

# Staff Report of Investigation

AEP Ohio Transmission Company  
Pine Ridge Switch-Heppner 138 kV Transmission Line Project

Case No. 18-0031-EL-BTX

September 25, 2018



John R. Kasich, Governor | Asim Z. Haque, Chairman

**In the Matter of the Application of AEP Ohio )**  
**Transmission Company, Inc. for a Certificate of )**  
**Environmental Compatibility and Public Need for the ) Case No. 18-0031-EL-BTX**  
**Pine Ridge Switch-Heppner 138 kV Transmission )**  
**Line Project. )**

## **Staff Report of Investigation**

Submitted to the  
OHIO POWER SITING BOARD

BEFORE THE POWER SITING BOARD OF THE STATE OF OHIO

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

To the Honorable Power Siting Board:

In accordance with the Ohio Revised Code (R.C.) 4906.07(C) and rules of the Ohio Power Siting Board (Board), the staff of the Public Utilities Commission of Ohio (Staff) has completed its investigation in the above matter and submits its findings and recommendations in this Staff Report for consideration by the Board.

The findings and recommendations contained in this report are the result of Staff coordination with the following agencies that are members of the Board: Ohio Environmental Protection Agency, the Ohio Department of Health, the Ohio Development Services Agency, the Ohio Department of Natural Resources, and the Ohio Department of Agriculture. In addition, Staff coordinated with the Ohio Department of Transportation, the Ohio Historic Preservation Office, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the Federal Aviation Administration.

In accordance with R.C. 4906.07(C) and 4906.12, copies of this Staff Report have been filed with the Docketing Division of the Public Utilities Commission of Ohio and served upon the Applicant or its authorized representative, the parties of record, and pursuant to Ohio Administrative Code 4906-3-06, the main public libraries of the political subdivisions in the project area.

The Staff Report presents the results of Staff's investigation conducted in accordance with R.C. Chapter 4906 and the rules of the Board, and does not purport to reflect the views of the Board nor should any party to the instant proceeding consider the Board in any manner constrained by the findings and recommendations set forth herein.

Respectfully submitted,



Tamara S. Turkenton  
Director, Rates and Analysis  
Public Utilities Commission of Ohio

## TABLE OF CONTENTS

I. POWERS AND DUTIES .....	1
Ohio Power Siting Board .....	1
Nature of Investigation.....	1
Criteria.....	3
II. APPLICATION.....	5
Applicant .....	5
History of the Application.....	5
Project Description.....	5
Project Maps.....	7
III. CONSIDERATIONS AND RECOMMENDED FINDINGS .....	13
Basis of Need .....	13
Nature of Probable Environmental Impact.....	14
Minimum Adverse Environmental Impact.....	22
Electric Grid .....	24
Air, Water, Solid Waste, and Aviation.....	26
Public Interest, Convenience, and Necessity .....	28
Agricultural Districts.....	30
Water Conservation Practice .....	31
IV. RECOMMENDED CONDITIONS OF CERTIFICATE.....	33
General Conditions.....	33
Socioeconomic Conditions.....	34
Ecological Conditions .....	34
Public Services, Facilities, and Safety Conditions.....	35
Air, Water, Solid Waste, and Aviation Conditions.....	35



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## **I. POWERS AND DUTIES**

### **OHIO POWER SITING BOARD**

The authority of the Ohio Power Siting Board (Board) is prescribed by Ohio Revised Code (R.C.) Chapter 4906. R.C. 4906.03 authorizes the Board to issue certificates of environmental compatibility and public need for the construction, operation, and maintenance of major utility facilities defined in R.C. 4906.01. Included within this definition of major utility facilities are: electric generating plants and associated facilities designed for, or capable of, operation at 50 megawatts (MW) or more; electric transmission lines and associated facilities of a design capacity of 100 kilovolts (kV) or more; and gas pipelines greater than 500 feet in length and more than nine inches in outside diameter, and associated facilities, designed for transporting gas at a maximum allowable operating pressure in excess of 125 pounds per square inch. In addition, pursuant to R.C. 4906.20, the Board authority applies to economically significant wind farms, defined in R.C. 4906.13(A) as wind turbines and associated facilities with a single interconnection to the electrical grid and designed for, or capable of, operation at an aggregate capacity of 5 MW or greater but less than 50 MW.

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

### **NATURE OF INVESTIGATION**

The Board has promulgated rules and regulations, found in Ohio Administrative Code (Ohio Adm.Code) 4906:1-01 et seq., which establish application procedures for major utility facilities and economically significant wind farms.

#### **Application Procedures**

Any person that wishes to construct a major utility facility or economically significant wind farm in this state must first submit to the Board an application for a certificate of environmental compatibility and public need.<sup>1</sup> The application must include a description of the facility and its location, a summary of environmental studies, a statement explaining the need for the facility and how it fits into the Applicant's energy forecasts (for transmission projects), and any other information the Applicant or Board may consider relevant.<sup>2</sup>

Within 60 days of receiving an application, the Chairman must determine whether the application is sufficiently complete to begin an investigation.<sup>3</sup> If an application is considered complete, the Board or an administrative law judge will cause a public hearing to be held 60 to 90 days after the

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1. R.C. 4906.04 and 4906.20.

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

3. Ohio Adm.Code 4906-3-06(A).

official filing date of the completed application.<sup>4</sup> At the public hearing, any person may provide written or oral testimony and may be examined by the parties.<sup>5</sup>

### **Staff Investigation and Report**

The Chairman will also cause each application to be investigated and a report published by the Board's Staff not less than 15 days prior to the public hearing.<sup>6</sup> The report sets forth the nature of the investigation and contains the findings and conditions recommended by Staff.<sup>7</sup> The Board's Staff, which consists of career professionals drawn from the staff of the PUCO and other member agencies of the Board, coordinates its investigation among the agencies represented on the Board and with other interested agencies such as the Ohio Department of Transportation (ODOT), the Ohio History Connection, and the U.S. Fish and Wildlife Service (USFWS).

The technical investigations and evaluations are conducted pursuant to Ohio Adm.Code 4906-1-01 et seq. The recommended findings resulting from Staff's investigation are described in the Staff Report pursuant to R.C. 4906.07(C). The report does not represent the views or opinions of the Board and is only one piece of evidence that the Board may consider when making its decision. Once published, the report becomes a part of the record, is served upon all parties to the proceeding and is made available to any person upon request.<sup>8</sup> A record of the public hearings and all evidence, including the Staff Report, may be examined by the public at anytime.<sup>9</sup>

### **Board Decision**

The Board may approve, modify and approve, or deny an application for a certificate of environmental compatibility and public need.<sup>10</sup> If the Board approves, or modifies and approves an application, it will issue a certificate subject to conditions. The certificate is also conditioned upon the facility being in compliance with applicable standards and rules adopted under the Ohio Revised Code.<sup>11</sup>

Upon rendering its decision, the Board must issue an opinion stating its reasons for approving, modifying and approving, or denying an application for a certificate of environmental compatibility and public need.<sup>12</sup> A copy of the Board's decision and its opinion is memorialized upon the record and must be served upon all parties to the proceeding.<sup>13</sup> Any party to the proceeding that believes its issues were not adequately addressed by the Board may submit within 30 days an application for rehearing.<sup>14</sup> An entry on rehearing will be issued by the Board within 30 days and may be appealed within 60 days to the Supreme Court of Ohio.<sup>15</sup>

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4. R.C. 4906.07(A) and Ohio Adm.Code 4906-3-08.

5. R.C. 4906.08(C).

6. R.C. 4906.07.

7. Ohio Adm.Code 4906-3-06(C).

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

9. R.C. 4906.09 and 4906.12.

10. R.C. 4906.10(A).

11. R.C. 4906.10.

12. R.C. 4906.11.

13. R.C. 4906.10(C).

14. R.C. 4903.10 and 4906.12.

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



## CRITERIA

Staff developed the recommendations and conditions in this *Staff Report of Investigation* pursuant to the criteria set forth in R.C. 4906.10(A), which reads, in part:

The board shall not grant a certificate for the construction, operation, and maintenance of a major utility facility, either as proposed or as modified by the board, unless it finds and determines all of the following:

- (1) The basis of the need for the facility if the facility is an electric transmission line or gas pipeline;
- (2) The nature of the probable environmental impact;
- (3) That the facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations;
- (4) In the case of an electric transmission line or generating facility, that the facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems and that the facility will serve the interests of electric system economy and reliability;
- (5) That the facility will comply with Chapters 3704, 3734, and 6111 of the Revised Code and all rules and standards adopted under those chapters and under sections 1501.33, 1501.34, and 4561.32 of the Revised Code. In determining whether the facility will comply with all rules and standards adopted under section 4561.32 of the Revised Code, the board shall consult with the office of aviation of the division of multi-modal planning and programs of the department of transportation under section 4561.341 of the Revised Code;
- (6) That the facility will serve the public interest, convenience, and necessity;
- (7) In addition to the provisions contained in divisions (A)(1) to (6) of this section and rules adopted under those divisions, what its impact will be on the viability as agricultural land of any land in an existing agricultural district established under Chapter 929 of the Revised Code that is located within the site and alternative site of the proposed major utility facility. Rules adopted to evaluate impact under division (A)(7) of this section shall not require the compilation, creation, submission, or production of any information, document, or other data pertaining to land not located within the site and alternative site; and
- (8) That the facility incorporates maximum feasible water conservation practices as determined by the board, considering available technology and the nature and economics of the various alternatives.

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## **II. APPLICATION**

### **APPLICANT**

AEP Ohio Transmission Company, Inc. (AEP Ohio Transco or Applicant) is a transmission-only company approved as a public utility in Ohio in 2010 (Case No. 10-245-EL-UNC). AEP Ohio Transco is an affiliate of AEP Ohio/Ohio Power Company, based in Gahanna, Ohio, and is one of many utility units of AEP.

### **HISTORY OF THE APPLICATION**

Prior to formally submitting its application, the Applicant consulted with the Staff regarding application procedures.

On January 25, 2018, the Applicant held a public informational meeting regarding the proposed electric transmission line rebuild project in Jackson, Ohio.

On March 29, 2018, the Applicant filed the Pine Ridge Switch-Heppner 138 kV Transmission Line Rebuild application.

On May 29, 2018, the Director of Rates and Analysis, Public Utilities Commission of Ohio (PUCO), issued a letter of compliance regarding the application to the Applicant.

A local public hearing has been scheduled for October 10, 2018 at 6:00 p.m., at the Northview Elementary School Gymnasium, 11507 Chillicothe Pike, Jackson, Ohio 45640. The evidentiary hearing will commence on October 24, 2018, 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 18-0031-EL-BTX. The docketing record for this case, which lists all documents filed to date, can be found online at <http://dis.puc.state.oh.us>.

### **PROJECT DESCRIPTION**

The Applicant proposes to construct the Pine Ridge Switch-Heppner 138 kV Transmission Line Rebuild Project in Jackson County, Ohio.<sup>16</sup> The Applicant would own, operate, and maintain the transmission line.

The proposed project involves the installation of a new 138 kV overhead electric transmission line between the existing Pine Ridge Switch and proposed Heppner Substation. Both routes proposed by the Applicant largely make use of the right-of-way of the existing Berlin-Ross 69 kV transmission line. To meet 138 kV standards, a 100-foot right-of-way is proposed by the Applicant for the new transmission line, which would incorporate steel poles for support. AEP Ohio Transco utilized field survey data to further identify route alternatives and to ultimately select its Preferred and Alternate routes.

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<sup>16</sup>. "Application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility and Public Need" (Application), American Electric Power Ohio Transmission Company, Inc., March 29, 2018.

Once completed, the new transmission line would replace approximately 3.6 miles of the existing Berlin-Ross 69 kV transmission line, which has been in service since 1926 and serves areas within Ross and Jackson counties. With installation of the new 138 kV transmission line, the 69 kV transmission line would then be taken out of service. The new 138 kV transmission line would operate at 69 kV until 138 kV service would be needed to serve customer load.

#### **Preferred Transmission Line Route**

The Applicant's Preferred Route is approximately 3.6 miles long, and predominately parallels either the northern or southern edge of the existing Berlin-Ross 69 kV Transmission Line right-of-way. This new line would be offset by approximately 25-50 feet from the centerline of the existing 69 kV line in order to allow the existing line to remain in service during construction.

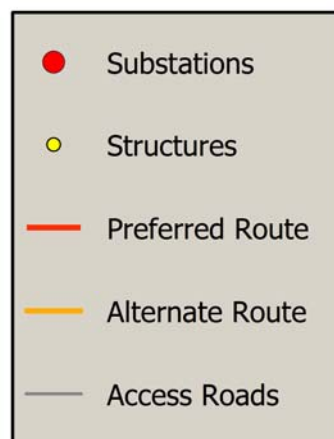
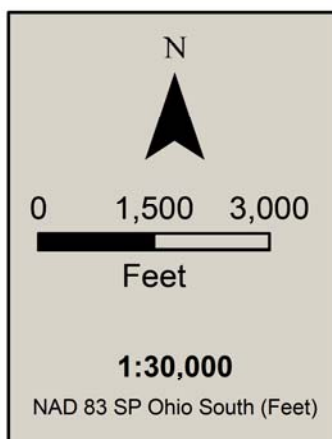
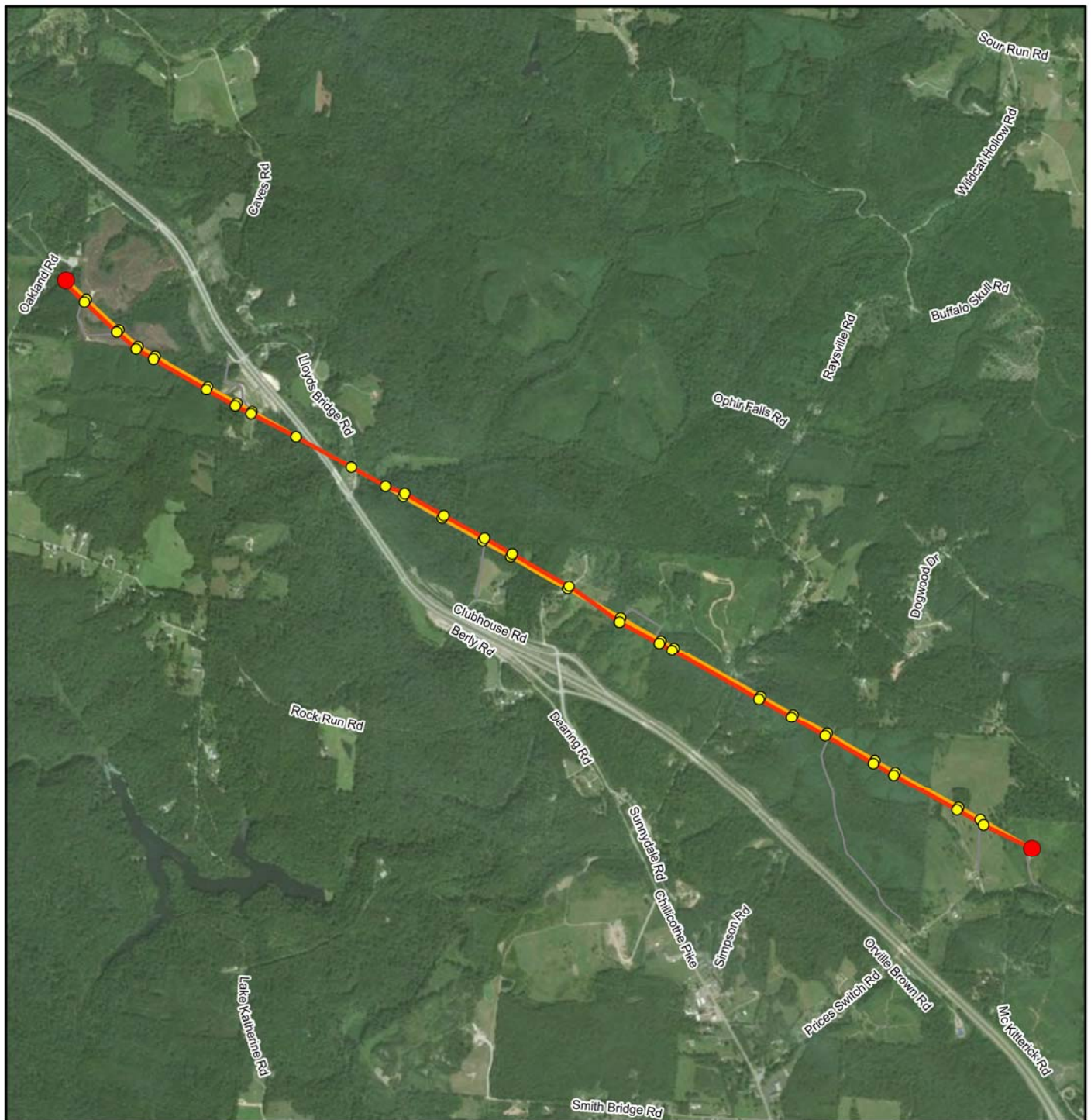
The Preferred Route exits the Pine Ridge Switch and follows the existing 69 kV line, along the southern edge of the right-of-way for approximately 0.9 mile. The Preferred Route then aligns with the Alternate Route (centerline of the Berlin-Ross line) for approximately 0.3 miles as the line crosses U.S. Highway 35. The Preferred Route then crosses the existing Berlin-Ross line to the northern edge of right-of-way and continues for approximately 0.8 miles to the southeast. The Preferred Route crosses to the southern edge of right-of-way for the existing Berlin-Ross line for approximately 1.6 miles southeast to the proposed Heppner Station. The Heppner Station project was approved in March 2018 by the OPSB in Case No. 17-0806-EL-BLN and is not yet under construction.

#### **Alternate Transmission Line Route**

The Applicant's Alternate Route is also approximately 3.6 miles long, and exclusively follows along the centerline of the existing Berlin-Ross 69 kV Transmission Line. The Alternate Route exits the Pine Ridge Switch to the southeast and follows the existing 69 kV line to the proposed Heppner Station, exclusively following the centerline with no offset. Construction of the Alternate Route would require that the existing 69 kV line be taken out of service during construction of the new transmission line.

The Preferred and Alternate routes are shown on the maps in this report.





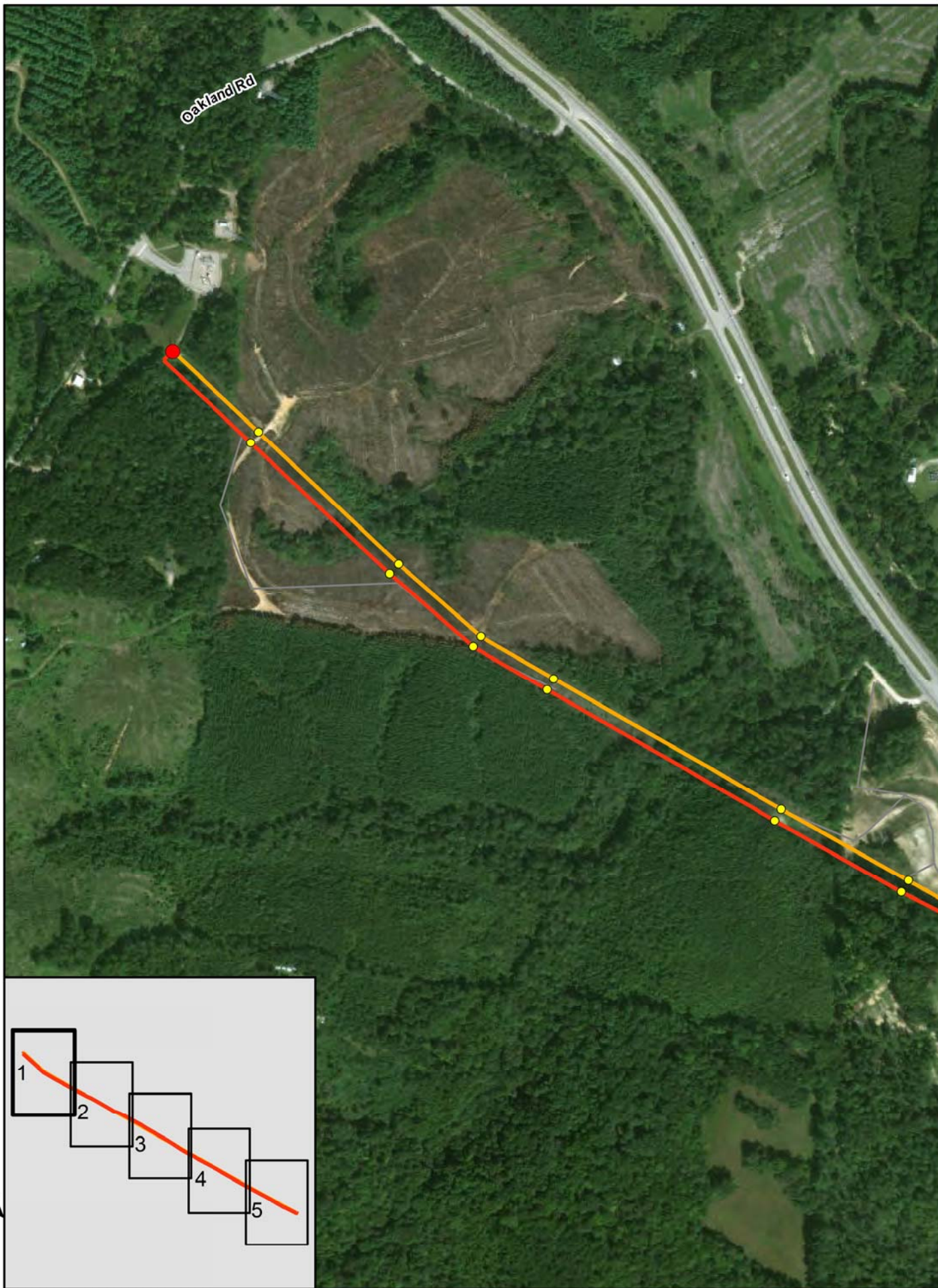
## Overview Map

### 18-0031-EL-BTX

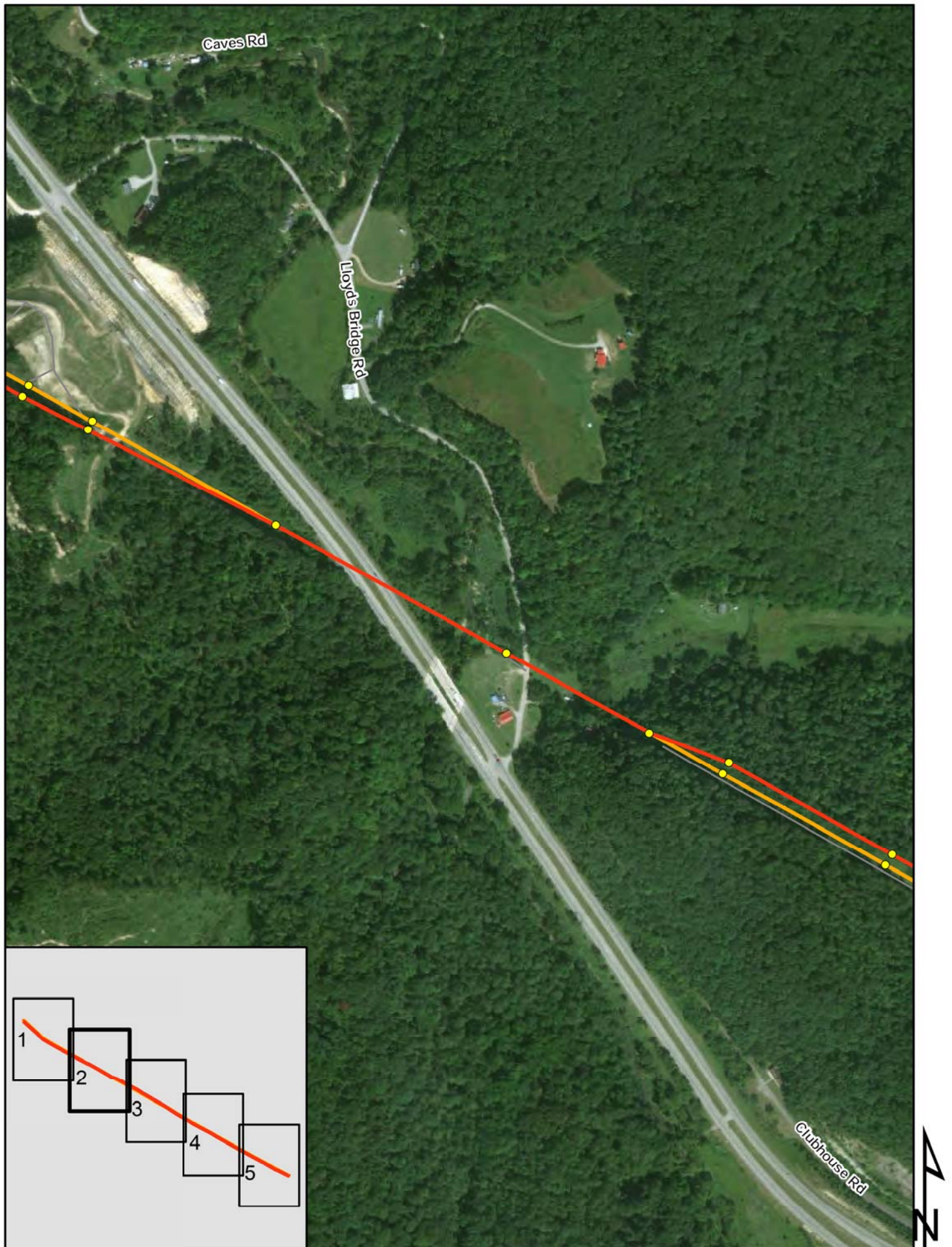
**Pine Ridge Switch - Heppner  
138kV Transmission Line**

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







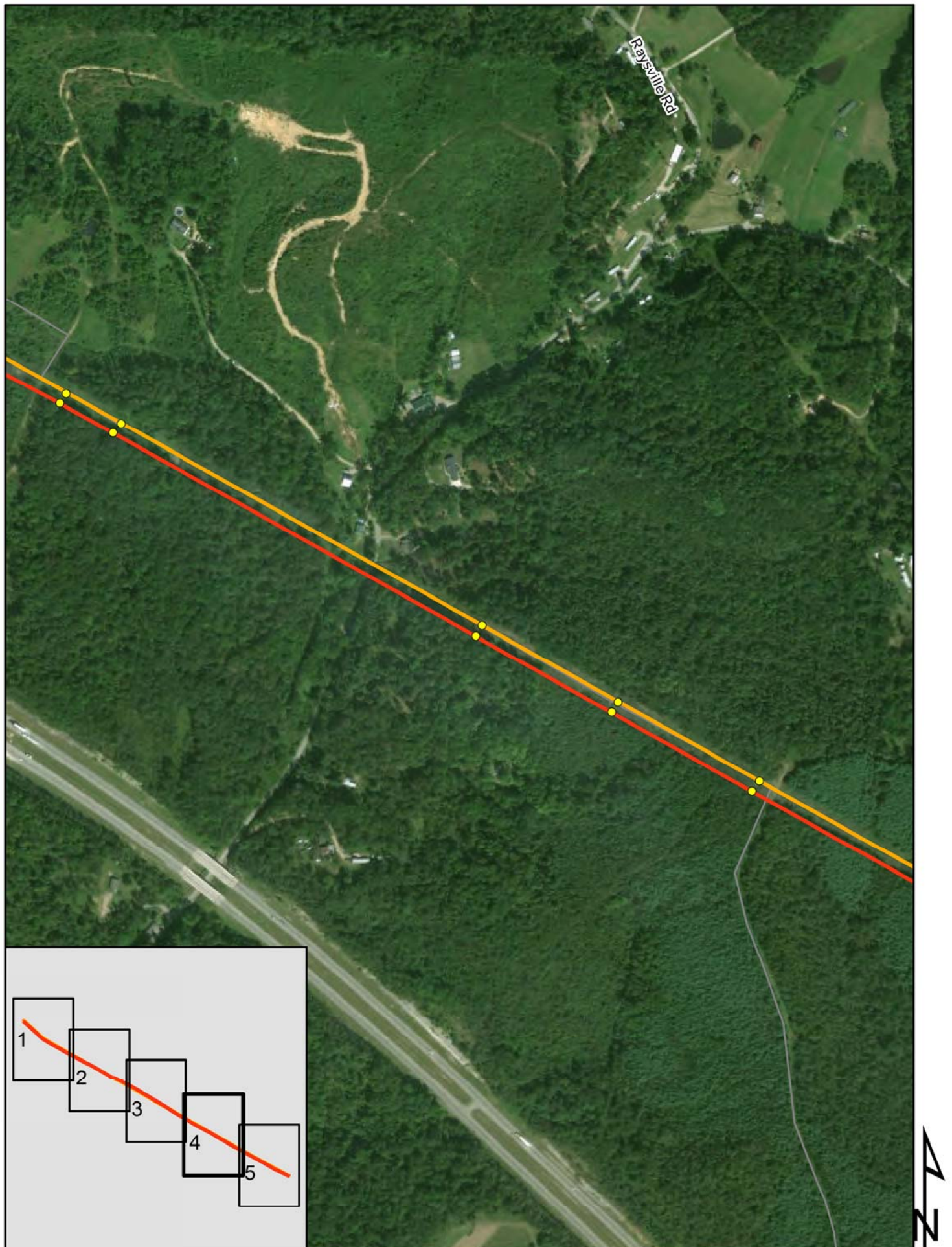


1 inch = 500 feet





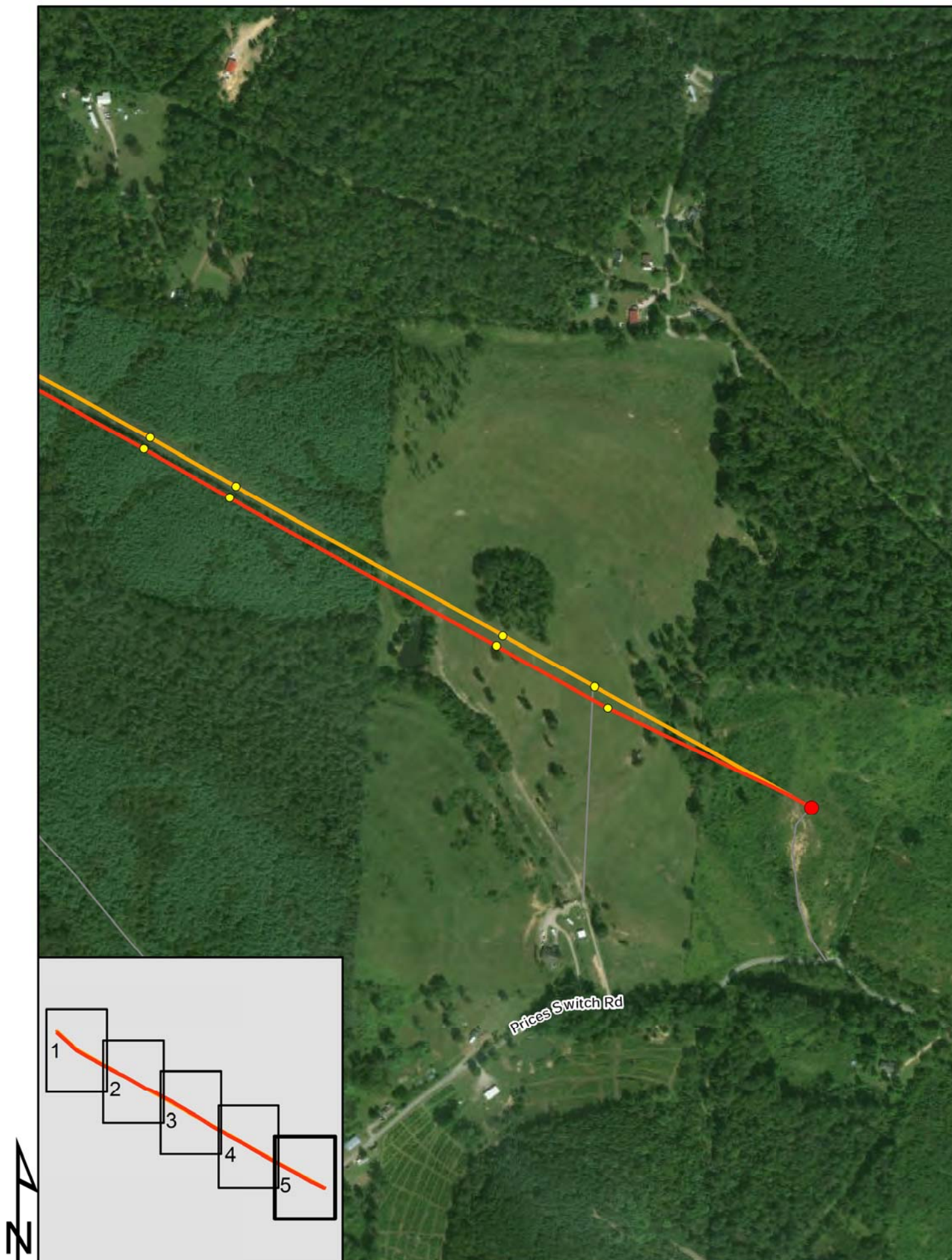




1 inch = 500 feet

Map Page 4







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

In the matter of the application of AEP Ohio Transmission Company, Inc, Staff submits the following considerations and recommended findings pursuant to R.C. 4906.07(C) and 4906.10(A).

#### **Considerations for R.C. 4906.10(A)(1)**

##### **BASIS OF NEED**

###### **Purpose of Proposed Facility**

The proposed facility is part of the Applicant's broader Ross-Jackson Area Improvements Project (Ross-Jackson Project) The goal of the Ross-Jackson Project is to modernize and improve the reliability of the Applicant's transmission system in Ross and Jackson Counties.

The existing 69 kV transmission line was constructed in 1926. The ninety-two year old line has a very poor performance history and extended outage recovery times. The proposed project would be constructed at 138kV and would improve reliability with fewer service interruptions, improved service to customers, and faster recovery time during outages.

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

AEP Ohio Transco identified the need for the proposed transmission line project in the 2018 AEP Ohio Transmission Company Long-Term Forecast Report to the Public Utilities Commission of Ohio (LTFR).<sup>17,18</sup>

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

The proposed project is not expected to adversely impact the existing transmission grid. The Applicant identified reliability problems associated with the existing 69 kV transmission line. These problems are discussed in more detail in the Electric Grid section of this report. Replacing the existing 69 kV line with the proposed facility should address these problems and thus improve system reliability.

###### **Conclusion**

Staff concludes that the Applicant has demonstrated the basis of need due to the reliability issues caused by the age and condition of the 1926 transmission line. The proposed facility should allow the transmission system to provide safe, reliable electric service.

###### **Recommended Findings**

Staff recommends that the Board find that the basis of need for the project has been demonstrated and therefore complies with the requirements specified in R.C. 4906.10(A)(1), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

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17. "AEP Ohio Transmission Company LTFR," Public Utilities Commission of Ohio Case No. 18-1501-EL-FOR, <http://dis.puc.state.oh.us>.

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

## **Considerations for R.C. 4906.10(A)(2)**

### **NATURE OF PROBABLE ENVIRONMENTAL IMPACT**

Pursuant to R.C. 4906.10(A)(2), the Board must determine the nature of the probable environmental impact of the proposed facility.

#### **Socioeconomic Impacts**

##### *Land Use Planning*

The Applicant states that there are no formally adopted development or land use plans identified for the areas of this project in Jackson County. As the proposed facility would include existing right-of-way for a large portion of the project, the proposed facility should not limit future development or population growth in the region.

##### *Land Use*

The proposed right-of-way width for this project is 100 feet. Both proposed routes predominantly utilize the existing 69 kV right-of-way, thus minimizing the additional right-of-way needed for the proposed transmission line. The existing 69 kV line has a right-of-way ranging from 50 feet wide to blanket easement, which covers entire properties. Making use of the existing right-of-way for the proposed 138 kV transmission line results in utility land use crossed of 30 percent for the Preferred Route and 49 percent for the Alternate Route.

There are 30 residences within 1,000 feet of both the Preferred and Alternate Route centerlines. Five residences are located within 200 feet of the Preferred Route centerline. There are six residences within 200 feet of the Alternate Route. There are no structures located within the 100-foot right-of-way proposed for either route. Residents in the area would experience temporary ambient noise increases during facility construction.

The Preferred Route crosses 25 properties and includes 44 acres of proposed right-of-way area. The Alternate Route crosses 27 properties and also includes 44 acres of proposed right-of-way area. Approximately 33 percent of the Preferred Route and 32 percent of the Alternate Route acreage cross agricultural land and open land/pasture. As the purpose of this project is to rebuild an existing transmission line, permanent additional impacts to agricultural fields would be minimal.

There are four commercial facilities and no industrial buildings within 1,000 feet of both the Preferred and Alternate Routes. None of these commercial facilities are located within the planned disturbance areas (defined as being within 100 feet) for either route. No negative impacts to commercial or industrial land uses are anticipated as a result of the project.

No schools, hospitals, nor places of worship were identified as being within 1,000 feet of the Preferred or Alternate routes. One recreational area/parkland is crossed by both routes, the Coalton Wildlife Area. The existing Berlin-Ross 69 kV line crosses through this wildlife area. Expanding the right-of-way would require additional tree clearing but otherwise would not change the use (utility) crossing the Coalton Wildlife Area. No negative impacts to institutional and recreational land uses are expected from the construction, operation, or maintenance of either the Preferred or the Alternate routes for the project.



### *Cultural, Archaeological, and Architectural Resources*

The Applicant conducted a cultural resources literature review, Phase I fieldwork, and a history/architectural study of the project. The Phase I fieldwork for the project resulted in identifying one new archaeological site that is considered potentially eligible for listing in the National Register of Historic Places (NRHP). Further work and analysis was done on this site by the consultant. This site would not be impacted by this project, and no further archaeological work was recommended by the Applicant's cultural resources consultant.

Five individual structures 50 years of age or older were identified within the project Area of Potential Effect (APE). None of these structures were determined eligible for listing in the NRHP.

The findings were submitted to the Ohio Historic Preservation Office (OHPO). The OHPO responded to the consultant in concurrence that this project would not likely affect historic properties. No further cultural resources work was determined to be needed for this project, unless the scope of work or centerline changes.

### *Aesthetics*

Permanent visual impacts would result from the introduction of a new manmade element to the landscape. Aesthetic impacts would vary with the viewer and setting, depending on the degree of contrast between the proposed transmission line and the existing landscape. Because the new transmission line would be constructed where existing aboveground utilities are already located, the aesthetic impact would be lessened. In those areas along either route where existing screening trees would need to be removed, the aesthetic impact would be greater.

### *Economics*

The Applicant estimates the applicable intangible and capital costs for the Preferred Route at \$8,423,094 and the Alternate Route at \$8,726,926. The following table summarizes the Applicant's cost estimates.

INTANGIBLE AND CAPITAL COSTS		
Category	Preferred Route	Alternate Route
Land and Land Rights	\$1,632,135	\$1,088,090
Poles and Fixtures	\$3,363,509	\$4,170,751
Overhead Conductors and Devices	\$825,966	\$1,024,198
Right-of-way clearing, Roads, Trails, or other Access	\$2,601,484	\$2,443,887

Both routes are located within Jackson County. The projected tax revenue generated from the project would benefit the local school district, public library, and mental health district. The Applicant estimates the Preferred Route would generate approximate annual property tax revenue of \$256,570 over the first year of operation, while the Alternate Route would generate \$288,560.

Additionally, by upgrading service reliability and providing greater capacity in the region, the proposed transmission line would facilitate future economic growth in the area.

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

## **Ecological Impacts**

### *Site Geology*

Jackson County lies within the unglaciated Allegheny Plateau Region. It is extensively dissected by drainageways and plateaus with moderately high relief. The topography is rugged and hilly, except along the floors of ancient preglacial stream valleys. The county is underlain by sedimentary rocks of Pennsylvanian age and in the northwestern corner of Jackson County are rocks of Mississippian age. Bedrock consists primarily of sandstone and shale, clay, along with economically important coal.

Both the Preferred and Alternate routes are located within the Allegheny Plateau region. Much of the area is considered unglaciated. The plateau was once continuous but now is dissected by streams that have eroded the unglaciated sandstone bedrock into steep hillsides. A limited amount of coal mining took place near the Pine Ridge Switch Substation. D.D. Edwards operated an underground coal mine, now abandoned, that extracted the Quakertown (#2) coal at a recorded date of 1914. The mapped extent of the underground mine is unknown. In this same locality is a reclaimed surface mine that operated in the early 1970's.

As the proposed routes head southeast towards the Heppner Switch substation, the transmission line crosses over US Route 35 to the north of the highway, where there is more extensive abandoned underground and surface mining operations. The route following the existing utility corridor passes over the reclaimed surface mine, Big W Coal Co., Inc., permit ID D-229. The Division of Geological Survey reported one seismic event that took place northwest of the Preferred and Alternate Routes in Jackson County on February 11, 2015. The seismic event occurred about 14 miles northwest of the city Jackson, just north of Brohard Rd. and west of U.S. Route 35. The magnitude of the seismic event is listed at 2.6 on the Richter scale. No other seismic events have been recorded in the county that would affect either route.

The Applicant proposes to perform soil and rock test along portions of the final approved route to determine final design for foundations and pole locations. Special attention should be given where the proposed transmission line crosses over mined out areas along the route.

Based on Staff review, the construction of the transmission line along the existing utility corridor for either route should not be restricted or limited due to the geology in the area.

### *Slopes and Foundation Soil Suitability*

The 138 kV transmission line would span the northwestern part of Jackson County. The soils along both routes consist of loams, silt loams or silty clay loams that are suitable for constructing foundations for these type of structures. Erosion and severe slopes are noted along both routes and the Applicant will implement best management practices (BMP) and a Stormwater Pollution Prevention Plan (SWPPP) to control erosion, sedimentation, slippage, and runoff in areas where the slopes are greater than 12 percent. The Applicant will revegetate and stabilize all disturbed areas once construction is completed.



The Applicant stated they would perform a geotechnical investigation and perform soil/rock borings along portions of the selected route as needed to design and construct foundations for the poles where soil and site conditions warrant such testing. Soil borings will provide information on rock quality description, subsurface soil properties, static water level, percent recovery, and depth and description of bedrock contact. The Applicant anticipates that foundation design would be determined based on the results of test drilling and laboratory test to ensure they are sited in locations suitable for construction. Although land use limitations related to slope and severe erosion exist, these limitations should not adversely affect or restrict the construction of either route.

#### *Surface Waters*

The Preferred Route right-of-way contains 16 stream crossings, including three perennial streams, nine intermittent streams, and four ephemeral streams, totaling 3,183 linear feet of streams. The Alternate Route right-of-way contains 13 stream crossings, including three perennial streams, eight intermittent streams and two ephemeral streams, totaling 2,544 linear feet of streams.

The proposed transmission line would aerially span all streams, and no in-water work is expected. The Applicant has committed not to conduct mechanized clearing within 25 feet of any stream, and would only clear trees in this area which are tall enough to have the potential to interfere with safe construction and operation of the transmission line. Construction vehicles may cross some streams. The Applicant has proposed temporary culvert stream crossings, and temporary access bridge crossing methods to minimize impacts.

The Preferred Route right-of-way contains seven wetlands with 0.07 acre of wetlands within the right-of-way. The Alternate Route right-of-way contains seven wetlands, with 0.06 acre of wetlands within the right-of-way. All delineated wetlands are category 1 and category 2 wetlands. Fill within wetlands is not anticipated.

The Applicant stated that it would use timber matting at any areas where construction access through wetlands is necessary and that selective non-mechanized clearing would be used to remove woody vegetation in wetlands that would otherwise interfere with the operation of the transmission line. In the event that fill within any of the other wetlands becomes necessary, impacts would be covered under the Army Corps of Engineers Nationwide 12 Permit.

No lakes, reservoirs, or ponds were observed along the construction corridor of the routes.

The Applicant would obtain coverage under the Ohio EPA General National Pollutant Discharge Elimination System (NPDES) Permit. Sedimentation that may occur as a result of construction activities would be minimized through BMP, such as silt fences. BMP would be outlined in the Applicant's SWPPP required as part of the NPDES Permit. Both the Preferred Route and Alternate Route would cross within small portions of 100-year floodplain areas. Staff recommends the Applicant coordinate with the Ross and Jackson county floodplain administrators to attain any necessary floodplain development permit.

#### *Threatened and Endangered Species*

The Applicant requested information from the ODNR and the USFWS regarding state and federal listed threatened and endangered plant and animal species. Staff gathered additional information

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

REPTILES AND AMPHIBIANS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
timber rattlesnake	<i>Crotalus horridus</i>	Species of concern	Threatened	Potential habitat within project area. Habitat suitability survey recommended
Kirtland's snake	<i>Clonophis kirtlandii</i>	N/A	Threatened	No known habitat types within project area, this project is not likely to impact this species
mud salamander	<i>Pseudotriton montanus</i>	N/A	Threatened	Due to the location, the type of habitat present at the project site, this project is not likely to impact this species
FISH				
Ohio lamprey	<i>Ichthyomyzon bdellium</i>	N/A	Endangered	Due to no in-water work in a perennial stream, no impacts to this species are anticipated.
lake chubsucker	<i>Erimyzon sucetta</i>	N/A	Threatened	Due to no in-water work in a perennial stream, no impacts to this species are anticipated.
MUSSELS				
little spectaclecase	<i>Villosa lienosa</i>	N/A	Endangered	Due to no in-water work, no impacts to this species are anticipated.
MAMMALS				
Indiana bat	<i>Myotis sodalis</i>	Endangered	Endangered	Historical range includes the project area.
northern long-eared bat	<i>Myotis septentrionalis</i>	Threatened	N/A	Historical range includes the project area.
black bear	<i>Ursus americanus</i>	N/A	Endangered	Historical range includes the project area. Due to the mobility of this species, this project is not likely to impact this species.
PLANTS				
running buffalo clover	<i>Trifolium stoloniferum</i>	Endangered	Endangered	Potential habitat within project area. Habitat suitability survey recommended

The project area is within the range of state and federal endangered Indiana bat (*Myotis sodalis*) and the federal threatened northern long-eared bat (*Myotis septentrionalis*). As tree roosting species in the summer months, the habitat of these species may be impacted by the project. In order to avoid impacts to the Indiana bat and northern long-eared bat, Staff recommends the Applicant adhere to seasonal tree cutting dates of October 1 through March 31 for all trees over 3 inches in diameter, unless coordination efforts with the ODNR and the USFWS allows a different course of action. The project would not disturb any hibernacula, including caves or abandoned mines.



Potentially suitable habitat for the timber rattlesnake (*Crotalus horridus horridus*) and the running buffalo clover (*Trifolium stoloniferum*) may be located within the project area. Prior to construction, the Applicant plans to complete habitat assessments for these species within the project area to determine if suitable habitat is present. If suitable habitat is found to be present, then Staff recommends that a presence/absence survey be conducted, or an avoidance/minimization plan be developed, in coordination with the ODNR Division of Wildlife and the USFWS.

Due to a lack of suitable habitat and no proposed in-water work, impacts to other federal and state listed species are not anticipated.

### *Vegetation*

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

VEGETATION		
Community Type	Preferred Route Impacts (Including Common Route) (Acres)	Alternate Route Impacts (Including Common Route) (Acres)
Open Land / Agricultural	14.1	13.7
Forest	14.5	6.7
Utility right-of-way	12.8	21.2

Impacts to vegetation along both routes would include initial clearing for the proposed 100-foot right-of-way and along access roads, as well as operational maintenance. Construction related tree clearing would be less for the Alternate Route, which is proposed on the centerline of an existing 50-foot right-of-way, than for the Preferred Route, which is proposed near the edge of the same existing right-of-way. Trees adjacent to the proposed transmission line right-of-way, which would be significantly encroaching or prone to failure, may require clearing to allow for safe operation of the transmission line. Vegetative wastes generated during construction would be windrowed or chipped and disposed of appropriately depending on landowner requests. The Applicant does not anticipate the use of herbicides during construction or operation.

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

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

#### *Public Services and Traffic*

The principal impact on public services would be an increase in truck traffic during the construction phase of the project for equipment access and delivery. Workers arriving and departing during construction would also increase traffic. Some traffic management during the construction phase may be necessary in the immediate vicinity of the project area to ensure safe and efficient maintenance of existing traffic patterns and usages. The Applicant has committed to



coordinating with local officials to ensure that shift times and travel routes are optimized to the extent possible.

#### *Roads and Bridges*

Equipment deliveries to the site would be by truck and would be planned as to minimize impact to local traffic patterns. Road access to the project would be by U.S. Highway 35. Access roads that would be needed during construction would require landowner's input and approval. No upgrades to local roads and bridges are anticipated. Staff recommends a requirement for the Applicant to develop a final Transportation Management Plan that would include a Road Use Agreement. The Applicant, under the guidance of the appropriate regulatory agency, would repair any damaged public roads and bridges promptly to their previous condition. Any temporary improvements would be removed unless the appropriate regulatory agency request that they remain in place.

#### *Noise*

Most noise impacts associated with this project would be confined to the 30 month construction period. The Applicant stated that it will mitigate noise impacts by properly maintaining construction equipment with installed mufflers and limiting construction activities to daylight hours, to the extent feasible.

The Applicant stated that major construction work will typically occur between 7:00 a.m. and 7:00 p.m. Staff recommends the following:

- The Applicant use the generally accepted construction working 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, would be limited to the hours between 10:00 a.m. and 5:00 p.m., Monday through Friday.
- The Applicant could conduct construction activities that do not involve noise increases above ambient levels at sensitive receptors outside of daylight hours when necessary.
- The Applicant will notify property owners or affected tenants of upcoming construction activities, including any potential for nighttime construction activities.

#### *Safety*

The Applicant stated that it would comply with all applicable safety standards set by the Occupational Safety and Health Administration, safety standards of the PUCO, and the North American Electric Reliability Corporation (NERC) Reliability Standards. Additionally, the Applicant stated it will administer a contractor safety program where contractors are required to maintain internal safety programs and to provide safety training. The Applicant also stated that it will design the facility to meet the requirements of the National Electric Safety Code.

#### *Communications*

The Applicant does not expect radio or television interference to occur from the operation of the proposed transmission line along the Preferred or Alternate routes. Any likely source of radio or television interference would be a localized effect primarily from defective hardware that easily could be detected and would be replaced by the Applicant.

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

### **Recommended Findings**

Staff recommends that the Board find that the Applicant has determined the nature of the probable environmental impact for the proposed facility, and therefore complies with the requirements specified in R.C. 4906.10(A)(2), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.



## **Considerations for R.C. 4906.10(A)(3)**

### **MINIMUM ADVERSE ENVIRONMENTAL IMPACT**

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

#### **Route Selection**

The Applicant conducted a route selection study to identify potential electric transmission line routes that avoid or limit impacts to sensitive land uses, ecological resources, and cultural features, while taking into consideration the engineering and construction needs of the project. The Applicant's study area focused on the existing Berlin-Ross 69 kV Transmission Line right-of-way and surrounding area between the existing Pine Ridge Switch and the proposed Heppner Substation.

The Applicant received one comment regarding the proposed route alternatives at the public informational meeting. The commenter expressed concerns that an expanded right-of-way would come too close to their home and that tree clearing would negatively impact woods and wildlife.

The Applicant chose the Preferred Route, because it runs parallel to the existing Berlin-Ross right-of-way for the majority of its length, allowing the existing transmission line to remain in service during most of the construction period. The Preferred Route crosses fewer parcels, impacts fewer landowners, and has fewer residences located within 100 feet of its centerline than the Alternate Route. The Alternate Route is located on the existing Berlin-Ross centerline, necessitating an outage between sections of the 69 kV line during the entire construction period. However, the Alternate Route would require less new right-of-way and 7.8 fewer acres of tree clearing than the Preferred Route.

#### **Minimizing Impacts**

As this project is proposed as a rebuild of an existing 69 kV line, potential impacts are generally limited to those associated with an existing and expanded utility right-of-way. While both routes are viable, they each have issues unique to one another, and no route is without impact. Staff has analyzed each route and concluded that potential impacts are expected to be less for the Preferred Route.

The number of properties crossed, and number of residences within 1,000 feet of either route are very similar. Likewise, agricultural impacts and potential wetland and stream crossings are similar for both routes.

The Preferred Route would allow the Applicant to construct the project while keeping the existing 69 kV transmission line in service, minimizing safety and reliability concerns. Because of necessary outage constraints, the Alternate Route would have to be constructed in segments. Thus it would take more than twice as much time to construct the Alternate Route than the Preferred Route.

Staff concludes that the Preferred Route represents the minimum adverse environmental impact when compared to the Alternate Route.

**Recommended Findings**

Staff recommends that the Board find that the Preferred Route represents the minimum adverse environmental impact, and therefore complies with the requirements specified in R.C. 4906.10(A)(3), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.



## **Considerations for R.C. 4906.10(A)(4)**

### **ELECTRIC GRID**

Pursuant to R.C. 4906.10(A)(4), the Board must determine that the proposed electric facilities are consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facilities will serve the interests of electric system economy and reliability. The purpose of this section is to evaluate the impact of integrating the proposed facility into the existing regional transmission grid.

The Applicant proposes that the existing 69 kV transmission line, which was constructed in 1926, will be replaced with a 138 kV transmission line. The project would be 10.3 miles in length and would begin at the existing Vigo Station and continue to the Pine Ridge Switch.

#### **NERC Planning Criteria**

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. As an owner, operator, and/or user of the bulk power system, the Applicant is subject to compliance with various NERC Reliability Standards, including but not limited to those related to transmission planning for contingency events.

#### **AEP Ohio Transco Planning Criteria**

AEP Ohio Transco follows internal transmission planning reliability criteria to plan their system. These criteria are required by the Federal Regulatory Energy Commission (FERC) and are filed as part of the annual FERC Form No. 715 filing. The criteria must comply with NERC Reliability Standards and PJM planning and operating manuals for the bulk electric system. The proposed project is designed to meet AEP Ohio Transco's planning criteria. The figure below highlights a portion of AEP Ohio Transco's planning criteria.<sup>19, 20</sup>

<b>AEP TRANSMISSION PLANNING RELIABILITY CRITERIA</b>		
<b>System Condition</b>	<b>Voltage Performance</b>	<b>Thermal Performance</b>
Normal	95% - 105% of nominal voltage	No facility may exceed its normal rating
Contingency (single & multiple)	92% - 105% of nominal voltage Voltage deviation from system normal of 8% or greater is not acceptable	No facility may exceed its emergency rating

19. "Transmission Planning Reliability Criteria - AEP PJM," American Electric Power, accessed August 23, 2018, <https://www.aep.com/about/codeofconduct/OASIS/TransmissionStudies>.

20. "Form No. 715 - Annual Transmission Planning and Evaluation Report," Federal Regulatory Energy Commission, accessed August 23, 2018, <https://www.ferc.gov/docs-filing/forms/form-715/overview.asp>.

### **PJM Interconnection**

The proposed project was submitted to PJM Interconnection, LLC (PJM) as a supplemental project and reviewed at the PJM Subregional RTEP Committee - Western meeting on November 2, 2017. PJM assigned the project upgrade ID No. s1432. The construction status of the transmission project can be tracked on PJM's website.<sup>21, 22</sup>

### **Load Flow Study**

The proposed 138 kV transmission line would be required to meet all PJM planning standards. Contingency and load flow analysis was conducted as part of the design of the 138 kV facilities. Analysis showed that without the proposed facility, a contingency event would overload a 138 kV circuit leaving the Waverly Substation to 92 percent of its emergency rating. The proposed facility would alleviate this overloading by providing a second 138 kV source to AEP Ohio Transco's Ross Substation in Southern Ohio. Without the proposed facility the Applicant would be unable to maintain system reliability and would violate internal system planning criteria.

### **Customer Outages**

AEP Ohio Transco reported that during the years 2013 through 2017 the existing line was responsible for 478,000 customer minutes of interruption. Many of the outages were caused by failures attributable to the age of the equipment, including such items as rotten cross arms and cracked insulators.

### **Conclusion**

The Applicant provided information demonstrating the proposed project would improve reliability by decreasing customer interruptions and speed recovery time during outages. In addition, planning for the project demonstrated that adding an additional source to the Ross Substation, would alleviate contingency concerns. The proposed facility is consistent with plans for expansion of the regional

### **Recommended Findings**

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

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21. PJM Interconnection, "11.2.2017 - Subregional RTEP Committee – Western," accessed August 23, 2018, <http://pjm.com/committees-and-groups/committees/srrtep-w.aspx>.

22. PJM Interconnection, "Transmission Construction Status," accessed August 23, 2018, <http://pjm.com/planning/rtep-upgrades-status/construct-status.aspx>.



## **Considerations for R.C. 4906.10(A)(5)**

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

Pursuant to R.C. 4906.10(A)(5), the facility must comply with Ohio law regarding air and water pollution control, withdrawal of waters of the state, solid and hazardous wastes, and air navigation.

#### **Air**

Air quality permits are not required for construction of the proposed facility. However, fugitive dust rules adopted under R.C. Chapter 3704 may be applicable to the construction of the proposed facility. The Applicant would control fugitive dust through dust suppression techniques such as irrigation, mulching, or application of tackifier resins. These methods of dust control are sufficient to comply with fugitive dust rules.

#### **Water**

Neither construction nor operation of the proposed facility would require the use of significant amounts of water. Therefore, the requirements under R.C. 1501.33 and 1501.34 are not applicable to this project. The Applicant would seek coverage, if needed, under the U.S. Army Corps of Engineers Nationwide Permit 12 for Utility Line Activities for surface water impacts associated with the proposed transmission line.

The Applicant intends to submit a Notice of Intent for coverage under the Ohio EPA's NPDES general permit for stormwater discharges associated with construction activities. The Applicant would submit a SWPPP to the Ohio EPA as part of the NPDES permit. This SWPPP would include a detailed construction access plan and indicate BMP for construction activities that minimize erosion-related impacts to streams and wetlands. The Applicant shall clearly identify wetlands, streams, and other environmentally sensitive areas before commencement of clearing or construction. No construction or access would be permitted in these areas unless clearly specified in the construction plans and specifications, thus minimizing any clearing-related disturbance to surface water bodies. With these provisions, construction of this facility would comply with the requirements set forth under R.C. Chapter 6111.

#### **Solid Waste**

Debris generated during construction would consist of items such as conductor scrap, construction material packaging (including cartons, boxes, insulator crates, conductor reels, and wrapping), and used stormwater erosion control materials. Materials with reuse or salvage value would include clearance poles and conductor reels. All construction-related debris would be disposed of in accordance with state and federal requirements.

Any contaminated soils discovered or generated during construction would be handled in accordance with applicable regulations. The Applicant intends to 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 set forth in R.C. Chapter 3734.

#### **Aviation**

The height of the tallest aboveground structure of the transmission line and construction equipment would be approximately 100 feet. The closest airports are the Baisden, Pike County, James

Rhodes, Vinton County, Greater Portsmouth Regional, and Ohio University airports, which are all between 1.5 and 20 miles from the proposed transmission line. The closest heliport is the Southern Ohio Regional Medical Center which is approximately 25 miles away. The Applicant states it does not anticipate that there will be any impact to airports, landing strips, or heliports. Upon completion of the final design, the Applicant states that it will consult with the FAA and the ODOT Office of Aviation to determine if a Notice of Construction or Alteration or other permitting is required.

In accordance with R.C. 4906.10(A)(5), Staff contacted the ODOT Office of Aviation during the review of this application in order to coordinate review of potential impacts of the facility on local airports. ODOT Office of Aviation does not anticipate any adverse impacts to the airport airspace of any public use airport or heliport.

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

### **Recommended Findings**

Staff recommends that the Board find that the proposed facility complies with the requirements specified in R.C. 4906.10(A)(5), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.



## **Considerations for R.C. 4906.10(A)(6)**

### **PUBLIC INTEREST, CONVENIENCE, AND NECESSITY**

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

#### **Public Interaction**

The Applicant hosted a public informational meeting for this project. Attendees were provided the opportunity to speak with representatives of the Applicant about the proposed project, view proposed route maps, and provide feedback regarding potential routes.

The Applicant served copies of the complete application on officials representing Jackson and Ross counties; the cities of Chillicothe and Jackson; Coal, Jackson, and Liberty townships in Jackson County and Jefferson Township in Ross County; and the Jackson and Ross county soil and water conservation districts. The Applicant also sent hard copies of the application to the Ross County Public Richmond Dale Branch and the Jackson City Library. Copies of the complete application are available for public inspection at the offices of the PUCO and online at <http://opsb.ohio.gov>, and are available upon request from the Applicant.

The Applicant maintains a website at <http://aepttransmission.com/ohio/coaltownship/index.php> that provides details about the project. Members of the public may contact the Applicant's project outreach specialist with questions or concerns during any phase of the project. The Applicant has committed to log all comments provided through its public interaction program and to share them with Staff. The Applicant has also committed to notify affected landowners or tenants by mail or telephone, or in person, at least seven days prior to the start of any construction activities. Staff recommends conditions requiring the Applicant to develop and provide to Staff a public information program that informs affected property owners and tenants of the nature of the project and a complaint resolution procedure to address potential public grievances resulting from project construction and operation.

The Board will conduct a local public hearing and an adjudicatory hearing for this proceeding. The local public hearing, at which the Board will accept written or oral testimony from any person, is scheduled for October 10, 2018, at 6:00 p.m., at the Northview Elementary School Gymnasium, located at 11507 Chillicothe Pike, Jackson, OH 45640. The adjudicatory hearing is scheduled for October 24, 2018, at 10:00 a.m., in Hearing Room 11-C at the offices of the Public Utilities Commission of Ohio, 180 E. Broad St., Columbus, OH 43215-3793.

As of the filing of this Staff Report, the Board has not received any public comments or motions to intervene in this case.

#### **Electromagnetic Fields**

Electric 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. There have been concerns, however, that EMF may have impacts on human health.

Because these concerns exist, the Applicant has computed the EMF associated with the new circuits.<sup>23</sup> The fields were computed based on the maximum loadings of the lines, which would lead to the highest EMF values that might exist along the proposed transmission line. Daily current load levels normally operate below the maximum load conditions, thereby further reducing nominal EMF values.

The electric field is a function of the voltage, the line configuration, and the distance from the transmission lines. 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 for this transmission line would be 0.72 kV/meter or less. Electric fields are easily shielded by physical structures such as the walls of a house, foliage, etc.

Magnetic fields are a function of the electric current, the configuration of the conductors, and the distance from the transmission lines. The magnetic fields for this project are estimated at the right-of-way edge to be less than 99.76 milligauss. The magnetic field output is comparable to that of common household appliances. A list of typical magnetic fields from household items, as well as the maximum magnetic field scenarios for this facility, is in the application.<sup>24</sup> The Applicant states that the transmission facilities will be designed according to the requirements of the NESC.

### **Recommended Findings**

Staff recommends that the Board find that the proposed facility would serve the public interest, convenience, and necessity, and therefore complies with the requirements specified in R.C. 4906.10(A)(6), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

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23. *Application* at Table 7-2.

24. *Ibid.*, Table 7-3.



## **Considerations for R.C. 4906.10(A)(7)**

### **AGRICULTURAL DISTRICTS**

Pursuant to R.C. 4906.10(A)(7), the Board must determine the facility's impact on the agricultural viability of any land in an existing agricultural district within the Preferred and Alternate routes of the proposed utility facility. The agricultural district program was established under R.C. Chapter 929. Agricultural district land is exempt from sewer, water, and electrical service tax assessments.

Agricultural land can be classified as an agricultural district through an application and approval process that is administered through local county auditors' offices. Eligible land must be devoted exclusively to agricultural production or be qualified for compensation under a land conservation program for the preceding three calendar years. Furthermore, eligible land must be at least 10 acres or produce a minimum average gross annual income of \$2,500.

Neither the Preferred nor Alternate routes cross land presently used for row crop production. Approximately 14 acres of open land/pasture is crossed by both the Preferred and Alternate Routes. According to the Applicant's research of county records, no part of the Preferred or Alternate Route crosses land with the agricultural district designation.

The Applicant would take measures to minimize impacts to field operations, irrigation, and field drainage systems associated with agricultural lands that would occur as a result of construction, operation, and maintenance of the proposed project. Construction would interrupt field operations for a portion of the growing season or dormant season. The Applicant stated that it would coordinate with the landowners to mitigate any impact to irrigation systems. Damage to field drainage systems is not anticipated by the Applicant. However, the Applicant stated it will resolve any disturbances. Staff recommends that repair to field drainage systems that are damaged during construction be required as a condition of the certificate. Existing infrastructure in the vicinity of the proposed project could be used for construction access, thus minimizing impacts of agricultural land. Structures would be located, where feasible, and excavated top soil would be segregated and stockpiled. Top soil would also be restored to original conditions unless otherwise specified by the affected land owners.

### **Recommended Findings**

Staff recommends that the Board find that the impact of the proposed facility on the viability of existing agricultural land in an agricultural district has been determined, and therefore complies with the requirements specified in R.C. 4906.10(A)(7), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

### **Considerations for R.C. 4906.10(A)(8)**

#### **WATER CONSERVATION PRACTICE**

Pursuant to R.C. 4906.10(A)(8), the proposed facility must incorporate maximum feasible water conservation practices, considering available technology and the nature and economics of the various alternatives.

The facility may require the use of minimal amounts of water for dust control and for concrete foundations during construction. However, the transmission line would not require the use of any water during operation. Therefore, the facility would comply with water conservation practice as specified under R.C. 4906.10(A)(8).

#### **Recommended Findings**

Staff recommends that the Board find that the proposed facility would incorporate maximum feasible water conservation practices, and therefore complies with the requirements specified in R.C. 4906.10(A)(8).



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

Following a review of the application filed by AEP Ohio Transco, and the record compiled to date in this proceeding, Staff recommends that a number of conditions become part of any certificate issued for the proposed facility. These recommended conditions may be modified as a result of public or other input received subsequent to the issuance of this report. At this time, Staff recommends the following conditions:

##### **GENERAL CONDITIONS**

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

- (1) The facility shall be installed on the Applicant's Preferred Route, utilizing the equipment, construction practices, and mitigation measures as presented in the application filed on March 29, 2018, and further clarified by recommendations in this *Staff Report of Investigation*.
- (2) 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/or 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 to ensure compliance with this condition. The Applicant may conduct separate preconstruction conferences for each stage of construction.
- (3) At least 30 days before the preconstruction conference, the Applicant shall submit to Staff one set of detailed engineering drawings of the final project design, including the facility, 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 design 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.
- (4) 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.
- (5) 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.
- (6) 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.



- (7) Prior to the commencement of construction activities in areas that require permits or authorizations by federal or state laws and regulations, the Applicant shall obtain and comply with such permits or authorizations, including any permits necessary for aviation clearance. The Applicant shall provide copies of permits and authorizations, including all supporting documentation, to Staff within seven days of issuance or receipt by the Applicant. The Applicant shall provide a schedule of construction activities and acquisition of corresponding permits for each activity at the preconstruction conference.

### **SOCIOECONOMIC CONDITIONS**

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

- (8) The Applicant shall repair or replace agricultural field tiles damaged from this project, and the Applicant shall segregate excavated topsoil in agricultural fields and restore in its proper position upon backfilling.
- (9) At least 30 days prior to the preconstruction conference, the Applicant shall provide to Staff a complaint resolution procedure to address potential public grievances resulting from project construction and operation. The resolution procedure must provide that the Applicant will work to mitigate or resolve any issues with those who submit either a formal or informal complaint and that the Applicant will immediately forward all complaints to Staff.
- (10) At least 30 days prior to the preconstruction conference, the Applicant shall provide to Staff a copy of its public information program that informs affected property owners and tenants of the nature of the project, specific contact information of Applicant personnel who are familiar with the project, the proposed timeframe for project construction, and a schedule for restoration activities. The Applicant shall give notification to property owners and tenants at least 7 days prior to work on the affected property.

### **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) Prior to construction, the Applicant shall provide a copy of any floodplain permit required for construction of this project, or a copy of correspondence with the floodplain administrator showing that no permit is required.
- (12) The Applicant shall adhere to seasonal cutting dates of October 1 through March 31 for removal of any trees greater than or equal to three inches in diameter, unless coordination efforts with the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) allow a different course of action.
- (13) The Applicant shall contact Staff, the 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 such plants or animals shall be halted until an appropriate course of action has been agreed upon by the Applicant, Staff, and the 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 provide a construction access plan for review prior to the preconstruction conference. The plan shall consider the location of streams, wetlands, wooded areas, and sensitive plant species, as identified by the ODNR Division of Wildlife (DOW), and explain how impacts to all sensitive resources will be avoided or minimized during construction, operation, and maintenance. 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.
- (15) Prior to construction, the Applicant shall retain an ODNR DOW approved herpetologist to determine if suitable habitat for the timber rattlesnake (*Crotalus horridus horridus*) is present along the project route. If suitable habitat is found to be present then a presence/absence survey shall be conducted, or an avoidance/minimization plan be shall developed by an ODNR DOW approved herpetologist.
- (16) Prior to construction, the Applicant shall conduct a presence/absence survey for the running buffalo clover (*Trifolium stoloniferum*) between May and June when the plant is in flower and coordinate the findings with the USFWS. The USFWS shall determine if an avoidance/minimization plan be developed in order to minimize impacts to this species.

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

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

- (17) 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.
- (18) General construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m., or until dusk when sunset occurs after 7:00 p.m. Impact pile driving, hoe ram, and blasting operations, if required, shall be limited to the hours between 10:00 a.m. to 5:00 p.m., Monday through Friday. Construction activities that do not involve noise increases above ambient levels at sensitive receptors are permitted outside of daylight hours when necessary. The Applicant shall notify property owners or affected tenants within the meaning of Ohio Adm.Code 4906-5-08(C)(3), of upcoming construction activities including potential for nighttime construction activities.

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

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

- (19) The Applicant shall remove all construction staging area and access road materials after completion of construction activities, as weather permits, unless otherwise directed by the landowner. Impacted areas shall be restored to preconstruction conditions in compliance with



the Ohio Environmental Protection Agency (Ohio EPA) General National Pollutant Discharge Elimination System (NPDES) permit(s) obtained for the project and the approved Stormwater Pollution Prevention Plan (SWPPP) created for this project.

- (20) The Applicant shall not dispose construction material, during or following construction of the facility by depositing such material on agricultural land. All construction debris and all contaminated soil shall be promptly removed and properly disposed of in accordance with Ohio EPA regulations.
- (21) At least seven days before the preconstruction conference, the Applicant shall submit to Staff, for review, a copy of all NPDES permits including its approved SWPPP, approved Spill Prevention, Control, and Countermeasure procedures, and its erosion and sediment control plan. The Applicant must address any erosion related issues through proper design and adherence to Ohio EPA best management practices related to erosion and sedimentation control.



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