



Legal Department

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

November 22, 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

**Re: PUCO Case No. 16-1856-EL-BLN
In the Matter of the Letter of Notification for the
Herlan 138 kV Switching Substation Project**

Dear Chairman Haque,

Attached please find a copy of the Letter of Notification for the Herlan 138 kV Switching Substation Project submitted 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. 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/ Erin C. Miller
Erin C. Miller
Contract Counsel
AEP Ohio Transmission Company, Inc.

cc: Jon Pawley, OPSB Staff



**LETTER OF NOTIFICATION FOR THE
HERLAN 138 KV SWITCHING SUBSTATION
PROJECT**

PUCO Case No. 16-1856-EL-BLN

Submitted pursuant to O.A.C. 4906-6-05

AEP Ohio Transmission Company, Inc.

November 22, 2016

AEP Ohio Transmission Company, Inc. (“AEP Ohio Transco”) provides this Letter of Notification (“LON”) to the Ohio Power Siting Board (“OPSB”) in accordance with the requirements of the Ohio Administrative Code Chapter 4906-6-05.

4906-6-05(B)(1): General Information

AEP Ohio Transco has identified the need to construct the Herlan 138 kV Substation Project (the “Project”). The overall Project consists of constructing a new 138 kV transmission switching station and extending and terminating the existing double-circuit Summerfield – Natrium 138 kV Transmission Line into the new switching station. The Summerfield – Natrium line extensions and terminations will occur within the proposed Herlan Switching Station property. The Project will be set up as a 138kV breaker-and-a-half configuration, with an initial placement of four breaker strings, containing five 138kV circuit terminations. It will also contain two 138kV capacitor banks, for system voltage support.

The Project will be constructed on property currently owned by a private landowner in Seneca Township, in Monroe County, Ohio, which is northeast of the intersection of State Route 379 (“Route 379”) and State Route 78 (“Route 78”). The parcel is approximately 157 acres in size and currently used as pasture. AEP Ohio Transco intends to purchase approximately 13.6 acres of the parcel for the Project and obtain an access road easement (collectively referred to as the “Site”), and has secured an option to purchase the property. The Site is bisected by the existing Summerfield – Natrium 138 kV Transmission Line. The majority of the area where the switching station will be located is cleared. The western portion of the Site is forested. The general location of the proposed Project is shown in Figure 1 in Appendix A.

The Project meets the requirements for a Letter of Notification because the Project is within the types of projects defined by Items (1)(a) and (3) of 4906-1-01 Appendix A, “Application Requirements for Electric Power Transmission Lines.” (December 11, 2015):

(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:

a. Line(s) not greater than 0.2 miles in length.

(3) Constructing a new electric power transmission substation.

4906-6-05(B)(2): Need for the Project

The proposed Project is a substation; therefore, this section does not apply.

4906-6-05(B)(3): Location Relative to Existing or Proposed Lines

The general location of the Project in relation to existing AEP Ohio Transco facilities is shown in this Application as Figure 2 in Appendix A.

4906-6-05(B)(4): Alternatives Considered

AEP Ohio Transco and its consultant conducted a Site Selection Study to identify and evaluate potential sites for the Herlan Switching Station in the vicinity of the existing Summerfield – Natrium 138 kV Transmission Line. The team's objective was to identify switching station sites that minimized the overall impacts to the community and the environment, while taking into account the engineering and construction needs of the Project.

Using established siting guidelines, AEP Ohio Transco's consultant identified suitable sites within the Study Area that would minimize impacts to the natural and human environment and still stay within close proximity of the existing 138 kV transmission line that would need to connect to the new substation, and included consideration of the new 138 kV line connecting the existing Blue Racer Substation to the new Herlan Switching Station. The Study Area was defined as a 2,000-foot-wide buffer to the north and south of the existing Summerfield – Natrium 138 kV Transmission Line; the Seneca and Malaga township boundary on the east; and the existing Summerfield Substation on the west. The Study Area is characterized by steep topography and is primarily forested, with a mix of

agricultural pastures and sparse residential development. Natural gas development is occurring throughout Monroe County. As a result, several pipelines and associated natural gas infrastructure are located within the Study Area. Using this Study Area, AEP Ohio Transco determined Potential Sites for the new switching station.

AEP Ohio Transco identified switching station sites that most effectively met the electrical requirements and purpose and the engineering constraints of substation design, and minimized impacts on the natural and human environment. The electrical requirements for the switching station narrowed the initial scope of the site search by dictating that the site be located in the vicinity of the existing Summerfield – Natrium 138 kV Transmission Line east of the existing Summerfield Substation.

The Siting Team identified four Alternative Sites for the Herlan Switching Station, as shown on Figure 2. Each Alternative Site consists of approximately 13.6 acres, and was oriented to minimize steep slopes, avoid known hydrologic features, minimize the amount of tree clearing, and minimize distance to the existing transmission line and roadways needed to access the site. Once the list of Alternative Sites was developed, key members of the Siting Team conducted field inspections of each of the sites. These inspections involved the visual examination of the Alternative Sites and the surrounding area from road crossings and other points of public access.

The team utilized a GPS unit, along with the mapped coordinates of the Alternative Sites superimposed on road/street mapping software, to track precise locations and record the path of the field work. Residences (i.e., single family, multi-family, modular homes, and mobile homes), commercial buildings, and other potentially sensitive receptors (e.g., cemeteries, churches, and schools) within 1,000 feet of each Alternative Site were noted. The Siting Team also noted the location of outbuildings (e.g., garages, sheds, barns, etc.) where that information seemed pertinent or helpful to the team in analyzing the sites. At various points (e.g., in locations where homes or structures are located near the alternative site or potential transmission connections into and out of the substation), areas of

environmental concern were noted, and various other siting and routing challenges were identified.

Based on a comparative evaluation of the four Alternative Sites, AEP Ohio Transco has identified Alternative Site A for the new switching station as the site that will minimize impacts on the natural and human environment, and minimize costs. Alternative Site A is currently traversed by the existing Summerfield – Natrium 138 kV Transmission Line, and the area immediately surrounding the transmission line crossing is primarily cleared and used as pasture. Only limited tree clearing (less than 1 acre) is anticipated for the switching station footprint, Summerfield – Natrium transmission line connections, and the site access road.

No 100-year floodplain or wetlands are located on Alternative Site A. Three streams were delineated in the forested area along the western portion of the site. Based on preliminary design, these streams will not be impacted by site design. The only residence located within 500 feet of Site A is the current property owner who is selling approximately 13.6 acres to AEP Ohio Transco for the proposed Herlan Switching Station. Although significant grading will be required, any other switching station site in the vicinity would also require extensive grading due to the steep topography of the area.

4906-6-05(B)(5): Public Information Program

AEP Ohio Transco informs affected property owners and tenants about its projects 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). Further, AEP Ohio Transco mailed a letter, via first class mail, to the affected landowner and contiguous owners. The letter complies with all the requirements of O.A.C. Section 4906-6-08(B). AEP Ohio Transco also 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 provided to the Monroe County public library.

Lastly, AEP Ohio Transco retains ROW land agents who discuss project timelines, construction and restoration activities with affected owners and tenants.

4906-6-05(B)(6): Construction Schedule

Construction on the Project is expected to begin in February 2017, and is expected to be completed and placed in-service by December 2018.

4906-6-05(B)(7): Area Map

The general location of the Project is shown in Figure 1. To locate the Project site starting from the Columbus, Ohio area, travel east on Interstate 70 (I-70) for approximately 85 miles. Take exit 180A to merge onto Interstate 77 (I-77) east toward Marietta, Ohio. After approximately 6 miles, take the OH-313 exit toward Senecaville/Pleasant City. After approximately 0.2 mile, turn right onto OH-313 W and immediately turn left onto Pleasant Road, which turns into Main Street. After approximately 1.5 miles, turn left onto OH-146 E (Caldwell Street). Continue on OH-146 E for approximately 8.7 miles then turn right onto Marietta Street. Turn immediately left onto OH-146 E then right onto OH-147 W (Monroe Street/Seneca Lake Road). Continue on OH-147 W for approximately 2.6 miles then turn left onto OH-78 E. Continue on OH-78 E for approximately 10.9 miles then turn left onto OH-379 N. The Herlan Switching Station site will be on the right just north of the intersection of OH-78 and OH-379.

4906-6-05(B)(8): Property Owner List

The Herlan Switching Station construction will occur on property owned by Three Forks Farms, LLC in Seneca Township, Monroe County, Ohio. AEP Ohio Transco will purchase 13.6 acres of the 157-acre parcel for construction of the switching station. In addition, AEP Ohio Transco will obtain an easement for the switching station access road on property owned by Three Forks Farm, LCC. No other property acquisition or easements are required to construct and operate the Herlan Switching Station.

Purchase and Easement Pending

| | |
|--------|-----------------------|
| Owner: | Three Forks Farm, LLC |
|--------|-----------------------|

Parcel ID: 200170260000

Property Land Use: Grain or General Farm - CAUV

4906-6-05(B)(9): Technical Features of the Project

4906-6-05(B)(9)(a): Operating Characteristics

The proposed Herlan Switching Station will be constructed on a 13.6-acre property that AEP Ohio Transco will purchase from a private landowner. The equipment and facilities described below will be installed within the fenced area of the switching station.

Electric Transmission Switching Station Data

The equipment and facilities described below will be installed within the fenced area of the switching station.

Voltage: 138 kV

Structure Type: Double-circuit galvanized 2-pole steel structures (4) new pole structures to be constructed).

Shield Wire: 159,000 CM (12/7) ACSR

Conductors: 556, 500 CM (26/7) Dove ACSR

Other: N/A

Switching Station Data

Breakers

There will be nine (9) 138 kV breakers and two 138kV “cap-switchers” installed at the substation. These breakers will be SF₆ (sulfur hexafluoride) gas insulated, dead tank breakers.

Switchgear

The station is designed as a 138kV breaker-and-a-half design, with an initial installation of four (4) strings.

Bus Arrangement and Structures

The Project will be initially installed as follows: There will be a 138 kV four (4) string breaker-and-a-half layout with five 138kV line terminations (expandable to ten). Two 138kV capacitor banks will attach to the two 138kV buses, via a cap-switcher and disconnect switches. Equipment support steel structures will be designed using structural tubing, folded plate tapered tubular, and/or wide flange structures. There will be one five (5) bay 138 kV A-Frame dead-end expandable to six. All yard structures will be ASTM A36, ASTM A500, or ASTM A572 steel hot-dip galvanized for corrosion protection. The high bus throughout the yard will be approximately 34 feet in height.

Transformers

There will be no transformers installed at the substation. It will be a 138kV switching station.

Control Buildings

A single story, prefabricated control building, approximately 26 feet by 60 feet in dimension, will be installed.

Other Major Equipment

Other equipment will include two 138kV capacitor banks (28.8 MVAR each), surge arresters, Capacitor Voltage Transformers (“CVTs”), line traps, station service equipment, and disconnect switches.

The preliminary Herlan Switching Station layout, single-line diagram, and schematic drawings of each proposed structure type are included in Appendix B.

4906-6-05(B)(9)(b): Calculated Electric and Magnetic Fields

The substation will not be located within 100 feet of an occupied residence or institution. Therefore, no EMF calculations or design alternatives are included.

4906-6-05(B)(9)(c): Estimated Costs

The estimated capital costs by the Federal Energy Regulatory Commission (“FERC”) Accounts for the proposed Project are \$17,071,296.00.

4906-6-05(B)(10): Social and Ecological Impacts

4906-6-05(B)(10)(a): Land Use

The Project is located entirely within Seneca Township in Monroe County. The majority of the proposed Herlan Switching Station Site consists of grassland/pasture. Approximately 3.6 acres of the Site is forested, however, only limited tree clearing is anticipated. As shown in Figure 1, land use in the vicinity of the Site generally consists of a mix of rural forested and agricultural uses. In addition, natural gas infrastructure is occurring throughout the area. Limited residential development is located within the Site vicinity. The only residence within 500 feet of the Site is the current property owner, who is selling 13.6 acres of land to AEP Ohio Transco for the Herlan Switching Station Project. No Federal, state or local recreational land is located in close proximity to the Site.

4906-6-05(B)(10)(b): Agricultural Land

The proposed Herlan Switching Station site is not located within agricultural district lands or other agricultural row crop land. AEP Ohio Transco’s consultant contacted the Monroe County auditor in September 2016 to obtain information on Agricultural District land. AEP Ohio Transco’s consultant received the data via email from the Monroe County Auditor on

September 30, 2016. The Auditor indicated that there are no Agricultural District data updates within the Project area.

4906-6-05(B)(10)(c): Archaeological or Cultural Resources

Initial analysis of the Project's potential to affect cultural resources involved a review of data provided by Ohio History Connection, which serves as Ohio's State Historic Preservation Office ("OHPO"). In August 2016, AEP Ohio Transco's consultant conducted a cultural resource literature review titled *Phase I Cultural Resource Management Investigations for Approximately 5.5 ha (13.6 ac) Herlan Substation Project in Seneca Township, Monroe County, Ohio*. The review indicates that the Danford-Mechem-Rucker Cemetery is located 60 feet south of the Project as shown in Figure 1. One architectural resource was identified to the west of the Site. No additional previously identified resources are located in close proximity to the project area. The cemetery will not be physically impacted by the proposed Project; however, a fence is recommended around the perimeter during construction. Due to the lack of historic properties located in the Project vicinity, AEP Ohio Transco's consultant recommends no further investigation. The report was submitted to the OHPO. AEP Ohio Transco will continue to consult with the OHPO to avoid or minimize impacts to cultural resources. A copy of the report is included as Appendix C.

4906-6-05(B)(10)(d): Local, State, and Federal Requirements

The Applicant anticipates submitting Notice of Intent ("NOI") for coverage under Ohio EPA General National Pollutant Discharge Elimination System ("NPDES") Permit for Discharges Associated with Construction Activities. Based on preliminary engineering, no permanent wetland and stream impacts are anticipated as part of the Herlan Switching Station construction. No wetlands are crossed or located within the vicinity of the Project. No streams are crossed by the Project. Therefore, no coverage under U.S. Army Corps of Engineers ("USACE") Nationwide Permit-12 ("NWP-12") is anticipated for the proposed Herlan Switching Station. Consultation with the OHPO will also continue. Unless Project design changes, no additional consultation is anticipated with the U.S. Fish and Wildlife Service ("USFWS") or the Ohio Department of Natural Resources ("ODNR").

4906-6-05(B)(10)(e): Endangered, Threatened, and Rare Species Investigation

A written request was submitted to the USFWS on August 9, 2016 and to the ODNR on August 17, 2016 to research the presence of any endangered, threatened, or rare species within the Project area. The USFWS' August 23, 2016¹ response indicated that the proposed Herlan Switching Station site is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the threatened northern long-eared bat (*Myotis septentrionalis*). As stated in the USFWS response, summer habitat requirements for the Indiana bat and northern long-eared bat consist of:

- (1) Dead or live trees and snags greater than or equal to 3 inches in diameter at breast height (dbh) with peeling or exfoliating bark, split trunk and/or branches, or cavities, which may be used as maternity roost areas;
- (2) Linear features, such as, fencerows, stream corridors, riparian areas and upland woodlots which provide forage sites; and
- (3) Human-made structures, such as buildings, barns, bridges and bat houses.

USFWS recommends avoiding habitat that meets the above criteria. The USFWS indicated that because the Project will result in a small amount of forest clearing relative to the available habitat within the vicinity, habitat removal is not anticipated to impact these species or their habitat. However, since Indiana bat presence in the vicinity of the Project has been confirmed, clearing of trees greater than or equal to 3 inches dbh during the summer roosting season may result in a direct take of individuals. If tree removal is unavoidable, USFWS recommends that the removal of any trees greater than or equal to 3 inches dbh only occur between October 1 and March 31. USFWS also recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Best management practices should be used to minimize erosion, especially on slopes.

¹ TAILS# 03E15000-2016-TA-1535

The ODNR's Natural Heritage Program response dated August 11, 2016 indicated that the proposed Herlan Switching Station Substation is not within the range of any rare or endangered species. Further, they are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges or other protected natural areas within a 1-mile radius of the Project area.

The response received from the ODNR Office of Real Estate dated September 28, 2016 indicated that the Project is within the range of the following state-listed threatened and endangered species of fish: channel darter (*Percina copelandi*), river darter (*Percina shumardi*), Tippecanoe darter (*Etheostoma tippecanoe*), and Ohio lamprey (*Ichthyomyzon bdellium*). The ODNR recommended that no in-water work take place in perennial streams from April 15 to June 30, in order to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, the ODNR stated that this project is not likely to impact these or other aquatic species. The ODNR also stated that the Project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis*). However, the ODNR stated that due to the location, and because there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species. Additionally, the ODNR stated that the Project is within the range of the black bear (*Ursus americanus*), but that the Project is not likely to impact that species due to its mobility. Finally, the ODNR stated that the Project is within the range of the Indiana bat. They stated that if suitable Indiana bat habitat is present and trees must be cut, the ODNR recommends that tree clearing only occur between October 1 and March 31.

Stantec conducted a habitat assessment and identified one potential Indiana bat roost tree. AEP Ohio Transco will avoid cutting this tree, or adhere to the USFWS and ODNR recommended time of year restrictions. Based on the agency responses, the Project is not anticipated to result in any impacts to threatened, endangered, or rare species.

4906-5-06(10)(f): Areas of Ecological Concern

Wetland Delineation

AEP Ohio Transco retained Stantec to conducted field wetland delineation within the proposed Harmon Switching Station property in August 2016. Wetlands were delineated in accordance with the Ohio Environmental Protection Agency (“OEPA”) Ohio Rapid Assessment Method for Wetlands v. 5.0 (“ORAM”). ORAM was developed to determine the relative ecological quality and level of disturbance of a particular wetland in order to meet requirements under Section 401 of the Clean Water Act. Each wetland is given a score using a range from 0 (low quality and high disturbance) to 100 (high quality and low disturbance). Wetlands scored from 0 to 29.9 are grouped into “Category 1,” 30 to 59.9 are “Category 2,” and 60 to 100 are “Category 3.” No wetlands were identified within the Project area.

Four streams were delineated within the Herlan Switching Station site. The delineated streams include three intermittent streams and one ephemeral stream. All four streams were assessed using the headwater habitat evaluation index (“HHEI”) methodology (drainage area less than 1 square mile). Table 1 provides a summary of the number, type, and quality of HHEI streams crossed.

| Table 1. Summary of HHEI Streams that cross the Site | | | |
|---|-----------------------|--------------------------|--------------|
| Stream Attributes | Flow Regime | | Total |
| | Ephemeral (RE) | Intermittent (R4) | |
| Number of Streams | 1 | 3 | 4 |
| Linear Feet Crossing ROW | 119 | 834 | 953 |

None of the streams will be located within the switching station fenceline, or impacted by Project construction. No other areas of ecological concern were identified within the Project area. A copy of the ecological resources inventory report is provided as Appendix D.

Wildlife

No wildlife species were observed during wetland delineation activities. A potential Indiana bat roost tree was identified in the western portion of the Project area. The forested portion of the Herlan Switching Station Site may provide habitat for common small mammals and birds.

Conservation and Recreation Lands and Scenic Rivers

The Project will not traverse or otherwise impact any conservation or recreation lands. No scenic rivers will be crossed or otherwise impacted by the Project.

4906-6-05(B)(10)(g): Additional Information

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 ("OSHA"), and will be in accordance with the requirements specified in the latest revision of the National Electrical Safety Code ("NESC") as adopted by the Public Utilities Commission of Ohio.

This Application describes the nature of the probable environmental impact of the proposed Project. Of all potential switching station sites identified by AEP Ohio Transco, the proposed site represents the option with the least adverse environmental impact feasible, given all pertinent considerations. The Project is not expected to significantly impact water resources and AEP Ohio Transco will comply with all applicable provisions of relevant environmental statutes.

Appendix A: Project Maps

Appendix B: Design Drawings

Appendix C: Cultural Resource Report

Appendix D: Ecological Report

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

11/22/2016 5:01:06 PM

in

Case No(s). 16-1856-EL-BLN

Summary: Letter of Notification -Herlan 138 kV Switching Substation Project Part 1 of 5
electronically filed by Mrs. Erin C Miller on behalf of AEP Ohio Transmission Company