

**BEFORE  
THE OHIO POWER SITING BOARD**

In the Matter of the Application of Duke :  
Energy for a Certificate of Environmental :  
Compatibility and Public Need to : Case No. 16-0253-GA-BTX  
Construct the C314V Central Corridor :  
Pipeline Extension Project. :

**PREFILED TESTIMONY  
OF  
Peter A. Chace  
ON BEHALF OF THE OHIO POWER SITING BOARD STAFF**

**STAFF EX. \_\_\_\_**

**April 2, 2019**

1 1. Q. Please state your name and business address.

2 A. My name is Peter A. Chace. My address is 180 E. Broad Street, Columbus,  
3 Ohio 43215-3793.

4

5 2. Q. By whom are you employed?

6 A. I am employed by the Public Utilities Commission of Ohio.

7

8 3. Q. What is your present position with the Public Utilities Commission of Ohio  
9 and what are your duties?

10 A. I am the Gas Pipeline Safety Program Manager in the Facility and  
11 Operations Field Division of the Service Monitoring and Enforcement  
12 Department. The Gas Pipeline Safety Program monitors compliance with  
13 the Federal Pipeline Safety Regulations (49 C.F.R. 191 and 192) and the  
14 Ohio Administrative Code section 4901:1-16 (“Gas Pipeline Safety”) and  
15 recommends enforcement actions to the Commission if appropriate.

16

17 4. Q. Would you briefly state your educational background and work history?

18 A. I have a Bachelor’s degree in Chemistry (1988) from the University of  
19 Michigan, and a Masters of Science degree in Statistics (1996) from Miami  
20 University. From 1988 until 1994 I was a commissioned officer in the  
21 United States Navy. I graduated from Naval Nuclear Propulsion School in  
22 1989 and then served as an engineering officer on board the USS Carl

1 Vinson (CVN 70) where I gained a general knowledge of engineering  
2 principles. From 1997 to 1999 I was employed by the Battelle Memorial  
3 Institute in Columbus OH as a Statistician. From 1999 to 2007, I was  
4 employed by the Office of the Ohio State Fire Marshal where I served as  
5 the Chief of the Bureau of Underground Storage Tank Regulations  
6 (BUSTR), an organization that regulates the operation of underground  
7 petroleum storage tanks and the remediation of petroleum releases from  
8 regulated tanks into the environment. From 2007 to 2009, I was employed  
9 as a project manager by two environmental engineering firms, BJAAM  
10 Environmental (2007-2008) and August Mack Environmental (2008-2009).  
11 In June of 2009, I joined the PUCO as the Gas Pipeline Safety program  
12 manager and have served in that capacity since then.

13  
14 5. Q. What is the purpose of your testimony in this case?

15 A. My testimony addresses the application by Duke Energy Ohio, Inc. to  
16 construct a pipeline referred to as the C314V Central Corridor Extension  
17 Project.

18  
19 6. Q. What scope issues will your testimony address?

20 A. I will address scope issues related to what the Pipeline Safety Regulations  
21 will require Duke Energy Ohio to do in order to construct, operate and

1 maintain the proposed pipeline in a manner designed to protect human  
2 health and the environment.

3  
4 7. Q. What are the Pipeline Safety Regulations?

5 A. The Pipeline Safety Regulations are Federal regulations that govern the  
6 design, construction, operation and maintenance of pipeline systems. They  
7 are found in the Code of Federal Regulations, Chapter 49, Part 192. The  
8 Pipeline Safety Regulations are maintained by the U.S. Department of  
9 Transportation, Pipeline and Hazardous Material Safety Administration  
10 (PHMSA). The State of Ohio has adopted these regulations for intrastate  
11 pipelines in Ohio. The Public Utilities Commission enforces the Pipeline  
12 Safety Regulations at the State level.

13  
14 8. Q. How does the Commission enforce the Pipeline Safety Regulations?

15 A. The Commission employs field investigators located throughout the state  
16 that perform safety inspections of pipeline operators. These inspections  
17 consist of a review of records and field observations of operator personnel  
18 and pipeline infrastructure. Field investigators also perform safety  
19 inspections of new pipeline construction, and investigate pipeline incidents  
20 and complaints from the general public. The field investigators complete a  
21 training program offered by PHMSA in order to become qualified to  
22 perform independent safety inspections.

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9. Q. How prevalent are pipelines in Ohio?

A. There are 105,081 miles of distribution piping and 10,599 miles of transmission piping in Ohio as of December 31, 2018 according to data from annual reports that pipeline operators submit to PHMSA.

10. Q. How often are pipelines inspected?

A. There are 108 individual gas pipeline operators in Ohio. Each gas pipeline operator is inspected at a minimum of once every other year, with most pipeline systems inspected annually.

11. Q. Will the PUCO inspect and observe the construction and pre-operational testing of the Duke C314V Central Corridor Project?

A. Yes. Pipeline operators are required by the Ohio Revised Code to report new construction projects with an estimated cost of \$500,000 or more to the Commission not later than 21 days prior to the project start. I will assign one or more field investigators to perform a safety inspection of this project that will include a review of materials used, welding procedures, employee qualifications, construction practices in the field, and pressure testing of the completed piping.

1 12. Q. Have you and your Staff performed inspections of other pipelines operated  
2 in Ohio?

3 A. Yes. Pipeline operators are required by the Ohio Administrative Code  
4 (OAC) 4901:1-16 to report new construction projects involving expenses in  
5 excess of \$500,000 to the Commission. In 2018 there were 286 new  
6 construction projects reported to the Commission. I assign some of these  
7 projects to field investigators for safety inspections based on staff  
8 availability and criteria such as the size of the project, construction  
9 materials used, proximity to populated areas, and past experience of the  
10 operator with construction projects. Field investigators performed  
11 inspections of 54 of the 286 projects reported to the Commission to verify  
12 compliance with the Pipeline Safety Regulations. The Commission's Gas  
13 Pipeline Safety Staff has a great deal of experience inspecting new pipeline  
14 construction.

15  
16 13. Q. Will this project be inspected for compliance with pipeline safety  
17 regulations?

18 A. Yes.

19

20 14. Q. Do the Pipeline Safety Regulations allow the construction of high-pressure  
21 gas lines in densely populated areas?

1           A.    Yes. The Pipeline Safety Regulations require pipeline operators to classify  
2                    the location of their pipeline into one of four categories called Class  
3                    Locations. For example, a pipeline segment running through an  
4                    unpopulated area is in a Class 1 location, while a segment running through  
5                    a densely populated area would be in a Class 4 location. The class location  
6                    of the piping affects the maximum pressure at which a pipeline may  
7                    operate, how deep a pipeline has to be buried, and how rigorously welds  
8                    have to be tested to ensure there are no defects. It also affects the  
9                    frequency at which the pipeline right-of-way must be patrolled for  
10                  indications of leaks, construction activity, and other factors affecting safety  
11                  and operation. The Pipeline Safety Regulations do not prohibit the  
12                  construction of pipelines in populated areas, but the regulations do subject  
13                  them to a greater level of safety precautions.

14

15   15.   Q.    How do you determine the maximum pressure at which a pipeline may  
16                    operate?

17           A.    Each pipeline has a specified minimum yield strength (SMYS) that refers to  
18                    how much pressure a pipe can hold before it weakens and deforms  
19                    permanently. SMYS is determined by an engineering formula which takes  
20                    into account the piping diameter, wall thickness, and the tensile strength of  
21                    the steel used in the pipe manufacturing process. The maximum pressure at  
22                    which a pipeline can operate is a certain fraction of the calculated SMYS

1 depending on its class location. Other factors considered when determining  
2 this maximum pressure include the maximum pressure rating of valves,  
3 meters, and other equipment that are part of the pipeline system, as well as  
4 how the pipeline is pressure tested before placed into operation. This  
5 maximum pressure is referred to as the pipeline's Maximum Allowable  
6 Operating Pressure (MAOP). The pipeline operator is required to have a  
7 system of pressure regulation and overpressure protection to ensure  
8 pipeline pressure does not exceed the MAOP. The gas pipeline safety Staff  
9 will review these MAOP calculations as part of our pipeline construction  
10 safety inspection.

11  
12 16. Q. What pressure will the C314V Central Corridor Extension pipeline operate  
13 at?

14 A. Duke Energy Ohio has designed this pipeline to have a MAOP of 500  
15 pounds per square inch gauge (psig). Duke Energy Ohio has stated the line  
16 will be pressurized to approximately 400 psig under normal operating  
17 conditions.

18  
19 17. Q. Is an operating pressure that high dangerous?

20 A. While this pressure is high compared to pipelines delivering gas directly to  
21 residential customers, it is not uncommon for pipelines to operate at this  
22 pressure or higher. The pipe used by Duke Energy Ohio will result in this

1 pipeline having a MAOP equal to 19.0% of the piping SMYS, so this  
2 pipeline is operating well below the maximum pressure that would be  
3 allowed by the Pipeline Safety Regulations.  
4

5 18. Q. What is a transmission line?

6 A. The Pipeline Safety Regulations contain different construction and  
7 operation standards for pipelines like the C314V Central Corridor  
8 Extension pipeline depending on whether they are classified as  
9 transmission or distribution lines. The definition of a transmission line may  
10 be found in 49 C.F.R. 192.3 and reads: "Transmission Line means a  
11 pipeline, other than a gathering line, that: (1) Transports gas from a  
12 gathering line or storage facility to a distribution center, storage facility, or  
13 large volume customer that is not down-stream from a distribution center;  
14 (2) operates at a hoop stress of 20 percent or more of SMYS; or (3)  
15 transports gas within a storage field." A distribution line is a line that  
16 delivers gas from a distribution center to customers.  
17

18 19. Q. Are transmission lines required to have a higher level of protection than  
19 distribution lines?

20 A. The Pipeline Safety Regulations impose different requirements for  
21 transmission and distribution lines because safety considerations for these  
22 types of pipelines are different. Transmission line operators must meet

1 certain requirements that distribution operators do not and vice versa. The  
2 regulations are designed to make the pipeline, whether transmission or  
3 distribution, as safe as possible.  
4

5 20. Q. Is the C314V Central Corridor Extension pipeline a transmission line or a  
6 distribution line?

7 A. The term “distribution center” is not defined in the Pipeline Safety  
8 Regulations but PHMSA has consistently defined a distribution center  
9 through written interpretations and guidance as “the point where gas enters  
10 piping used primarily to deliver gas to customers who purchase it for  
11 consumption as opposed to customers who purchase it for resale”. As I  
12 understand Duke’s proposal, it is using the pipeline in question to deliver  
13 gas to consumers, and the gas is supplied from an upstream delivery point  
14 with redundant overpressure protection that qualifies as a distribution  
15 center. The C314V Central Corridor Extension pipeline will operate at a  
16 MAOP of 19.0% SMYS, so it does not meet the second part of the  
17 transmission definition which captures piping operating at over 20%  
18 SMYS. The pipeline in question is also not transporting gas within a  
19 storage field, so it does not meet the third part of the transmission  
20 definition. For these reasons the C314V Central Corridor pipeline is  
21 appropriately classified as a distribution line.  
22

1 21. Q. Are you proposing greater safety measures than the minimum Federal  
2 requirements? If so, why?

3 A. Yes. I am proposing that the C314V Central Corridor Pipeline be  
4 constructed in accordance with code requirements for transmission lines in  
5 instances where transmission requirements are more stringent than  
6 distribution requirements. For example the requirements for the inspection  
7 and testing of welds used in steel pipeline construction are more extensive  
8 for transmission lines than for distribution lines. Duke Energy has listed  
9 the construction standards they will follow in their “C314V Central  
10 Corridor Pipeline Extension Project” proposal dated January 2017. The  
11 Staff proposal spells out the remaining transmission construction  
12 requirements not already listed in the Duke Energy Ohio proposal. I have  
13 also proposed that underground warning tape be placed above the pipeline  
14 during burial to caution excavators of the buried pipeline below. The  
15 additional recommendations from Staff may be found under General  
16 Conditions 33 and 34 of the “Amended Staff Report of Investigation” filed  
17 on March 5, 2019.

18  
19 22. Q. If there is a failure on the pipeline, how is emergency response  
20 coordinated?

21 A. The Pipeline Safety Regulations require Duke Energy to have an  
22 emergency response plan to minimize the hazard resulting from a pipeline

1 emergency, and to inform the appropriate fire, police, and other public  
2 officials of relevant details about the plan. Duke Energy is also proposing  
3 to install above ground valve stations on the pipeline that will allow them to  
4 isolate the pipeline in case of an emergency.

5  
6 23. Q. Does the PUCO review emergency response plans?

7 A. Yes. An emergency response plan review is part of safety inspection field  
8 investigators perform when reviewing company policies and procedures.

9  
10 24. Q. What is an integrity management plan?

11 A. An integrity management plan is a documented and systematic approach to  
12 ensure the long-term integrity of pipeline systems. Integrity management  
13 planning is a process for assessing and mitigating risks in an effort to  
14 reduce both the likelihood and consequences of incidents. Integrity  
15 management plan requirements are described in Subpart O of the Pipeline  
16 Safety Regulations for transmission pipelines and Subpart P for distribution  
17 pipelines.

18  
19 25. Q. What is the difference between integrity management plans for  
20 transmission and distribution pipelines?

21 A. A transmission integrity management plan requires a pipeline operator to  
22 periodically assess pipelines near populated areas for structural integrity

1 using one of three methods; pressure testing, internal inspection using  
2 instrumentation attached to a device that travels along the inside of the  
3 pipe, or by certain electrical tests referred to as direct assessment. A  
4 distribution integrity management plan is less prescriptive and more  
5 flexible due to the wider range of pressures and construction materials  
6 found in distribution systems. A distribution integrity management plan  
7 requires the operator to identify threats to their system, evaluate and rank  
8 risks, and identify and implement measures to address those risks.

9  
10 26. Q. Do you believe including the C314V Central Corridor Pipeline in Duke  
11 Energy's integrity management plan for distribution lines instead of  
12 transmission lines will make this pipeline less safe?

13 A. No. The distribution integrity management plan requirements will allow  
14 Duke to create a monitoring and inspection plan using tools and methods  
15 appropriate for the pipeline.

16  
17 27. Q. Do you have an opinion on the need for this project?

18 A. No. My role at the Commission is to ensure operators follow the Pipeline  
19 Safety Regulations when designing, constructing, operating and  
20 maintaining gas pipelines.

21  
22 28. Q. Do you have an opinion on the route chosen for this project?

1           A.    No.

2

3   29.   Q.    Does this conclude your testimony?

4           A.    Yes.  However, I reserve the right to submit supplemental testimony as  
5                   described herein, as new information subsequently becomes available or in  
6                   response to positions taken by other parties.

## PROOF OF SERVICE

I hereby certify that a true copy of the foregoing Prefiled Testimony of Peter A. Chace, submitted on behalf of the Staff of the Ohio Power Siting Board, was served via electronic mail, upon the following parties of record, this 2<sup>nd</sup> day of April, 2019.

*/s/ Steven L. Beeler*

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**Steven L. Beeler**

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