



Legal Department

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

Hector Garcia
Senior Counsel –
Regulatory Services
(614) 716-3410 (P)
(614) 716-2014 (F)
hgarcia1@aep.com

Chairman Andre T. Porter
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

October 14, 2015

**Re: Case No. 15-0682 Letter of Notification
Harrison-Circleville 138 kV Transmission Line Rebuild Project**

Dear Chairman Porter,

Attached please find a copy of the Letter of Notification (LON) for the Harrison-Circleville 138 kV Transmission Line Rebuild Project by AEP Ohio Transmission Company, Inc. This filing and notice is in accordance with O.A.C. 4906-11-01.

A copy of this filing will also be submitted to the executive director or the executive director's designee. A copy will be provided to the Board Staff via electronic message.

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

Respectfully Submitted,

/s/ Hector Garcia

Hector Garcia
Senior Counsel
AEP Ohio Transmission Company, Inc.

cc. Counsel OPSB Staff
Patrick Donlon and Jon Pawley, OPSB Staff

**LETTER OF NOTIFICATION FOR THE
HARRISON-CIRCLEVILLE 138 KV
TRANSMISSION LINE REBUILD PROJECT**

PUCO Case No. 15-0682-EL-BLN

Submitted pursuant to OAC 4906-11-01

**AEP Ohio Transmission Company, Inc.
(AEP Ohio Transco)**

OCTOBER 2015

LETTER OF NOTIFICATION
Harrison-Circleville 138 kV Transmission Line Rebuild Project

AEP Ohio Transmission Company, Inc. (AEP Ohio Transco) is providing the following information in accordance with the procedures delineated in Ohio Administrative Code Section 4906-11-01: Letter of Notification Requirements of the Rules and Regulations of the Ohio Power Siting Board (OPSB).

4906-11-01

(B) GENERAL INFORMATION

- 1. The name of the project and applicant's reference number, if any, names and reference numbers(s) of resulting circuits and a brief description of the project, and why the project meets the requirements of a letter of notification.**

The proposed Harrison-Circleville 138 kV Transmission Line Rebuild Project (Project) is identified as part of PJM Reference Number B2256 regarding rebuild of approximately 40 miles of 138 kV transmission line between Ross Station and Harrison Station.

The Project consists of rebuilding the existing 138 kV single-circuit transmission line primarily within an existing right-of-way between Harrison Station and Circleville Station in Pickaway County, Ohio. Figures 1.1 through 1.3 show the location of the approximately 15.2-mile long project in relation to the surrounding vicinity.

The Project meets the requirements for a Letter of Notification because it is within the types of projects defined by Item (4)(a) of Attachment A of the interim process defined in the OPSB's September 4, 2012 Finding and Order in Docket 12-1981-GE-BRO. These items state:

(4) Replacing electric power transmission line structure(s) with a different type of structure(s) or adding structure(s) within an existing electric power transmission line and:

(a) Two miles or less of new right-of-way required.

2. If the proposed letter of notification project is an electric power transmission line or gas or natural gas transmission line, a statement explaining the need for the proposed facility.

As part of the 2017 RTEP process, PJM identified several N-1-1 and N-2 contingency violations requiring upgrades to remediate. These violations include:

- Loading above 100% of emergency capability on Delano-Scioto Trail 138 kV branch and Scioto Trail-Scippo 138 kV branch
- Voltages below 92% at Circleville Station, Delano Station, East Scippo Switch Station, Ross Station, Scioto Trail Station, Scippo Station, Clayburne Switch Station, Biers Run Station, and Hopetown Station.
- Voltage drops exceeding 8% at Biers Run Station, Circleville Station, East Scippo Switch Station, Scippo Station, Scioto Trail Station, Hopetown Station, Delano Station, Clayburne Switch Station, and Ross Station.

To correct these violations, AEP Ohio Transco proposed a new project to upgrade the entire 138 kV through path from Harrison Station in southern Columbus to Ross Station in Chillicothe including the rebuild of all existing 138 kV lines along this circuit path. PJM confirmed this project corrects the cited violations, decided to make this a baseline (mandatory) project, and assigned AEP Ohio Transco to make the required changes.

3. The location of the project in relation to existing or proposed lines and stations shown on maps and overlays provided to the Public Utilities Commission of Ohio in the applicant's most recent long term forecast report.

The location of this Project in relation to existing transmission lines is shown on Figures 1.1 through 1.3. The project directly impacts the following existing facilities:

- Harrison, Circleville, Scippo, East Scippo Switch, Scioto Trail, Delano, Clayburne Switch, and Ross Stations
- Circleville-Harrison (CSP) 138 kV transmission line, Circleville-Scippo 138 kV transmission line, Scioto Trail-Scippo 138 kV transmission line, Delano-Scioto Trail 138 kV transmission line, Delano-Kenworth-Ross 138 kV transmission line.

- 4. 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, natural environment, construction, or engineering aspects of the project.**

The proposed Project is along existing AEP right-of-way. No other alternatives to rebuilding the existing line were considered.

- 5. The anticipated construction schedule and proposed in-service date of project.**

Construction of the rebuild will begin in March 2016. The in-service date for the Project is December 1, 2017.

- 6. An area map of not less than 1:24,000-scale clearly depicting the facility's centerline with clearly marked streets, roads, and highways, and clearly written instructions for locating and viewing the facility.**

Figures 1.1 through 1.3 provide the proposed Project centerline on the United States Geological Service (USGS) 7.5-minute topographic maps of the Commercial Point, Lockbourne, Ashville, and Circleville, Ohio quadrangles. To access the Project location from public roads, take Interstate 71 South from Columbus for approximately 4.2 miles to Exit 101, Interstate 270 East. Follow I-270 E to Exit 52 taking US-23 South toward Circleville. Continue on US-23 South for approximately 5.3 miles. The substation is on your left. The approximate address of Harrison Station is 9816 US-23, Lockbourne, OH 43137.

- 7. 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.**

Property owners will be notified of the Project prior to commencement of construction activities. The new structures will be located predominantly within existing AEP right-of-way. While some adjustment to the centerline is proposed, the easements are written to allow for these slight shifts. A list of new parcels and property owners for which AEP does not hold existing right-of-way for the project are provided below.

NEW PARCELS AND PROPERTY OWNERS		
Parcel Number	Owner	Address
D1400010018101	Berger Hospital	0 US 23/ 1180 North Court Street, Circleville, OH 43113
D1400030000200	Van Dette Lee T	6600 ST RT 316, Circleville, OH 43113
M3000080000200	Toole Douglas & Marilyn	17325 Zig Zag Road, Circleville, OH 43113
M3000040004201	Gloyd David A Sr & Josephine Compton	17367 N US 23, Circleville, OH 43113
M3000040004202	Kirk Jeremy R & Sara L	17363 US RT 23, Circleville, OH 43113
A0200010004300	Schneider George B & Katie	325 South Court Street, Circleville, OH 43113
A0200010003900	Caudill John D & William R	19661 Island Road, Circleville, OH 43113
A0510400000100	Robert Northpoth	425 North Court Street, Circleville, OH 43113

(C) TECHNICAL FEATURES OF THE PROJECT

1. Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The Harrison-Circleville line is operated at 138 kV. The line will be rebuilt for double-circuit operation. The proposed 138 kV double-circuit transmission line will consist of one (1) 1234 ACSR/TW conductor per phase, for a total of 6 phase wires. Two (2) 7#8 Alumoweld overhead groundwires are to be installed at the top of the structures, and one (1) All-Dielectric Self-Supporting (ADSS) communication fiber cable to be installed below the phase conductors. The insulator assemblies will consist of polymer insulators. The new structures will consist of single steel poles, and two pole angle and dead-end structures. Generally, structures built on existing centerline will have drilled concrete pier foundations, and structures built offset from existing centerline will be direct embedded foundations.

Sketches of the proposed structure types are included as Figure 2, Sheets 1 - 4.

2. For electric power transmission lines, the production of electric and magnetic fields during the operation of the proposed electric power transmission line.

(a) Calculated Electric and Magnetic Field Levels

Two loading conditions were examined: (1) normal maximum and winter normal line loading, and (2) emergency line loading. 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. EMF levels were computed one meter above ground under the line and at the ROW edges (50/50 feet, left/right, from centerline. Loading levels and the calculated electric and magnetic fields are summarized below. Calculations were performed utilizing the most common structure to be installed on this line. The corresponding designs, including phase configurations, are shown in Figure 2, Sheets 1 through 4.

EMF CALCULATIONS				
Condition	Line Load (MVA)		Electric Field (kV/m)	Magnetic Field (mG)
	Circuit #1	Circuit #2		
(1) Normal Maximum & Winter Normal Line Loading	68.6	68.6	0.129 / 0.291 / 0.129	3.25 / 7.14 / 3.25
(2) Emergency Line Loading	91.0	91.0	0.140 / 0.409 / 0.140	5.50 / 14.41 / 5.50
* 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.				

(b) Discussion of the Company's Design Alternatives Regarding EMF Levels

Design alternatives were not considered due to electric and magnetic fields (EMF) and their strength levels. Transmission lines, when energized, generate EMF. Laboratory studies have failed to establish a strong correlation between exposure to EMF and effects on human health. However, some people are concerned that EMF have impacts on human health. Due to these concerns, EMF associated with the new circuits was calculated in the above Table. The EMF was computed assuming the highest possible EMF values that could exist along the proposed transmission line. Normal daily EMF levels will operate below these maximum load conditions. Based on studies from the National Institutes 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 like microwaves, electric 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/assets/docs_p_z/results_of_emf_research_emf_questions_answers_booklet.pdf

3. The estimated cost of the project by Federal Energy Regulatory Commission account, unless the applicant is not an electric light company, a gas company or a natural gas company as defined in Chapter 4905., of the Revised Code (in which case, the applicant shall file the capital costs classified in the accounting format ordinarily used by the applicant in its normal course of business).

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	\$2,230,216.28
352	Structures & Improvement	\$318,996.00
353	Substation Equipment	Not Applicable
354	Towers & Fixtures	Not Applicable
355	Poles & Fixtures	\$32,544,205.70
356	Overhead Conductors & Devices	\$4,668,800.30
357	Underground Conductors & Devices	Not Applicable
358	Underground-to-overhead Conversion Equipment	Not Applicable
359	Right-of-way Clearing, Roads, Trails or Other Access	Not Applicable
359.1	Asset retirement costs	1,789,912.00
	TOTAL	\$41,552,130.28

(D) SOCIOECONOMIC DATA

1. A brief description of land use within the vicinity of the proposed project, including: (a) a list of municipalities, townships and counties affected; and (b) estimates of population density adjacent to rights of way within the study corridor (the U.S. census information may be used to meet this requirement.)

On behalf of AEP Ohio Transco, URS prepared a Socioeconomic, Land Use, and Agricultural District Review Report. This report is included as Appendix A.

- 2. The location and general description of all agricultural land (including agricultural district land) existing at least sixty days prior to submission of the letter of notification within the proposed electric power transmission line right-of-way, or within the proposed electric power transmission substation fenced-in area, or within the construction site boundary of a proposed compressor station.**

The agricultural land crossed by the Project is within AEP's right-of-way. Impacts to agricultural land are expected to be temporary and limited to construction access and the small footprint of each structure. Additional details regarding agricultural land impacted by the construction of the Project are provided in Appendix A.

- 3. A description of the applicant's investigation (concerning the presence or absence of significant archaeological or cultural resources that may be located within the area likely to be disturbed by 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 by Weller & Associates, Inc. will be completed for this project. A copy of the resulting report will be provided to the Ohio Power Siting Board under separate cover.

- 4. Documentation that the chief executive officer of each municipal corporation and county, and the head of each public agency charged with planning land use in the area in which any portion of the facility is to be located have been notified of the project and have been provided with a copy of the letter of notification. The applicant shall describe the company's public information program used in the siting of the proposed facility. The information submitted shall include either a copy of the material distributed to the public or a copy of the agenda and summary of the meeting(s) held by the applicant.**

Copies of this Letter of Notification have been sent to the Pickaway County Commissioners, Pickaway County Engineer, the Mayor of Circleville, City of Circleville City Council, Pickaway County Office of Planning, Department of Public Services and Planning, Harrison Township Trustees, Walnut Township Trustees, Circleville Township Trustees, and the Pickaway County District Library. Copies of the cover letters to these officials and the local library are attached in Appendix B. AEP Ohio Transco will advise local officials of features and the status of the proposed Project.

- 5. A brief description of any current or pending litigation involving the project known to the applicant at the time of the letter of notification.**

There is no known current or pending litigation involving this Project.

- 6. A listing of local, state, and federal governmental agencies known to have requirements which must be met in connection with the construction of the project, and 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 OHC000003. Based on the currently planned placement of 76 poles within a 100-year flood zone, coordination with the Pickaway County Floodplain Coordinator is anticipated. There are no other known local, state, or federal requirements that must be met prior to commencement of the proposed Project.

(E) ENVIRONMENTAL DATA

- 1. A description of the applicant's investigation concerning the presence or absence of federal or state endangered 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 area likely to be disturbed by the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

On behalf of AEP Ohio Transco, URS prepared a Threatened and Endangered Species Report. URS coordinated with the U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources (ODNR) regarding special status species in the vicinity of the Project. No impacts to threatened or endangered species are expected. The full Threatened and Endangered Species Report for the Project is included as Appendix C.

- 2. 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 areas likely to be disturbed by the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

On behalf of AEP Ohio Transco, URS prepared an Areas of Ecological Concern, Wetland Delineation, and Stream Assessment Report. No impacts to wetlands or streams are anticipated. The full Areas of Ecological Concern, Wetland Delineation, and Stream Assessment Report for the Project is included as Appendix D.

- 3. 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 (SWPPP), which will include the Access Plan, will be provided to the OPSB under separate cover, after submission of this Letter of Notification.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

10/14/2015 4:51:24 PM

in

Case No(s). 15-0682-EL-BLN

Summary: Letter of Notification electronically filed by Mr. Hector Garcia on behalf of AEP Ohio Transmission Company