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April 10, 2015

Ms. Barcy F. McNeal
Secretary
Docketing Division, 11th Floor
Public Utilities Commission of Ohio
180 East Broad Street
Columbus, OH 43215

RE: Direct Testimony of Ted Krauss on behalf of
FirstEnergy Intervenors
Case # 14-1717-GA-BLN

Dear Ms. McNeal:

Please find enclosed Intervenors American Transmission Systems, Incorporated, Ohio Edison, and The Cleveland Electric Illuminating Company (collectively, FirstEnergy Intervenors) pre-filed testimony in the above referenced matter.

If you have any questions or require further information, please do not hesitate to contact me.

Very truly yours,



Robert J. Schmidt, Jr.

RJS:clk
Enclosure

COLUMBUS/1762990v.1

BEFORE THE
OHIO POWER SITING BOARD

In the Matter of the Application of)	
NRG Ohio Pipeline Company, LLC)	Case Numbers:
for the Approval of a Letter of Notification for)	14-1717-GA-BLN
the Avon Lake Gas Addition Project in Lorain)	
County, Ohio.)	

INITIAL TESTIMONY OF

THEODORE ROBERT KRAUSS, P.E.

ON BEHALF OF FIRSTENERGY INTERVENORS

AMERICAN TRANSMISSION SYSTEMS, INCORPORATED,

OHIO EDISON COMPANY AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

1 **Q. PLEASE STATE YOUR NAME, EMPLOYER, BUSINESS ADDRESS AND**
2 **POSITION.**

3 A. My name is Theodore R. Krauss. I am employed by the FirstEnergy Service
4 Company. My business address is 76 South Main Street, Akron, Ohio, 44308. I am
5 Manager of the Siting, Survey and Right-of-Way organizational unit which is within
6 the Energy Delivery Group and the Transmission and Substation Design Department.

7

8 **OBSERVATIONS THAT WILL ASSIST THE READER WITH**
9 **UNDERSTANDING THIS TESTIMONY**

10

11 **Q. BEFORE TURNING TO SUBSTANTIVE MATTERS, DO YOU HAVE ANY**
12 **OBSERVATIONS THAT WILL ASSIST THE READER WITH**
13 **UNDERSTANDING THIS TESTIMONY?**

14 A. Yes. My testimony is being submitted in the proceedings for the Letter of
15 Notification application submitted by NRG Ohio Pipeline Company LLC for the
16 Avon Lake Gas Addition Project in Ohio Power Siting Board Case No. 14-1717-GA-
17 BLN. I refer to American Transmission Systems, Incorporated (“ATSI”), Ohio
18 Edison Company (“OE”) and The Cleveland Electric Illuminating Company (“CEI”),
19 FirstEnergy Service Company, FirstEnergy Corp. and other FirstEnergy companies
20 collectively as FirstEnergy. FirstEnergy’s property rights for its existing electric
21 infrastructure may consist of owned property, other property rights granted
22 through easements, leases, license agreements, permits and similar agreements and
23 documents that I collectively refer to as right-of-way.

1 Q. WHAT IS THE PURPOSE OF THIS TESTIMONY?

2 A. I am providing this testimony on behalf of American Transmission Systems,
3 Incorporated (“ATSI”), Ohio Edison Company (“OE”) and The Cleveland Electric
4 Illuminating Company (“CEI”), which are FirstEnergy companies and are collectively
5 referred to as the FirstEnergy Intervenors, all of which have intervened in these
6 proceedings. The FirstEnergy Intervenors are participating as parties in this
7 proceeding to ensure that the final route approved by the Board, as well as the
8 construction of the pipeline by the Applicant, are consistent with the current and
9 planned future uses of the FirstEnergy Intervenors’ electric infrastructure and that the
10 Applicant and the Ohio Power Siting Board are aware of FirstEnergy Intervenors’
11 requirements and applicable safety standards when a pipeline is installed within and
12 or near the FirstEnergy Intervenors’ electric infrastructure.

13

14 **Q. HOW LONG HAVE YOU BEEN EMPLOYED BY FIRSTENERGY SERVICE**
15 **COMPANY, FIRSTENERGY CORP., OR IT’S OTHER SUBSIDIARIES OR**
16 **PREDECESSOR COMPANIES?**

17 A. I have been employed with FirstEnergy Service Company, a FirstEnergy company, or
18 other FirstEnergy subsidiaries or predecessors, continuously since August 1979.

19

20 **Q. HOW LONG HAVE YOU BEEN IN YOUR CURRENT POSITION?**

21 A. I was promoted to my current position in February 2011. Previously, in January
22 2008, I was promoted to Supervisor of Transmission Siting, Right-of-Way

1 Engineering and Survey, and in May 2008, that job title was revised to General
2 Supervisor of Transmission Siting, Right-of-Way Engineering and Survey.

3
4 **Q. PLEASE DESCRIBE YOUR CURRENT POSITION.**

5 A. In my current position I provide guidance, leadership and supervision to a staff of 20
6 professionals in the Transmission Engineering group that are responsible for 1) siting
7 and regulatory approvals for FirstEnergy's new transmission lines and substations in
8 Ohio, Maryland, New Jersey, Pennsylvania, Virginia and West Virginia; 2) surveying
9 activities for FirstEnergy's new transmission lines and substations in Ohio, Maryland,
10 New Jersey, Pennsylvania, Virginia and West Virginia; and 3) Right-of-Way
11 engineering for transmission line projects that are generally designed at FirstEnergy's
12 Akron, Ohio office. In this position I support FirstEnergy's efforts to site new
13 transmission facilities by managing the unit's efforts in developing transmission line
14 route siting studies, transmission substation siting studies, and associated regulatory
15 filings. This includes working with internal and external resources including
16 consultants, and FirstEnergy's Legal Department, Real Estate Department,
17 transmission and substation engineers and designers, Environmental Services
18 Department, Public Communications, Regional Organizations, Area Managers and
19 the Project Management Department. The unit's activities are structured to ensure
20 that the required transmission siting regulatory approvals are diligently pursued.

21 In this position I also support FirstEnergy's design engineering area, by supervising
22 the group's efforts in providing complete and accurate survey and right-of-way
23 engineering required for the design and acquisition of right-of-way for new facilities.

1 Working with the Real Estate Department and Transmission Designers, the group's
2 activities seek to ensure that the required property rights are identified, documented,
3 and acquired to support the construction, operation and maintenance of the proposed
4 facilities. The unit's activities also provide survey support as required for Substation
5 Engineering, Transmission Maintenance, Vegetation Management, and Real Estate
6 Departments.

7 Finally, due to my familiarity with the siting process, as well as my knowledge and
8 experience with the FirstEnergy's electric infrastructure, I support FirstEnergy's
9 process to review requests from other entities to use or modify portions of the
10 FirstEnergy's property and rights of way for other activities including the
11 construction of other utilities and structures. FirstEnergy's process to review
12 proposals to use FirstEnergy property and rights-of-way include assigning staff from
13 technical roles that are up-to-date on installation and construction practices applicable
14 to the construction of new electric infrastructure and applicable and necessary safety
15 requirements for construction activities that occur in, near or around existing electric
16 infrastructure. Proposals are reviewed for consistency with the operation and
17 maintenance of existing facilities, potential reconstruction or expansion of those
18 facilities, and for future expansion of the electric grid. The process to review use or
19 modify FirstEnergy's property and rights of way also includes consideration of safety
20 issues such not jeopardizing the stability of existing or future structures and clearance
21 requirements of the National Electric Safety Code.

1 **Q. STARTING WITH HIGH SCHOOL GRADUATION, PLEASE TELL US**
2 **YOUR EDUCATIONAL BACKGROUND.**

3 A. I earned a Bachelor of Science degree in Civil Engineering from Valparaiso
4 University in 1979.

5

6 **Q. DO YOU HAVE ANY PROFESSIONAL LICENSES OR CERTIFICATIONS?**

7 A. Yes, I am a registered Professional Engineer in the State of Ohio; my registration
8 number is 49006.

9

10 **Q. HAVE YOU EVER HAD TO TESTIFY PREVIOUSLY IN PROCEEDINGS**
11 **BEFORE THE BOARD?**

12 A. Yes, I have testified before the Ohio Power Siting Board in several cases.

13

14 **Q. WHAT WAS THE NATURE OF YOUR TESTIMONY IN THOSE CASES?**

15 A. In the Ohio Power Siting Board cases, I was called as a witness for FirstEnergy
16 Service Company, or other FirstEnergy subsidiaries or predecessors in support of an
17 Application filed with the Ohio Power Siting Board for a Certificate of
18 Environmental Compatibility and Public Need for proposed transmission line or
19 transmission substation project.

20

21

22

1 **Q. WHY DID THE FIRSTENERGY INTERVENORS SEEK PARTY STATUS IN**
2 **THIS PROCEEDING?**

3 A. FirstEnergy Intervenor have compelling interests implicated by this proceeding. For
4 example, Intervenor OE and CEI have significant electric transmission and
5 distribution facilities along portions of the proposed route of the NRG Pipeline, are
6 the record owners of multiple parcels of real estate along the NRG Pipeline Route (as
7 depicted in Attachment B to NRG's Application), and have significant transmission
8 and distribution right-of-way easements along portions of the proposed route of the
9 NRG Pipeline. Proposed Intervenor ATSI, moreover, has significant electric
10 transmission facilities located on the OE and CEI right-of-way located along portions
11 of the proposed route of the NRG Pipeline. Initially the proposed NRG Pipeline
12 affected no less than thirteen 69kV, 138kV, and 345kV sub-transmission and
13 transmission lines, crosses back and forth through the transmission corridors twenty-
14 three times, and is adjacent to the Avon and Carlisle Substation and the potential site
15 of a distribution substation. The area in which the proposed NRG Pipeline enters/exits
16 the Avon Lake generating plant is also of concern, as ATSI and CEI have numerous
17 structures in the vicinity and the Avon Substation is in close proximity to the
18 proposed NRG Pipeline.

19

20 **Q. DO THE FIRSTENERGY INTERVENORS OPPOSE LOCATING ALL**
21 **PIPELINES WITHIN OR NEAR ITS ELECTRIC INFRASTRUCTURE?**

22 A. No. Our belief is that FirstEnergy's electric infrastructure and pipelines can coexist
23 in a corridor if the design of the secondarily installed facility is adequately

1 coordinated, designed and installed to not impact the initially established facility.
2 From our point of view, the ideal location of a pipeline along FirstEnergy's existing
3 electric infrastructure, would be to locate the right-of-way of the pipeline adjacent to
4 the right-of-way of the electric infrastructure with no overlap of the right-of-ways.
5 Although coordination between FirstEnergy and the installer of the pipeline would
6 still be appropriate and necessary, having no overlap of the electric infrastructure and
7 the pipeline right-of-way would likely result in the pipeline having no substantial
8 impact on FirstEnergy's electric infrastructure, would likely reduce and potentially
9 eliminate many of FirstEnergy's concerns with installation of the pipeline and would
10 likely simplify the coordination process. If it is necessary to locate pipeline right-of-
11 way within the right-of-way of FirstEnergy's electric infrastructure, we believe three
12 significant activities must occur to eliminate or minimize impacts to the continued
13 operation and maintenance and future construction of the electric infrastructure and to
14 address safety and construction practices within the electric infrastructure right-of-
15 way. The first activity is coordination between the installer of the pipeline and
16 FirstEnergy to identify, discuss and adjust as necessary the specific location, design
17 and installation process for the pipeline. The second activity is achieving an
18 agreement between the installer of the pipeline and FirstEnergy that provides
19 FirstEnergy's approval of the pipeline location, design and installation and ultimately
20 facilities obtaining the necessary land rights to facilitate installing the pipeline within
21 FirstEnergy Intervenor's electric infrastructure. The third activity is the installation
22 of the pipeline in conformance with the agreement.

1 **Q. ARE THE FIRSTENERGY INTERVENORS DISCUSSING ISSUES**
2 **RELATED TO THE LOCATION OF THE PIPELINE ADJACENT TO AND**
3 **WITHIN FIRSTENERGY'S ELECTRIC INFRASTRUCUTRE AND**
4 **ASSOCIATED SAFETY AND CONSTRUCTION PRACTICES WITH**
5 **APPLICANT?**

6 A. Yes. FirstEnergy Intervenors' real estate staff have had discussions with the
7 Applicant's staff regarding the route of the pipeline and safety and construction
8 practices.

9
10 **Q. IS IT THE EXPECTATION OF THE FIRSTENERGY INTERVENORS THAT**
11 **THEY WILL BE ABLE TO REACH AN ACCEPTABLE FINAL**
12 **AGREEMENT WITH THE APPLICANT?**

13 A. Based on the discussions to date, FirstEnergy Intervenors' believe that they will reach
14 an acceptable agreement with the Applicant. In order to ensure that an acceptable
15 agreement is reached, FirstEnergy Intervenors' recommend that the following
16 condition be included in the Board's Order authorizing the project:

17 The Applicant shall provide FirstEnergy Intervenors, as reasonably
18 necessary, with drawings and other technical information for the
19 construction of the pipeline within, or adjacent to, FirstEnergy Intervenors
20 electric infrastructure including electric distribution and/or transmission line
21 right-of-way and / or corridors and substation sites. Applicant shall reach an
22 agreement with FirstEnergy Intervenor on the location and other details of
23 the pipeline located within FirstEnergy Intervenors electric infrastructure

1 and shall obtain the necessary land rights to permit the use of FirstEnergy
2 Intervenor's electric infrastructure by Applicant prior to the construction of
3 the portion of the pipeline located within FirstEnergy Intervenor's electric
4 infrastructure.

5
6 **Q. WHAT ARE THE SAFETY AND CONSTRUCTION PRACTICES THAT**
7 **APPLICANT WILL NEED TO FOLLOW WHEN WORKING IN, NEAR OR**
8 **AROUND THE FIRSTENERGY INTERVENORS' EXISTING ELECTRIC**
9 **INFRASTRUCTURE?**

10 A. As I mentioned previously, coordination between the installer of the pipeline and
11 FirstEnergy to identify, discuss and adjust as necessary the specific location, design and
12 installation process for the pipeline is a key part of the process. Below I describe other
13 generally applicable safety and construction practices divided into four categories. It
14 should be noted that this is not intended as an all-inclusive list of practices, but rather a
15 list of the more common issues. The appropriate safety and construction practices and
16 other restrictions include, but would not be limited to the following:

17
18 Working Safety Restrictions:

19 Compliance is required for all Occupational Safety Health Administration (OSHA)
20 safe-working clearances between persons, conductive objects and energized
21 conductor/wire. In particular it should be noted that the conductor/wire position
22 changes continuously depending on load, ambient temperature, wind speed, etc.

1 FirstEnergy is not responsible for providing conductor/wire position to determine
2 OSHA safe-working clearance.

3

4 Parking or operating a vehicle or equipment within or adjacent to the FirstEnergy
5 Transmission Rights-of-Way may induce an electrical charge. Induced electric
6 charges may also be transmitted to objects such as fences, signs, or any other
7 conductive object. The use of a proper grounding system designed by a licensed
8 engineer is required. Construction vehicles, vehicles with booms and equipment
9 operating within or adjacent to the FirstEnergy Transmission Rights-of-Way must be
10 properly grounded.

11

12 Right-of-Way Access

13 FirstEnergy's authorized personnel, vehicles and equipment must have continuous
14 access to the right-of-way and all the electrical infrastructure structures.

15

16 Right-of-Way Restrictions

17 Changes to grade elevations within the FirstEnergy's Transmission-Rights-of-Way
18 without FirstEnergy's prior authorization are NOT permitted. Ground disturbance or
19 excavations without FirstEnergy's prior authorization are NOT permitted and
20 excavations are typically not permitted within 50 feet of any FirstEnergy structures
21 (poles, towers, anchor guys, etc.).

22

1 Buildings, solar panels, lighting fixtures, signs, billboards, swimming pools, decks,
2 flag posts, sheds, barns, garages, playgrounds, fences, equipment, trailers, materials
3 or any other permanent or temporary objects are NOT permitted within the
4 FirstEnergy's Transmission Rights-of-Way. Other restrictions may apply under
5 specific situations as defined by FirstEnergy.

6
7 During construction activities, protective barriers must be used for any driveway or
8 parking area located within 25 feet of any FirstEnergy structure (poles, towers, anchor
9 guys, etc.).

10
11 All vegetation within or adjacent to the FirstEnergy Transmission Rights-of-Way
12 shall be low growing within the wire zone. The wire zone is defined as the area
13 directly under the conductors which extends approximately 15 feet on each side. Low
14 growing vegetation generally has a 10-foot maximum mature height. It is preferred
15 that the planting of any woody vegetation be done outside of the wire zone of
16 FirstEnergy's transmission facilities and are not permitted to be closer than 10 feet in
17 any direction from the structure (poles, towers, anchor guys, etc.). All approved
18 shrubbery planted near structures shall allow for working area and accessibility at
19 ground level.

1 Explosives or combustible liquids, substances, or materials are not permitted within
2 the right-of-way after the initial construction of pipeline facilities. Prohibited
3 materials included but are not limited to fuel, wood chips, mulch, brush, and tires.

4
5 Septic systems leach beds and/ or wells are not typically permitted within the
6 FirstEnergy's Transmission- Rights-of-Way.

7
8 Kite flying, model airplane flying, or similar activities is strictly prohibited on or near
9 FirstEnergy's Transmission-Rights-of-Way.

10
11 Pipeline Construction Restrictions

12 FirstEnergy maintains unlimited access to their facilities. At no time, during
13 construction or afterward, shall access to FirstEnergy structures and facilities be
14 compromised by installation of the pipeline. FirstEnergy will continue to utilize
15 existing access roads or routes or open areas to access its transmission lines and
16 structures. FirstEnergy will be permitted to utilize any new road to be used for
17 purposes of accessing the pipeline right-of-way crossings.

18
19 The pipeline location must be permanently and adequately marked (and visible from a
20 distance) at both the crossing location and edges of the transmission right-of-way and
21 also at no greater than 300 foot intervals, or as required by applicable law.

1

2 The pipeline shall be buried below ground level so as not to interfere with
3 FirstEnergy's surface use of the Transmission-Rights-of-Way. Design of the pipeline
4 shall incorporate the expectation that FirstEnergy will be using heavy equipment on
5 any portion of the Transmission-Rights-of-Way, and all underground facilities shall
6 be capable of withstanding American Association of State Highway and
7 Transportation Officials H25 loading configuration.

8

9 Steel pipelines must be grounded per National Electric Safety Code (NESC) and/or
10 National Electric Code (NEC) requirements at both sides of the crossing of the
11 Transmission-Rights-of-Way.

12

13 The pipeline installer will be responsible for evaluating, installing and maintaining
14 alternating current (A/C) mitigation and cathodic protection for the pipeline and
15 providing the details of the evaluations and installation details to FirstEnergy.

16

17 The pipeline installer should be aware that if it is necessary for any portion of the
18 electric infrastructure to be taken out of service, either for the initial construction or
19 maintenance of the pipeline, that the necessary electric infrastructure outage needs to
20 be coordinated with FirstEnergy and for the portion of the transmission grid under
21 PJM's control, the electric infrastructure outage is also subject to PJM procedures and
22 ultimately PJM's acceptance or rejection of the request.

1

2 All equipment and vehicles operated in the Transmission-Rights-of-Way and in the
3 vicinity of all energized, overhead conductors shall be operated in strict compliance
4 with safe-working distances per all current OSHA requirements. Construction
5 vehicles and equipment near transmission lines should be properly grounded.

6

7 Temporary warning signage stating “Danger - Power Lines Above”, or similar, shall
8 be properly installed in the areas of the Transmission Rights-of-Way until completion
9 of construction and reclamation.

10

11 There shall be no storage of any equipment, material, soil, etc. within the
12 Transmission-Rights-of-Way in a fashion that violates NESC and/or the OSHA
13 clearance standards.

14

15 Fill material considered suitable for backfilling of any excavations within the
16 Transmission-Rights-of-Way shall consist of either natural cohesive soils or select
17 granular fill. All natural cohesive (clay base) fill material shall be clean, inorganic
18 soils that are free of any large rock fragments or debris. The pipeline trench fill must
19 be 90% compacted based on a Modified Proctor and seeded with grass (or other
20 suitable ground cover) as a means of erosion control.

21

1 No buildings, structures, construction trailers, sheds, fences, lighting fixtures, etc. are
2 permitted anywhere within the FirstEnergy's Transmission-Rights-of-Way.

3
4 All trees and shrubbery must not exceed a mature growth height of 10 feet.
5 Otherwise, they will be subject to trimming and/or removal by FirstEnergy.

6
7 FirstEnergy or its authorized representative shall have the right to inspect
8 construction within the Transmission Right of Way at any time. Any such inspection
9 shall be performed in accordance with health and safety requirements.

10
11 Any ground disturbances that are caused during the pipeline installation or
12 maintenance must be restored to an equal to or better than before construction
13 condition.

14
15 No equipment shall be operated within the Transmission-Rights-of-Way that cannot
16 maintain minimum Occupational Safety and Health Association OSHA working
17 clearances of any energized overhead conductor of the Company.

18
19 The installer of the pipeline is responsible for all damages to FirstEnergy's facilities
20 that it causes, during construction and while any operations or activities occur in the

1 Transmission-Rights-of-Way, including but not limited to poles, hardware, guy wires,
2 anchors, conductor wires and shield wires.

3

4 If pipeline construction traffic activities come closer than 25 feet to the Company's
5 facilities, safety shaped protective barriers must be installed to protect the facility.

6

7 The pipeline facilities shall be registered with Ohio Utilities Protection Services
8 (OUPS).

9

10 Tree removals for installation of the pipeline shall be performed with extreme care.

11 Trees shall not be allowed to fall in the direction of FirstEnergy's facilities.

12

13 The pipeline installer shall provide FirstEnergy as built drawings upon completion of
14 the pipeline installation, with pipeline facilities being located and installed
15 specifically in accordance with the drawings referenced herein.

16

17 **Q. DOES THIS CONCLUDE YOUR INITIAL DIRECT TESTIMONY?**

18 A. Yes it does. However, I would like to reserve the right to supplement my initial
19 testimony if anything changes with respect to the status of the Application or the
20 Staff's Recommended Conditions

This foregoing document was electronically filed with the Public Utilities

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in

Case No(s). 14-1717-GA-BLN

Summary: Testimony of Theodore Robert Krauss, P.E. in behalf of Intervenor American Transmission Systems, Incorporated, Ohio Edison and The Cleveland Electric Illuminating Company electronically filed by Mr. Robert J Schmidt on behalf of American Transmission Systems Inc.