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DUKE ENERGY CORPORATION
139 East Fourth St.
PO Box 960
Cincinnati, OH 45201-0960

RECEIVED-DOCKETING DIV
2009 JUL -2 AM 10:29
PUCO

sent by overnight courier

July 1, 2009

Ms. Reneé Jenkins, Secretary
Public Utilities Commission of Ohio
180 East Broad Street
Docketing Division 13th Floor
Columbus, Ohio 43215-3973

Re: Letter of Notification – Expedited Processing
Zimmer Substation Expansion Project
PUCO Case No. 09- -EL-BLN

557

Ms. Jenkins:

Enclosed for filing are one original and ten copies of a Letter of Notification (LON) regarding a Duke Energy project. Also enclosed is a check in the amount of \$2,000 as required under OAC 4906-05-11(I) for expedited LON processing.

If you have any questions regarding this submittal, please contact me at (513) 287-2379.

Sincerely,
Duke Energy

Stephen R. Lane
Environmental Scientist

Enclosures

- Cc Ms. Kim Wissman - OPSB (1/1)
- Mr. Klaus Lambeck - OPSB (1/1)
- Mr. Jim O'Dell - OPSB (1/1)
- Mr. Mark Ruzicka - Duke Energy (1/0)
- Mr. Paul Kling - Duke Energy (1/0)

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Technician Jmm Date Processed 07-02-09

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**LETTER OF NOTIFICATION FOR
ZIMMER SUBSTATION EXPANSION PROJECT**

PUCO Case Number 09- 557 -EL- BLN

Submitted pursuant to OAC 4906-11-01

Duke Energy Ohio

July 1, 2009

PUCO

RECEIVED-DOCKETING DIV
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(A) **Need Statement**

(1) **Project Name, Description, and Need**

(a) *Name:* This proposed project is the Zimmer Substation Expansion Project.

This project qualifies as a Letter of Notification (LON) because it fits the criteria of the Ohio Administrative Code (OAC) 4906-1-01, Appendix A (8)(b), "Constructing additions to existing electric power transmission substations where: There is a greater than twenty percent expansion of the fenced area." The proposed substation expansion will expand the existing substation fence line by approximately 200 percent to accommodate a new 5 breaker air insulated ring bus to replace the existing 4 breaker sulfur hexafluoride (SF6) insulated ring bus.

(b) *Description:* The existing SF6 bus is at the end of its useful life and needs to be replaced with a more reliable, albeit larger footprint, air insulated bus.

A vicinity map and proposed layout engineering line drawing for the project are included.

(c) *Need:* This project is required to provide continued reliable electricity output from Zimmer Generating Station to the grid. Recent outages lasting many weeks, required to repair the SF6 bus when it fails, are becoming more frequent and it has been determined that the SF6 bus is at the end of its useful life.

(2) **Reference per Long-Term Forecast Report (LTFR)**

This proposed project is not included in the 2009, or earlier, LTFRs.

(3) Alternatives Considered

An alternative to the east of U.S. 52 was considered for this project. This alternative site would have been out of the floodplain, reduced facility and construction congestion compared to down at the Zimmer Generating Station, and maximized any future expansion possibilities. The negatives to this site included the potential of significant buried cultural resources overlooking the Ohio River and Little Indian Creek, potentially difficult construction access, increased 345kV transmission line lengths, and an increased cost of about \$1.7 million compared to the site down the generating station. The proposed site minimizes: transmission line length, potential environmental impact, and cost and was selected for these reasons.

(4) Construction Schedule

Below grade work on the project is planned to begin August 2009 before the ground becomes too wet for fill placement and grading. The project must be ready for tie-in during a spring 2011 outage of Zimmer Generating Station. The overall project has an in-service date of April 2011 following the station outage.

(5) Area Maps and Directions to Project Area

A street line map of the project vicinity is attached to this LON; a smaller scale engineering line drawing of the project site is also attached. One way to reach the project site from Columbus is to take I-71 south to I-275 east (exit 17A). Travel east and south around I-275 to exit #71, then head east on U.S. Route 52 (Kellogg Road) towards New Richmond and Moscow. Drive approximately 8 miles to Beckjord Generating Station and another 8 miles to Zimmer Generating Station. At Zimmer Gate 4, turn right into the generating station property and take an immediate right towards the existing SF6 insulated bus substation and the proposed expansion site. *Note that all visitors to*

Zimmer Generating Station property are required to sign in and out at the main guard office at the end of the road that begins at Zimmer Gate 6.

(B) Technical Features

(1) Operating Characteristics

The proposed air insulated bus will operate at 345kV and require the following equipment 5 - 345kV 50kA circuit breakers, 10 - 345kV 3000 amp breaker disconnect switches, 5 - 345kV 3000 amp line disconnect switches, 3 - 345kV 3000 amp wave traps and line tuners, 12 - 345kV coupling capacitor voltage transformers (CCVT's), 15 - 345kV surge arresters, 5 - 345kV take-off towers, and support structures for disconnect switches, wave traps, CCVT's, surge arresters and bus supports. The project will also require a 5 inch aluminum pipe bus and dual 1590MCM aluminum jumpers. Note this project involves a new air insulated bus and the associated equipment, the control building within the existing substation fenceline will be re-used.

(2) Electric and Magnetic Fields

Electric and magnetic field levels are not expected to significantly increase as the proposed configuration is similar to the existing layout but shifted approximately 200 feet to the east. Note that the nearest residence is approximately 2,500 feet to the south in Moscow, Ohio.

Based upon past measurements taken at existing Duke Energy substations, magnetic field levels at the fence-line of the proposed Zimmer Substation Expansion would not be expected to exceed 5 mG. This is largely due to field canceling effects of the various pieces of electrical equipment that comprise the substation. Electric field strength levels at the fence-line of the proposed substation would not be expected to exceed 1 V/m. This can be attributed to the shielding provided by the metallic casings on components and

cables, and any enclosure walls. The exceptions to these predicted low-level electric and magnetic fields would be where the 345kV transmission lines enter or leave the proposed substation.

Duke Energy designs its facilities according to the National Electric Safety Code (NESC), at a minimum. The equipment configuration was chosen based on the NESC, engineering parameters, and cost.

(3) Estimated Cost

The project is expected to cost approximately \$14 million.

(C) Socioeconomic Data

(1) Land Use

The proposed project is entirely on property owned by Duke Energy. The site is currently being used for generating station contractor parking and for storm water retention. Land use in the vicinity of the project site is industrial, this being the Zimmer Generating Station and associated facilities.

(2) Agricultural District Land

The site is industrial and is not included in the ORC 929 agricultural district program.

(3) Cultural Resources

The substation expansion will be built at an elevation of 513 feet, or 2.4 feet above the level 500 year flood plain. This will involve tearing up the existing asphalt, where it exists, and placing between 5 and 18 feet of fill depending upon the location. The fill

will be clean soil of appropriate geotechnical qualities taken from one of the Zimmer landfill expansion areas. Also note that the proposed site was disturbed when the Zimmer Generating Station was constructed as a source of grading material. Due to the elevated nature of the substation and the previously disturbed nature of the site, Duke Energy proposes no buried cultural resource investigations for the project.

(4) Notification of Officials

Copies of the letters transmitting this Letter of Notification to officials of the Village of Moscow, Clermont County, and Washington Township are included in Appendix A. No public information program, materials, or meetings were conducted for the siting of this proposed facility.

(5) Current and Pending Litigation

There is no current or pending litigation involving the existing or proposed substation facility.

(6) Other Agency Permits and Requirements

Although a portion of the site is within the 100 year floodplain of the Ohio River the project is exempt from floodplain permitting as per Section 3.9(C) of the Clermont County Flood Damage Reduction Regulations which state that "An application for a floodplain development permit shall not be required for: Major utility facilities permitted by the Ohio Power Siting Board under Section 4906 of the Ohio Revised Code".

This site will be required to file for construction storm water discharge permit coverage under Ohio EPA General Permit OHC000003. The site will also be required to file for local storm water permit approval under the Clermont County Water Management and Sediment Control Regulations.

(D) Environmental Data

The project site is a combination of asphalt and gravel covered parking areas and a gravel covered storm water retention area to the southwest comprising about 15 percent of the site area. Very little habitat is provided by the asphalt and gravel that covers the project site.

(1) Species of Concern

No species of concern or habitat suitable for species of concern were identified on the project site.

(2) Ecological Feature of Concern

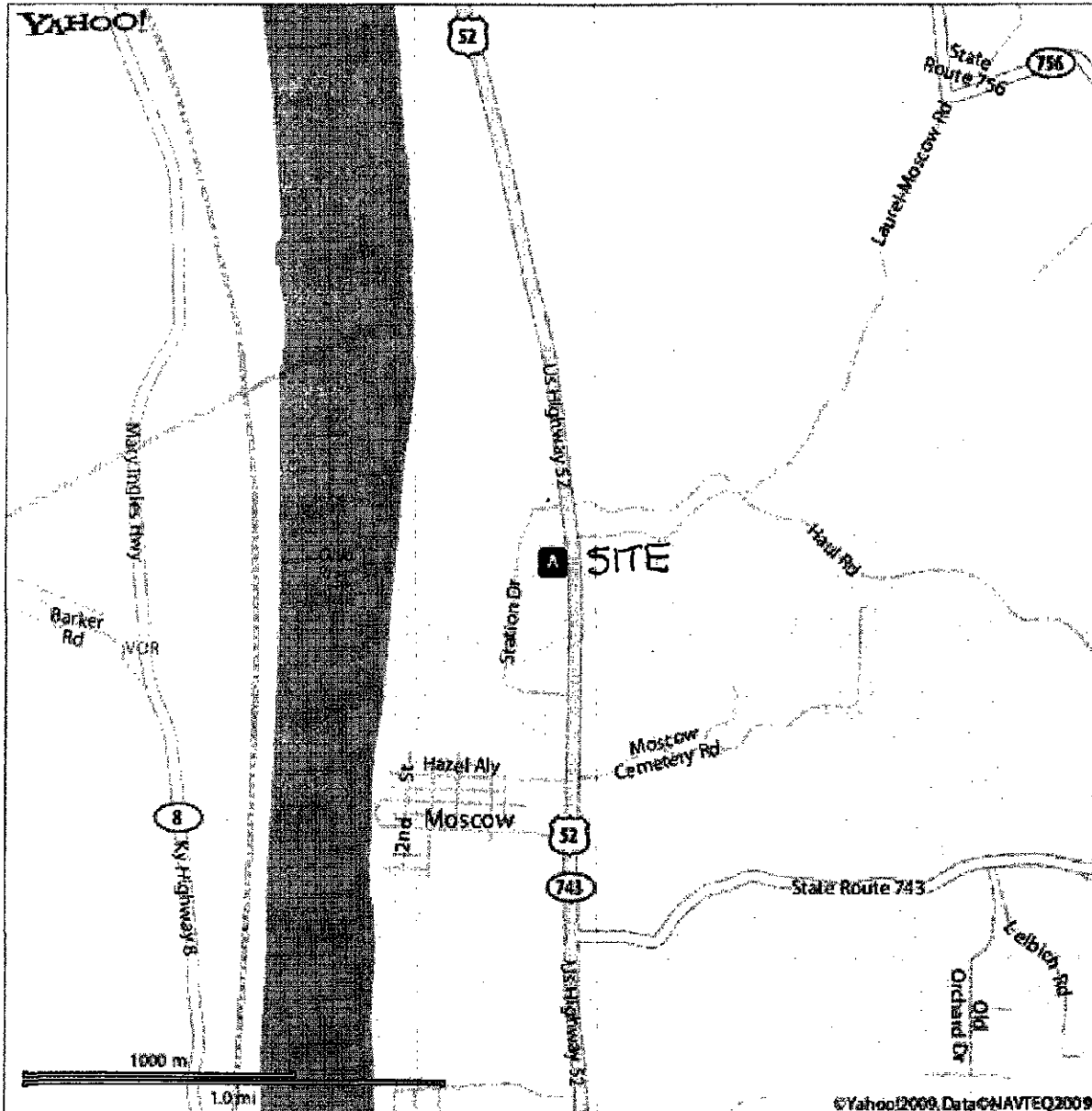
No wetlands or streams were identified on the project site. With the exception of the Ohio River floodplain discussed further under Section (C)(6) of this Letter of Notification, no other areas of ecological concern were identified on the project site. Although part the project site is within the 100 year floodplain, based upon the existing paved and gravel nature of the site and the resulting lack of habitat this is not of ecological concern.

(2) Additional Information

There is no known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

PROJECT VICINITY MAP

Map of 38.865847,-84.224746

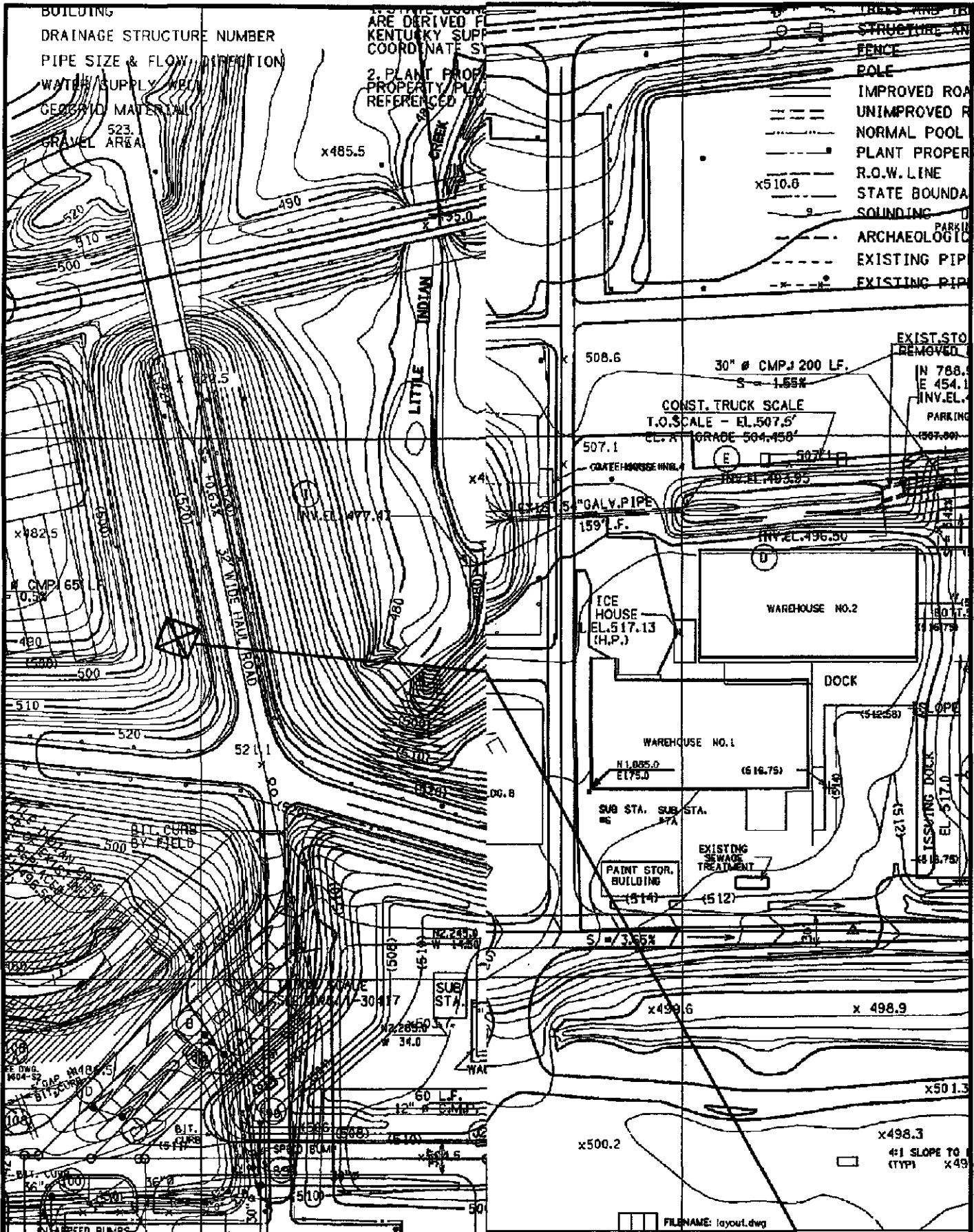


When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning.

A | B | G | H

5
4
3
2
1

5
4
2
1



BUILDING
DRAINAGE STRUCTURE NUMBER
PIPE SIZE & FLOW DIRECTION
WATER/SUPPLY WEIR
GEOSOID MATERIAL
523
GRAVEL AREA

1. STATE COORDINATE ARE DERIVED FROM KENTUCKY SUPPORT COORDINATE SYSTEM
2. PLANT PROPERTY REFERENCED

TREES AND TR
STRUCTURE AN
FENCE
POLE
IMPROVED ROA
UNIMPROVED R
NORMAL POOL
PLANT PROPER
R.O.W. LINE
STATE BOUNDA
SOUNDING
ARCHAEOLOGIC
EXISTING PIP
EXISTING PIP

30" # CMP, 200 LF.
S = 1.55%
CONST. TRUCK SCALE
T.O. SCALE - EL. 507.5'
CL. X GRADE 504.450'

ICE HOUSE
EL. 517.13
(H.P.)

WAREHOUSE NO. 2

WAREHOUSE NO. 1
N 1,085.0
E 175.0
(16.75)

DOCK

SUB STA. SUB STA.
MS STA

PAINT STOR.
BUILDING
(514)

EXISTING
SEWAGE
TREATMENT

FILENAME: layout.dwg

PRELIMINARY
 APPROVAL
 AS BUILT
DATE _____
NAME _____

PROPOSED SUBSTATION EXPANSION LAYOUT

LOCATION: **ZIMMER TRANSMISSION SUBSTATION**

SCALE: _____ STA NO: _____ REV: _____ DWG NO: **ZIMMER-1**

Lot Plot Date: 6/25/2009 2:51 PM

06/25/09 14:36:51 JTB

A | B | G | H

APPENDIX A

LETTERS TO OFFICIALS



DUKE ENERGY CORPORATION
139 East Fourth St.
PO Box 960
Cincinnati, OH 45201-0960

July 1, 2009

Natural Resources Management
Room EX552
139 East Fourth Street
Cincinnati, Ohio 45202

Mr. Ron Rudd, Chair
Washington Township Trustees
2238 State Route 756
Moscow, OH 45153-9773

Dear Mr. Rudd:

RE: Zimmer Substation Expansion Project

Please find enclosed a copy of a letter of Notification that Duke Energy Ohio sent to the Ohio Power Siting Board regarding a planned expansion to the existing Zimmer Generating Station substation.

In accordance with Ohio Administrative Code (OAC) 4906-1-01 Appendix A, we are required to prepare this Letter of Notification for the Ohio Power Siting Board and in compliance with OAC 4906-11-01(D)(4), we are hereby providing you with a copy. Please feel free to call me at (513) 287-2379 if you have any questions about this project.

Sincerely,
Duke Energy

Stephen R. Lane
Environmental Scientist

Enclosure

Cc Mayor Tim Suter, Village of Moscow
Mr. Edwin H. Humphrey, Clermont County Board of Commissioners
Public Utilities Commission of Ohio, Ohio Power Siting Board



DUKE ENERGY CORPORATION
139 East Fourth St.
PO Box 960
Cincinnati, OH 45201-0960

July 1, 2009

Natural Resources Management
Room EX552
139 East Fourth Street
Cincinnati, Ohio 45202

Mr. Edwin H. Humphrey, President
Clermont County Board of Commissioners
101 East Main Street, Suite 329
Batavia, Ohio 45103


Dear Mr. Humphrey:

RE: Zimmer Substation Expansion Project

Please find enclosed a copy of a letter of Notification that Duke Energy Ohio sent to the Ohio Power Siting Board regarding a planned expansion to the existing Zimmer Generating Station substation.

In accordance with Ohio Administrative Code (OAC) 4906-1-01 Appendix A, we are required to prepare this Letter of Notification for the Ohio Power Siting Board and in compliance with OAC 4906-11-01(D)(4), we are hereby providing you with a copy. Please feel free to call me at (513) 287-2379 if you have any questions about this project.

Sincerely,
Duke Energy



Stephen R. Lane
Environmental Scientist

Enclosure

Cc Mayor Tim Suter, Village of Moscow
Mr. Ron Rudd, Washington Township Trustees
Public Utilities Commission of Ohio, Ohio Power Siting Board



DUKE ENERGY CORPORATION
139 East Fourth St.
PO Box 960
Cincinnati, OH 45201-0960

July 1, 2009

Natural Resources Management
Room EX552
139 East Fourth Street
Cincinnati, Ohio 45202

Mayor Tim Suter
Moscow Village Administration
79 Elizabeth St
Moscow, OH 45153

Dear Mayor Suter:

RE: Zimmer Substation Expansion Project

Please find enclosed a copy of a letter of Notification that Duke Energy Ohio sent to the Ohio Power Siting Board regarding a planned expansion to the existing Zimmer Generating Station substation.

In accordance with Ohio Administrative Code (OAC) 4906-1-01 Appendix A, we are required to prepare this Letter of Notification for the Ohio Power Siting Board and in compliance with OAC 4906-11-01(D)(4), we are hereby providing you with a copy. Please feel free to call me at (513) 287-2379 if you have any questions about this project.

Sincerely,
Duke Energy

Stephen R. Lane
Environmental Scientist

Enclosure

Cc Mr. Edwin H. Humphrey, Clermont County Board of Commissioners
Mr. Ron Rudd, Washington Township Trustees
Public Utilities Commission of Ohio, Ohio Power Siting Board