FLORIDA
PUBLIC SERVICE COMMISSION

NATURAL GAS PIPELINE
ANNUAL
SAFETY REPORT

2023

DIVISION OF ENGINEERING

Natural Gas Pipeline Safety Background

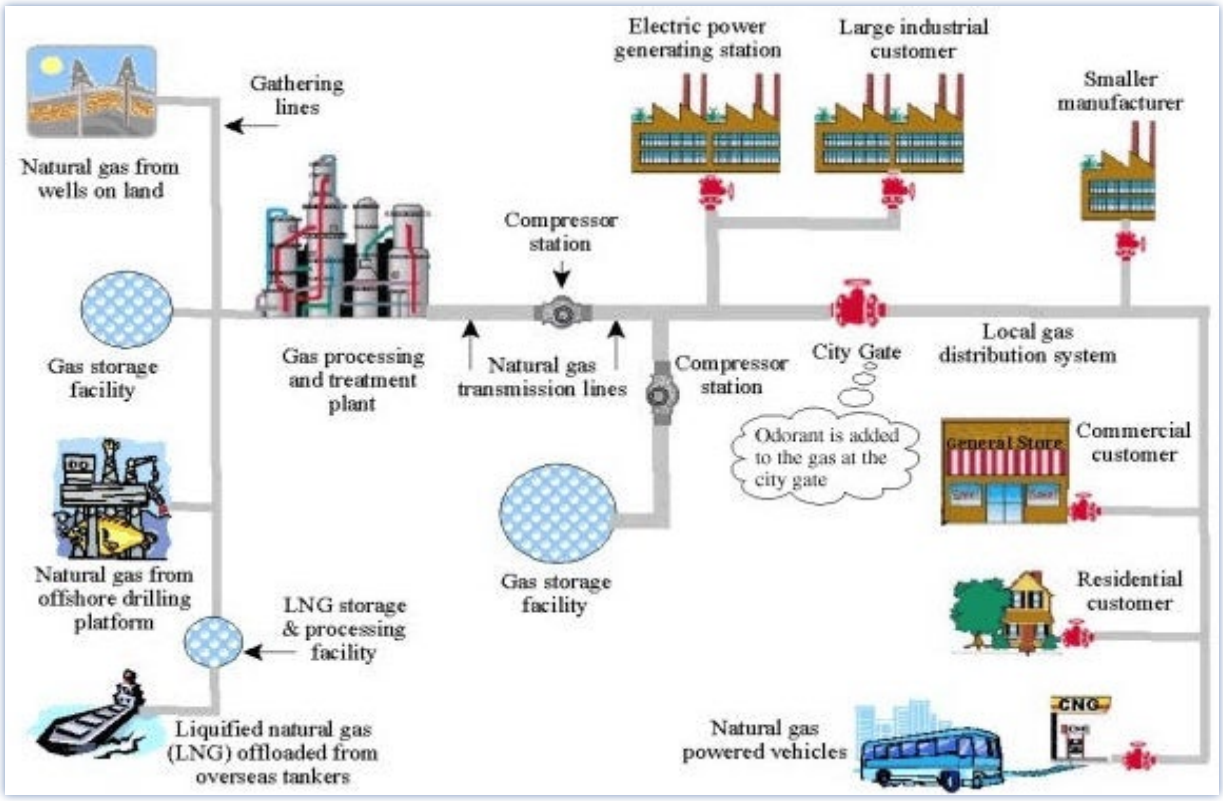
The federal government establishes minimum pipeline safety performance standards under the United States Code of Federal Regulations (CFR), Title 49 "Transportation," Parts 190, 191, 192, and 199. The Office of Pipeline Safety, within the U.S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), has overall regulatory responsibility for hazardous liquid and gas pipelines in the United States. PHMSA authorizes state agencies, such as the Florida Public Service Commission (FPSC or Commission), to conduct oversight and enforcement of pipeline operators through PHMSA's State Pipeline Safety Program.[1]

Chapter 368, Florida Statutes, authorizes the FPSC to inspect pipelines and adopt rules for governing pipeline safety. The FPSC has adopted the federal standards as well as more stringent regulations found in Chapter 25-12, Florida Administrative Code (F.A.C.). At the March 5, 1984, Internal Affairs meeting, the FPSC voted to require staff to prepare an annual summary of the previous year's natural gas pipeline safety activities. This report reflects the calendar year 2023.

[1] Federal Statutes provide for state assumption of all or part of the intrastate regulatory and enforcement responsibility of utility companies through annual certifications and agreements issued under this program.

Natural Gas in Florida

Natural gas is delivered into Florida by high-pressure transmission pipelines from other states. These transmission pipelines use compressor stations to maintain the appropriate pressure of the gas. The gas is distributed to large end users like power plants by lateral lines branching off the transmission lines. From the transmission lines, gas is delivered to city gate stations which reduces the pressure for the distribution systems. The pressure is further reduced by regulator stations located within the distribution systems. If a consumer's appliances require further reduction in gas pressure, a regulator is installed at the consumer's location. The figure below provides a view of the various stages of natural gas delivery.



2023 Safety Activities

The FPSC has jurisdiction over intrastate operators (an entity that owns, operates, manages, or controls any gas transmission or distribution facility transporting gas) as well as master meter facilities.[2] Interstate facilities are under the jurisdiction of PHMSA and facilities beyond the outlet of a customer's meter set assembly are the responsibility of the customer.

As of December 31, 2023, there were 54 operators with facilities in Florida. These operators control and maintain 108 distinct systems which are comprised of more than 48,000 miles of pipeline and over 1,000,000 customer service lines.

[2] Rule 25-12.004 F.A.C. defines a master meter system as a pipe system that receives gas through a gas meter and transports that gas to or for the public, with the gas being delivered through another gas meter prior to consumption.

Operator Inspections/Evaluations

In 2023, 10 FPSC engineers inspected 106 of the previously discussed natural gas systems.[3] In order to perform these inspections, FPSC engineers must complete training courses provided by PHMSA and/or must be trained by a senior engineer. The inspections performed by FPSC engineers involve a review of the plans, procedures, programs, records, and facilities of the respective system to ensure the operator is in compliance with state and federal regulations.[4] When a condition of non-compliance is identified, a notice of probable violation is issued to the operator. This notice details the violation(s) found and informs the operator of the date on which their response to the violation(s) is required.

The inspections performed by FPSC engineers in 2023 identified 14 violations. The primary rule/code violations were related to inactive gas service lines (3), odorization of gas (2), external corrosion control (2), and qualification program (2). Five different rule/code violations accounted for the remaining five violations. FPSC engineers have followed up with the operators that received a notice of probable violation, and the respective operator has either corrected the violation or is making progress toward correcting the violation.

Construction Inspections/Evaluations

In addition to the annual evaluations discussed above, FPSC engineers also evaluate pipeline construction projects. For construction projects involving pipeline that is at least two inches in diameter and 2,000 feet or more in length, operators are required to notify the Commission at least 15 days prior to starting construction. During a construction inspection, amongst other activities, the qualifications of employees are reviewed as well as the procedures relied on for the construction project. In 2023, FPSC engineers evaluated 46 construction projects and identified two violations.

Reportable Incidents

FPSC engineers also respond to and investigate certain natural gas incidents and outages (reportable incidents). In Florida, natural gas incidents and outages are reported to the FPSC in accordance with Rule 25-12.084, F.A.C. which requires an operator, at the earliest practicable moment following discovery, to give telephonic notice to the Commission of any event involving the release of gas from a pipeline that:

a) Caused a death or a personal injury requiring hospitalization;
b) Required the taking of any segment of transmission pipeline out of service;
c) Resulted in gas igniting;
d) Caused estimated damage to the property of the operator, or others, or both, of a total of $10,000 or more; or
e) In the judgment of the operator, was significant even though it did not meet the criteria of subsection (a), (b), (c), or (d).

Operators are also required to provide notice of any distribution system-related incident or failure which interrupts service to either 10 percent or more of its meters or 500 or more meters. In 2023, Florida had 26 reportable incidents and none of them involved an injury or fatality. Of the 26 reportable incidents, more than 92% (24) were the result of dig-ins. Other causes of reportable incidents include natural gas facilities being impacted by fires.

[3] Two systems were constructed and in the process of commissioning in 2023 and will be evaluated in 2024.
[4] Drug and Alcohol Plans, Control Rooms, and Transmission Integrity Management Plans are evaluated at least once every five years. There are currently two control rooms evaluated by FPSC engineers.

Excavation Damages and Damage Prevention

As identified above, dig-ins (pipelines cut or damaged by those engaged in excavation activities or directional drilling) were the leading cause of reportable incidents in 2023. In 2023, dig-ins were also a leading cause of natural gas releases/leaks that did not meet the thresholds set forth in Rule 25-12.084, F.A.C. Florida's operators reported more than 3,500 leaks that were the result of excavation damage in 2023.

Chapter 556, Florida Statutes, is the Underground Facility Damage Prevention and Safety Act that requires notification at least two full business days prior to any excavation or demolition activity. Notification of such activities allows natural gas operators as well as other underground utilities to locate and mark their facilities. Sunshine 811 operates the notification system and is responsible for receiving and transmitting excavation and demolition information.

Effective July 1, 2020, Chapter 556, Florida Statutes, was amended. Part of the amendment expanded the list of entities that may issue citations for violation of Chapter 556, Florida Statutes. Pursuant to Chapter 556, Florida Statutes, a citation may be issued by the State Fire Marshal or his or her agents; the fire chief of the special district, municipality, or county; or any local or state law enforcement officer, government code inspector, or code enforcement officer,

While the FPSC does not have citation authority over excavators, FPSC staff does review the number of damages caused by inaccurate or incomplete markings which is the responsibility of the operator. Although the majority of excavation damages in Florida (approximately 44 percent) are the result of no notification to the One-Call Center/811, the percentage of excavation damages caused by inaccurate or incomplete marking of lines is approximately 14 percent. In addition to reviewing the information described above, FPSC staff shares information with the Fire Marshal and 811 and provides Call Before You Dig reminders on the Commission website and in Commission brochures.

Bare Steel and Cast Iron Pipe Replacement

In 2011, following major natural gas pipeline incidents in the United States, DOT and PHMSA encouraged the accelerated repair, rehabilitation, and replacement of the highest-risk pipeline infrastructure. Bare steel and cast iron pipelines were identified among those pipelines that pose the highest risk. TECO Peoples Gas, Florida Public Utilities, the Florida Division of Chesapeake Utilities (Central Florida Gas), and Pensacola Energy have voluntarily established pipeline replacement programs to replace cast iron and bare steel pipelines. Since 2012, these utilities have replaced more than 1,100 miles of bare steel and cast iron pipeline. As of December 31, 2023, approximately 332 miles of bare steel and cast iron pipeline remain to be replaced.

Safety Device Installation

In addition to the preventative activities described above, natural gas operators also take steps to mitigate the impact of pipeline damage/failure. An excess flow valve (EFV) is a safety device designed to automatically shut off the flow of natural gas in the event a pipeline ruptures thereby mitigating the consequences of incidents where there has been a substantial line break. Since 2012, the FPSC began monitoring the installation of EFVs by gas operators. To date, more than 419,000 EFVs have been installed.

Conclusion

The FPSC has adopted federal standards as well as more stringent regulations to govern Florida's natural gas operators. Using these standards, FPSC engineers annually evaluate operators for compliance and respond to construction notices and reportable incidents. In addition to these annual activities, the FPSC is working with various state entities to prevent dig-ins, Florida's operators have implemented programs to replace higher risk pipeline, and safety devices (EFVs) are being installed to mitigate the impact of pipeline damages. These efforts, which are discussed in greater detail in this report, demonstrate the actions taken by the Commission and its Federal and industry partners to facilitate the efficient provision of safe natural gas service.