite habitat, this species would not be expected within the project area, and no impact to this species is expected.
<b>REPTILES &amp; AMPHIBIANS</b>				
<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Presence in Project Area</b>
Eastern hellbender	<i>Cryptobranchus alleganiensis alleganiensis</i>	Species of Concern	Endangered	Known range, ODNR recommends that the proposed project be developed to minimize indirect stream impacts (e.g., preserve wide riparian buffers, maximize erosion control, maximize permeable surfaces and storm water retention).
timber rattlesnake	<i>Crotalus horridus horridus</i>	Species of Concern	Endangered	Known range, due to the project location and onsite habitat, no impacts are expected for this species.

<sup>1</sup> bald and golden eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act

**MAMMALS**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Presence in Project Area</b>
Indiana bat	<i>Myotis sodalis</i>	Endangered	Endangered	Known range, suitable habitat is present; Applicant would need to adhere to seasonal cutting dates (September 30 to April 1).
black bear	<i>Ursus americanus</i>	N/A	Endangered	Known range, due to the mobility of this species, the project is not likely to impact this species.

**FISH**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Presence in Project Area</b>
blacknose shiner	<i>Notropis heterolepis</i>	N/A	Endangered	Known range, no in-water work is proposed in perennial streams; therefore, the project is not likely to impact this species.
shortnose gar	<i>Lepisosteus platostomus</i>	N/A	Endangered	Known range, no in-water work is proposed in perennial streams; therefore, the project is not likely to impact this species.

**FRESH WATER MUSSELS**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Presence in Project Area</b>
clubshell	<i>Pleurobema clava</i>	Endangered	Endangered	Known range, records of these species are located some distance from the project. No in-water work is proposed in perennial streams; therefore, the project is not likely to impact this species.
little spectaclecase	<i>Villosa lienosa</i>	N/A	Endangered	Known range, no in-water work is proposed in perennial streams; therefore, the project is not likely to impact this species.
Northern riffleshell	<i>Epioblasma torulosa rangiana</i>	Endangered	Endangered	Known range, records of these species are located some distance from the project. No in-water work is proposed in perennial streams; therefore, the project is not likely to impact this species.
rayed bean	<i>Villosa fabalis</i>	Endangered	Endangered	Known range, if the project directly or indirectly impacts suitable habitat for this species, the USFWS recommends a survey be conducted. No in-water work is proposed and no suitable habitat is present; therefore, the project is not likely to impact this species.
snuffbox	<i>Epioblasma triquetra</i>	Endangered	Endangered	Known range, records of these species are located some distance from the project. No in-water work is proposed in perennial streams; therefore, the project is not likely to impact this species.

**INSECTS**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Presence in Project Area</b>
Uhler's sundragon	<i>Helocordulia uhleri</i>	N/A	Endangered	Known range, no wetlands are proposed to be impacted; therefore, the project is not likely to impact this species.

Most of these species are not expected to be negatively impacted by the proposed project. However, the loss of suitable habitat may 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 site, could be negatively impacted as a result of the tree clearing associated with construction and maintenance of the project. Tree clearing associated with the access road would be limited to less than 0.1 acres along the Biers Run riparian corridor. ODNR and OPSB Staff recommend that the Applicant be required to adhere to seasonal cutting dates (between September 30 and April 1) for the clearing of trees that exhibit suitable Indiana bat summer habitat, such as roosting and maternity roost trees. If suitable Indiana bat habitat trees must be cut during the summer season (between April 2 and September 29), a mist-netting survey must be conducted in May or June prior to cutting.

The rayed bean mussel was identified by the USFWS as a concern if in-water work is necessary along Biers Run. The USFWS recommended a survey be conducted to determine the presence or probable absence of rayed bean mussels in the vicinity of the proposed site. ODNR indicated that this species is likely to be impacted only if in-water work is necessary in a perennial stream. Biers Run is an intermittent stream along the stretch that includes the Preferred and Alternate sites. Further, the Preferred Site access road crosses a portion of Biers Run that has been heavily impacted by the construction of an agricultural fording access drive. Given ODNR's indication that impacts to the rayed bean are likely only in perennial streams, the lack of suitable habitat, and the existing impacts to Biers Run at the access crossing location, no additional mussel surveys are required and impacts to this species are not expected as a result of this project.

To minimize adverse impacts to the Eastern hellbender, ODNR recommends that the proposed project be developed to minimize indirect stream impacts. Storm water best management practices, such as placement of silt fencing and storm water retention, would be employed where necessary to mitigate potential erosion and degradation during construction.

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

**Public Services, Facilities, and Safety**

The Applicant will comply with safety standards set by the Occupational Safety and Health Administration, the PUCO, and NERC Mandatory Reliability Standards. The Applicant will construct and operate the facility to meet the requirements of the National Electric Safety Code.

*Communications*

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

## *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. Daily current load levels would normally operate below the maximum load conditions, thereby further reducing nominal EMF values. The EMF profiles are shown in Figures 06-2 to 06-3 in the application.

The electric field is a function of the voltage, the line configuration, and the distance from the substation. 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. The electric field from the substation would be less than 2.1 kilovolt/meter. The electric fields are easily shielded by physical structures such as the walls of a house, foliage, or other barriers.

The magnetic fields are a function of the electric current, the configuration of the conductors, and the distance from transmission lines. The magnetic fields were estimated at the Preferred Site fence to be less than 205 milligauss. The magnetic field output is comparable to that of common household appliances. A list of typical magnetic fields from household items is included in the application (Table 06-4). The maximum magnetic field scenarios for the proposed substation sites are listed in the application (Table 06-3).

The magnetic fields generated by the substation are attenuated very rapidly as the distance from it 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 (NIEHS/DOE EMF RAPID Program, June 2002; OPSB Staff, 1996, October). The nearest residence is over 1,100 feet from the Preferred Site, and about 700 feet from the Alternate Site footprint.

## *Geology and Seismology*

The applicant lists the soil associations at the Preferred and Alternate sites as the Miamian-Celina-Crosby soil associations. More site specific, the major soil units in the project area are mapped as a MhB – Miamian silt loam, 2 to 6 percent slopes; MhC2 – Miamian silt loam, 6 to 12 percent slopes, eroded; and minor amounts (5 percent or less) Kp – Kokomo silty clay loam. The parent material for both soil units is a loamy material and till.

Triad Engineering conducted preliminary soil testing at the project area for the applicant and determined that the soil material at the site is a stiff sandy clay. Additional soil testing and auger borings will be performed by the applicant and/or its representative to determine engineering qualities. If rock is encountered, a carbide-tipped drill bit will be used to drill 5 to 10 feet into the rock for percentage of recovery and rock quality description (RQD) of the core.

The dominant soil unit may exhibit shrinking and swelling, directly affecting the foundation and other structures that may require some special design, construction techniques, and maintenance. Also, because of the seasonal high water table, which greatly limits absorption, the time period for excavations may be restricted. Special design of structures may be needed to prevent damage

caused by wetness. The applicant, taking these measures into consideration, does not anticipate any issue with siting this facility at this location.

The project area lies just west of the city of Chillicothe, Ross County, Ohio. The United States Geological Survey (USGS) indicates one seismic event that occurred in the county in 1899. The seismic event took place just southwest of the city limits of Chillicothe in central Ross County. The magnitude of the seismic event is listed at 3.1 on the Richter scale. No other seismic activity of note is recorded in all of Ross County.

All OPSB Staff recommendations for the requirements discussed in this section can be found under the **Public Services, Facilities, and Safety 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**

The Applicant performed a site selection study to identify properties that would meet the requirements of the project while minimizing ecological, cultural, and land use impacts. The study area was defined to include land crossed by or directly adjacent to the existing Don Marquis - Bixby 345 kV transmission line in order to limit the potential impacts of a future interconnection between this line and the substation. The Applicant also plans to submit two separate applications for transmission lines between the proposed substation and existing substations nearby. To accommodate this, the study area was further narrowed to minimize the required distance of future transmission lines and the resulting impacts. The study also focused on identifying properties large enough to accommodate viable substation site alternatives, and to avoid uncertainty associated with property availability and possible condemnation.

Seven properties were identified that contained desirable attributes and provided opportunities to avoid major constraints. Once initial site alternatives were selected, they were each quantitatively and qualitatively assessed based on impacts. The Applicant considered it most appropriate to use relevant raw data counts in conjunction with qualitative assessments of each site to assess a final ranking. Site 4 was ranked as the best candidate, followed by Site 1. The Applicant approached the owner of Site 4 in the fall of 2011. However, the owner of this family farm indicated that the property was not for sale. The Applicant then negotiated the purchase of Site 1. Site 1 offers the shortest distance for future transmission projects.

The Applicant presented two substation site alternatives within the Site 1 property, depicted as the red site and the blue site on the map displayed at a public meeting held June 25, 2012 (no relation to the colors presented in the staff report map). All feedback indicated a preference for the blue site. The Applicant also foresees a potential flooding issue for the access road to the red site. Based on the comments received at the public meeting and the potential flooding issue, the Applicant selected the blue site as the Preferred Site and the red site as the Alternate Site.

#### **Minimizing Impacts**

The Applicant has sited and designed the Biers Run Station Project to minimize potential impacts while meeting the need for the project. Land use on the proposed site and surrounding properties is predominantly agricultural. One residence is located within 1,000 feet of the Alternate Site, while no residences are located within 1,000 feet of the Preferred Site. No other sensitive uses are within 1,000 feet of either site. Additionally, the Applicant has indicated a willingness to allow for the continued farming of either site not developed for the substation.

Both the Preferred and Alternate sites require the crossing of Biers Run for access to the site adjacent to Biers Run Road. Both sites are located on agricultural land and both sites have adequate open area for laydown yards and interconnection to the existing 345 kV Don Marquis-Bixby transmission line.

The cost to construct either site is comparable, and the tax revenues associated with either site are not significantly different. The project should not affect future growth in the region, and would support economic development by improving the supply and reliability of the regional electric system.

### **Conclusion**

The project would result in both temporary and permanent impacts to the project area. Because of its lower potential to impact adjacent residential land use, Staff concludes that the Preferred Site represents the minimal adverse environmental impact. In addition, Staff has recommended several conditions in order to mitigate any impacts. With the recommended conditions, Staff concludes that minimum adverse environmental impacts would be realized.

### **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 Biers Run Station into the existing regional transmission grid. The proposed substation project is part of an overall reliability improvement in south central Ohio which includes other system enhancements. Analysis shows that without the proposed project, AEP would be unable to maintain compliance with PJM and North American Electric Reliability Corporation (NERC) reliability criteria.

#### **Transmission System Reliability**

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 electric system. The bulk electric system is defined as electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, being operated at voltages of 100 kV or higher (NERC, 2013, April 5). NERC requires planners of the bulk electric transmission system to meet Reliability Standards TPL-001-0.1 through TPL-004-0 under transmission outage conditions for categories A, B, C, and D contingencies (NERC, 2012). 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. Below is a partial list of the NERC categories and their meanings:

- Category A (no contingencies, normal system conditions);
- Category B (loss of a single bulk electric system element, 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 (loss of two or more bulk electric system elements, 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. The N-1-1 criterion anticipates that a second N-1 contingency will occur on the system after the first N-1 event occurs.

#### **Load Flow Analysis**

A summer 2016 peak load flow case was used to analyze system load flows. Analysis shows that without the Biers Run Station and other area improvements, the south central Ohio transmission system would experience voltage and thermal problems.

AEP designs its system so that system voltage must be maintained at or above 92 percent during a contingency and equipment thermal loading may not exceed 100 percent of the equipment's emergency rating. In addition, normal system voltages should not go below 95 percent during steady state conditions and should not change by more than 8 percent for any applicable

contingency condition. If system voltages decline below 92 percent, the grid may become unstable and voltage collapse could occur. The NERC criterion requires that AEP plan for an N-1-1 contingency.

AEP provided load flow transcription diagrams to Staff for review. Staff verified that the double contingency outages caused voltage and thermal problems to the south central Ohio transmission system. In addition, the diagrams showed that the addition of the proposed substation project improved the voltage and thermal issues to AEP-recommended planning criteria levels. The results of the load flow studies are listed in the below scenarios.

<b>69 kV and 138 kV System Voltage Violations 2016 Base Case - (N-1-1 contingency)</b>			
<b>Outage</b>	<b>Area and Facilities Affected</b>	<b><i>Before Improvement</i></b>	<b><i>After Improvements</i></b>
Circleville - Harrison 138 kV Poston - Ross 138 kV	Circleville/Ross 138kV	73%	98.6%
	Circleville/Ross 69kV	80%	97.4%
	Circleville/Ross 138kV	14% <i>Voltage Drop</i>	0.5% Voltage Drop
	Circleville/Ross 69kV	11.3% <i>Voltage Drop</i>	0.4% Voltage Drop
Circleville - Harrison 138 kV Rozelle - Waverly 138 kV	Circleville/Ross 138kV	61.5%	97.4%
	Circleville/Ross 69kV	66.3%	97.7%
Poston - Ross 138 kV Rozelle - Waverly 138 kV	Circleville/Ross 138kV	85.5%	97.4%
<b>69 kV and 138 kV System Thermal Violations 2016 Base Case - (N-1-1 contingency – Emergency Rating)</b>			
<b>Outage</b>	<b>Area and Facilities Affected</b>	<b><i>Before Improvement</i></b>	<b><i>After Improvements</i></b>
Circleville - Harrison 138 kV Rozelle - Waverly 138 kV	Poston-Ross 138kV	125%	9%
	Ross-Ginger 69kV	150%	20%
Poston - Ross 138 kV Rozelle - Waverly 138 kV	Circleville Harrison 138 kV	106%	46%
	Ross-Ginger 69kV	110%	23%

## **Conclusion**

The Applicant provided details on load flow studies that were performed by AEP. The study demonstrated that, without the Biers Run Station Project, AEP would be unable to provide safe, reliable electric service. In addition, AEP would be unable to comply with the federal reliability standards. The proposed project is listed in PJM’s 2012 RTEP as a baseline upgrade and approved by the PJM Board.

## **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 has coordinated with the U.S. Army Corps of Engineers (USACE). Based on the proposed work, no permit is required for the access bridge to the sites.

The Applicant has indicated that it intends to submit a Notice of Intent (NOI) for coverage under 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 would be developed for the project pursuant to Ohio EPA regulations and would conform to the ODNR's Rainwater and Land Development Manual. Using best management practices for construction activities would help minimize any erosion-related impacts to streams. Streams and other environmentally-sensitive areas shall be clearly identified before commencement of clearing or construction. No construction or access is 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 would comply with requirements of ORC Chapter 6111, and the rules and laws adopted under this chapter.

#### **Solid Waste**

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. 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. The Applicant would have a Spill Prevention Plan in place and would follow manufacturer's recommendations for any spill cleanup.

The Applicant's solid waste disposal plans would comply with solid waste disposal requirements in ORC Chapter 3734, and the rules and laws adopted under this chapter.

## **Aviation**

The height of the tallest anticipated above ground structure is designed to be approximately 100 feet. According to the Federal Aviation Administration's (FAA) Office of Aeronautical Information Services, seven airports, landing strips, or heliports are located in Ross County. The closest of these facilities is the Ross County Airport, which is located approximately five miles to the northeast of the Preferred and Alternate sites. Coordinates for the tallest structures were submitted to the FAA via the Notice Criteria Tool. The Notice Criteria Tool indicated the structures are "in proximity to a navigation facility and may impact the assurance of navigation signal reception." The coordinates of the tallest potential structures were formally submitted to the FAA. The FAA performed aeronautical studies (2012-AGL-10599-OE through 2012-AGL-10602-OE) on each location based on the type of structure, height, and base elevation. The FAA issued determinations of no hazard to air navigation for each of the submitted structures. No marking or lighting is required on the structures.

In accordance with ORC 4561.32, Staff contacted the ODOT Office of Aviation during review of this application in order to coordinate review of potential impacts of the facility on local airports. As of the date of preparation of this report, no such concerns have been identified. Construction and operation at the Preferred Site is not expected to have an impact on aviation.

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.

AEP Transco will construct, own, operate, and maintain the proposed transmission lines and equipment related to the Biers Run Station Project. The Biers Run Substation is a necessary component of a larger transmission system project. This project would maintain, improve, and reinforce electric service quality and reliability for the communities of southern Columbus, Chillicothe, Circleville, Highland, Greenfield, and Waverly. The proposed Biers Run Substation would serve the public interest by helping provide sufficient capacity for future growth and improved reliability in the area.

The estimates of applicable intangible and capital costs for the Preferred Site and the Alternate Site for the proposed Biers Run Substation are \$22,481,349 and \$22,183,510, respectively.

The Preferred and Alternate sites are located within Ross County and Union Township and will provide additional tax revenue. The Preferred Site and Alternate Site would provide Ross County, Union Township, Adena Local School District, Pickaway-Ross County Joint Vocational School District, Paint Valley Mental Health District, and Chillicothe/Ross County Public Library with additional annual tax revenues of \$1,132,000 and \$1,117,000, respectively.

The proposed project would have a positive impact on regional development in the south central Ohio area through increased reliability and availability of electric power to residential, commercial, and industrial users throughout the region.

**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 10 acres or produce a minimum average gross annual income of \$2,500.

The Applicant has indicated there is no agricultural district land located within 100 feet of the proposed Preferred or Alternate sites. Therefore, the Applicant proposes no mitigation for agricultural district 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 AEP Ohio Transmission Company 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 the *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 the *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 the *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 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. The Applicant shall 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.

### **ECOLOGICAL CONDITIONS**

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

- (10) The Applicant shall have a Staff-approved environmental specialist on site during construction activities that may affect sensitive areas, as mutually agreed upon between the Applicant and Staff, and as shown on the Applicant's final construction access plan. Sensitive areas include but are not limited to areas of vegetation clearing, designated wetlands and streams, and locations of threatened or endangered species or their identified habitat. The environmental specialist shall be familiar with water quality protection issues and potential threatened or endangered species of plants and animals that may be encountered during project construction.
- (11) 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.

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

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

- (12) 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, ODOT, local law enforcement, and health and safety officials. This coordination shall be detailed 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.

- (13) General construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m., or until dusk when sunset occurs after 7:00 p.m. Impact pile driving 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, with Staff approval.

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

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

- (14) Prior to the commencement of construction activities that require permits, licenses, or authorizations by federal or state laws and regulations, the Applicant shall obtain and comply with such permits, licenses, 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.

## APPENDIX

### 1. DOCKETING RECORD

CASE NUMBER: 12-1361-EL-BSB

DESCRIPTION: Biers Run Station Project

FILINGS AS OF: May 22, 2013

05/21/2013	Response letter sent to: Michael and Kathryn Kerns filed by K.Wissman on behalf of OPSB.
04/15/2013	Proof of Pub Biers Run Substation Project (Chillicothe Gazette) Ross County electronically filed by Erin C Miller on behalf of AEP Ohio Transmission Company, Inc.
03/22/2013	Service Notice
03/22/2013	Administrative Law Judge Entry scheduling local public hearing on June 11, 2013, at 6:00 p.m., and adjudicatory hearing on June 25, 2013, at 10:00 a.m., electronically filed by Vesta R Miller on behalf of Jay S. Agranoff, Administrative Law Judge, Ohio Power Siting Board.
03/22/2013	Receipt of check received from AEP Ohio Trans Co. dated 3/13/2013.
03/21/2013	Notice Proof of Service electronically filed by Erin C Miller on behalf of AEP Ohio Transmission Company, Inc.
02/13/2013	Response letter sent to Mr. Shawn P. Malone filed by T. A. Snitchler, Chairman on behalf of OPSB
12/20/2012	Application for a Certificate of Environmental Compatibility and Public Need/Biers Run Station filed by S. Moore. on behalf of AEP Ohio Transmission Co., Inc.
07/05/2012	Proof of Pub for Biers Run Substation Project electronically filed by Erin C Miller on behalf of AEP Ohio Transmission Company, Inc.
06/12/2012	Notice of rescheduled Public Informational Meeting electronically filed by Erin C. Miller on behalf of AEP Ohio Transmission Company, Inc.
05/22/2012	Letter of Notification Pre-Application electronically filed by Erin C Miller on behalf of AEP Ohio Transmission Company, Inc.
04/25/2012	In the matter of the application for a Certificate of Environmental Compatibility and Public Need for a 345/138/69 kV Biers Run Substation Project. electronically filed by Erin C. Miller on behalf of AEP Ohio Transmission Company, Inc.

## 2. REFERENCES

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Summary: Report of investigation electronically filed by Mr. Adam S Bargar on behalf of Staff of OPSB