# AMERICAN TRANSMISSION SYSTEMS, INCORPORATED A FIRSTENERGY COMPANY 

## LETTER OF NOTIFICATION

## ANGOLA-EBER-VULCAN 138 kV TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

OPSB CASE NO. 13- 493 -EL-BLN

February 20, 2013

## American Transmission Systems, Incorporated

76 South Main Street Akron, Ohio 44308

# LETTER OF NOTIFICATION <br> ANGOLA-EBER-VULCAN 138 kV <br> TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT <br> OPSB Case No. <br> $\qquad$ -EL-BLN 

The following information is being provided in accordance with the procedures delineated in Ohio Administrative Code Rule 4906-11-01: Letter of Notification Requirements of the Rules and Regulations of the Ohio Power Siting Board.

## 4906-11-01 (B): General Information

> 4906-11-01 (B)(1): (a) Name and Reference Number $\begin{array}{ll}\text { Name of Project: } & \text { Angola - Eber - Vulcan } 138 \mathrm{kV} \text { Transmission Line Structure } \\ & \text { Replacement Project ("Project"). }\end{array}$

2012 LTFR Reference: This project is not identified in the FirstEnergy Corp. 2012
Long-Term Forecast Report (LTFR) submitted to the Public
Utility Commission of Ohio in Case Number 12-0504-ELFOR.

## 4906-11-01(B)(1): (b) Brief Description of Project

In this Project, American Transmission Systems, Incorporated ("ATSI"), a
FirstEnergy Company, is proposing to replace one (1) wood pole structure in the Angola - Eber - Vulcan 138 kV Transmission Line with one (1) laminated wood pole switch structure. The Project is located along Clarion Avenue in the City of Toledo, Lucas County, Ohio.

The general location of the Project is shown in Exhibit 1, which is a partial copy of the United States Geologic Survey, Lucas County, Ohio, Quad Map, ID number 41083F6. Exhibit 2 shows the general layout of the proposed Project.

## 4906-11-01(B)(1): (c) Qualification for a Letter of Notification

The Project meets the requirements for a Letter of Notification because the Project is the type of project defined by Item (4)(a) of the Application Requirement Matrix for Electric Power Transmission Lines in Appendix A of 4906-1-01 of the Ohio Administrative Code, which states:
(4) Replacing electric power transmission line structure(s) with a different type of structure(s) within an existing electric power transmission line or adding structure(s) within an existing electric power transmission line and:
(a) Two miles or less of new right-of-way required.

The proposed Project replaces one (1) existing wood pole structure of the transmission line with one (1) laminated wood pole switch structure.

## 4906-11-01 (B) (2): Need for the Project

The replacement of the existing wood pole with a laminated wood pole switch structure will replace an inoperable switch that is being taken out of service nearby.

## 4906-11-01(B)(3): Location Relative to Existing or Proposed Lines

The location of the Project relative to existing or proposed transmission lines is described in reference to the FirstEnergy System Facilities map, which is referenced in an April 16, 2012 filing of FirstEnergy Corp.'s 2012 Long-Term Forecast Report submitted to the Public Utility Commission of Ohio ("PUCO") in Case No. 12-0504-EL-FOR. The map was redacted from the public filings in that case due to the fact that it contains confidential and critical energy infrastructure information. The map shows ATSI's 345 kV and 138 kV transmission lines and transmission substations, including the location of the Angola -Eber-Vulcan 138 kV transmission line. The Project area is located approximately $41 / 2$ inches ( 11 by 17 inch printed version) from the left edge of the map box and 2 inches ( 11 by 17 inch printed version) from the top of the map box. The general location of the Project is shown in Exhibit 1.

## 4906-11-01(B)(4): Alternatives Considered

There were no alternatives considered.

## 4906-11-01(B)(5): Construction Schedule

Construction of the project is expected to begin as early as May 1, 2013 and be completed by May 31, 2013.

## 4906-11-01(B)(6): Area Map

Exhibit 1 depicts the General Project Location and Layout. To locate and view the project site from the Columbus, Ohio area, take I-71 N and continue for approximately 11 miles. Take exit 119 onto I-270 W toward Dayton for approximately 2.2 miles. Take exit 23 to merge onto US- 23 N/N High Street toward Delaware and follow US23 for approximately 20 miles. Keep left at the fork and continue for approximately 46.7 miles. Continue onto $\mathrm{OH}-15 \mathrm{~W}$ for approximately 17 miles. Keep right at the fork, and follow signs for Interstate $75 \mathrm{~N} /$ Ohio $15 /$ Toledo and merge onto I- 75 N and follow approximately 35 miles. Take exit 192 on the left to merge onto I-475 N/US23 N toward Maumee/Ann Arbor and follow for approximately 8.5 miles. Take exit 8 for $\mathrm{OH}-2$ toward Swanton/Toledo and turn right onto $\mathrm{OH}-2$ E/Airport Hwy. Take the 1st left onto S Holland Sylvania Road and continue for approximately 1.5 miles. Turn left onto Reo Street and follow for 0.5 miles. Turn right onto Swift Rd and take the first right onto Clarion Ave. The Project area will be on Clarion Avenue.

## 4906-11-01(B)(7): Property Owner List

The easement for the existing right-of-way provides the necessary right to install the Project. That easement is located on property owned by:

Lucas County

One Government Center, Ste. 800
Toledo, OH 43604

## 4906-11-01(C): Technical Features of the Proiect

## 4906-11-01(C)(1): Operating Characteristics

The Transmission Line with the structure replacement will have the following characteristics:

Voltage:
Conductors:
Static wire:
Insulators:
New Structures:

138 kV
954 kcmil 37 AAC
7\#10 Alumoweld
138 kV Polymer Suspension
Exhibit 2 - Wood Pole Switch Structure

The proposed Project is located within the existing 100 foot right-of-way of the Angola-Eber-Vulcan 138 kV Transmission Line, and no new right-of-way is required.

## 4906-11-01(C)(2): (a) Calculated Electric and Magnetic Fields

The following table itemizes the line loading of the Angola - Eber - Vulcan 138 kV Transmission Line. The normal line loading represents FirstEnergy's peak system load for the transmission lines. The emergency line loading represents the maximum line loading under contingency operation. The winter rating is based on the continuous maximum conductor ratings (MCR) of the circuits for the 954 kcmil 37 strand AAC conductors and an ambient temperature of zero degrees centigrade ( 32 deg. F), wind speed of 1.3 miles per hour, and a circuit design operating temperature of 100 degrees centigrade ( 212 deg . F).

| Line Name | Normal Loading <br> Amps | Emergency Loading <br> Amps | Winter Rating <br> Amps |
| :---: | :---: | :---: | :---: |
| Angola - Eber - Vulcan 138 <br> kV Transmission Line | 273 | 564 | 1443 |

The following calculations provide an approximation of the magnetic and electric fields strengths of the new 138 kV transmission line loop. The calculations provide an approximation of the electric and magnetic field levels based on specific assumptions utilizing the EPRI EMF Workstation 2009 program software. This program software assumes the input transmission line configuration is located on flat terrain. Also, a balanced, three-phase circuit loading is assumed for the transmission circuit. The model utilizes the normal, emergency, and winter rating of the line.

| EMF CALCULATIONS |  | Electric Field <br> kV/meter | Magnet Field <br> mGauss |
| :--- | :---: | :---: | :---: |
| Normal <br> Loading | Under Lowest Conductors | 1.92 | 43.4 |
|  | At Right-of-Way Edges | $0.48 / 0.65$ | $18.5 / 23.0$ |
| Emergency | Under Lowest Conductors | 1.92 | 89.8 |
| Loading | At Right-of-Way Edges | $0.48 / 0.65$ | $38.0 / 48.0$ |
| Winter <br> Rating | Under Lowest Conductors | 1.92 | 229.7 |
|  | At Right-of-Way Edges | $0.48 / 0.65$ | $97.2 / 120.0$ |

## 4906-11-01(C)(2): (b) EMF Discussion

## Background Information

Electric and magnetic fields (EMFs) are naturally occurring in the environment and can be found in the Earth's interior and in the human body. EMFs are generated essentially anywhere there is a flow of electricity, including electrical appliances and power equipment. Electric fields are associated with the voltage of the source; magnetic fields are associated with the flow of current in a wire. The strength of these fields decreases rapidly with distance from the source. EMFs associated with electricity use are not disruptive to cells like x-rays or ultraviolet rays from the sun. These fields are thought to be too weak to break molecules or chemical bonds in cells. Extensive research has been conducted over the past three decades to determine whether EMFs are associated with adverse health effects. A number of independent scientific panels have reviewed the research and have stated that there is no basis to conclude that EMFs cause adverse health effects nor has it been shown that levels in everyday life are harmful.

## Recent Developments

As a part of the National Energy Policy Act of 1992, the Electric and Magnetic Fields Research and Public Information Dissemination (EMF RAPID) program was initiated within the five-year effort under the National EMF Research Program. The culmination of this five-year effort resulted in a final RAPID Working Group report, which was released for public review in August 1998. The Director of the National Institutes of Environmental Health Sciences (NIEHS) then prepared a final report to Congress after receiving public comments.

The NIEHS' Director's final report, released to Congress on May 4, 1999, concluded that extremely low frequency electric and magnetic field (ELF-EMF) exposure cannot be recognized at this time as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard. The Director further stated that the conclusion of this report is insufficient to warrant aggressive regulatory concern.

## Sources for Additional Information

The following websites sponsored by federal agencies or other organizations provide additional information on EMF:

- Centers for Disease ControlNational Institute for Occupational Safety and Health: http://www.cdc.gov/niosh/topics/emf/
- NIEHS EMF Rapid Program: http://www.niehs.nih.gov/emfrapid/home.htm


## 4906-11-01(C)(3): Estimated Costs

The following are the estimated capital costs by FERC Accounts for the proposed project:

| Account | Cost |  |
| :--- | :--- | ---: |
| 350 | Land Rights, Engineering, etc. | $\$$ |
|  | 10,000 |  |
| 355 | Poles and Fixtures | $\$$ |
| 356 | 65,000 |  |
| Overhead Conductors \& Devices | $\$$ | 36,000 |
| Total | $\$$ | 111,000 |

## 4906-11-01(D): Socioeconomic Data

## 4906-11-01(D)(1): Land Use

The existing land use in the area of the proposed transmission line structure replacement is residential. Based on the U.S. Bureau of Census estimates, the 2010 population of the City of Toledo was 287,208 , and the 2010 population of Lucas County was 441,815 .

## 4906-11-01 (D) (2): Agricultural Land

There is no agricultural land involved with this project.

## 4906-11-01 (D) (3): Archaeological or Cultural Resources

As part of ATSI's investigation of the project site, ATSI conducted a search of the Ohio Historic Preservation Office (OHPO) National Register of Historic Places online database and did not identify any historic sites within the project area. Properties in the OHPO database include all Ohio listings on the National Register of Historic Places as well as districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture.

The existing transmission line is located in an existing transmission line corridor. The proposed Project will be within this existing transmission line corridor. Given the nature of the project, it is extremely unlikely that any archaeological or cultural resources would be disturbed by the limited nature of installing the new pole structure and removing the existing pole structure.

## 4906-11-01(D)(4): (a) Documentation of Letter of Notification Transmittal

This Letter of Notification is being provided concurrently to the following officials of the City of Toledo, and Lucas County, Ohio:

## Lucas County

The Honorable Pete Gerken Lucas County Commissioners
One Government Center, Ste. 800
Toledo, Ohio 43604
The Honorable Carol Contrada
President,
Lucas County Commissioner
One Government Center Ste 800
Toledo, Ohio 43604

The Honorable Tina Skeldon Wozniak
Lucas County Commissioner
One Government Center Ste 800
Toledo, Ohio 43604
Mr. Keith G. Earley, P.E., P.S.
Lucas County Engineer
One Government Center Ste 800
Toledo, Ohio 43604

## City of Toledo

The Honorable Michael Bell
Mayor, City of Toledo
One Government Center Ste. 2200
Toledo, OH 43604
Mr. Joeseph McNamara
President, City of Toledo City
Council
One Government Center Ste. 2120
Toledo, OH 43604
Mr. Edward Moore
Public Service Director
110 N. Westwood Ave.
Toledo, OH 43607
Ms. Robin Whitney, P.E
Div. of Engineering Services

Commissioner
600 Jefferson Ave., Ste. 300
Toledo, OH 43604
Mr. Gerald Dendinger
Clerk of Council, City of Toledo
One Government Center Ste. 2140
Toledo, OH 43604
Copies of the transmittal letters to these officials have been included with the transmittal letter submitting this Letter of Notification to the Ohio Power Siting Board.

## 4906-11-01(D)(4): (b) Public Information Program

Toledo Edison's Manager of External Affairs will advise local officials of features and the status of the proposed transmission line Project as necessary.

## 4906-11-01(D)(5): Current or Pending Litigation

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

## 4906-11-01(C)(0): Local, State, and Federal Requirements

There are no other known local, state, or federal requirements that must be met prior to commencement of construction of the proposed transmission line project.

## 4906-11-01(E): Environmental Data

## 4906-11-01(E)(1): Endangered, Threatened, and Rare Species Investigation

As part of our investigation, a request was submitted to the Ohio Department of Natural Resources (ODNR) on January 24, 2013 to research the presence of any endangered, threatened, or rare species within the project area. The ODNR's January 29, 2013 response, attached as Exhibit 4, indicated that they have no records of any endangered, threatened, or rare species within one half mile of the identified project area.

## 4906-11-01(E)(2): Areas of Ecological Concern

A visual assessment of the Project area did not identify any areas of ecological concern in the immediate vicinity of the Project.

## 4906-11-01(E)(3): Additional Information

Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the National Electric Safety Code as adopted by the PUCO and will meet all applicable safety standards established by the Occupational Safety and Health Administration.



# Exhibit 4 

January 29, 2013
Jessica Thacker
FirstEnergy Service Company
76 South Main Street
Akron, OH 44308

Dear Ms. Thacker
After reviewing the Natural Heritage Database, I find the Division of Wildilife has no records of rare or endangered species in the Angola-Eber-Vulcan 138 KV Structure Replacement Project area, including a one half mile radius, in the City of Toledo, Lucas County, Ohio. We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, parks or forests or other protected natural areas within a one half mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although we inventory all types of plant communities, we only maintain records on the highest quality areas.

This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Please contact me at 614-265-6452 if I can be of further assistance.
Sincerely,


Greg Schneider, Administrator
Ohio Natural Heritage Database Program

