



Legal Department

American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373
AEP.com

August 12, 2016

Chairman Asim Z. Haque
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

Erin C. Miller
Contract Counsel –
(614) 716-2942 (P)
(614) 716-2014 (F)
ecmiller1@aep.com

August 12, 2016

**Re: Case No. 16-1114-EL-BLN Request for Expedited Treatment
In the Matter of the Letter of Notification for the
Yager-Leesville 138kV Transmission Line Project**

Dear Chairman Haque,

Attached please find a copy of the Letter of Notification for the Yager-Leesville 138kV Transmission Line Project by AEP Ohio Transmission Company, Inc. (“AEP Ohio Transco”) This filing and notice is in accordance with O.A.C. 4906-6-05.

A copy of this filing will also be submitted to the executive director or the executive director’s designee and to the Board Staff via electronic message. AEP Ohio Transco will also submit a check in the amount of \$2,000 to the Treasurer, State of Ohio, for Fund 5610 for the expedited review fee.

If you have any questions, please do not hesitate to contact me.

Respectfully Submitted,

/s/ Erin C. Miller
Erin C. Miller
Contract Counsel
AEP Ohio Transmission Company, Inc.

cc: Jon Pawley, OPSB Staff
Werner Margard, Counsel OPSB Staff



LETTER OF NOTIFICATION FOR THE

**YAGER-LEESVILLE 138 KV
TRANSMISSION LINE PROJECT**

PUCO Case No. 16-1114-EL-BLN

Submitted pursuant to Ohio Administrative Code Section 4906-6-05

AEP Ohio Transmission Company, Inc.

AUGUST 2016

LETTER OF NOTIFICATION FOR YAGER-LEESVILLE 138 KV TRANSMISSION LINE PROJECT

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LETTER OF NOTIFICATION Yager-Leesville Transmission Line Project

American Electric Power Ohio Transmission Company, Inc. ("AEP Ohio Transco") provides this Letter of Notification ("LON") to the Ohio Power Siting Board ("OPSB") in accordance with the accelerated requirements of Ohio Administrative Code ("O.A.C.") Chapter 4906-6-05.

4906-6-05(B) GENERAL INFORMATION

B(1) Project Description

The applicant shall provide the name of the project and applicant's reference number, names and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a letter of notification or construction notice application.

AEP Ohio Transco proposes to build the single-circuit Yager-Leesville 138 kV transmission line ("Project") between Yager Station in Harrison County, Ohio and Leesville Station in Carroll County, Ohio. This is a customer-driven project that was identified in AEP Ohio Transco's 2015 and 2016 Long-Term Forecast Report (case number 15-1501-EL-FOR and 16-1501-EL-FOR, respectively). Figure 1 illustrates the location of the 4.1-mile long project in relation to the surrounding vicinity.

The Project meets the requirements for a Letter of Notification ("LON") because it is within the types of projects defined by item (1)(d)(ii) of 4906-1-01 Appendix A, "Application Requirement Matrix for Electric Power Transmission Lines." This item states:

(1) New construction, extension, or relocation of single or multiple circuit electric power transmission line(s), or upgrading existing transmission or distribution line(s) for operation at a higher transmission voltage, as follows:

(d) Line(s) primarily needed to attract or meet the requirements of a specific customer or customers, as follows:

(ii) Any portion of the line is on property owned by someone other than the specific customer or applicant.

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B(2) Statement of Need

If the proposed project is an electric power transmission line or gas pipeline, the applicant shall provide a statement explaining the need for the proposed facility.

The purpose of this Project is to meet the needs of a specific customer, Utica East Ohio Midstream, who has requested an increase in load capacity from 20 MW to 63 MW at its existing Leesville Plant along Azalea Road, which is west of the Village of Leesville located in Carroll County, Ohio. An existing 69 kV circuit currently serves the Leesville Plant, which is owned by Ohio Power Company, a wholly-owned subsidiary of American Electric Power Company, Inc. and an affiliate of AEP Ohio Transco. The 69 kV system was built decades ago and does not have the capacity to handle the needs of the significant load increase. Therefore, the customer has been instructed to place their plant expansion plans on hold until a new 138kV network loop can be built and connected to their site. This 138 kV project will allow AEP Ohio Transco to ensure reliable service to accommodate the forecasted load increase of the customer. The first phase of the Project will involve rebuilding the 138kV line from Yager to Azalea Road. This will result in Azalea and Leesville substations being served radially for a long distance. Due to the large magnitude of customer load served and critical nature of their processing operations, radial service goes against AEP Ohio Transco's transmission planning guidelines. Therefore, the second phase of the Project will involve constructing a 138 kV loop by building the 138 kv line from Yager to Leesville. This will result in redundant, two-way service to both the Yager and Leesville substations, as well as any future customers who should require transmission service in the area, all while adhering to AEP Ohio Transco's planning guidelines. Note that the line section in between Azalea and Leesville has already been built to 138 kV standards, so no further modifications are necessary.

B(3) Project Location

The applicant shall provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the project area.

Figure 1 shows the general location of the Project in relation to existing and proposed lines and stations in the area. As shown, the 138kV line route spans from the Yager 138-69 kV substation (which is currently under construction) to the Leesville distribution substation.

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Leesville substation is being upgraded to a 138-12kV distribution substation through some equipment replacements.

B(4) Alternatives Considered

The applicant shall describe the alternatives considered and reasons why the proposed location or route is best suited for the proposed facility. The discussion shall include, but not be limited to, impacts associated with socioeconomic, ecological, construction, or engineering aspects of the project.

AEP Ohio Transco was contacted by Utica East Ohio Midstream regarding their specific electrical expansion needs. AEP Ohio Transco worked with Utica East Ohio Midstream to identify a solution for their specific projected electrical load needs. Inserting a 138 kV station adjacent to the three existing FirstEnergy 138 kV circuits and extending a 138 kV line north to Azalea Station was identified as the best solution for phase one of the Project and area plan. As part of phase two of the Project, AEP Ohio Transco determined that a 138kV line would be built from Yager to Leesville, providing networked (two-way) transmission service to this large industrial customer, as well as AEP Ohio's distribution customers served from the Leesville substation. AEP Ohio Transco explored available property options near the three FirstEnergy 138 kV lines in the Project area. AEP Ohio Transco identified the selected Yager Station site as having developable land closest to the FirstEnergy circuits, which was also in close proximity to AEP's existing 69kV circuit. An engineering & siting study determined the specified Yager to Leesville line route as being optimal. AEP Ohio Transco purchased the Yager Station site in mid-2015. Hilly terrain limited available options between the two end points of the proposed 138 kV line. Ultimately, AEP Ohio Transco identified the route submitted in this LON as the best solution based on review of likely suitable structure locations and familiarity with property owners in the project vicinity.

Other than the new Yager Station, AEP Ohio Transco's nearest 138kV sources to the Azalea/Leesville area would have been Carrollton Station (11 miles direct to the northeast) or West New Philadelphia Station (15 miles direct to the west). There would have been considerably more siting difficulties and project expenses had AEP Ohio Transco sought to build from one of these remote stations to connect to the Leesville Station. Costs would have been at least two-to-three times higher for the project based on the line mileages involved. A longer line to Carrollton Station would have involved construction in and around Leesville Lake and its associated tributaries in addition to work around the City of

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Carrollton. A longer line to West New Philadelphia would have involved construction around the Tuscarawas River and various streams, work around the City of New Philadelphia and Schoenbrunn Village, and a crossing of Interstate 77. These options would have taken considerably longer to permit and construct, which would have negatively impacted the customer.

In addition to these considerations, 69 kV service was not a viable alternative to serve the Azalea Station due to high growth forecasts in the Project area. The projected high-demand area would quickly use the available 69 kV system capacity, resulting in a planning criteria thermal overload and/or voltage problems. The 138 kV system voltage provides the ample load-serving capacity, motor-starting flexibility (short circuit strength), and reliability for such large industrial customers as Utica East Ohio Midstream.

B(5) Public Information Program

The applicant shall describe its public information program to inform affected property owners and tenants of the nature of the project and the proposed timeframe for project construction and restoration activities.

AEP Ohio Transco informs affected property owners and tenants about the project through several different mediums. Within seven days of filing this LON, AEP Ohio Transco will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements under O.A.C. Section 4906-6-08(A)(1-6). Furthermore, AEP Ohio Transco mailed a letter, via first class mail, to affected landowners, tenants, contiguous owners and any other landowner AEP Ohio Transco may approach for an easement necessary for the construction, operation, or maintenance of the facility. The letter complies with all the requirements of O.A.C. Section 4906-6-08(B). AEP Ohio Transco maintains a website, <http://aeptransmission.com/ohio/>, which provides the public access to an electronic copy of this LON and the public notice for this LON. A paper copy of the LON will be served to the public library in each political subdivision for this project. AEP Ohio Transco retains right-of-way land agents knowledgeable about project timelines, construction and restoration activities and who convey this information to affected owners and tenants.

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B(6) Construction Schedule

The applicant shall provide an anticipated construction schedule and proposed in-service date of the project.

Construction will begin in approximately October 2016, with an approximate in-service date of May 2017.

B(7) Area Map

The applicant shall provide a map of at least 1:24,000 scale clearly depicting the facility with clearly marked streets, roads, and highways, and an aerial image.

Figures 1 and 2 provide the proposed Project area on a map of 1:24,000-scale. Figure 1 provides the proposed Project centerline on the United States Geological Survey (USGS) 7.5-minute topographic map of the Bowerston, Ohio quadrangle. Figure 2 shows the project area on recent aerial photography, as provided by Bing Maps. To visit the Project location from the OPSB Office, take Interstate 70-East for 101 miles and take the Interstate 77-North exit (Exit 180B). Follow the interstate for approximately twenty-one miles before taking Exit 65 for US Route 36 towards Newcomerstown/Port Washington. After approximately thirty miles, continue onto US Route 250 in Uhrichsville for approximately six miles. Turn left onto Ohio Route 151 East. Yager Station will be located on the left after 1.5 miles. The majority of the route is generally south to north through forest and agricultural fields between OH-151 and OH-212. Yager Station is approximately 5 miles east of Dennison Station in Uhrichsville, Ohio. Leesville Station is approximately 0.3-mile southeast of Leesville, Ohio.

B(8) Property Agreements

The applicant shall provide a list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the facility and a list of the additional properties for which such agreements have not been obtained.

Easements have been secured for the highlighted parcels below. No easements, options, or land use agreements have been obtained to date for the Project for the remainder of the parcels listed; however, AEP Ohio Transco's right-of-way Agents are working diligently with

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affected property owners to secure the necessary agreements in order to proceed with construction.

PARCELS AND PROPERTY OWNERS		
Parcel Number	Owner	Address
Harrison County		
15-0000922.004	Todd A & Josephine M Armstrong	90415 Yager Rd, Dennison, Oh 44621
15-0000080.000	Daniel B. Czekansky	91158 Yager Rd, Dennison, Oh 44621
15-0000922.003	Matthew C Edwards	91175 Yager Rd, Dennison, Oh 44621
15-0000356.000	Matthew C Edwards	91175 Yager Rd, Dennison, Oh 44621
15-0000136.000	Moreland Family Trust	91405 Yager Rd, Dennison, Oh 44621
15-0000777.000	Moreland Family Trust	91405 Yager Rd, Dennison, Oh 44621
15-0000774.000	Leonard and Sharon Wenger, et.al	38 Kurzen Rd S., Dalton, Oh 44618
15-0000963.000	Leonard and Sharon Wenger, et.al	38 Kurzen Rd S., Dalton, Oh 44618
15-0000964.000	Florence M. Diodati	31425 Tunnel Hill Rd, Dennison, Oh 44621
15-0000921.002	James R. Rea	1358 W. Waterloo Rd, Akron, Oh 44314
15-0000921.006	James R. Rea	1358 W. Waterloo Rd, Akron, Oh 44314
15-0000921.010	James R. Rea	1358 W. Waterloo Rd, Akron, Oh 44314
15-0000921.003	Myron L. Shetler	912 East Front St, Dover, Oh 44622
15-0000070.000	Nicholas W. and Nicole M. Turner	31500 Caldwell Rd, Bowerston, Oh 44695
15-0000260.001	Melvin A. Yoder Et Al - Leon Yoder	3622 County Road 168, Millersburg, Oh 44654
Carroll County		
25-0000808.000	Melvin A. Yoder Et Al - Leon Yoder	3622 County Road 168, Millersburg, Oh 44654
25-0000701.000	Barry I. and Carol A. Merrick	898 Village Brook Way, Columbus, Oh 43235
25-0000194.002	Charles E. and Robin Ward	9580 Cordova Rd SW, Bowerston, Oh 44695
25-0000194.001	Charles and Harriet Erba	9576 Cordova Rd SW, Bowerston, Oh 44695
25-0000194.000	Scott Vitagliano	9570 Cordova Rd SW, Bowerston, Oh 44695
25-0000262.000	Victoria J. Yoder	17068 Dover Rd, Kidron, Oh 44659
25-0000395.000	Timothy M. Gartrell, ETAL	9080 Cordova Rd SW, Bowerston, Oh 44695
25-0000396.000	Timothy M. Gartrell, ETAL	9080 Cordova Rd SW, Bowerston, Oh 44695
25-0000397.000	Timothy M. Gartrell, ETAL	9080 Cordova Rd SW, Bowerston, Oh 44695
25-0000397.001	Timothy M. Gartrell	9080 Cordova Rd SW, Bowerston, Oh 44695
25-0000392.002	Timothy M. Gartrell	9080 Cordova Rd SW, Bowerston, Oh 44695

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PARCELS AND PROPERTY OWNERS		
25-0000644.000	Naddine B. Leggett Revocable Living Trust	9035 Cumberland Rd, Bowerston, Oh 44695

B(9) Technical Features

The applicant shall describe the following information regarding the technical features of the project:

B(9)(a) Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The Yager-Leesville line will operate at 138 kV. The first 3.6 miles of the Project will be constructed as a new single circuit H-Frame line with 3- 1,033 kcmil ACSR Curlew conductor and two 7#8 alumoweld. The last 0.4 miles of the Project will be a rebuild of an existing single-circuit line as a double circuit line with two 7#8 Alumoweld. One circuit will be 1,033 kcmil Curlew and the other circuit will be 959 kcmil ACSS Suwannee. The line will consist of twenty-four single circuit H-Frames and eight double circuit mono pole structures.

A sketch of the proposed structure type is included as Figure 3.

B(9)(b) For electric power transmission lines that are within one hundred feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line.

(i) Calculated Electric and Magnetic Field Levels

Three loading conditions were examined: (1) normal maximum loading, (2) emergency line loading, and (3) winter normal conductor rating. Normal maximum loading represents the peak flow expected with all system facilities in service; daily/hourly flows fluctuate below this level. Emergency loading is the maximum current flow during unusual (contingency) conditions, which exist only for short periods of time. Winter normal (WN) conductor rating represents the maximum current flow that a line, including its terminal equipment, can carry during winter conditions. It is not anticipated that this line would operate at its WN rating in the foreseeable future. Loading levels and the calculated electric and magnetic fields are summarized below.

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EMF CALCULATIONS				
YAGER-LEESVILLE (SINGLE CIRCUIT) 138 KV LINE				
Condition	Circuit Load (A)	Ground Clearance (feet)	Electric Field (kV/m)*	Magnetic Field (mG)*
(1) Normal Maximum Loading	117.6	30	0.61 / 1.38 / 0.63	6.65 / 22.81 / 6.95
(2) Emergency Line Loading	275.9	30	0.63 / 1.38 / 0.63	15.60 / 53.52 / 16.30
(3) Winter Normal Conductor Rating	1,568	21	0.64 / 2.60 / 0.64	105.41 / 557.53 / 107.80

YAGER-LEESVILLE (CIRCUIT 1) / AZALEA-LEESVILLE (CIRCUIT 2) 138 KV LINE					
Condition	Circuit Load (A)		Ground Clearance (feet)	Electric Field (kV/m)*	Magnetic Field (mG)*
	Ckt 1	Ckt 2			
(4) Normal Maximum Loading	117.6	103.3	30	0.13 / 2.00/ 0.13	5.78 / 13.75 / 5.57
(5) Emergency Line Loading	275.9	261.5	30	0.13 / 2.00/ 0.13	13.91 / 33.32 / 13.70
(6) Winter Normal Conductor Rating	1,568	2,368	21	0.13 / 2.00/ 0.13	95.54 / 251.72 / 106.79

* EMF levels (left right-of-way edge/maximum/right right-of-way edge) calculated one meter above ground assuming balanced currents and nominal voltages. Electric fields reflect normal and emergency operations; lower electric fields are expected during emergency conditions when one mutually-coupled line is out of service.

(ii) Discussion of the Company’s Design Alternatives Regarding EMF Levels

AEP Ohio Transco did not consider design alternatives due to EMF and their strength levels. Transmission lines, when energized, generate EMF. Laboratory studies have failed to establish a material correlation between exposure to EMF and effects on human health. However, some people are concerned that EMF has impacts on human health. Due to their concerns, EMF associated with the new circuits was calculated and is provided in the Table above. The EMF was computed assuming the highest possible EMF values that could exist along the transmission line. Normal daily EMF levels will operate below these maximum load conditions. Based on studies from the National Institute of Health, the magnetic field (measured in milliGauss) associated with emergency loading at the highest EMF value for this transmission line, is lower than those associated with normal household appliances such as microwaves, electric

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shavers and hair dryers. For additional information regarding EMF, the National Institute of Health has posted information on their website: <http://www.niehs.nih.gov/health/topics/agents/emf/>

Additionally, information on electric and magnetic fields is available on AEP Ohio's website: <https://www.aepohio.com/info/projects/emf/OurPosition.aspx>. The information found on AEP Ohio's website describes the basics of electromagnetic field theory, scientific research activities, and EMF exposures encountered in everyday life. Similar material will be made available for those affected by the construction activities in this Project.

B(9)(c) The estimated capital cost of the project.

The 2015 capital cost estimates for the proposed project have been tabulated by the Federal Energy Regulatory Commission (FERC) Electric Plant Transmission Accounts:

ESTIMATES OF APPLICABLE INTANGIBLE AND CAPITAL COSTS		
FERC Account Number	Description	Cost
350	Land and Land Rights	\$2,930,000
352	Structures & Improvement	Not Applicable
353	Substation Equipment	Not Applicable
354	Towers & Fixtures	Not Applicable
355	Poles & Fixtures	\$7,442,275
356	Overhead Conductors & Devices	\$2,982,875
357	Underground Conductors & Devices	Not Applicable
358	Underground-to-overhead Conversion Equipment	Not Applicable
359	Right-of-way Clearing, Roads, Trails or Other Access	\$237,458
	TOTAL	\$\$13,556,608

B(10) The applicant shall describe the social and ecological impacts of the project:

(a) Provide a brief, general description of land use within the vicinity of the proposed project, including a list of municipalities, townships, and counties affected.

AEP Ohio Transco's consultant prepared a Socioeconomic, Land Use, and Agricultural District Review Report. This report is included as Appendix A.

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- (b) Provide the acreage and a general description of all agricultural land, and separately all agricultural district land, existing at least sixty days prior to submission of the application within the potential disturbance area of the project.**

AEP Ohio Transco's consultant prepared a Socioeconomic, Land Use, and Agricultural District Review Report. This report is included as Appendix A.

- (c) Provide a description of the applicant's investigation concerning the presence or absence of significant archaeological or cultural resources that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

An archaeological investigation will be conducted by AEP Ohio Transco's consultant. A copy of the report will be provided to the Ohio Power Siting Board under separate cover.

- (d) Provide a list of the local, state, and federal governmental agencies known to have requirements that must be met in connection with the construction of the project, and a list of documents that have been or are being filed with those agencies in connection with siting and constructing the project.**

A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction stormwater discharges under General Permit OHC000004. There are no other known local, state, or federal requirements that must be met prior to commencement of the proposed Project.

- (e) Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

AEP Ohio Transco's consultant prepared a Threatened and Endangered Species Report. AEP Ohio Transco's consultant coordinated with the United States Fish and Wildlife Service and Ohio Department of Natural Resources regarding special status

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species in the vicinity of the Project. No impacts to threatened or endangered species are expected. The Threatened and Endangered Species Report for the Project is included as Appendix B.

- (f) Provide a description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

AEP Ohio Transco's consultant prepared an Areas of Ecological Concern, Wetland Delineation, and Stream Assessment Report. No impacts to wetlands or streams are anticipated. The Areas of Ecological Concern, Wetland Delineation, and Stream Assessment Report for the Project is included as Appendix C.

- (g) Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.**

To the best of AEP Ohio Transco's knowledge, no unusual conditions exist that would result in environmental, social, health, or safety impacts. Construction and operation of the proposed Project will meet all applicable safety standards established by the Occupational Safety and Health Administration, and will be in accordance with the requirements specified in the latest revision of the National Electrical Safety Code as adopted by the Public Utilities Commission of Ohio. The Stormwater Pollution Prevention Plan, which will include the Access Plan, will be provided to the OPSB under separate cover, after submission of this LON.