

BEFORE THE POWER SITING BOARD OF THE STATE OF OHIO

**In the Matter of the Letter of Notification Application)
of AEP Ohio Transmission Company for a Certificate)
of Environmental Compatibility and Public Need for) Case No. 20-0389-EL-BLN
the Bethel-Sawmill 138 kV Transmission Line Rebuild)
Project)**

Members of the Board:

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

To the Honorable Power Siting Board:

Please review the attached Staff Report of Investigation, which has been filed in accordance with Ohio Power Siting Board (Board) rules. The accelerated certificate application in this case is subject to an automatic approval process as required by Ohio Revised Code (R.C.) 4906.03 and Ohio Administrative Code (Ohio Adm.Code) 4906-6.

On March 17, 2020, an administrative law judge tolled the time period for automatic approval of this project and other accelerated projects during the state of emergency declared in Executive Order 2020-01D. (See case number 20-601-GE-UNC, the "Tolling Directive.") On May 20, 2020, the administrative law judge modified the Tolling Directive, finding that the tolling provisions should be terminated effective June 1, 2020, thereby again subjecting this matter to an automatic approval, unless suspended.

Staff recommends the application for automatic approval June 19, 2020, unless suspended by the Board, an administrative law judge, or the chairperson or executive director of the Board for good cause shown. If suspended, the Board must render a decision on the application within 90 days from the date of suspension.

Please present any concerns you or your designee may have with this case to my office at least four business days prior to June 19, 2020, which is the recommended automatic approval date.

Sincerely,



Theresa White
Executive Director
Ohio Power Siting Board

OPSB STAFF REPORT OF INVESTIGATION

Case Number: 20-0389-EL-BLN
Project Name: Bethel-Sawmill 138 kV Transmission Line Rebuild Project
Project Location: Franklin County
Applicant: AEP Ohio Transmission Company
Application Filing Date: March 20, 2020; supplementation April 2 and May 1, 2020
Filing Type: Letter of Notification
Inspection Dates: May 29, 2020
Report Date: June 12, 2020
Recommended Automatic Approval Date: June 19, 2020
Applicant's Waiver Requests: None
Staff Assigned: J. Pawley, A. Conway, M. Mansour, G. Zeto

Summary of Staff Recommendations (see discussion below):

Application: ☐ Approval ☐ Disapproval ☒ Approval with Conditions
Waiver: ☐ Approval ☐ Disapproval ☒ Not Applicable

Project Description

AEP Ohio Transmission Company (Applicant or AEP Ohio Transco) proposes to rebuild and upgrade approximately 2.7 miles of 138 kilovolt (kV) transmission line between the existing Bethel Substation and the existing Brookside Substation, located in the cities of Columbus and Dublin. A total of 50 steel pole structures would replace the existing lattice towers. The new structures include 45 double circuit, steel monopole structures and 5 double circuit, two-pole, steel dead-end structures. The existing lattice towers, which have been in place over 60 years, are approximately 100 feet tall, and the new steel monopole structures would be approximately 85 feet tall.

The proposed project would be located entirely on existing right-of-way owned by Ohio Power Company. All easements necessary for this project have been obtained.

The Applicant plans to commence construction of the project as early as the third quarter 2020 and place the facility in service by May 2021. The capital cost of the proposed transmission line rebuild project is estimated to be \$19,200,000, and that cost would be borne by the Applicant. The Applicant filed supplemental information regarding three minor centerline adjustments for this project on May 1, 2020.

Need

Upgrades to the transmission system are part of PJM Interconnection, LLC's (PJM) Regional Transmission Expansion Planning process.¹ Staff verified the need for this project through consultation of PJM's baseline projects. Baseline projects include projects planned for (1) reliability, (2) operational performance, (3) FERC Form No. 715 criteria, (4) economic planning, and (5) public policy planning (State Agreement Approach).²

This is a baseline reliability project driven by a planning criterion violation, which consisted of thermal overloads of up to 102 percent on the Bethel-Brookside circuit under single and double contingencies. While this violation was initially thought to have been caused by a load ramp schedule provided by a new customer, further investigation revealed that the planning criterion violation occurred as a result of de-rating of the transmission line.³ De-rating of the line was necessary to address reduced vertical clearances on the Bethel-Brookside transmission line caused by existing encroachments near the edge of the right-of-way (e.g., sheds, trees, etc.) and to address related concerns about conductor blowout. Additionally, the existing Bethel-Sawmill 138 kV transmission line was found to have 35 age-related (the line was constructed in 1956-1957) A-type open conditions associated with conductors, transmission tower structures, and nearby trees.

Alternatives considered by the Applicant were all deemed infeasible and eliminated from further review.⁴ The Applicant's analyses concluded that construction of the project on the existing right-of-way was the best and most reasonable option as the route is short, efficient, direct, and minimizes viewshed impacts. It also provides for distribution under-build onto the new transmission structures, creating a cleaner, and more simplified right-of-way where all of the electric utilities would be located on one set of poles rather than in parallel alignments.

PJM Interconnection, LLC has identified this proposed transmission project as a baseline project, filed as number b3109.⁵ The project was also included in the Applicant's 2019 Long Term Forecast Report to the Public Utilities Commission of Ohio, filed in Case No. 19-1501-EL-FOR.⁶

1. PJM Interconnection, LLC is the regional transmission organization charged with planning for upgrades to the regional transmission system in Ohio.

2. PJM Manual 14B: PJM Region Transmission Planning Process.

3. A sag study was performed on the Bethel-Sawmill 138 kV line. The results of the study identified existing structures near the edge of the right-of-way that resulted in derating of the line.

4. Alternatives considered include: (1) aboveground and underground construction along Sawmill Road and Riverside Drive in lieu of the existing right-of-way (in addition to the high cost, this would involve numerous potential conflicts with the OSU airport, traffic management, development, and existing underground electric, gas, water and sewer infrastructure), and (2) an underground option within the existing right-of-way (presence of a large diameter sewer main within the existing right-of-way made available space insufficient for an underground alternative along the existing right-of-way).

5. PJM Interconnection, "Transmission Construction Status," accessed May 26, 2020, <https://www.pjm.com/planning/rtep-upgrades-status/construct-status.aspx>. Please note that baseline project b3109s also includes rebuilding the Brookside-Sawmill transmission line. The need and solution for this project were presented to the Western Subregional Regional Transmission Expansion Plan (SRRTEP) Committee during the November 2018 and February 2019 meetings.

6. AEP Ohio Transmission Company, Inc., "Long-Term Forecast Report to the Public Utilities Commission of Ohio," Public Utilities Commission of Ohio Case No. 19-1501-EL-FOR, April 15, 2019.

Nature of Impacts

Land Use

The existing 138 kV transmission line, which the re-built line would follow, runs in a north-south direction west of Sawmill Road. Several residential areas abut or are crossed by the existing right-of-way. Some tree clearing in residential areas would be required to access, install, and maintain the new line. No agricultural land nor agricultural districts are crossed by the project. The existing line is located in a mixture of commercial and residential properties.

Since the existing line being replaced dates back over 60 years ago, development has occurred up to the 50-foot right-of-way. The Applicant would need to work with property owners along the route to move physical objects located within the existing right-of-way, including but not limited to trees, sheds, and fences in order to remove the existing line and install the new line. The Applicant would also need to coordinate timing of access and construction with property owners along the route.

Cultural Resources

The Applicant's cultural resources consultant performed a literature review and Phase I cultural resource management investigation (archaeology and history/architecture) for the project. The consultant determined that the project would not involve nor impact any significant cultural resources or landmarks, and that no further cultural resource management work was considered to be necessary. The findings were submitted to the Ohio Historic Preservation Office (OHPO). The OHPO responded to the consultant in concurrence that this project would not affect historic properties.

Aviation

The Federal Aviation Administration (FAA) and the Ohio Department of Transportation Office of Aviation administer regulatory programs to provide airport airspace analysis. These programs also evaluate and authorize certain obstructions near airports. The Applicant submitted a request for review by the FAA (FAA Form 7460-1) of the electric transmission support structures. The anticipated height of the electric transmission support structures is expected to be 85 feet tall. The FAA performed an aeronautical study (ASN numbers 2020-AGL-1596-OE through 2020-AGL-1646-OE) for these structures and issued determination of no hazard letters for each structure. Staff has reviewed the FAA determinations of no hazard letters.

The Applicant also indicated that it would utilize cranes during the construction of the proposed facility. The analysis and letters from the FAA authorize temporary construction equipment such as cranes to be used during actual construction of the transmission support structures. However, the FAA determination of no hazard letters caveat that if the crane height exceeds the overall heights in the aeronautical study, a separate temporary construction authorization may need to be obtained from the FAA. Staff recommends that the Applicant file in this docket a copy of the FAA determination of no hazard letters and/or the FAA temporary construction permit, if applicable, for the electric transmission towers and any construction cranes. Staff also recommends that the Applicant notify the closest airport prior to construction and provide details of the height, operating conditions, and duration of the crane work.

The Ohio State University Airport (OSU Airport) is the closest airport. It is located approximately 1,800 feet east of the proposed transmission line route. The Applicant coordinated with the OSU

Airport in August 2018. The OSU Airport indicated no issues with the proposed project with respect to their current or future expansion plans at the airport. The OSU Airport recommended that the Applicant coordinate with the FAA, which it did by filing the Form 7460-1 with the FAA. Staff recommends continued coordination with the OSU Airport during construction of the transmission line, to ensure that any necessary notification can be issued by the airport during construction regarding the use of any construction cranes.

The Applicant also stated that proposed transmission structures would not be installed via helicopter.

Staff contacted the Ohio Department of Transportation (ODOT) Office of Aviation during the review of this application, in accordance with R.C. 4906.10(A)(5) and 4561.341, to consult and determine potential impacts of the proposed transmission line on local airports. The ODOT Office of Aviation sent staff a determination letter pursuant to R.C. 4561.341 on May 28, 2020. In that letter, the ODOT Office of Aviation stated that “The proposed 51 utility pole structures will not exceed obstruction standards established by 14 CFR Part 77. In addition, none of the proposed utility pole structures will impact the clear zone, horizontal, conical, primary, approach and transitional surfaces of any airport that has been issued a commercial operating certificate.”⁷

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.⁸ 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 0.76 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 154.51 milligauss. The Applicant states that the transmission facilities will be installed according to the requirements of the National Electric Safety Code.

Surface Waters

The right-of-way contains one perennial stream. No poles would be located in streams and no in-water work is planned. No wetlands are present within the right-of-way. Construction access

7. While the ODOT letter submitted to staff indicated 51 utility poles, staff confirmed with the Applicant that 50 structures will be replaced.

8. Supplemental information for the Bethel-Sawmill 138 kV Transmission Line Project (Bethel-Brookside), filed April 2, 2020.

would not require wetland or stream crossings. Erosion control measures including silt fencing would be used where appropriate to minimize runoff impacts to stream channels.

The Applicant stated that the Storm Water Pollution Prevention Plan and Notice of Intent for the transmission line would be submitted in support of the National Pollutant Discharge Elimination System General Permit. Staff does not anticipate issues with the procurement of this permit. The route would not cross a 100-year floodplain area and a floodplain development permit would not be required.

Threatened and Endangered Species

Some tree clearing would be required for this project. 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 would be impacted by the project. In order to avoid impacts to the Indiana bat and northern long-eared bat, Staff recommends that the Applicant adhere to seasonal tree cutting dates of October 1 through March 31 for all trees three inches or greater in diameter, unless coordination efforts with the Ohio Department of Natural Resources and the U.S. Fish and Wildlife Service allows a different course of action. The proposed project would not impact any bat hibernacula.

Impacts to other state and federal listed species are not anticipated, due to no proposed in-water work and a lack of suitable habitats.

Conclusion

Staff's review of the application as supplemented included consideration of the requirements listed in R.C. 4906.10. Based on Staff's review, the application meets the necessary criteria for granting a certificate. Staff recommends automatic approval of this application provided that the following conditions are satisfied. Staff notes that its recommendation for approval of this application should not be construed as a recommendation for approval of cost recovery in any ratemaking proceeding.

Conditions:

- (1) The certificate authority provided in this case shall not exempt the facility from any other applicable and lawful local, state, or federal rules or regulations nor be used to affect the exercise of discretion of any other local, state, or federal permitting or licensing authority with regard to areas subject to their supervision or control.
- (2) 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. The Applicant shall provide copies of permits and authorizations, including all supporting documentation, on the case docket prior to commencement of construction.
- (3) The Applicant shall adhere to seasonal cutting dates of October 1 through March 31 for removal of any trees greater than three inches in diameter, unless coordination with the Ohio Department of Natural Resources and the U.S. Fish and Wildlife Service allows a different course of action.
- (4) The Applicant shall hold a preconstruction meeting to discuss plans for construction, access and tree clearing prior to the commencement of construction.

- (5) The Applicant shall meet all recommended and prescribed Federal Aviation Administration (FAA) and Ohio Department of Transportation (ODOT) Office of Aviation requirements to construct an object that may affect navigable airspace. This includes submitting coordinates and heights for all structures that penetrate the notification slope of any public use airport or that exceed 199 feet above ground level for ODOT Office of Aviation and FAA review prior to construction, and the non-penetration of any Federal FAA Part 77 surfaces.
- (6) At least 30 days prior to the preconstruction conference, the Applicant shall file in this docket a copy of the FAA Determination of No Hazard letters and/or the FAA temporary construction permit, where applicable, for the electric transmission towers and any construction cranes.
- (7) Within 30 days of construction completion, the Applicant shall file the as-built electrical transmission tower coordinates and heights with the Ohio Power Siting Board.
- (8) The Applicant shall coordinate with the Ohio State University Airport to ensure that any necessary notification can be issued by the airport during construction regarding the use of any construction cranes.

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Case No(s). 20-0389-EL-BLN

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