

Prepared Testimony of

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*before the*

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## **Introduction**

Good morning, Chairman Barrar, Chairman Sainato and members of the House Veterans Affairs and Emergency Preparedness Committee. I am Gladys Brown Dutrieuille, Chairman of the Pennsylvania Public Utility Commission. On behalf of the Commission, I thank you for the invitation to testify regarding pipeline safety. A central focus of the Commission – since its creation more than 80 years ago – is to ensure safe and reliable public utility service to the Commonwealth’s citizens and communities.

## **Background**

Before we delve deeper into specific pipeline safety activities at the PUC, I want to provide an overview of the jurisdictional and operational issues related to pipelines, because this is a complicated and sometimes confusing landscape. The PUC’s pipeline safety jurisdiction includes both public and nonpublic utilities:

- Public utilities include both natural gas distribution companies and common carrier pipelines for the transport of natural gas and hazardous liquids.
- Nonpublic utilities include pipeline operators, such as intrastate natural gas transmission and jurisdictional gathering lines, regulated under the Gas and Hazardous Liquids Pipelines Act, enacted in 2011, known as “Act 127.”

Equally important to note is that the regulation of natural gas and hazardous liquids pipelines - including safety, siting and environmental issues - involves several different state and federal regulatory agencies. The three main factors affecting the jurisdiction and regulation of pipeline safety are:

- The commodity being transported;
- The entity transporting the commodity; and,
- The pipeline’s geographic intakes and offtakes (i.e. interstate or intrastate).

The transportation of natural gas in interstate commerce is regulated at the federal level under the Natural Gas Act (NGA), and the transportation of hazardous liquids/petroleum products in interstate commerce is regulated under the Interstate Commerce Act (ICA). The Federal Energy Regulatory Commission (FERC) is the

lead federal regulatory agency for both the NGA and ICA, with FERC's jurisdiction varying under each act. FERC's authority under the NGA is exclusive and preempts all state regulation of natural gas in interstate commerce.<sup>1</sup> FERC issues certificates of public convenience, has siting authority, and approves rates. It does not matter whether the pipeline crosses state borders or if the applicable pipeline segment is located within a single state. If the natural gas pipeline is part of the interstate pipeline system, the PUC has no regulatory role. Examples of these types of pipelines in Pennsylvania include the Texas Eastern Pipeline, Columbia Gas Transmission, and the Tennessee Gas Pipeline.

By and large, the distribution of natural gas to end-use customers is primarily regulated by the states. However, some pipelines delivering natural gas directly to large end-users (such as power plants) from the interstate pipeline system are subject to FERC's exclusive jurisdiction.

The ICA is the federal law which governs the transportation of petroleum products. The ICA defines petroleum products as both refined petroleum products (for example, gasoline, diesel fuel, and heating oil) and petroleum hydrocarbons (for example, propane, butane and ethane). Under the ICA, FERC does not issue certificates of public convenience or conduct siting – FERC's jurisdiction under the ICA is limited to rate review and approval. Additionally, FERC's role is non-exclusive, meaning a pipeline jurisdictional to FERC under the ICA can also provide intrastate service jurisdictional to the PUC. In fact, the Commission and FERC share jurisdiction over several intrastate hazardous liquid pipelines in Pennsylvania, including Sunoco Pipeline L.P.'s Mariner East projects. Conversely, pipelines under the purview of the ICA solely providing interstate service are not PUC jurisdictional public utilities.

While pipeline safety under the NGA and ICA are within the purview of the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA), the Commission has a formal agreement with PHMSA to enforce compliance with the pipeline safety provisions of these federal laws – working through the Pipeline Safety Division of the PUC's independent Bureau of Investigation and Enforcement (I&E). The PHMSA agreement requires that the PUC have a federally trained workforce of engineers and an active compliance enforcement program. The prescribed federal training is rigorous, consisting of 26 classes at PHMSA's sole training facility in Oklahoma City, Oklahoma. These

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<sup>1</sup> Production and gathering are not considered "interstate commerce" and therefore not regulated under the NGA.

classes are one week in length and require a two-hour test that engineers must pass to become federally certified.

It is important to note that in recent years there has been a greater demand for training than the number of available openings at the PHMSA facility – prompting the exploration of other training opportunities and technology. The PUC is currently working with PHMSA on a pilot long-distance training project that would allow inspectors to attend some classes remotely, from a location here in Pennsylvania, easing the pressure on limited classroom space in Oklahoma, allowing quicker access to necessary training and helping to reduce costs.

As stipulated in the PHMSA agreement, the PUC enforces compliance to federal pipeline safety laws of public utility and Act 127 pipeline operators. These pipeline operators include distribution operators (e.g. UGI, PECO, Columbia, Peoples, etc.) that transport natural gas from a transmission pipeline to the end-use customer (residential, industrial, commercial); gathering pipelines in Class 2, 3, and 4 areas; and intrastate transmission pipeline operators in Class 1-4 locations. Federal pipeline safety regulations define these class locations – Class 4 being pipe situated in the most densely populated areas while Class 1 being pipe situated in the most sparsely populated areas.

The Commission employs 21 engineers who monitor over 47,000 miles of distribution lines and over 1,100 miles of intrastate transmission lines. This responsibility entailed over 1,161 inspections in 2018. The PUC's pipeline safety program is audited annually by PHMSA, and our inspectors do an outstanding job – as evidenced by annual audit reviews of pipeline inspection performance and compliance enforcement actions. The most recent PHMSA audit of the PUC's pipeline safety activities (for calendar year 2017) resulted in an aggregate score of 252 out of a maximum possible score of 253.

Additionally, given the extremely specialized nature of some of the recent issues and complaints raised about pipelines – especially as it relates to geology, geotechnical engineering, hydrogeology and geophysics – I&E has retained the services of an independent engineering and consulting firm. This expert will provide technical engineering support to I&E and the Pipeline Safety Division on various cases involving pipeline and utility projects.

While we are proud of the work being done every day by our engineers and inspectors, it is essential that we continue to review the Commission's complement as it relates to our core functions. I would note that the PUC's 2019-2020 fiscal year budget request includes four additional positions in the Pipeline Safety Division.

The Commission is also now responsible for enforcement of the PA One Call law, which requires contractors and residents to contact PA One Call at least three business days prior to excavation.<sup>2</sup> These “8-1-1” calls trigger alerts to all utilities within an intended digging area and prompt utilities to mark where their facilities are located. The overarching goal of the PUC’s enhanced enforcement of the PA One Call Law is to reduce the number of “hits” on underground infrastructure – including pipelines – and reduce the risk to contractors and homeowners who are conducting the excavation work; to utility workers and emergency responders who are mobilized when lines are struck; and to bystanders who live, work or travel near the locations of the incidents.

Since November 2018, when the PUC’s Damage Prevention Committee first began meeting to review potential violations of the PA One Call Law, more than 400 actions have been taken against utilities, contractors & project owners – ranging from education or additional training requirements to fines. To date, over \$300,000 in fines have been imposed by the Damage Prevention Committee, helping to drive home the message that PA One Call violations are unacceptable.

## **Pipeline Integrity Management**

With that landscape in mind, I will now turn my attention to the primary focus of today’s hearing: the public safety aspects of gas and hazardous liquid pipeline systems. One of the most important tools related to public safety is Pipeline Integrity Management. This is especially true for pipelines in high consequence areas – defined in pipeline safety regulations as an area where pipeline releases could have greater consequences to health and safety or the environment, including high population areas, sensitive ecological areas and drinking water sources.

The federal hazardous liquid pipeline safety regulations for Pipeline Integrity Management, (49 CFR 195.452) apply to pipelines that could affect high consequence areas (as defined in 49 CFR 195.450). The regulations in 49 CFR 195.452 (Hazardous Liquid) and 49 CFR 192 (Natural Gas), Subpart O (Transmission) and Subpart P (Distribution), are performance-based regulations and require the pipeline operator to develop a written integrity management program to address pipeline risks. The main components of the program include:

- Pipeline segment identification.

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<sup>2</sup> Act 50 of 2017.

- Development of baseline assessment.
- Analysis of integrity and consequence of failure.
- Remedial action to address integrity issues.
- Continual assessment process to evaluate and maintain pipeline integrity.
- Identification of preventative and mitigative measures.
- Measurement of program effectiveness.
- Review process of integrity assessment results.

As part of their Pipeline Integrity Management efforts, operators are required to analyze several different factors:

- Probability of Occurrence – The goal for operators is to drive down the probability of a failure or product escaping the pipeline system. The integrity management sections of the federal code are designed to reduce the probability of failure and create an acceptable level of risk.
- Risks Identification – Risk is defined as probability (P) of failure multiplied by consequence (C) of that failure ( $\text{Risk} = P \times C$ ). An operator must assess all risk factors and base an assessment schedule on a prioritized risk basis, meaning the riskiest assets get the most attention. The regulations list factors that must be addressed but do not limit operators to just those risks. Some of these risk factors include: defect types and sizes identified, defect growth rate, assessment method detection parameters, pipe specifications (size, material, manufacturing information, coating type, seam type), leak history, product in pipeline, pipeline operating stress levels, 3rd party excavations or other activities in the area, environmental factors (subsidence) and geo-technical hazards.
- Consequence of occurrence – Operators must take measures to prevent and mitigate the consequence of a pipeline failure in a high consequence area. These measures can include enhanced damage prevention guidelines, cathodic protection enhancements if corrosion is an issue, shorter inspection intervals (using in-line Pipeline Inspection Gauges or “PIGs”), installing Emergency Flow Restricting devices (EFRDs), leak detection/SCADA/control room enhancements and additional training and drills with first responders.
- Risk Reduction – Since the regulations are performance based, the risk reduction approaches vary from pipeline segment to segment and operator to operator. Overall risk reduction is achieved by reducing both probability and consequence of failures. Operators must consider the preventative and mitigative measures to drive down the probability of occurrence while considering the baseline and all periodic integrity assessment results.

Technology for In-line inspection tools, or PIGs, is evolving and must be considered by operators. Hydrotesting, or pressure testing, the pipeline is a means to assess the integrity of pipeline segments.

- Living Breathing Document – An operator must continually change the program to address current and potential risks. The operator must use operating experience, integrity assessment results, maintenance and surveillance data and failure evaluations. This document must be continually assessed, evaluated and amended.

## **Public Awareness**

Another key function addressed by federal pipeline safety regulations is public awareness. The regulations (49 CFR 192.616 and 49 CFR 195.440) require pipeline operators to develop and implement public awareness programs that follow the guidance provided by the American Petroleum Institute (API) Recommended Practice (RP) 1162 ("Public Awareness Programs for Pipeline Operators," incorporated by reference in federal regulations). The API public awareness program (RP 1162) is an industry consensus standard that provides guidance and recommendations to pipeline operators for the development and implementation of enhanced public awareness programs. It addresses various elements of such programs, including the intended audiences, the kinds of information to be communicated, frequencies and methodologies for communicating the information, and evaluation of the programs for effectiveness.

The primary audience is affected members of the public including residents, businesses, customers, and schools along the pipeline and the right of way, along with emergency response and planning agencies (state, county and local), public officials, government councils and excavators known to work on or in proximity to the pipeline.

## **Emergency Response Planning**

The API public awareness program (RP 1162) includes requirements for notifications and meetings with emergency response officials. The meetings are used to identify pipeline locations, emergency contacts, potential hazards, emergency response plan review, how to safely respond to a pipeline emergency,

and overall preventive measures performed by the operators. Specific requirements include the following:

- Liquid operators are required (49 CFR 195.402) to have procedures to notify fire, police and other public officials of emergencies and coordinating with them preplanned and actual responses during emergencies.
- Emergency response training requirements are addressed by 49 CFR 195.403.
- Emergency procedures and emergency plan requirements for natural gas operators are addressed by 49 CFR 192.605 and 615.

## **Communication**

Communication between entities – county governments, municipalities, school districts and various state agencies – is essential. In addition to inspections for public awareness procedures and emergency response training, the PUC has coordinated and attended meetings with highly volatile liquids (HVLs) operators and impacted local, county, and state officials.

Working through I&E, multiple meetings have been held with local and county emergency management agencies, members of the Pennsylvania State Senate and House of Representatives, the Pennsylvania Emergency Management Agency (PEMA), the Pennsylvania Department of Environmental Protection (DEP), school boards, and PHMSA in an effort to ensure all parties are communicating and to identify needed resources. I&E is in regular contact with PHMSA regarding the HVL lines under joint jurisdiction.

## **Pipeline Replacement**

Another factor that must be considered in the overall landscape of pipeline safety is the replacement of aging and other “at risk” pipelines, especially older cast iron and unprotected steel lines that are still in use across the state. The Commission has approved Long-Term Infrastructure Improvement Plans (LTIIPs) for the majority of large natural gas distribution companies in the Commonwealth. Correspondingly, for each of these companies, the Commission has approved Distribution System Improvement Charges (DSIC) to facilitate recovery of infrastructure remediation expenditures. LTIIPs provide a five to ten-year forward-looking plan for pipeline and distribution asset replacements with associated budgets. The Commission

periodically reviews LTIIPs to ensure companies are meeting the established metrics and are replacing the riskiest pipes.

### **Distribution Integrity Management Programs**

Distribution Integrity Management Programs (DIMP) apply to natural gas distribution operators and the regulations are found in 49 CFR 192 Subpart P. The DIMP regulations were established to reduce risks and failures specific to gas distribution systems. I&E conducts robust DIMP inspections of the operators often resulting in non-compliance actions. These performance-based regulations require a deep dive into an operator's data. Overall, the goal is to ensure that the operator develops plans to reduce risks on all threats. Pipeline replacement of cast iron and bare steel pipelines is the most common way to reduce the largest risk for most operators. This ties into the operator's LTIIPs. Pennsylvania was the first state to begin annual DIMP inspections of large pipeline operators, and we remain committed to continuous improvement.

### **Conclusion**

Finally, it is important to note that there are common threads to some recent high-profile public complaints regarding pipeline development in Pennsylvania, which are currently out of reach of the PUC, including the absence of siting authority for pipelines, the "stacking" of multiple pipelines within a right of way corridor and increased residential and business development along existing pipeline rights of way.

While different pieces of legislation have been introduced over the last few years related to these topics, most remain unresolved – leading to increased friction between operators and the communities they pass through. While these matters are outside the jurisdiction of the Commission, they are shaping the ongoing public discussion involving "pipeline safety" and are matters that the General Assembly may wish to consider. The Commission will continue to focus on the area where our jurisdiction lies, pipeline integrity.

I hope my testimony today has detailed the PUC's role in addressing pipeline safety. We are committed to working with the legislature, our regulated entities, emergency responders, contractors, municipalities, other state agencies, and additional stakeholders to enhance the safety of Pennsylvania's infrastructure. I

appreciate the opportunity to testify today and would be happy to address any of your questions.