Staff Report of Investigation

Black River Project

Case Numbers
11-5855-EL-BSB and 11-5856-EL-BTX

February 3, 2012

Ohio | Power Siting Board

John Kasich, Governor **Todd Snitchler,** Chairman

In the Matter of the Applications by ATSI for a	**)**	**Case Numbers**
Certificate of Environmental Compatibility and	**)**	**11-5855-EL-BSB and**
Public Need for the Black River Project	**)**	**11-5856-EL-BTX**

Staff Report of Investigation

Submitted to the
OHIO POWER SITING BOARD

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BEFORE THE POWER SITING BOARD OF THE STATE OF OHIO

In the Matter of the Applications by ATSI for a Certificate of Environmental Compatibility and Public Need for the Black River Project	**)** **)** **)**	**Case Numbers 11-5855-EL-BSB and 11-5856-EL-BTX**

Members of the Board:

Todd Snitchler, Chairman, PUCO
Christiane Schmenk, Director, ODD
Dr. Ted Wymyslo, Director, ODH
Dr. Tony Forshey, Interim Director, ODA
Scott Nally, Director, Ohio EPA
Jim Zehringer, Director, ODNR

Louis Blessing, Jr., State Representative
Jay Goyal, State Representative
Tom Sawyer, State Senator
David Daniels, State Senator

To the Honorable Power Siting Board:

In accordance with provisions of the Ohio Revised Code (ORC) Section 4906.07(C), and the Commission's rules, the Staff has completed its investigation in the above matter and submits its findings and recommendations in this staff report for consideration by the Ohio Power Siting Board (Board).

The *Staff Report of Investigation* has been prepared by the Staff of the Public Utilities Commission of Ohio. The findings and recommendations contained in this report are the result of Staff coordination with the Ohio Environmental Protection Agency, the Ohio Department of Health, the Ohio Department of Development, the Ohio Department of Natural Resources, and the Ohio Department of Agriculture. In addition, the Staff coordinated with the Ohio Department of Transportation, the Ohio Historic Preservation Office, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the Federal Aviation Administration.

In accordance with ORC Sections 4906.07 and 4906.12, copies of this staff report have been filed with the Docketing Division of the Public Utilities Commission of Ohio on behalf of the Ohio Power Siting Board and served upon the Applicant or its authorized representative, the parties of record, and the main public libraries of the political subdivisions in the project area.

The staff report presents the results of the Staff's investigation conducted in accordance with ORC Chapter 4906 and the rules of the Board, and does not purport to reflect the views of the Board nor should any party to the instant proceeding consider the Board in any manner constrained by the findings and recommendations set forth herein.

Respectfully submitted,

Klaus Lambeck, Chief
Facilities, Siting, & Environmental Analysis Division

ACRONYMS

BMP	best management practices
dBA	decibels (A-weighted)
DOW	ODNR Division of Wildlife
FAA	Federal Aviation Administration
kV	kilovolts
MW	megawatts
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OAC	Ohio Administrative Code
ODA	Ohio Department of Agriculture
ODD	Ohio Department of Development
ODH	Ohio Department of Health
ODNR	Ohio Department of Natural Resources
ODOT	Ohio Department of Transportation
Ohio EPA	Ohio Environmental Protection Agency
OPSB	Ohio Power Siting Board
ORC	Ohio Revised Code
PUCO	Public Utilities Commission of Ohio
SPCC	Spill Prevention, Containment, and Countermeasure
SWPPP	Storm Water Pollution Prevention Plan
USFWS	U.S. Fish and Wildlife Service

I. POWERS AND DUTIES

OHIO POWER SITING BOARD

The Ohio Power Siting Board (Board or OPSB) was created on November 15, 1981, by amended Substitute House Bill 694 as a separate entity within the Public Utilities Commission of Ohio (PUCO). The authority of the Board is outlined in Ohio Revised Code (ORC) Chapter 4906.

The Board is authorized to issue certificates of environmental compatibility and public need for the construction, operation, and maintenance of major utility facilities as defined in ORC Section 4906.01. Included within this definition are: electric generating plants and associated facilities designed for, or capable of, operation at 50 megawatts (MW) or more; electric transmission lines and associated facilities of a design capacity greater than or equal to 125 kilovolts (kV); and gas and natural gas transmission lines and associated facilities designed for, or capable of, transporting gas or natural gas at pressures in excess of 125 pounds per square inch. In addition, per ORC Section 4906.20, the Board authority applies to economically significant wind farms, defined in ORC 4906.13(A) as wind turbines and associated facilities with a single interconnection to the electrical grid and designed for, or capable of, operation at an aggregate capacity of five MW or greater but less than 50 MW.

Membership of the Board is specified in ORC Section 4906.02(A). The voting members include: the Chairman of the PUCO who serves as Chairman of the Board; the directors of the Ohio Environmental Protection Agency (Ohio EPA), the Ohio Department of Health (ODH), the Ohio Department of Development (ODD), the Ohio Department of Agriculture (ODA), and the Ohio Department of Natural Resources (ODNR); and a member of the public, specified as an engineer, appointed by the Governor from a list of three nominees provided by the Ohio Consumers' Counsel. Ex-officio Board members include two members (with alternates) from each house of the Ohio General Assembly.

NATURE OF INVESTIGATION

The OPSB has promulgated rules and regulations, found in Chapter 4906 of the Ohio Administrative Code (OAC), which establish application procedures for major utility facilities and wind farms.

Application Procedures

Any person that wishes to construct a major utility facility or economically significant wind farm in this state must first submit to the OPSB an application for a certificate of environmental compatibility and public need.[1] The application must include a description of the facility and its location, summary of environmental studies, a statement explaining the need for the facility and how it fits into the applicant's energy forecasts (for transmission projects), and any other information the OPSB may consider relevant.[2]

Within 60 days of receiving an application, the OPSB must determine whether the application is sufficiently complete to begin an investigation.[3] If an application is considered complete, the Chairman of the OPSB will cause a public hearing to be held 60 to 90 days after the official filing date of the completed application. At the public hearing, any person may provide written

[1] ORC 4906.04 and 4906.20
[2] ORC 4906.10(A)(1) and 4906.20(B)(1)
[3] OAC 4906-5-05(A)

or oral testimony and may be examined by the parties.[4] Parties include the Applicant, public officials, and any person who has been granted a motion of leave for intervention.[5]

Staff Investigation and Report

The Chairman will also cause each application to be investigated and a report published not less than 15 days prior to the public hearing. The report sets forth the nature of the investigation and contains the findings and conditions recommended by Staff. The Board's Staff, which consists of career professionals drawn from the Staff of the PUCO and other member agencies of the OPSB, coordinates its investigation among the agencies represented on the Board and with other interested agencies such as the Ohio Department of Transportation (ODOT), the Ohio Historical Society, and the U.S. Fish and Wildlife Service (USFWS).

The technical investigations and evaluations are conducted under guidance of the OPSB rules and regulations in OAC Chapter 4906. The recommended findings resulting from the Staff's investigation are described in the staff report pursuant to ORC Section 4906.07(C). The report does not represent the views or opinions of the OPSB and is only one piece of evidence that the Board may consider when making its decision. Once published, the report becomes a part of the record and is served upon all parties to the proceeding and is made available to any person upon request.[6] A record of the public hearings and all evidence, including the staff report, may be examined by the public at anytime.[7]

Board Decision

The OPSB may approve, modify and approve, or deny an application for a certificate of environmental compatibility and public need. If the OPSB approves, or modifies and approves an application, it will issue a certificate subject to conditions. The certificate is also conditioned upon the facility being in compliance with standards and rules adopted under the ORC.[8]

Upon rendering its decision, the OPSB must issue an opinion stating its reasons for approving, modifying and approving, or denying an application for a certificate of environmental compatibility and public need.[9] A copy of the OPSB's decision and its opinion is memorialized upon the record and must be served upon all parties to the proceeding.[10] Any party to the proceeding that believes its issues were not adequately addressed by the OPSB may submit within 30 days an application for rehearing.[11] An entry on rehearing will be issued by the OPSB within 30 days and may be appealed within 60 days to the Supreme Court of Ohio.[12]

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[4] ORC 4906.07
[5] ORC 4906.08(A)
[6] ORC 4906.07(C) and 4906.10
[7] ORC 4906.09 and 4906.12
[8] ORC 4906.10(A) and (B)
[9] ORC 4906.11
[10] ORC 4906.10(C)
[11] ORC 4903.10 and 4906.12
[12] ORC 4903.11, 4903.12, and 4906.12

CRITERIA

The recommendations and conditions in this *Staff Report of Investigation* were developed pursuant to the criteria set forth in ORC Section 4906.07(C), which requires, in part, that the staff report shall contain recommended findings with regard to ORC Section 4906.10(A).

Section 4906.10(A) of the ORC reads in part:

> The Board shall not grant a certificate for the construction, operation, and maintenance of a major utility facility, either as proposed or as modified by the Board, unless it finds and determines all of the following:
>
> (1) The basis of the need for the facility if the facility is an electric transmission line or gas or natural gas transmission line;
>
> (2) The nature of the probable environmental impact;
>
> (3) That the facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations;
>
> (4) In the case of an electric transmission line or generation facility, that the facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems and that the facility will serve the interests of electric system economy and reliability;
>
> (5) That the facility will comply with Chapters 3704., 3734., and 6111. of the Revised Code and all rules and standards adopted under those chapters and under Sections 1501.33, 1501.34, and 4561.32 of the Revised Code. In determining whether the facility will comply with all rules and standards adopted under Section 4561.32 of the Revised Code, the Board shall consult with the ODOT Office of Aviation of the Division of Multi-Modal Planning and Programs of the Department of Transportation under Section 4561.341 of the Revised Code.
>
> (6) That the facility will serve the public interest, convenience, and necessity;
>
> (7) In addition to the provisions contained in divisions (A)(1) through (A)(6) of this section and rules adopted under those divisions, what its impact will be on the viability as agricultural land of any land in an existing agricultural district established under Chapter 929. of the Revised Code that is located within the site and alternative site of the proposed major utility facility. Rules adopted to evaluate impact under division (A)(7) of this section shall not require the compilation, creation, submission, or production of any information, document, or other data pertaining to land not located within the site and alternate site.
>
> (8) That the facility incorporates maximum feasible water conservation practices as determined by the Board, considering available technology and the nature and economics of the various alternatives.

II. APPLICATION

APPLICANT

American Transmission Systems, Incorporated (ATSI) is a subsidiary of FirstEnergy Corporation. ATSI owns and manages 7,100 miles of transmission lines, with nominal voltages of 69 kV, 138 kV, and 345 kV. These lines serve the customers of Ohio Edison, Penn Power, Toledo Edison, and Cleveland Electric Illuminating Company. ATSI's transmission system offers gateways into Pennsylvania, Michigan, and southern Ohio.

FirstEnergy Corporation is an energy company headquartered in Akron, Ohio. In 2010, FirstEnergy Corporation's total revenues were over $13.3 billion. Its subsidiaries and affiliates are involved in the generation, transmission, and distribution of electricity, as well as energy management and other energy-related services. Its seven electric utility operating companies serve 4.5 million customers in Ohio, Pennsylvania, and New Jersey. Its generation subsidiaries control more than 24,000 MW of capacity generated by coal, nuclear, natural gas, and oil, and include pumped-storage, hydroelectric, and wind facilities.

HISTORY OF THE APPLICATION

Prior to formally submitting its application, the Applicant consulted with the Staff and representatives of the Board, including the Ohio EPA, regarding application procedures. Unless otherwise specified, the items referenced are common to both 11-5855-EL-BSB and 11-5856-EL-BTX.

On December 20, 2011, the Applicant held a public information meeting regarding the proposed electric transmission line and substation. The Honorable Tony Krasienko, Mayor of the City of Lorain, expressed his strong support for electric transmission line and substation projects and his intent to intervene at a later date. Also, the Applicant filed motions for waiver of the one-year notice provision, the 20 percent in-common rule, and requirements to submit fully developed information for the alternate substation and alternate transmission line route. Staff did not object to these waivers.

On December 22, 2011, the Applicant filed both the transmission line and substation applications.

On December 23, 2011, the Applicant was issued a letter of compliance regarding the applications from the Chairman of the Board.

On January 5, 2012, an Entry was issued ordering that the motion to consolidate the proceedings along with approval of the other requested waivers be granted and scheduled the public hearing in this case.

A local public hearing has been scheduled for February 21, 2012, at 6:00 p.m., at the Lorain City Hall, Council Chambers, 200 West Erie Avenue, Lorain, Ohio. The adjudicatory hearing will commence on February 23, 2012, at 10:00 a.m., in Hearing Room 11-D, at the offices of the PUCO, 180 East Broad Street, Columbus, Ohio.

This summary of the history of the application does not include every filing in case numbers 11-5855-EL-BSB and 11-5856-EL-BTX. The docketing record for this case, which lists all documents filed to date, can be found in the Appendix to this report and online at http://dis.puc.state.oh.us.

PROJECT DESCRIPTION

The Applicant is seeking approval to construct the Black River 138 kV Transmission Line and Substation (Black River Project). The project would reinforce the existing transmission system in the greater Lorain area and support expansion of the Republic Steel facility. Republic Steel will expand operations at its Lorain facility by installing a new 100 MW electric arc furnace, resulting in an estimated 449 new jobs there.

ATSI performed a site selection analysis in the one-mile area around Republic Steel to identify a potential location for a new substation and the associated electric transmission lines. ATSI found six potential sites and narrowed the options to a Preferred Substation Site (referred to as Site 3 in the application, site selection analysis, and throughout this report) and Alternate Substation Site (Site 6). The substation sites and proposed electric transmission line facilities are shown on the maps in this report.

The Applicant proposed a separate Preferred and Alternate transmission line route, with Common Transmission Line Route portions, for each of the proposed substation sites. Thus, four transmission line routes are proposed. The project involves the construction of new 138 kV transmission lines, rebuilding of existing 138 kV transmission lines, reconductoring existing 138 kV transmission lines, installing 138 kV transmission lines on the open arms of existing transmission structures, and upgrading an existing 69 kV line for 138 kV operation.

Preferred Substation Site (Site 3)

The substation would be a switching station that would also transform the voltage from 138 kV down to 69 kV. The Preferred Substation Site occupies the northern portion of an existing city park. The 1.35-acre fenced-in substation area is bordered by Clifton Avenue, 29th Street, Canton Avenue, and 30th Street. The Applicant has indicated that after completion of construction of the substation and associated facilities, the unused southern portion of the park would be returned to the City of Lorain. The City of Lorain currently owns this local park property and has initiated a process to transfer ownership of the site to ATSI. The total cost to build the Preferred Substation Site is approximately $11.9 million.

Alternate Substation Site (Site 6)

Site 6 is on property owned by CSX Railroad (CSX). The site is located at the southeast corner of the property, between Globe Avenue and Dunton Road south of East 36th Street. The 1.6-acre fenced-in area of the substation is on the southern portion of the site. The Applicant has initiated negotiations with CSX to obtain Site 6. The total cost to build the Alternate Substation Site is approximately $12.6 million.

Transmission Line Routes for Preferred Substation Site (Site 3)

The Preferred Transmission Line Route for Site 3 involves approximately 900 feet of new double-circuit construction located in the city of Lorain. The Preferred Transmission Line Route would run south along the east side of the park. The Alternate Transmission Line Route for Site 3 involves approximately 860 feet of new double-circuit construction parallel to an existing transmission line. The Alternate Transmission Line Route would run south from Site 3 along the west side of the park.

The Common Transmission Line Route for Site 3 involves:

1. Two new 138 kV loops from the existing double-circuit (Edgewater to Beaver and Johnson to USS Kobe 138 kV) transmission line from Clifton Avenue going east and north into the Preferred Substation Site (Site 3). These loops would be approximately 100 feet long.

2. 138 kV jumper work[13] at the existing transmission tower located approximately 480 feet north of Site 3 where the existing Edgewater to Beaver, Edgewater to USS Kobe, and Johnson to USS Kobe 138 kV lines currently intersect. This jumper work would allow the proposed Black River Substation to be connected directly to the Republic Steel facility by both circuits. Figure 01-3 in the application shows the general location of the necessary jumper work.

3. Rebuilding approximately 2,770 feet of the existing Johnson to USS Kobe 138 kV transmission line from the intersection of East 32nd Street and Clifton Avenue, going east and southeast to the intersection of East 36th Street and Wood Avenue, to accommodate both new and existing 138 kV circuits.

4. Installing approximately 2,330 feet of new 138 kV conductor circuit on the open arms of the existing Edgewater to Beaver 138 kV transmission line going south and southwest from East 32nd Street and Clifton Avenue to East 36th Street just east of its intersection with Broadway Avenue.

5. Reconductoring approximately 4,760 feet of the de-energized 138 kV side of the existing Edgewater to Johnson West 69 kV transmission line along East 36th Street. This existing line was constructed as a double-circuit 138 kV / 69 kV transmission line, but the 138 kV portion of the line has been de-energized. The old conductors would be replaced with new conductors supported on the existing transmission line structures. In addition, approximately six new intermediate structures would be needed to support the new conductors.

Most of the Common Transmission Line Route for Site 3 is located in the city of Lorain. The reconductor portion that is along East 36th Street is located within and along the border of Sheffield Township, Lorain County. The cost to build this route is $1.25 million.

Transmission Line Routes for Alternate Substation Site (Site 6)

The Preferred Transmission Line Route for Site 6 is approximately 0.4 miles long, parallel to an existing 69 kV transmission line corridor that would be rebuilt along the eastern CSX property boundary, located in the city of Lorain. The Alternate Transmission Line Route for Site 6 is also approximately 0.4 miles long and would be located on properties adjacent to the east of the substation property, located in the city of Lorain.

The Common Transmission Line Route for Site 6 involves:

1. Two new 138 kV loops from the existing Johnson to USS Kobe 138 kV line and the existing Johnson to Lorain 138 kV line that are located approximately 660 to 680 feet west of Site 6.

2. 138 kV jumper work at the existing transmission tower located approximately 480 feet north of Site 3 where the existing Edgewater to Beaver, Edgewater to USS Kobe, and Johnson to USS Kobe 138 kV lines currently intersect. This jumper work would allow

[13] A jumper is a length of conductor used to close a break or bypass an electric circuit.

the proposed Black River Substation to be connected directly to the Republic Steel facility by both circuits. Figure 01-3 in the application shows the general location of the necessary jumper work.

3. Reconductoring the de-energized 138 kV side of the existing Edgewater to Johnson West 69 kV transmission line as described for Site 3.

4. Rebuilding the Edgewater to Johnson West 69 kV transmission line to operate at 138 kV.

The cost to build this route is $1.1 million.

PROJECT MAPS

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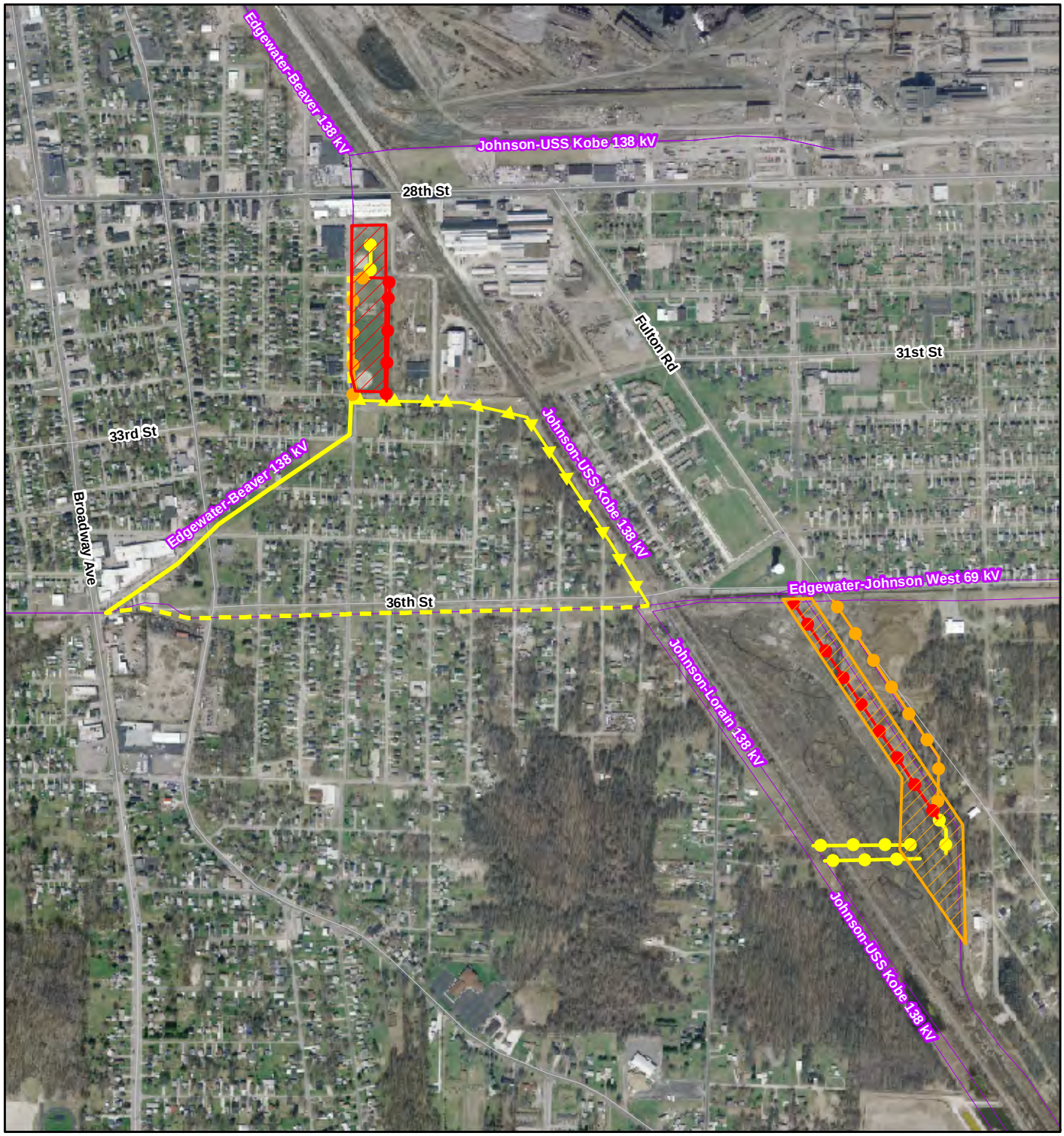


Lorain County

NORTH

0 500 1,000

Feet

1:12,000

NAD 83 SP Ohio North (Feet)

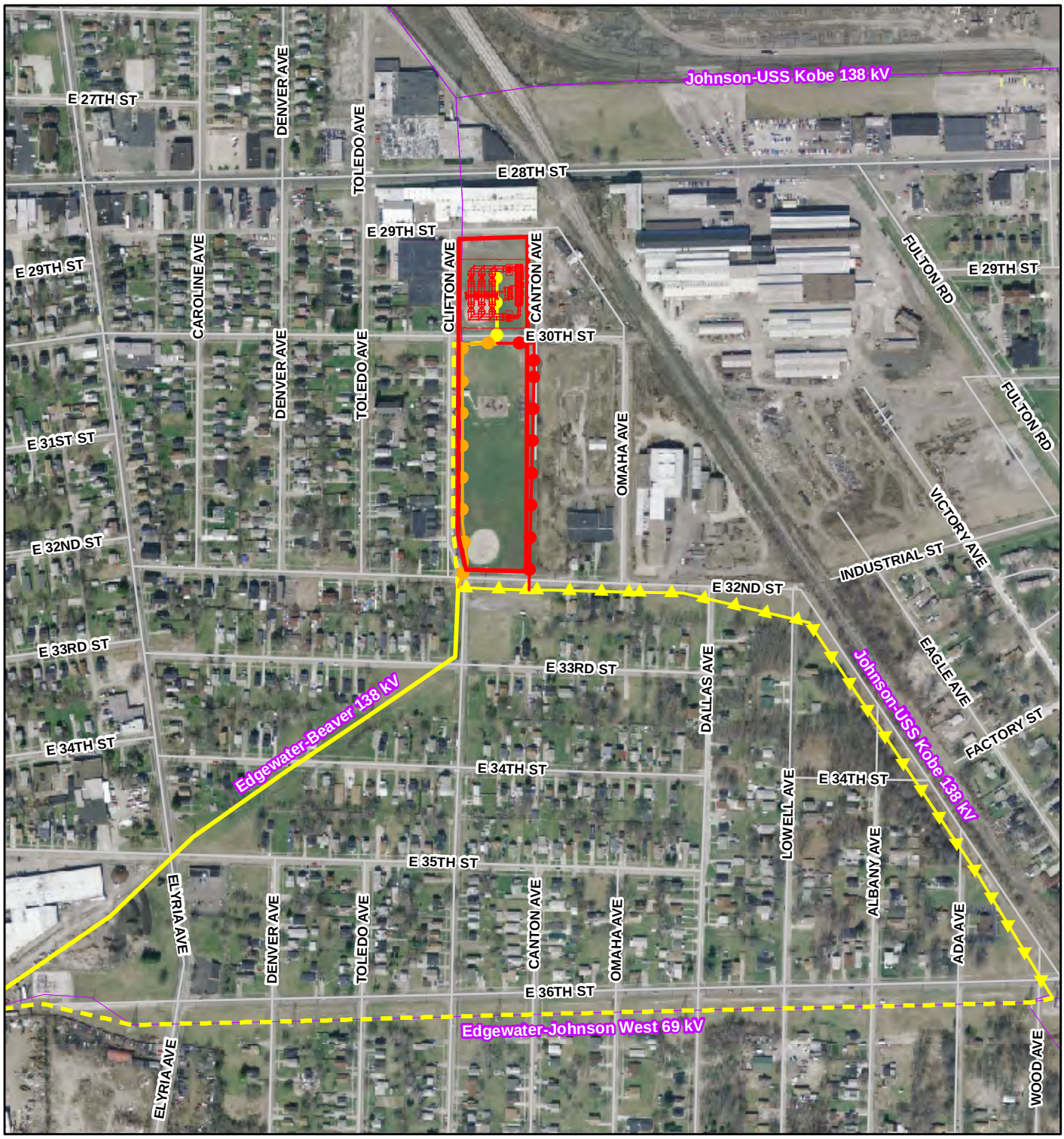
- Preferred Substation
- Alternate Substation
- Preferred Transmission
- Alternate Transmission
- Common New Transmission
- Common New Conductor
- Common Reconductor
- Common Rebuild
- Existing Transmission

Overview Map

11-5855-EL-BSB
&
11-5856-EL-BTX

Black River Substation and Transmission Lines

Maps are presented solely for the purpose of providing a visual representation of the project in the staff report, and are not intended to modify the project as presented by the Applicant in its certified application and supplemental materials.



Lorain County

NORTH

0 250 500

Feet

1:6,000

NAD 83 SP Ohio North (Feet)

- Preferred Substation
- Preferred Transmission
- Alternate Transmission
- Common New Transmission
- Common New Conductor
- Common Reconductor
- Common Rebuild
- Existing Transmission

Preferred Layout Site 3

11-5855-EL-BSB
&
11-5856-EL-BTX

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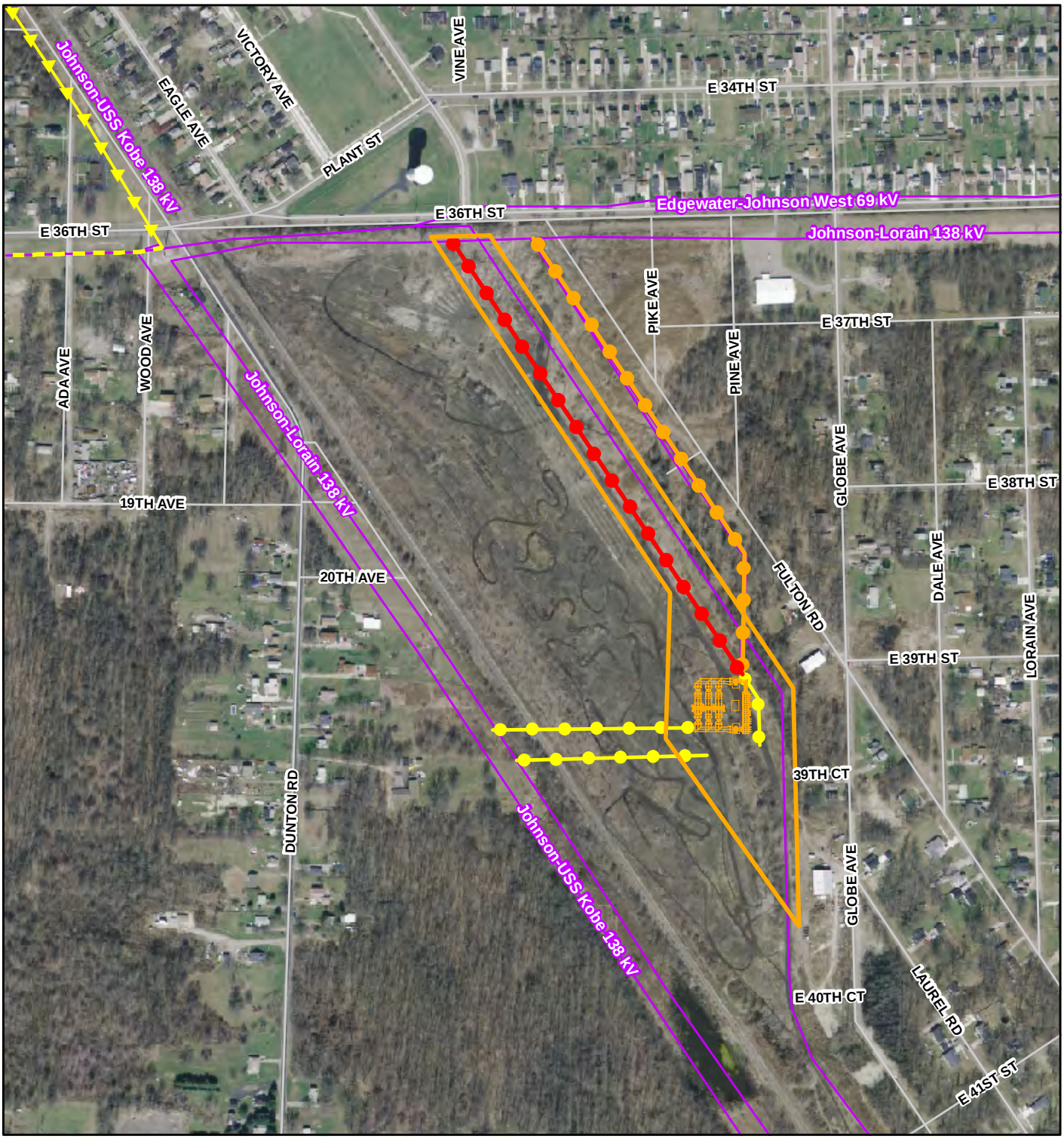

Lorain County

NORTH

0 250 500

Feet

1:6,000

NAD 83 SP Ohio North (Feet)

- Alternate Substation
- Preferred Transmission
- Alternate Transmission
- Common New Transmission
- Common New Conductor
- Common Reconductor
- Common Rebuild
- Existing Transmission

Alternate Layout Site 6

11-5855-EL-BSB
&
11-5856-EL-BTX

Maps are presented solely for the purpose of providing a visual representation of the project in the staff report, and are not intended to modify the project as presented by the Applicant in its certified application and supplemental materials.

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III. CONSIDERATIONS AND RECOMMENDED FINDINGS

In the matter of the application of ATSI the following considerations and recommended findings are submitted pursuant to ORC Section 4906.07(C) and ORC Section 4906.10(A).

Considerations for ORC Section 4906.10(A)(1)

BASIS OF NEED

Purpose of Proposed Facility

The purpose of the Black River Project is to provide reliable and economical electric power service to a new electric arc furnace to be constructed at Republic Steel in Lorain, Ohio. The proposed project would also reinforce the existing transmission system that serves the greater Lorain area. The proposed 138 kV Black River Substation would serve as a transmission switching station with 138 kV to 69 kV transformation. In addition to the proposed substation, the Applicant would be reconfiguring the local 138 kV transmission system by constructing, rebuilding, reconductoring, installing new lines on open arms of existing transmission structures on several 138 kV circuits, and upgrading an existing 69 kV line for 138 kV operation. The proposed project would create a reliable transmission system that would be able to handle the increased load from the installation of the new arc furnace. This section of the staff report focuses on reviewing the need for the proposed substation and transmission lines.

Long Term Forecast

The proposed substation and transmission line project was not identified in the 2011 ATSI *Long-Term Forecast Report to the Public Utilities Commission of Ohio*. This project was not identified in the most recent Long-Term Forecast because the project was not announced until after the 2011 report was filed with the PUCO.

PJM Regional Transmission Expansion Plan

PJM Interconnection, LLC (PJM), a Regional Transmission Organization, is charged with the operation and reliability of the regional transmission system within its footprint. PJM issues an annual Regional Transmission Expansion Plan (RTEP) that explains the rationale behind transmission upgrades that are needed to maintain reliability. The proposed Black River Project was not identified in the most recent PJM RTEP. PJM has been made aware of the project. ATSI plans to submit the proposed projects and load addition for inclusion in the next RTEP. Staff would require that ATSI provide a copy of this request when submitted to PJM.

Explanation of Need

Republic Steel plans to add a new electric arc furnace at its steel making facility in Lorain, Ohio. The proposed electric arc furnace will add 100 MW of new electric load. Current steel manufacturing load in Lorain totals 115 MW. With the current load and the proposed arc furnace, total load in the area will rise to 215 MW, an 87 percent load increase. The current configuration of the local transmission system is unable to handle the increased load. In addition to the increased load in the area, the Edgewater Generation Station, a 57.6 MW gas turbine generating station, was retired in 2010. The increased load and generation retirement has changed the way the local transmission system operates. To maintain reliable power to the proposed arc furnace and maintain reliability in the area, the Applicant will also be upgrading the

local transmission system as part of the substation project. More detailed investigation about reliability and electric grid concerns may be found in the Electric Grid section of this report.

Conclusion

Staff recommends that the basis of need has been demonstrated due to the significant increase in load in the area and the inability for the current transmission facilities to handle this increased load. Without the Black River Project, the system would not be able to reliably provide the energy needed for the new electric arc furnace at Republic Steel.

Recommended Findings

Staff recommends that the Board find that the basis of need for the project has been demonstrated and therefore complies with the requirements specified in ORC Section 4906.10(A)(1), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(2)

NATURE OF PROBABLE ENVIRONMENTAL IMPACT

Pursuant to ORC Section 4906.10(A)(2), the Board must determine the nature of the probable environmental impact of the proposed facility. Staff has found the following with regard to the nature of the probable environmental impact:

Socioeconomic Impacts

Demographics

The project is located within an urbanized area of Lorain, Ohio (Lorain/Elyria metropolitan area). The project area is densely populated and has heavy industrial uses in the immediate vicinity, with supporting institutional and commercial uses scattered throughout the area. The proposed substation sites and associated transmission line routes are located within the city of Lorain and Sheffield Township. The 2010 population for the city of Lorain was 64,097, a 6.6 percent decrease from 2000. Also, the population of Sheffield Township decreased 9.6 percent, compared to a 5.9 percent population increase for the entire county over the same time period. While this project is expected to have positive consequences on local economic development, the project is not expected to have an impact on the demographics of the region as a whole.

Land Use

Approximately 297 residences are within 1,000 feet of the Preferred Substation Site (Site 3). These residences are predominately located to the west and south of the site, with one residence located within 100 feet of the site, on the west side of adjacent Clifton Avenue. Approximately 161 residences have been identified within 1,000 feet of the Alternate Substation Site (Site 6). These residences are predominately located to the north, east, and west of Site 6, with two residences located within 100 feet, to the east along Globe Avenue. No residences would need to be removed for construction of the project.

There are approximately 33 commercial/industrial properties within 1,000 feet of Site 3, including the large Republic Steel and USS Kobe Steel facilities. No industrial land uses were identified within 1,000 feet of Site 6.

Three institutional facilities, including two churches and one neighborhood social services facility, are located within 1,000 feet of Site 3. None of these facilities are located within 100 feet of the Site 3 project boundary. Three churches are located within 1,000 feet of Site 6, none of which are located within 100 feet. No agricultural land uses were identified within 1,000 feet of either site.

The Applicant states that there are 820 residences, 44 businesses, and six public facilities within 1,000 feet of the Preferred, Alternate, and Common transmission line routes for Site 3. There are 254 residences, 23 businesses, and two public facilities within 1,000 feet of the Preferred Transmission Line Route. No homes are located within 100 feet of the Preferred Transmission Line Route. There are 273 residences, 19 businesses, and two public facilities within 1,000 feet of the Alternate Transmission Line Route. Twelve residences are located within 100 feet of the Alternate Transmission Line Route.

The Applicant states that there are 145 residences (none within 100 feet), one business, and four public facilities within 1,000 feet of the Preferred Transmission Line Route for the Alternate Substation site. There are 159 residences (none within 100 feet), one business, and four public facilities within 1,000 feet of the Alternate Transmission Line Route. There are an additional 418

residences, five businesses, and three public facilities within 1,000 feet of the Common Transmission Line Route. Nine residences are located within 100 feet of the Common Transmission Line Route for Site 6. Construction of the facilities would likely result in temporary impacts associated with increased traffic, noise, and dust.

Recreational Land Use

The Preferred Substation Site is located on property owned by the City of Lorain, and is currently used as a city park/recreational area. This property includes playground equipment, baseball fields, a basketball court, and restroom facilities. The substation would require approximately 1.4 acres of the 6.2-acre site, including one baseball field. The Applicant has stated that the remaining recreational facilities on approximately 4.8 acres would be returned to the City of Lorain for public use after construction of the substation.

No other recreational land uses have been identified within 1,000 feet of the Site 3. There is one recreational area located within 1,000 feet of Site 6 (Johnnie Wilson Park), which should not be directly affected by the proposed project.

The Preferred Transmission Line Route for Site 3 is located along the eastern edge of the park space, while the Alternate Transmission Line Route cuts through existing ball fields. No direct impacts to recreational space should occur with either the Preferred or Alternate transmission line routes for Site 6.

Cultural and Archeological Resources

The Applicant performed a review of Ohio Historic Inventory (OHI) sites listed in the project area. One OHI site is listed within 1,000 feet of Site 3, and seven sites are listed within 1,000 feet of Site 6. The Applicant has stated that none of these sites are listed or anticipated to be eligible for the National Register of Historic Places (NRHP).

One OHI site is listed within 1,000 feet of the new portion of the Preferred and Alternate transmission line routes for Site 3. The Common Transmission Line Route for Site 3 is within 1,000 feet of six historical properties, none of which are within 300 feet. The Applicant has stated that none of these sites are listed or anticipated to be eligible for the NRHP.

Aesthetics

The Black River substation and transmission line facilities would have a minimal impact on public and residential views within the project area. Aesthetic impact considerations for electricity infrastructure projects discuss the visual impact of the proposed facility to the surrounding area, structural design features (included in Figures 04-3 through 04-5 of the application), and measures taken to minimize visual impact.

The northern portion of the city park for the Preferred Substation Site (Site 3) allows for the continued use of the playground, basketball court, open field, baseball diamond, and Nord center offices. Because the substation would be placed along the northern edge of the park and adjacent to existing light industrial buildings, the visual impact to residences along Clifton Avenue would be minimized and most of the city park retained. The engineering limitations of this site do not allow for perimeter tree plantings or berms to provide visual screening. A substation at this site is consistent and compatible with the industrial/commercial land use north of 30th Street. However, there is a visual impact, and Staff recommends that the Applicant submit, for Staff review and approval, a landscaping plan in order to minimize any impacts from the project.

Construction of the Preferred Transmission Line Route to the Preferred Substation Site (Site 3) would necessitate the removal of trees that currently offer screening to nearby residents. The screening provides a division between the park and the industrial/commercial area to the east. The loss of this screening will be addressed by the installation of vegetation that is compatible with the transmission line, as part of the Applicant's landscaping plan.

The Alternate Substation Site (Site 6) is an undeveloped CSX Railroad property with scattered tree stands/groupings and woodlots. To the extent practical, existing trees on the site or low-growing vegetation would be incorporated to lessen visual impacts. Travelers along East 36 Street would see portions of both proposed transmission line routes to the Alternate Substation Site (Site 6). However, there already is an existing transmission line located along East 36th Street, and the common double-circuit loops would not be highly visible. The rest of the Common Transmission Line Route to Site 6 involves reconductoring of existing transmission lines and would have negligible aesthetic impacts on neighboring residential views due to the presence of the existing transmission line.

The Black River substation and transmission line project does not visually affect any historic districts, NRHP listed or eligible sites, nor are there any scenic highways, lookouts, or scenic waterways located within 1,000 feet of the routes. Therefore, no important view sheds or historic settings within the landscape would be negatively affected.

Economics

ATSI would construct, own, operate, and maintain the proposed Black River substation and the associated transmission line facilities. The total cost to build the Preferred Substation Site is approximately $11.9 million, with an additional $1.1 million for the associated transmission lines. The total cost to build the Alternate Substation Site is approximately $12.6 million, with an additional $1.25 million for the associated transmission lines.

The Black River Project is located within the city of Lorain, with some portions in Sheffield Township, in Lorain County. ATSI would pay property taxes on utility facilities in each jurisdiction, benefitting the local school district, park district, and fire department. The approximate annual property taxes associated with the Preferred Substation Site and Alternate Substation Site over the first year of the completed project are $766,842 and $850,082, respectively. The project would facilitate the expansion of the Republic Steel facility, resulting in an estimated 449 new jobs there.

Ecological Impacts

Surface Waters

There are no streams or drainage channels within 100 feet of the Preferred, Alternate, or the Common transmission line routes for Site 3, nor at the Preferred Substation Site. There are four isolated emergent wetlands within 100 feet of the Common Transmission Line Route for Site 3. These palustrine emergent wetlands range between 0.08 and 0.33 acres in size. There are no wetlands located within 100 feet of the Preferred Substation Site. All wetlands associated with Site 3 would be spanned during construction, operation, and maintenance activities, and therefore no direct impacts would occur.

There are no streams or drainage channels within 100 feet of the Preferred, Alternate, or the Common transmission line routes for Site 6, or at the Alternate Substation Site. A roadside drainage ditch is present south of East 36th Street near the termination points of both the Preferred and Alternate transmission line routes. There is also a narrow, FEMA-designated

floodplain associated with this drainage ditch. This floodplain is approximately 80-90 feet wide where it parallels the site boundary. This ditch and the associated floodplain would be spanned, resulting in no impacts to this surface water feature or the associated FEMA-designated floodplain.

There are two small emergent wetlands and one forested wetland present along the Preferred Transmission Line Route for Site 6 and along an access road that would lead to the Alternate Substation Site. These wetlands range between 0.39 and 1.29 acres. The Alternate Transmission Line Route crosses a forested wetland in two locations. The right-of-way in these areas would be approximately 0.6 acres and 0.7 acres. Two wetlands were also identified along the proposed alignment of two new 138 kV loops that would connect to the existing 138 kV transmission lines to the west of the Alternate Substation Site. The Applicant states that there are no wetlands within the footprint of the Alternate Substation Site. Not all wetlands associated with Site 6 would be avoided. However, where practicable, the Applicant would span these resources during construction, operation, and maintenance activities.

No ponds, lakes, or reservoirs were observed along the transmission right-of-ways of Site 3 or 6, nor at either substation site.

Threatened and Endangered Species

The Applicant requested information from the ODNR and the USFWS regarding state- and federally-listed threatened and endangered plant and animal species. Additional information was provided through field assessments and review of published ecological information. The following table reflects the results of the information requests, field assessments, and document review.

PLANTS				
Common Name	**Scientific Name**	**Federal Status**	**State Status**	**Presence in Project Area**
American Water-milifoil	*Myriophyllum sibiricum*	NA	Threatened	Known range, species not found during December 2011 field surveys.
Bushy Aster	*Symphyotrichum dumosum*	NA	Threatened	Known range, species not found during December 2011 field surveys.
Cow-wheat	*Melampyrum lineare*	NA	Threatened	Known range, species not found during December 2011 field surveys.
Necklace Sedge	*Carex projecta*	NA	Threatened	Known range, and species not found during December 2011 field surveys.
Sharp-glumed Manna Grass	*Glyceria acutiflora*	NA	Threatened	Known range, and species not found during December 2011 field surveys.
Smooth Rose *	*Rosa blanda*	NA	Threatened	Known range, species not found during December 2011 field surveys. Species may be present at Site 6. Further survey would be required.
BIRDS				
Common Name	**Scientific Name**	**Federal Status**	**State Status**	**Presence in Project Area**
Bald Eagle	*Haliaeetus leucocephalus*	Species of Concern	Threatened	Known range, no bald eagle nests records near project, and species not found during December 2011 field surveys.

Golden-winged Warbler *	*Vermivora chrysoptera*	N/A	Endangered	Known range, and species not found during December 2011 field surveys. Suitable habitat is present within the Common Transmission Line Route for Site 3 and 6, within the Preferred Transmission Line Route for Site 6, and at the Alternate Substation Site. Construction constraints would be required.
Hermit Thrush *	*Catharus guttatus*	N/A	Threatened	Known range, and species not found during December 2011 field surveys. Suitable habitat is present within the Alternate Transmission Line Route for Site 6, and at the Alternate Substation Site. Further survey would be required.
Kirtland's Warbler *	*Dendrioca kirtlandii*	Endangered	Endangered	Known range, and species not found during December 2011 field surveys. The USFWS requested that the Applicant avoid suitable habitat for species during the spring from late April through May and in the fall from late August to early October.
Peregrine Falcon	*Falco peregrines*	NA	Threatened	Known range, no peregrine falcon nests records near project, and species not found during December 2011 field surveys.
Piping Plover	*Charadrius melodus*	Endangered	Endangered	Known range, no piping plover nests records near project, no suitable habitat available, and species not found during December 2011 field surveys.
Sandhill Crane	*Grus Canadensis*	NA	Endangered	Known range, no sandhill crane nests records near project, no suitable habitat available, and species not found during December 2011 field surveys.
Sedge Wren	*Cistothorus platensis*	NA	Species of Concern	Known range, no sedge wren nests records near project, no suitable habitat available, and species not found during December 2011 field surveys.
Upland Sandpiper	*Bartramia longicauda*	NA	Threatened	Known range, no upland sandpiper nests records near project, and species not found during December 2011 field surveys.
Barn Owl	*Tyto alba*	NA	Threatened	Known range, no barn owl nests records near project, and species not found during December 2011 field surveys.

REPTILES & AMPHIBIANS

Common Name	**Scientific Name**	**Federal Status**	**State Status**	**Presence in Project Area**
Blanding's Turtle	*Emydoidea blandingi*	NA	Threatened	Known range, and species not found during December 2011 field surveys.
Four-toed Salamander	*Hemidactylium scutatum*	NA	Species of Concern	Known range, and species not found during December 2011 field surveys.
Spotted Turtle	*Clemmys guttata*	NA	Threatened	Known range, no suitable habitat found within any of the transmission line routes or at either substation site, and species not found during December 2011 field surveys.

MAMMALS				
Common Name	**Scientific Name**	**Federal Status**	**State Status**	**Presence in Project Area**
Indiana Bat *	*Myotis sodalis*	Endangered	Endangered	Known range, suitable habitat may be present within the Alternate Transmission Line Route at Site 6. Applicant is not required to perform presence surveys unless suitable habitat trees need to be cut during the summer roosting period of April 2nd to September 29th. The ODNR and USFWS would require the Applicant to apply the season cutting restriction dates (September 30th to April 1st) if suitable Indiana bat summer roosting/rearing habitat would need to be cut to construct this project.
FISH				
Common Name	**Scientific Name**	**Federal Status**	**State Status**	**Presence in Project Area**
Bigmouth Shiner	*Notropis dorsalis*	NA	Threatened	Known range, surveys were not required based on lack of suitable habitat for species.
Channel Darter	*Percina copelandi*	NA	Threatened	Known range, surveys were not required based on lack of suitable habitat for species.
FRESH WATER MUSSELS				
Common Name	**Scientific Name**	**Federal Status**	**State Status**	**Presence in Project Area**
Black Sandshell	*Ligumia recta*	NA	Threatened	Known range, surveys were not performed based on lack of suitable habitat for species.
Creek Heelsplitter	*Lasmigona compressa*	NA	Species of Concern	Known range, surveys were not performed based on lack of suitable habitat for species.
Eastern Pondmussel	*Ligumia nasuta*	NA	Threatened	Known range, surveys were not performed based on lack of suitable habitat for species.
Threehorn wartyback	*Obliquaria reflexa*	NA	Threatened	Known range, surveys were not performed based on lack of suitable habitat for species.
Wavy-rayed Lampmussel	*Lamsilis fasciola*	NA	Species of Concern	Known range, surveys were not performed based on lack of suitable habitat for species.
INSECTS				
Common Name	**Scientific Name**	**Federal Status**	**State Status**	**Presence in Project Area**
Two-spotted Skipper	*Euphyes bimacula*	NA	Species of Concern	Known range, species not found during December 2011 field surveys.

* Additional field survey work would be required to determine the presence of species or suitable habitat, and/or construction restrictions would be required depending on the transmission line routes and substation site approved by the Board.

Direct and indirect impacts to wildlife at the Black River Project would be minimized by prohibiting the clearing of golden-winged warbler nesting habitat during critical breeding periods, and Kirtland's warbler suitable habitat during spring and fall migration periods.

Vegetation

The Preferred and Alternate transmission line routes for Site 3 are located on the east and west sides of the Site 3 property. These areas are composed of various grasses and weed species. The Common Transmission Line Route for Site 3 travels entirely within existing right-of-way that is

maintained in turf grass with some shrub species scattered throughout. The Preferred Substation Site is nearly flat and contains maintained grasses. Some clearing of vegetation may be required to construct the Preferred Transmission Line Route. If this route is not located entirely within the site, some tree clearing to the east may be necessary. No tree clearing would be required for construction of the Alternate and Common transmission line routes, except for some clearing of brush within the existing right-of-way. A small amount of clearing and grading would be required at the Preferred Substation Site. The total land disturbance activity for the Preferred Substation Site and associated transmission lines is estimated to be up to 2.5 acres.

The Preferred and Alternate transmission line routes for Site 6 cross mostly open space containing grasses with small shrub species and scattered tree groupings. Wooded areas are found along the east and west sides of the site. The Alternate Substation Site is also relatively flat, but contains more vegetation than the Preferred Substation Site. It is comprised of grasses, forbs, shrubs, individual trees, and some stands of trees. The right-of-way associated with the transmission line routes for Site 6 would need to be cleared to accommodate placement of poles/towers and to facilitate conductoring. The Preferred Transmission Line Route would cross only individual trees, totaling approximately 0.1 acres. The Alternate Transmission Line Route would cross through a wooded area, totaling approximately 1.4 acres. Some minor vegetation clearing would be necessary for the two new double-circuit 138 kV loops to the Alternate Substation Site from the west. No vegetation clearing would be necessary along the existing Edgewater to Johnson West 69 kV line that would be reconductored to 138 kV. Some clearing would be required at the Alternate Substation Site. The total land disturbance activity for the Alternate Substation Site and associated transmission lines is estimated to be up to 5.0 acres.

Public Services and Facilities

Noise

Construction noise impacts would occur during the five-month construction period for the transmission lines and the 13-month construction period for the substation. Construction noise would be most intense during auger drill rig or pneumatic tool operations.[14] The impacts of these operations to residents should be reduced by limiting the acceptable construction times to Monday-Friday, 7:00 a.m. to 7:00 p.m. Construction noise impacts would be nearly equal for either proposed substation site.

Intermittent noise impacts would also occur during maintenance of the substation and transmission lines, but this noise would be for short durations. The transmission lines would generally not emit audible noise during operation.

As provided within the application, the Preferred and Alternate substation sites initially yielded operational exceedances of 7.1 to 11.8 decibels (dBA) over the existing background noise levels.[15] After discussions with Staff, the Applicant chose to move forward with quieter transformers than initially proposed within the application. These transformers result in a substation design that nearly eliminates operational increases over the existing background noise levels.

[14] 84.4 and 85.2 dBA maximum noise output, respectively, at a separation distance of 50 feet, per *Road Construction Noise Model, Version 1.1*; U.S. Department of Transportation, Federal Highway Administration.

[15] As calculated by Staff through logarithmic addition of the ambient and operational noise levels.

This change in transformer technology reduces sound levels by 16 decibels. The change is appropriate because it would reduce noise impacts to residents and the need for further mitigation required of the Applicant in the long term.

The Preferred Substation Site presents the least operational noise impacts to the surrounding residences and businesses. The choice by the Applicant to install quieter transformers only serves to increase the Preferred Substation Site's suitability.

Communication

The Applicant states that radio or television interference should not result from the operation of the proposed transmission line and substation. However, defective substation hardware can cause corona/gas discharges, which could cause localized television and radio signal degradation. The Applicant states that this is easily identifiable and correctable through component replacement, thereby eliminating the interference.

However, the Applicant makes no mention of microwave communication paths or wired telephone circuit noise created by electrical interference. Microwave paths rely on clear and unobstructed paths from the emitter to end-point receiver. The Applicant should conduct a worst-case microwave path survey for the approved transmission line routes and substation site and avoid any existing or proposed microwave paths. Further, the Applicant should consult and work with the local telephone provider(s) to ensure no degradation to wired telephone service occurs or is acceptably mitigated.

Recommended Findings

The Staff recommends that the Board find that the nature of the probable environmental impact has been determined for the proposed facility, and therefore complies with the requirements specified in ORC Section 4906.10(A)(2), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(3)

MINIMUM ADVERSE ENVIRONMENTAL IMPACT

Pursuant to ORC Section 4906.10(A)(3), the proposed facility must represent the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, along with other pertinent considerations.

Site Selection

The principle objective for siting the project was to identify sufficient open space, a minimum of two acres, for a substation to supply additional power to Republic Steel. Additional considerations included minimizing ecological impacts to the Black River corridor, as well as efficiently tying in to existing electrical line infrastructure to minimize impacts to the surrounding area.

The Applicant conducted a systematic site selection study intended to identify Preferred and Alternate substation sites that would meet engineering requirements for the project and minimize ecological, cultural, and land use impacts. A project study area was defined to include land within 0.25 miles of existing ATSI 69 kV or larger electric lines. The Applicant's siting study considered a one-mile zone around the power demand and reliability need area, which is the Republic Steel facility. Land use, ecological, and cultural features in the study area that represent possible constraints to project construction were then identified and mapped. Six potential sites were identified that contain desirable attributes and avoid major constraints to the greatest extent practicable. The overall desirability of these potential sites was then ranked based on their quantitative and qualitative characteristics. The Applicant selected the three highest scoring sites for further review (sites 3, 4, and 6 in the site selection study). Based on refining further constraints, including site proximity to existing electric lines, proximity to existing buildings, site size, and site orientation, the Applicant refined its selection to the proposed Preferred and Alternate substation sites (sites 3 and 6, respectively).

Route alternatives for the transmission lines were identified in the vicinity of Site 3 and Site 6. Alternatives were considered based on their proximity to the Republic Steel plant and the location of existing ATSI transmission lines and easements. Both substation sites had extensive routing criteria evaluated by the Applicant to incorporate a Preferred and Alternate transmission line route. Criteria included, among others, proximity of the lines to residences, historical sites, and new parcels crossed. Some of the primary constraints that were identified by the Applicant included residences and neighborhoods, parks and recreation areas, wetlands, ease of interconnection, and availability of existing transmission corridors.

Staff has evaluated the Applicant's site and route selection process and finds the Preferred and Alternate substation sites and transmission line routes to be reasonable selections based on proximity to the steel plant, existing ATSI transmission corridors, and sensitive land uses in a dense urban environment.

Minimizing Impacts

Staff recommends the Preferred Substation Site (Site 3) as representing the minimum adverse environmental impact. While there would be direct recreational impacts at Site 3, the property owner, the City of Lorain, is aware of the project and has indicated its support. The remaining property on Site 3 would be available for recreational uses after construction when the Applicant returns unused land back to the City. Staff recommends the Preferred Transmission Line Route

for Site 3, as it is farther away from existing residences than the Alternate Transmission Line Route.

Site 3 and the associated Preferred, Alternate, and Common transmission line routes would not impact any surface waters and would require less than 2.5 acres of vegetation clearing. The Alternate Substation Site (Site 6) and associated Preferred, Alternate, and Common transmission line routes may impact some wetlands and would require up to approximately 5.0 acres of vegetation clearing. Therefore, the Preferred Substation Site (Site 3), with the associated Preferred Transmission Line Route and the Common Transmission Line Route, would have fewer ecological impacts than the Alternate Substation Site (Site 6) and its associated transmission line routes.

Conclusion

The project would result in both temporary and permanent impacts to the project area. Because of its reduced social impacts and its lower potential to impact streams, wetlands, and wildlife, Staff concludes that the Preferred Substation Site (Site 3), with the associated Preferred Transmission Line Route and the Common Transmission Line Route, represents the minimal adverse environmental impact. With the recommended conditions, Staff concludes that minimum adverse environmental impacts would be realized.

Recommended Findings

The Staff recommends that the Board find that the proposed facility represents the minimum adverse environmental impact, and therefore complies with the requirements specified in ORC Section 4906.10(A)(3), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(4)

ELECTRIC GRID

Pursuant to ORC Section 4906.10(A)(4), the Board must determine that the proposed electric facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facility will serve the interests of electric system economy and reliability.

The purpose of this section is to evaluate the impact of integrating the proposed Black River Project into the existing regional transmission grid. The Lorain, Ohio area transmission system is unable to reliably handle the addition of the proposed Republic Steel electric arc furnace. Without these the proposed upgrades, the transmission system would be unable to supply ample power to the new electric arc furnace and withstand certain single and double contingencies. The proposed substation would be located in the PJM Interconnection control area. The ability of the local and regional electric system to handle the increased load growth will require the electric transmission system to be expanded by:

- Installing the Black River Substation;
- Looping the Beaver-Edgewater 138 kV line to the Black River Substation, creating the Beaver-Black River 138 kV line and Black River-Republic 138 kV line, de-energizing the existing Beaver-Edgewater 138 kV line that extends from the closed Edgewater Generating Station;
- Looping the Johnson-USS/Kobe 138 kV line to the Black River Substation, creating a new Black River-Johnson 138 kV line and a second Black River-Republic 138 kV line; and,
- Looping the Johnson-Lorain 138 kV line to the Black River Substation, creating a second Black River-Johnson 138 kV line and a Black River-Lorain 138 kV line.

PJM Interconnection

PJM annually publishes the Regional Transmission Expansion Plan (RTEP). The RTEP summarizes the results of planning studies and explains the rationale behind system upgrades that are needed to maintain reliability within the PJM footprint. Stakeholders are encouraged to participate in the Transmission Expansion Advisory Committee, which provides advice and recommendations to aid in the development of the RTEP.

The Black River Project was not identified in the most recent PJM RTEP. PJM has been made aware of the project. ATSI plans to submit the proposed project and load addition for inclusion in the next RTEP. Staff asks that ATSI provide a copy of this request when submitted to PJM.

Transmission Planning Requirements

The North American Electric Reliability Corporation (NERC) is responsible for the development and enforcement of the federal government's approved reliability standards, which are applicable to all owners, operators, and users of the bulk power system. NERC requires planners of the bulk electric transmission system to meet Reliability Standards[16] TPL-001-0.1 through TPL-004-0 under transmission outage conditions for categories A, B, C, and D contingencies. According to NERC, a contingency is an unexpected failure or outage of a system component, such as a

[16] North American Electric Reliability Corporation, Reliability Standards, Transmission Planning (TPL-001-0.1-TPL-004-0). Retrieved January 23, 2011, from http://www.nerc.com/page.php?cid=2|20

generator, transmission line, circuit breaker, switch, or other electrical element. ATSI used NERC categories A through C for contingency planning of the Black River Project. Below is a partial list of the NERC categories and their meanings:

- Category A (no contingencies, normal system conditions);
- Category B (single contingency outage, n-1), the planning authority and transmission planner shall demonstrate that the interconnected transmission system can operate to supply projected customer demands and firm transmission service at all demand levels over the range of forecast system demand; and,
- Category C (multiple contingency outages, n-1-1), the planning authority shall demonstrate that the interconnected transmission system can operate to supply projected customer demands and firm transmission service at all demand levels over the range of forecast system demand and may rely upon the controlled interruption of customers or curtailment of firm transmission service.

During normal system conditions and categories B and C system outages, transmission lines shall not exceed their conductor thermal rating, and substation bus voltages must range from 0.95 per unit to 1.05 per unit, with a minimum contingency voltage of 0.092 per unit. Transformer ratings are specific to each transformer and are based on seasonal conditions, considering loss of life and thermal stresses, and ratings should not be exceeded during normal conditions or emergency conditions.

Load Flow Analysis

ATSI performed a load flow study on the 138 kV transmission systems in the area of Lorain, Sheffield Lake, and Vermilion. A 2011 summer peak load flow case was used to analyze the project area without the proposed Black River Project in-service, and a 2016 summer peak load flow case was used to analyze the project area with the proposed Black River Project in-service. Analysis shows that without the Black River Project, the existing transmission and distribution system is unable to adequately supply service to the increased load caused by the new electric arc furnace. The tables below show the overload and voltages problems with and without the Black River Project in-service.

Category A & B - Load Flow Analysis WITHOUT Proposed Black River Project

Base Case	Condition/Contingency/Outage	Line Overloads	Low Voltage
Normal Operations 2011 Summer Peak Load 138 kV Lorain Area	*Normal Operations*	None	None
	USS/Kobe 138 kV Line	Edgewater-USS/Kobe 138 kV (158.1%) Beaver-Edgewater 138 kV (107.2%)	US Steel (90.3%)
	Beaver-Edgewater 138 kV Line	Johnson-USS/Kobe 138 kV (110.7%)	None
	Johnson 138 kV Bus	Edgewater-USS/Kobe 138 kV (163.7%) Beaver-Edgewater 138 kV (133.2%)	US Steel (87.1%)

Category A & B - Load Flow Analysis WITH Proposed Black River Project			
Base Case	**Condition/Contingency/Outage**	**Line Overloads**	**Low Voltage**
Normal Operations 2016 Summer Peak Load 138 kV Lorain Area	*Normal Operations*	None	None
	Johnson 138 kV Line	Beaver-Black River 138 kV (100.6%)	None
	Johnson 138 kV Bus	Beaver-Black River 138 kV (99.2%)	None
Category C - Load Flow Analysis WITHOUT Proposed Black River Project			
Base Case	**Condition/Contingency/Outage**	**Line Overloads**	**Low Voltage**
Normal Operations 2011 Summer Peak Load 138 kV Lorain Area System	*Beaver-Johnson and Beaver-Edgewater 138 kV Lines*	Johnson-USS/Kobe 138 kV (109%) Johnson-Lorain 138 kV (113.2%) Q-2-AV-FW-X 138 kV (103.7%)	US Steel (91.6%) Edgewater (91.4%)
	#1 and #2 Beaver 345/138 kV Transformers	Johnson-USS/Kobe 138 kV (103%) Johnson-Lorain 138 kV (136.2%) Q-2-AV-FW-X 138 kV (121.9%)	US Steel (90.3%)
Category C - Load Flow Analysis WITH Proposed Black River Project			
Base Case	**Condition/Contingency/Outage**	**Line Overloads**	**Low Voltage**
Normal Operations 2016 Summer Peak Load 138 kV Lorain Area System	*Edgewater and Beaver-Black River 138 kV Lines*	None	None
	Beaver-Johnson and Black River-Lorain 138 kV Lines	Beaver-Black River 138 kV (115.2%)	None
	Avon #91 and #92 345/138 kV Transformers	Beaver-Black River 138 kV (123.22%)	None

The load flow studies show that even with the Black River Project, the Beaver-Black River 138 kV line still overloads under certain contingencies. ATSI plans to address this issue by bringing a 345 kV to 138 kV source into the Lorain area. They plan to make a submission to the Board in 2012 to address this Beaver-Black River overload.

Conclusion

The Applicant provided load flow details that demonstrated the power flows on the system with and without the proposed substation and transmission lines. Without the Black River Project, during certain single and double contingencies, the system may become unstable. In addition, the load flow studies indicated that the Beaver-Black River 138 kV line may remain unreliable during certain contingencies. ATSI will submit a project in 2012 to correct reliability problems in order to meet NERC criteria. The proposed facility is consistent with plans for expansion of the regional power system, and serves the interests of electric system economy and reliability.

Recommended Findings

The Staff recommends that the Board find that the proposed facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facility would serve the interests of electric system economy and reliability. Therefore, the facility complies with the requirements specified in ORC Section 4906.10(A)(4), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(5)

AIR, WATER, SOLID WASTE, AND AVIATION

Pursuant to ORC Section 4906.10(A)(5), the facility must comply with specific sections of the ORC regarding air and water pollution control, withdrawal of waters of the state, solid and hazardous wastes, and air navigation.

Air

Air quality permits are not required for construction of the proposed facility. However, fugitive dust rules adopted pursuant to the requirements of ORC Chapter 3704 (air pollution control laws) may be applicable to the proposed facility. The Applicant has indicated that fugitive dust would be controlled, where necessary, through dust suppression techniques such as irrigation, mulching, or application of tackifier resins. These methods of dust control comply with fugitive dust rules.

Water

Neither construction nor operation of the proposed facility would require the use of significant amounts of water, so requirements under ORC 1501.33 and 1501.34 are not applicable to this project. The Applicant has indicated that it will apply for the Ohio National Pollutant Discharge Elimination System (NPDES) Construction Water General Permit, Ohio EPA No. OHC000003.

In order to obtain the NPDES permit, an Ohio EPA Notice of Intent (NOI) application will be submitted 21 days before construction. Included with the NOI is the Storm Water Pollution Prevention Plan (SWPPP). The Applicant will control storm water and erosion and restore soils, wetlands, and streams disturbed as a result of construction of the facility by the following means:

- Obtain an NPDES Construction Water General Permit from the Ohio EPA;
- Prepare an SWPPP that identifies potential sources of pollution and describes and ensures the implementation of best management practices (BMPs);
- Prepare a Spill Prevention, Containment, and Countermeasure plan (SPCC) that will outline procedures to be implemented to prevent the release of hazardous substances into the environment.

With the implementation of these plans and permits, construction and operation of this facility would comply with requirements of ORC Chapter 6111, and the rules and laws adopted under this chapter.

Solid Waste

The Applicant has determined that, where trees must be cleared from the right-of-way, the resulting brush would be chipped, timber would be cut into appropriate lengths for sale or disposition by the landowner, and stumps would be buried or hauled from the site. Approximately 200 cubic yards of waste would be generated during construction. The Applicant indicated that all vegetation and waste would be disposed of at an approved landfill. The Applicant's solid waste disposal plans would comply with solid waste disposal requirements in ORC Chapter 3734, and the rules and laws adopted under this chapter.

Aviation

There are five public-use air transportation facilities within 20 miles of the proposed transmission line and substation. The nearest identified public-use airports include the Cleveland

Hopkins Airport, the Lorain County Airport, the Elyria Airport, Bots-Ford, and Wakeman. Because of the distance and lack of structures greater than 200 feet above ground level, the construction and operation of the proposed facility is not expected to have a significant impact on airport facilities.

Recommended Findings

The Staff finds that the proposed facility complies with the requirements specified in ORC Section 4906.10(A)(5), provided that any certificate issued by the Board for the certification of the proposed facility include the conditions specified in the section of this report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(6)

PUBLIC INTEREST, CONVENIENCE, AND NECESSITY

Pursuant to ORC Section 4906.10(A)(6), the Board must determine that the facility will serve the public interest, convenience, and necessity.

The Black River substation and transmission lines are part of an overall project to improve the area's electric transmission system and provide a reliable electricity supply for Republic Steel. With this new substation, the Edgewater Substation can be removed and the lakefront property will be opened up. City officials hope that this lakefront will then be re-developed.

The Applicant will comply with safety standards set by the Occupational Safety and Health Administration (OSHA), the Public Utilities Commission of Ohio, and equipment specifications. The Applicant has designed the facility to meet or exceed the requirements of the National Electric Safety Code.

EMF

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. However, there have been concerns that EMF may have impacts on human health.

Because these concerns exist, the Applicant is required to compute the EMF associated with the new circuits. The fields were computed based on the maximum loadings of the lines, which would lead to the highest EMF values that might exist at the proposed substation and along the transmission line routes. The magnetic fields are a function of the electric current, the configuration of the conductors, and the distance from the transmission lines. The electric field is a function of the voltage, the line configuration, and the distance from the transmission lines.

The magnetic fields were estimated at the substation fence to be less than 91.9 milligauss, and the electric field would be less than 1.61 kilovolt/meter. The magnetic field output is comparable to that of common household appliances; for example, a corded power tool has a magnetic field output of 123 milligauss. The maximum magnetic field scenarios for the proposed transmission lines are listed in that application (Table 06-4). 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 EMF profiles for the proposed transmission line routes are shown in Figures 06-6 through 06-9 in that application.

Daily current load levels would normally operate below the maximum load conditions, thereby further reducing nominal EMF values. The electric fields are easily shielded by physical structures such as the walls of a house, foliage, or earthen berms. The magnetic fields generated by the substation and transmission line are attenuated very rapidly as the distance from them increases. The Applicant will use a compact design (single wood pole tangent structures with horizontal post insulators) that reduces EMF in comparison to other installations.

Recommended Findings

Staff recommends that the Board find that the proposed facility would serve the public interest, convenience, and necessity, and therefore complies with the requirements specified in ORC Section 4906.10(A)(6), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(7)

AGRICULTURAL DISTRICTS

Pursuant to ORC Section 4906.10(A)(7), the Board must determine the facility's impact on the viability as agricultural land of any land in an existing agricultural district within the Preferred and Alternate site of the proposed utility facility. The agricultural district program was established under ORC Chapter 929. Agricultural land is classified as an agricultural district through an application and approval process that is administered through local county auditors' offices.

There are no agricultural district parcels within the project area; therefore, no impacts to agricultural districts would occur from the project.

Recommended Findings

The Staff recommends that the Board find that the impact of the proposed facility on the viability of existing agricultural land in an agricultural district has been determined, and therefore complies with the requirements specified in ORC Section 4906.10(A)(7), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this report entitled Recommended Conditions of Certificate.

Considerations for ORC Section 4906.10(A)(8)

WATER CONSERVATION PRACTICE

Pursuant to ORC Section 4906.10(A)(8), the proposed facility must incorporate maximum feasible water conservation practices, considering available technology and the nature and economics of the various alternatives.

Because the facility would not require the use of water for operation, water conservation practice as specified under ORC 4906.10(A)(8) is not applicable to the project.

Recommended Findings

The Staff recommends that the Board find that the proposed facility would incorporate maximum feasible water conservation practices, and therefore complies with the requirements specified in ORC Section 4906.10(A)(8).

IV. RECOMMENDED CONDITIONS OF CERTIFICATE

Following a review of the application filed by ATSI and the record compiled to date in this proceeding, OPSB Staff recommends that a number of conditions become part of any certificate issued for the proposed facility. These recommended conditions may be modified as a result of public or other input received subsequent to issuance of this report. At this time, OPSB Staff recommends the following conditions:

(1) That the facility be installed at the Applicant's Preferred Substation Site (Site 3), with the associated Preferred Transmission Line Route and the Common Transmission Line Route, as presented in the application, and as modified and/or clarified by the Applicant's supplemental filings and further clarified by recommendations in this *Staff Report of Investigation*.

(2) That the Applicant shall utilize the equipment and construction practices as described in the application and as modified and/or clarified in supplemental filings, replies to data requests, and recommendations in this *Staff Report of Investigation*.

(3) That the Applicant shall implement the mitigation measures as described in the application and as modified and/or clarified in supplemental filings, replies to data requests, and recommendations in this *Staff Report of Investigation*.

(4) That the Applicant shall conduct a pre-construction conference prior to the start of any construction activities. OPSB Staff, the Applicant, and representatives of the prime contractor and all sub-contractors for the project shall attend the pre-construction conference. The conference shall include a presentation of the measures to be taken by the Applicant and contractors to ensure compliance with all conditions of the certificate, and discussion of the procedures for on-site investigations by OPSB Staff during construction. Prior to the conference, the Applicant shall provide a proposed conference agenda for OPSB Staff review. The Applicant may conduct separate pre-construction meetings for various stages of the construction process.

(5) That prior to the commencement of construction activities 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, to OPSB Staff within seven days of issuance or receipt by the Applicant. The Applicant shall provide a schedule of construction activities and acquisition of corresponding permits for each activity at the pre-construction conference.

(6) That prior to the pre-construction conference and subject to OPSB Staff review and approval, the Applicant shall have in place a complaint resolution procedure to address potential public grievances resulting from project construction and operation. The Applicant shall work to mitigate or resolve any issues with those who file a complaint. All complaints submitted must be immediately forwarded to OPSB Staff.

(7) That the Applicant shall submit to OPSB Staff a copy of the request submitted to PJM that the Black River Project be included the Regional Transmission Expansion Plan.

(8) That any new structures for the rebuilt portion of the transmission line system be located so that any new overhead transmission lines are not closer to existing residential structures than already exists at that location.

(9) That prior to commencement of any construction, the Applicant shall prepare a landscape plan for OPSB Staff's review and approval that addresses the aesthetic impacts of the facility, including screening types and locations. The Applicant shall consult with adjacent property owners in the development of this plan.

(10) That prior to commencement of any construction, the Applicant shall submit to OPSB Staff, for review and approval, a construction and maintenance access plan based on final plans for the access roads, transmission line, substation facilities, and types of equipment to be used. The plan shall consider the location of streams, wetlands, wooded areas, and sensitive plant species (as identified by the ODNR Division of Wildlife), and explain how impacts to all sensitive resources will be avoided or minimized during construction, operation, and maintenance. The plan shall provide specific details on all wetlands, streams, and/or ditches to be crossed by the transmission line, including those where construction or maintenance vehicles and/or facility components such as access roads cannot avoid crossing the waterbody. In such cases, specific discussion of the proposed crossing methodology for each wetland and stream crossing (such as culverts), and post-construction site restoration, must be included. The plan shall include the measures to be used for restoring the area around all temporary access points, and a description of any long-term stabilization required along permanent access routes.

(11) That prior to commencement of any construction, the Applicant shall submit a vegetation management plan, for OPSB Staff review and approval, identifying all areas of proposed vegetation clearing for the project, specifying the extent of the clearing, and describing how trees and shrubs around structures, along access routes, in the transmission line corridor, at construction staging areas, at the substation, during maintenance operations, and in proximity to any other project facilities will be protected from damage, and, where clearing cannot be avoided, how such clearing work will be done so as to minimize removal of woody vegetation. Priority should be given to protecting mature trees throughout the project area, and all woody vegetation in wetlands and riparian areas, both during construction and during subsequent operation and maintenance of all facilities; low-growing trees and shrubs in particular should be protected wherever possible within the proposed right-of-way. The Vegetation Management Plan should also explore various options for disposing of downed trees, brush, and other vegetation during initial clearing for the project, and recommend methods that minimize the movement of heavy equipment and other vehicles within the right-of-way that would otherwise be required for removing all trees and other woody debris off site.

(12) That for both construction and future right-of-way maintenance, the Applicant shall limit to the greatest extent possible the use of herbicides in proximity to surface waters, including wetlands along the right-of-way. Individual treatment of tall-growing woody plant species is preferred, while general, widespread use of herbicides during initial clearing or future right-of-way maintenance should only be used where no other options exist, and with prior approval from the Ohio EPA. The Applicant shall submit a plan describing the planned herbicide use for all areas in or near any surface waters during initial project construction and/or future right-of-way maintenance for review and approval by OPSB Staff prior to commencement of any construction.

(13) That the Applicant shall have an OPSB Staff-approved environmental specialist on site during construction activities that may affect sensitive areas, as mutually agreed upon between the Applicant and OPSB Staff, and as shown on the Applicant's final approved construction plan. Sensitive areas include but are not limited to areas of vegetation clearing, designated wetlands and streams, and locations of threatened or endangered species or their identified habitat. The environmental specialist shall be familiar with water quality protection issues and potential threatened or endangered species of plants and animals that may be encountered during project construction.

(14) That OPSB Staff, the ODNR Division of Wildlife (DOW), and the USFWS shall be contacted within 24 hours if state or federal threatened or endangered species are encountered during construction activities. Construction activities that could adversely impact the identified plants or animals shall be halted until an appropriate course of action has been agreed upon by the Applicant, OPSB Staff, and the DOW in coordination with the USFWS. Nothing in this provision shall preclude agencies having jurisdiction over the facility with respect to threatened or endangered species from exercising their legal authority over the facility consistent with law.

(15) That if golden-winged warbler preferred habitat types are present and will be impacted, then construction in this habitat is prohibited during the nesting period of May 15 to July 15.

(16) That the Applicant shall avoid suitable habitat for the Kirtland's warbler during the spring from late April through May and in the fall from late August to early October.

(17) That the Applicant shall adhere to seasonal cutting dates of September 30 through April 1 for removal of suitable Indiana bat habitat trees, if avoidance measures cannot be achieved. If suitable Indiana bat habitat trees must be cut during the summer season of April 2 through September 29, a mist-netting survey must be conducted in May or June prior to cutting. Net surveys shall incorporate either two net sites per square kilometer of project area with each net site containing a minimum of two nets used for two consecutive nights, or one net site per kilometer of stream within the project limits with each net site containing a minimum of two nets used for two consecutive nights. OPSB Staff and the ODNR shall be contacted to discuss methodologies prior to commencement of any mist-netting surveys proposed by the Applicant. All mist-netting results shall be reviewed and approved by OPSB Staff and the ODNR prior to the cutting of any Indiana bat habitat trees during the summer season.

(18) That at least seven (7) days before the pre-construction conference, the Applicant shall submit to OPSB Staff for review and acceptance, a copy of all NPDES permits including its approved SWPPP, approved SPCC procedures, and its erosion and sediment control plan. Any soil issues must be addressed through proper design and adherence to the Ohio EPA BMPs related to erosion and sedimentation control.

(19) That the Applicant shall employ the following erosion and sedimentation control measures, construction methods, and BMPs when working near environmentally-sensitive areas and/or when in close proximity to any watercourses, in accordance with the Ohio NPDES permit(s) and SWPPP obtained for the project:

(a) During construction of the facility, seed all disturbed soil, except within actively cultivated agricultural fields, within seven (7) days of final grading with a seed mixture

acceptable to the appropriate County Cooperative Extension Service. Denuded areas, including spoils piles, shall be seeded and stabilized within seven (7) days, if they will be undisturbed for more than twenty-one (21) days. Re-seeding shall be done within seven (7) days of emergence of seedlings as necessary until sufficient vegetation in all areas has been established.

(b) Inspect and repair all erosion control measures after each rainfall event of one-half of an inch or greater over a twenty-four (24) hour period, and maintain controls until permanent vegetative cover has been established on disturbed areas.

(c) Delineate all watercourses, including wetlands, by fencing, flagging, or other prominent means.

(d) Avoid entry of construction equipment into watercourses, including wetlands, except at specific locations where construction has been approved.

(e) Prohibit storage, stockpiling, and/or disposal of equipment and materials in these sensitive areas.

(f) Locate structures outside of identified watercourses, including wetlands, except at specific locations where construction has been approved.

(g) Divert all storm water runoff away from fill slopes and other exposed surfaces to the greatest extent possible, and direct instead to appropriate catchment structures, sediment ponds, etc., using diversion berms, temporary ditches, check dams, or similar measures.

(20) That the Applicant shall remove all temporary gravel and other construction staging area and access road materials after completion of construction activities, as weather permits, unless otherwise directed by the landowner. Impacted areas shall be restored to pre-construction conditions in compliance with the NPDES permit(s) obtained for the project and the approved SWPPP created for this project.

(21) That the Applicant shall comply with fugitive dust rules by the use of water spray or other appropriate dust suppressant measures whenever necessary.

(22) That the Applicant shall restrict public access to the facility with appropriately placed warning signs or other necessary measures.

(23) That prior to commencement of construction activities that require transportation permits, the Applicant shall obtain all such permits. The Applicant shall coordinate with the appropriate authority regarding any temporary or permanent road closures, lane closures, road access restrictions, and traffic control for access/egress necessary for construction and operation of the proposed facility. Coordination shall include, but not be limited to, the County Engineer, ODOT, local law enforcement, and health and safety officials. This coordination shall be detailed as part of a final traffic plan submitted to OPSB Staff prior to the pre-construction conference for review and acceptance.

(24) That general construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m., or until dusk when sunset occurs after 7:00 p.m. Impact pile driving and hoe ram operations, if required, shall be limited to the hours between 10:00 a.m. to 5:00 p.m., Monday through Friday. Construction activities that do not involve noise increases above

ambient levels at sensitive receptors are permitted outside of daylight hours when necessary. The Applicant shall notify property owners or affected tenants within the meaning of Rule 4906-5-08(C)(3), OAC, of upcoming construction activities including potential for nighttime construction activities.

(25) That thirty (30) days prior to commencement of any construction, the Applicant notify, in writing, any owner of an airport located within 20 miles of the project boundary, whether public or private, whose operations, operating thresholds/minimums, landing/approach procedures and/or vectors are expected to be altered by the siting, operation, maintenance, or decommissioning of the facility.

(26) That all applicable structures, including construction equipment, be lit in accordance with FAA circular 70/7460-1 K Change 2, Obstruction Marking and Lighting; or as otherwise prescribed by the FAA. This includes all cranes and construction equipment.

(27) That prior to the pre-construction conference, the Applicant shall conduct a telephone noise survey in coordination with the local service provider(s) and provide the results to OPSB Staff for review and acceptance.

(28) That the Applicant must meet all Federal Communications Commission and other federal agency requirements to construct an object that may affect communications and, subject to OPSB Staff approval, mitigate any effects or degradation caused by substation operation or placement. For any residence that is shown to experience a degradation of TV reception or interference of wired telephone service due to facility operation, the Applicant shall provide, at its own expense, cable or direct broadcast satellite TV service or other mitigation acceptable to the affected resident(s), the Applicant, and OPSB Staff.

(29) That at least thirty (30) days prior to the pre-construction conference, the Applicant shall conduct a microwave path study that identifies all existing microwave paths that intersect the project area, and a worst-case Fresnel zone analysis for each path. A copy of this study shall be provided to the path licensee(s), for review, and to OPSB Staff for review and acceptance. The assessment shall conform to the following requirements:

(a) An independent and registered surveyor, licensed to survey within the state of Ohio, shall determine the exact location and worst-case Fresnel zone dimensions of the above-referenced paths, and the center point and boundary of the proposed substation site, using the same survey equipment.

(b) Provide the distance (feet) between the surveyed center point and boundary of the proposed substation and the surveyed worst-case Fresnel zone of each microwave path.

(c) Provide a map of the surveyed microwave paths, center points, and boundaries at a legible scale.

(d) Describe the specific, expected impacts of the project on all paths and systems considered in the assessment.

(30) That all existing licensed microwave paths and communication systems shall be subject to avoidance or mitigation. The Applicant shall complete avoidance or mitigation measures prior to commencement of any construction for impacts that can be predicted in sufficient detail to implement appropriate and reasonable avoidance and mitigation measures. After construction, the Applicant shall mitigate all observed impacts of the project to microwave

paths and systems within seven (7) days or within a longer time period approved by OPSB Staff. Avoidance and mitigation for any known point-to-point microwave paths shall consist of measures acceptable to OPSB Staff, the Applicant, and the affected path owner, operator, or licensee(s). If interference with an omni-directional or multi-point system is observed after construction, mitigation would be required only for the affected receptor(s).

(31) That at least thirty (30) days before the pre-construction conference, the Applicant shall submit to OPSB Staff, for review and acceptance, one set of detailed engineering drawings of the final project design, including all substations, electric tower and pole locations, temporary and permanent access roads, any crane routes, construction staging areas, and any other associated facilities and access points, so that OPSB Staff can determine that the final project design is in compliance with the terms of the certificate. The final project layout shall be provided in hard copy and as geographically-referenced electronic data. The final design shall include all conditions of the Certificate and references at the locations where the Applicant and/or its contractors must adhere to a specific condition in order to comply with the Certificate.

(32) That if any changes are made to the project layout after the submission of final engineering drawings, all changes shall be provided to OPSB Staff in hard copy and as geographically-referenced electronic data. All changes outside the environmental survey areas and any changes within environmentally-sensitive areas will be subject to OPSB Staff review and approval prior to construction in those areas.

(33) That within sixty (60) days after the commencement of commercial operation, the Applicant shall submit to OPSB Staff a copy of the as-built specifications for the entire facility. If the Applicant demonstrates that good cause prevents it from submitting a copy of the as-built specifications for the entire facility within 60 days after commencement of commercial operation, it may request an extension of time for the filing of such as-built specifications. The Applicant shall use reasonable efforts to provide as-built drawings in both hard copy and as geographically-referenced electronic data.

(34) That the certificate shall become invalid if the Applicant has not commenced a continuous course of construction of the proposed facility within five (5) years of the date of journalization of the certificate.

(35) That the Applicant shall provide to OPSB Staff the following information as it becomes known:

(a) The date on which construction will begin;

(b) The date on which construction was completed;

(c) The date on which the facility began commercial operation.

APPENDIX

1. DOCKETING RECORD

CASE NUMBER: 11-5855-EL-BSB and 11-5856-EL-BTX
DESCRIPTION: Black River Project
FILINGS AS OF: 01/31/2012

01/26/2012	Letter in support of the ATSI/FirstEnergy Black River project filed by J. Vigil on behalf of Republic Steel, Inc..
01/24/2012	Response letter to Loraine Ritchey, Charleston Village Society, Inc. regarding the ATSI/FirstEnergy Black River project.
01/20/2012	Proof of publication for the county of Lorain.
01/13/2012	OPSB public response letter sent to: Mayor Tony Krasienko filed by Todd A. Snitchler.
01/11/2012	Service Notice
01/11/2012	Entry ordered, that ATSI's motion for an order approving the delay of publication be granted.
01/09/2012	Proof of Publication. (Lorain County)
01/09/2012	Motion for order approving date of publication of public newspaper notice of filing of certified and complete application and memorandum in support filed by Robert J Schmidt Jr on behalf of American Transmission Systems Inc.
01/05/2012	Service Notice
01/05/2012	Entry ordered that ATSI's motion to consolidate the proceedings is reasonable and should be granted; that, in accordance with finding (7), ATSI's waiver requests be granted; that the hearings in this matter be scheduled at the times and places designated in finding (13); that notices of the application and hearings be published by ATSI in accordance with findings (14) and (15); that Staff file its Staff Report pursuant to finding (16); that all parties file their issues lists, and expert and factual testimony in accordance with finding (16). (JJT)
12/27/2011	Supplemental affidavit of proof of service of certified application on public officers filed by J. Thacker on behalf of FirstEnergy Service Company.
12/23/2011	Notice that applicant ATSI has paid $30, 000 in application fees for case no. 11-5856-EL-BTX and $50,000 in application fees for case no. 11-5855-EL-BSB, filed by R. Schmidt, Jr.
12/23/2011	Affidavit of proof of service of certified application on public officers and service to public libraries on behalf of FirstEnergy Service Company, filed by J. Thacker.
12/23/2011	Motion and memorandum in support to consolidate proceedings on behalf of American Transmission Systems, Inc., filed by R. Schmidt Jr.
12/23/2011	Correspondence on behalf of OPSB staff, stating staff does not object to waiver request in referenced cases.
12/23/2011	Letter to Mr. Morgan Parke of American Transmission Systems, Inc. informing that application has been found to comply with Chapters 4906-01, et seq., of the Ohio Administrative Code filed on behalf of the Ohio Power Siting Board, filed by Chairman, T. Snitchler.
12/22/2011	Application continued. (Part 2 of 2)
12/22/2011	Application for Certificate of Environmental Compatibility and Public Need for the Black River substation project on behalf of FirstEnergy Service Company filed by J. Thacker. (Part 1 of 2)
12/22/2011	Motion and memorandum in support to seal portions of record of these proceedings on behalf of American Transmission Systems, Inc., filed by R. Schmidt.
12/22/2011	Confidential document target: proprietary and trade secret information on behalf of American Transmission Systems Inc., filed by R. Schmidt.
12/22/2011	Letter from GIS providing data prepared by Burns & McDonnell filed by R.J. Schmidt Jr.
12/20/2011	Motion and memorandum in support by applicant American Transmission Systems, Inc. for certain waivers filed by R. J. Schmidt.
12/02/2011	In the matter of the pre-application notification for Black River Transmission Substation Project.

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Summary: Staff Report Filed Staff Report electronically filed by Mr. James S. O'Dell on behalf of Staff of OPSB