

The Leonel Rondon Pipeline Safety Act

Section-by-Section

Sponsored by Sen. Markey, Sen. Warren, Sen. Blumenthal

Short Summary

This legislation responds to deficiencies uncovered during the investigation into the Merrimack Valley disaster by Senators Markey and Warren. The legislation is intended to strengthen distribution systems management and safety by closing regulatory loopholes and increasing safety standards. It would improve:

- Operator planning against high-consequence, low-probability risks;
- Emergency response coordination with first responders, the public and relevant officials;
- Written procedures for responding to over-pressurization and managing changes to the pipeline system that could lead to disasters;
- A culture of safety at gas companies by ensuring that all companies follow established best practices for holistic safety management;
- Maintenance of accurate, traceable, and reliable maps and records;
- Use of professional engineers to approve gas engineering plans or significant changes to the system;
- On-site monitoring of pressure regulation stations by qualified employees during construction that could result in dangerous operating conditions;
- Technological configurations of regulator stations by requiring improved equipment and configuration to avoid and quickly respond to hazardous gas pressure levels;
- Guidelines for appropriate company staffing levels; and
- Civil penalty limits by raising them to more appropriately deter wrongdoing.

Sec. 1: Short Title

Sec. 2: Distribution Integrity Management Plans

This section would direct the Secretary of Transportation to promulgate regulations that would strengthen requirements for distribution integrity management plans. Under current regulations, operators must develop these plans to identify threats to their pipeline system; evaluate and rank risks; implement measures to avoid risks; and measure performance, monitor results, and evaluate effectiveness of the integrity management program.

However, during the Senators' investigation into the Merrimack Valley disaster, it was discovered that many integrity management plans undervalue threats with a low probability of occurring or that have not occurred in the recent past, causing companies to ignore and fail to prepare for and possibly avoid high-consequence, low-probability events.

The regulations under this section would:

- Require a greater focus on the presence of leak-prone cast iron pipes and mains and on risks that could result in operation above the maximum allowable operating pressure

- Direct companies to avoid using a risk rating of zero for low-probability events, like the over-pressurization event in the Merrimack Valley, in order to decrease the likelihood that companies fail to address rare but devastating system failures.
- Require distribution operators to submit copies of their distribution integrity management plans, emergency response plans, and procedural operations and maintenance manuals to PHMSA or to the certified State authority, if applicable. The responsible regulatory agency must have updated copies of all of these documents on-hand to review and inspect whenever necessary.
- Strengthen the PHMSA yearly audits of how states are doing in regulating pipeline distribution companies.
 - Through regulations, PHMSA would make sure that these yearly evaluations review the State’s capability to assess the plans and manuals submitted to the state.
 - These regulations would also require that State authorities have a sufficient number of inspectors to ensure safe operations, determined by a formula that takes into account factors including the age of the system in the state, population density, and geologic factors.

Section 3. Emergency Response Plans

This section would direct the Secretary to issue regulations to strengthen Emergency Response Plans. Under current regulations, all gas distribution operators must have written plans to minimize the hazard resulting from a gas pipeline emergency. After the Merrimack Valley disaster, local officials and residents noted the public silence of Columbia Gas as a cause of confusion and concern, and officials also were not contacted sufficiently soon after the disaster began.

These regulations would:

- Require that operators establish protocols for communicating with fire, police, and other relevant public officials as soon as practicable, but no later than 30 minutes after a disaster that includes fires, explosions, or one or more fatalities or results in the shutdown of gas to more than 100 customers.
- Strengthen the requirements for public communication after a disaster of that magnitude, done in consultation with fire, police, and other public officials.
- Direct companies to develop and implement a voluntary, opt-in system that would allow gas distribution operators to communicate rapidly with customers in the event of an emergency.

Section 4: Operations and Maintenance Manuals

This section would direct the Secretary to issue regulations to strengthen gas distribution operators’ procedural manuals for operations, maintenance, and emergencies. Under current regulations, all gas distribution operators must have a manual of written procedures for conducting operations and maintenance activities, and this manual must be reviewed and updated by the operator at least once each calendar year.

These regulations would:

- Direct operators to have written procedures for responding to over-pressurization alarms, including a clear timeline and order of operations for responding to such an event and shutting down portions of the gas distribution system, if necessary.
- Require the inclusion of a procedure for managing changes to the distribution system that ensures relevant employees, as determined by the regulations, review construction documents to make sure they are accurate, complete, correct and will not lead to disaster.

In the Merrimack Valley disaster investigation, it was determined that the relevant employees with an overview of the gas distribution system did not review construction documents, allowing flawed work plans to be used for construction.

Section 5: Pipeline Safety Management Systems

This section would the Secretary to issue regulations to ensure that gas pipeline companies employ practices to promote a safety culture across all operations at their companies. These regulations would require companies to implement best safety practices, called a pipeline safety management system, in accordance with Recommended Practice 1137 of the American Petroleum Institute.

These safety management systems were recommended by the National Transportation Safety Board in its review of the Merrimack Valley accident.

Regulations that implement these practices would:

- Help operators holistically manage pipeline safety, and continuously measure progress to improve overall pipeline safety performance.
- Develop a system that can be used by regulators to evaluate the effectiveness of each company's pipeline safety management system, including by using independent third-party evaluators if necessary.

Section 6. Pipeline Safety Practices

This section would direct the Secretary to develop regulations that would strengthen the overall safety of the gas distribution system.

These regulations would:

- Direct operators to develop and maintain traceable, reliable, complete, and up-to-date records of the gas distribution system in each region of operation, and make sure that those maps and drawings are accessible to all relevant employees and provided to the relevant regulatory authority. These maps also much show the high-, medium-, and low-pressure gas systems. According to the National Transportation Safety Board, the Merrimack Valley disaster was linked to the use of incomplete maps that failed to depict key sensing lines attached to a pipe that was abandoned and contributed to the disaster. As a result, the National Transportation Safety Board recommended that the company

“review and ensure that all records and documentation [...] are traceable, reliable, and complete.”

- Require that important changes to the pipeline system are approved by a professional engineer, and that the professional engineer would need to have access to all relevant records and work plans needed to certify the safety of the covered task. The National Transportation Safety Board believes that professional engineers should review gas engineering work.
- Require that a qualified gas employee be on-site at a district regulator station to monitor gas pressure during construction work that could result in dangerous operating conditions, like tie-ins or abandonment of distribution lines or mains. This would ensure that changes in pressure can be quickly caught and potentially dangerous events can be stopped. The legislation would not require in-person monitoring if the regulator station has a monitoring system and the capability for remote or automatic shut-off. During the Merrimack Valley disaster, no employee was on-site at the regulator station affected by the construction, which meant the gas flow was not quickly shut off.
- Strengthen safety standards by requiring that operators assess and upgrade (as necessary) the regulator stations to make sure that there is no possibility for a common mode of regulator failure, as occurred during the Merrimack Valley disaster, that the station has monitoring technology to constantly assess pressure at the station, and that the station has some additional pressure-relieving safety technology (as appropriate for the configuration of the station).
- Require the development of standards that promote sufficient staffing at gas distribution companies to encourage an appropriate number of employees tasked with monitoring and controlling gas systems.

Sec. 7: Civil Penalties

The legislation would increase penalties for companies that violate the law by a factor of 100, to increase the financial deterrent for cutting corners on safety.

- The civil penalty limit for violating pipeline safety standards would be increased from not more than \$200,000 for each violation to not more than \$20,000,000 for each violation. A separate violation occurs for each day the violation continues.
- The maximum civil penalty under this paragraph for a related series of violations would be raised from \$2,000,000 to \$200,000,000.