COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the matter of:	)	
	)	Case No. 2020-00327
2021 Safety Modification and Replacement Program	)	
Filing of Columbia Gas of Kentucky, Inc.	)	
	)	

PREPARED DIRECT TESTIMONY OF DAVID ROY ON BEHALF OF COLUMBIA GAS OF KENTUCKY, INC.

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PREPARED DIRECT TESTIMONY OF DAVID ROY

I. INTRODUCTION

Q: Please state your name and business address.

A: My name is David Roy and my business address is 2001 Mercer Rd., Lexington, Kentucky.

Q: What is your current position and what are your primary responsibilities?

A: I am the Vice President & General Manager of Operations and Construction for Columbia Gas of Kentucky ("Columbia"). My responsibilities are to ensure the safe, reliable delivery of natural gas to all of Columbia's customers and to oversee all construction activities involving the installation of new natural gas facilities or the replacement of existing ones. Beyond these core responsibilities, I am also responsible for the safety and development of all field personnel, as well as, their direct leadership.

Q: Please describe your educational background.

A: I obtained a Bachelor of Science degree in Electrical Engineering from Purdue University in 1999 and a Master's degree in Business Administration from DePaul University in 2003.

Q: Please describe your professional employment history.

A: I joined NiSource, the parent company of Columbia, in 1999 as an Associate in their rotational development program. In 2000, I became a Field Engineer designing electric and natural gas distribution projects for Northern Indiana Public Service Company, another subsidiary of NiSource. I was promoted to a Field Operations Leader role in 2003 overseeing field operations and maintenance crews. In 2006, I was promoted to Field Engineering Manager for Columbia Gas of Kentucky and Columbia Gas of Ohio. While in this role I was responsible for the capital program development and field engineering designs for the two states. That role was expanded to six states in 2009 when I was promoted to Director of Field Engineering for all six Columbia distribution companies (Kentucky, Massachusetts, Maryland, Ohio, Pennsylvania, and Virginia). Later, in 2012, I was promoted to Vice President of Project Delivery for Columbia Pipeline Group where I oversaw the development, design and execution of all capital projects for the pipeline company. In 2015, Columbia Pipeline Group was spun off from NiSource and was subsequently acquired by TransCanada in 2016. In 2016, I was promoted to Vice President of U.S. Projects by TransCanada to oversee the development, design and execution of all of their U.S. projects. In 2019, I was hired by TRC Companies as Vice President of their Gas Distribution business consulting division. I was responsible for the profit/loss of that business unit with work

activities in management consulting, engineering design, operations, safety management systems and field maintenance work. I returned to NiSource and Columbia Gas of Kentucky in the fall of 2019 in my current role as discussed earlier in my testimony.

Q: Have you previously testified before any regulatory Commissions?

A: Yes, I have provided testimony for the Public Utilities Commission of Ohio multiple times in support of an accelerated mains replacement program and for the Massachusetts Department of Public Utilities in 2012 supporting a similar type of program.

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to update the Commission on Columbia's Safety Management System ("SMS"), provide an overview of Columbia's Safety Modification and Replacement Program ("SMRP") and introduce Columbia's In-Line Inspection project.

Q: Please summarize Columbia's business.

A: Columbia is one of six natural gas local distribution companies in the NiSource family of utility companies. Headquartered in Lexington, Kentucky, Columbia is

the result of a long history consolidations of other natural gas distribution companies. The result is a system made up of various different types of pipe installed during different time periods. Columbia serves approximately 135,700 customers in 30 Kentucky counties. It provides natural gas to residential, commercial and industrial customers through approximately 2,650 miles of mains, in the counties and municipalities listed in the tariff.

NiSource is headquartered in Merrilville, Indiana and was created by the mergers of Northern Indiana Public Service Company and Bay State Gas Company in 1998, and the Columbia Energy Group in 2000. NiSource is a registered public utility holding company subject to the jurisdiction of the Federal Energy Regulatory Commission.

Q: Describe Columbia's Safety Culture.

A: As described in the testimony of Kimra Cole and Dave Monte in Case No. 2019-00257, Columbia's long-term focus on continuous improvement in safety performance is rooted in its safety culture. Columbia and all NiSource companies aspire to be an industry leader in safety. It is the foremost stakeholder commitment and it guides daily work activities in the field, as well as investments in safety.

Our aspiration to be an industry leader in safety does not reflect a goal to outperform our peer companies, but rather it is about being a partner and leader in pursuit of critical shared safety goals for the natural gas industry. Columbia's safety commitment applies to all aspects of safety: customers, employees, business partners, and the communities Columbia serves. It reflects a continual focus on personal safety of people, pipeline safety for the public and the health and wellness assured through responsible environmental stewardship.

Q: Please describe Columbia's Safety Management System ("SMS").

A: As introduced in Case No. 2019-00257, Columbia's Safety Management System is a comprehensive approach to identifying risks and managing safety. It's based on API's Recommended Practice ("RP") 1173, which establishes a set of standards and best practices for the oil and natural gas industries based on the successful implementation of similar Safety Management Systems in the transportation, airline, and nuclear industries. Columbia has been assessing policies and procedures against the requirements of RP 1173 in order to ultimately align its policies and procedures with ten elements in RP 1173. These 10 essential elements are:

1. Leadership and Management Commitment
2. Stakeholder Engagement

3. Risk Management
4. Operational Controls
5. Incident Investigation, Evaluation, and Lessons Learned
6. Safety Assurance
7. Management Review and Continuous Improvement
8. Emergency Preparedness and Response
9. Competence, Awareness, and Training
10. Documentation and Recordkeeping

Additionally, Columbia has focused much time and effort on the following key efforts:

- **Asset Assessment:** Columbia is assessing risk around its assets, including customer-owned assets, building probabilistic risk assessment models, as well as analyzing, prioritizing, and building corrective action programs for identified risks.
- **SMS State Risk Tables and SMS Deployment:** Columbia established SMS State Risk Tables, chaired by the state presidents and includes the top leaders in each state in which NiSource operates. The State Risk Tables assess identified risks, monitor SMS performance, assign resources to support performance improvement, and take corrective actions.

- **Corrective Action Program ("CAP"):** Columbia established a Corrective Action Program or CAP to identify risks and to take action to mitigate those risks. CAP allows all employees and contractors to submit identified issues or concerns with physical assets, materials, resourcing, tools and equipment, work methods, and issues regarding health and safety.
- **Emergency Preparedness and Response**: Columbia established and trained local leadership on FEMA based emergency preparedness activities and emergency response capabilities. The team performs drills covering a broad range of potential scenarios and levels of emergency, and establishing well-defined roles with clear responsibilities.
- **SMS Learning Map Experience**: The learning maps are tools to help employees understand what they need to know about SMS. All Columbia employees participated in hands-on learning activities to help them understand SMS and its implementation.

Q: Please describe Columbia's current SMRP as approved in Case No. 2019-00257.

A: Columbia's SMRP, as approved in Case No. 2019-00257, combines elements from Columbia's accelerated main replacement program ("AMRP") and additional safety enhancements as identified and proposed from our SMS program. In the November 7, 2019 Order, Columbia was granted approval to complete Phase I of

an LP Program that was to be made up of two phases. Phase 1 included installing automatic shut-off valves ("ASV") as the primary form of overpressure protection in our low pressure systems. Also, on two small systems, we were to install low pressure gas regulators on facilities supplying those customers that perform the same function as the overpressure equipment at the district station. Additionally, we planned to install electronic instrumentation at each district LP station that can inform Columbia's Gas Control should one of these ASVs activate as well as sense other abnormal operating conditions. Phase II was under evaluation, but was intended to eliminate station by-pass valves.

Q: Has Columbia completed its LP Program?

A: Columbia expects to complete Phase I of its' LP Program as planned by the end of 2020. At this time, Columbia has decided to not move forward with Phase II of the LP Program based upon continued assessment and prioritization of risk. Columbia has not included costs related to the evaluation of Phase II in this filing.

Q: Is Columbia proposing any other safety modification investments as part of its SMRP?

A: Yes. Now that the LP Program is complete, Columbia seeks to address another big risk to its system which is the inability to assess Line DE using what is now the industry standard practice (i.e. inline inspection tools).

Q: Provide an overview of Line DE and outline why it's so important to Columbia and its customers?

A: Line DE is a transmission line that stretches approximately 52 miles from Nicholas County to Franklin County. It supplies natural gas to Toyota Motor Manufacturing of Kentucky and a public highway CNG fueling station in addition to 6 district stations that supply such customers as Buffalo Trace, Central Manufacturing, Kentucky Smelting Technologies, Woodford Reserve Barrel Warehouses, Lakeshore Learning, Minnesota Mining & Manufacturing, Central Motor Wheel of America, backup power generation for Kentucky Utilities, the Delaplain Industrial Park, the Lane's Run Business Park, and others. Those stations also provide natural gas supplies to the commercial and residential customers in communities including Paris, Cynthiana, Georgetown, Frankfort, and Versailles.

Q: Why does Columbia consider work on Line DE a priority?

A: The DE pipeline corridor has considerable elevation changes and water crossings as it traverses the 52 miles. Other operators with similar topological challenges have recently identified stress cracks at the base of hillsides due to land subsidence and other geological issues as well as at water crossings due to hydrological stresses. There have been recent failures at an interstate operator that also

highlight the need for Columbia to better understand the structural threats that may persist on Line DE.

Q: What does Columbia propose to address this risk?

A: Columbia proposes to modernize Line DE by making modifications to the transmission line so that it is capable of being assessed by In-Line Inspection ("ILI") tools to improve the continued safe and reliable operation of the line.

Q: **What is In-line Inspection ("ILI")?**

A: ILI is the most thorough and reliable pipeline integrity assessment method currently available to natural gas pipeline operators to assess the internal and external condition of transmission pipelines. ILI enables a pipeline operator to learn about the pipelines' physical properties relative to the condition of protective barriers used to protect these pipeline assets. The data received from ILI assessments supports predicting the integrity of those pipelines into the future to address time dependent, time independent and resident threats as well as other threats to pipeline integrity. It involves running technologically advanced inspection tools, often called "smart pigs," through the inside of the pipeline to collect data about the pipe, and then using that data to identify anomalies that may require further investigation or repair.

Q: **Please explain the benefit of modifying Line DE for ILI?**

A: Columbia will markedly improve the identification of anomalies from threats including external corrosion, internal corrosion and mechanical damage. Also, Columbia will have better visibility into stresses and anomalies created by outside force conditions introduced by water crossings and land subsidence or adverse loading conditions created by both overburden and shallow pipe conditions. The numerous elevation changes realized in the construction from Lake Carnico Station to Jim Beam Station may have potentially introduced stress points into the pipeline during original construction or transition into adverse conditions during the years of changes within the pipeline corridor.

An ILI assessment would provide Columbia a continuous and full view of the pipeline from the launcher to receiver. Columbia would address any key findings and use the data to proactively identify risks and take action prior to a failure or loss of service event.

Enabling Line DE to use ILI as the primary integrity assessment tool both in HCAs and non-HCAs not only aligns Columbia with industry best practices, but also provides Columbia with the opportunity to develop better data upon which it can more effectively evaluate and manage both the current and future asset health of Line DE.

Q: Please describe Columbia's current integrity management practices for transmission lines like Line DE?

A: Columbia's Transmission Integrity Management Program (TIMP) is a comprehensive systematic approach to maintain and improve the safety of the Company's transmission pipeline system through risk reduction and mitigation. The fundamental regulatory requirements associated with TIMP are found in the Code of Federal Regulations Title 49, Part 192, Sub-Part O for Gas Transmission Integrity that were most recently revised on October 1, 2019 to address process improvements involving assessment improvements and MAOP re-confirmation.

The company has employed procedures for the assessment methods that primarily addressed evaluation for external and internal corrosion threats that could also identify a significant number of mechanical damage threats from others known as direct assessment. These threats are more frequent than other threats but have not been the main contributors to catastrophic failures in the industry as seen regionally in recent events.

Q: What is meant by direct assessment?

A: Direct assessment is an integrity assessment method utilizing a structured process through which the operator is able to integrate knowledge of the physical characteristics and operating history of a pipeline system or segment with the

results of inspection, examination, and evaluation, in order to determine the integrity of the pipeline.

Q: Why does Columbia believe it should conduct ILI on Line DE rather than continuing to use direct assessment?

A: Direct assessment is an inferior approach to assess external and internal corrosion, because it isn't capable of providing information on threats from stress conditions (geotechnical and hydrological). Line DE crosses various streams and is in a corridor with a past history of subsidence in a few locations. Performing an ILI on Line DE should detect potential conditional issues realized from these geophysical stresses placed on the pipeline and alert Columbia to these threats. Also, any possible manufacturing threats that may persist on the pipeline can be checked for adverse response over the years of operation.

Q: Do federal regulations encourage the use of ILI tools for pipeline integrity?

A: We believe they do. An operator is required by 49 CFR 192.921 to assess the integrity of the line pipe in each covered segment using a method or methods best suited to address the threats identified to a covered segment. Columbia believes ILI tools are best suited to identify some of the potential threats on Line DE.

Additionally, in Case No. 2017-00482, the Commission supported Louisville Gas and Electric's ("LG&E") use of ILI technology stating "the Commission finds that the use of ILI tools to conduct integrity reassessment is preferable to assessment by other accepted methods.[1]" It was also stated in the same order that the "collection of more comprehensive integrity assessment data enhances pipeline safety by enabling an operator to conduct a more accurate risk assessment.[2]"

Q: Please summarize the proposed Line DE ILI work plan and the expected cost of the project?

A: Please see the prepared testimony of Gary Sullivan for this information.

Q: Does this conclude your Prepared Direct Testimony?

A: Yes, it does; however, I reserve the right to file rebuttal testimony if necessary.

[1] *In the Matter of the Application of Louisville Gas and Electric Company for Approval of State Waiver of the Reassessment Interval Required by C.F.R. 192.939*, Case No. 2017-00482, June 3, 2019 Order at 14.
[2] *Id*. at 15.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

ELECTRONIC 2021 SAFETY MODIFICATION AND REPLACEMENT PROGRAM FILING OF COLUMBIA GAS OF KENTUCKY, INC.	))))))	Case No. 2020- 00327

CERTIFICATE AND AFFIDAVIT

The Affiant, David Roy, being duly sworn, deposes and states that the prepared testimony attached hereto and made a part hereof, constitutes the prepared direct testimony of this affiant in the above-captioned matter, and that if asked the questions propounded therein, this affiant would make the answers set forth in the attached prepared direct pre-filed testimony.

/s/ David Roy

David Roy

COMMONWEALTH OF KENTUCKY

COUNTY OF FRANKLIN

SUBSCRIBED AND SWORN to before me by David Roy on this 13th day of October, 2020.

Stefon Fink

Notary Public #598041

My Commission expires: 03/26/2022