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Methane Leak Abatement Policies

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Mission Statement Risk Assessment Section

The Mission of the Safety & Enforcement Division's Risk Assessment section is to promote safety by ensuring that the regulated entities integrate risk assessment and risk management into their operational planning and other decision-making processes.

SB 1371 and Methane Leaks

- In 2014, SB 1371 requires the adoption of rules and procedures to minimize natural gas leakage from Commission-regulated natural gas pipeline facilities
- *"Provide for the maximum technologically feasible and cost-effective avoidance, reduction, and repair of leaks and leaking components."*
- SB 1371 also requires the gas corporations to file an annual report about their natural gas leaks, and their leak management practices.
- In January 2015, the CPUC launched R.15-01-008, a rulemaking to implement SB 1371.
- Goal: To minimize leaks as a hazard to be mitigated consistent with gas safety policies, and reducing emissions of natural gas from such facilities to advance the state's goals of minimizing GHG's

SB 1371 and Methane Leaks

In D.17-06-015, the CPUC adopted annual reporting requires, a set of 26 Best Practices for planning, training, leak prevention, detection, quantification and repair.

Also made this distinct policy statement with regard to gas & methane emissions:

> *"Historical utility regulations view the primary issue with natural gas as the immediate **safety hazard** it presents when not managed properly."*

> *"As SB 1371 makes clear, this business paradigm is no longer acceptable and a 'new way of doing things' is required. In terms of managing natural gas, we need to look at not only policy goals of natural gas pipeline safety and integrity, but also reduction of greenhouse gases and their deleterious 'real' consequences."*

SB 1371 and Methane Leaks

- In keeping with statute SB 1383, SB 32 and policies set by California Air Resources Board, the decision establishes a “soft target” for a 40% emissions reduction from 2015 levels by 2030.

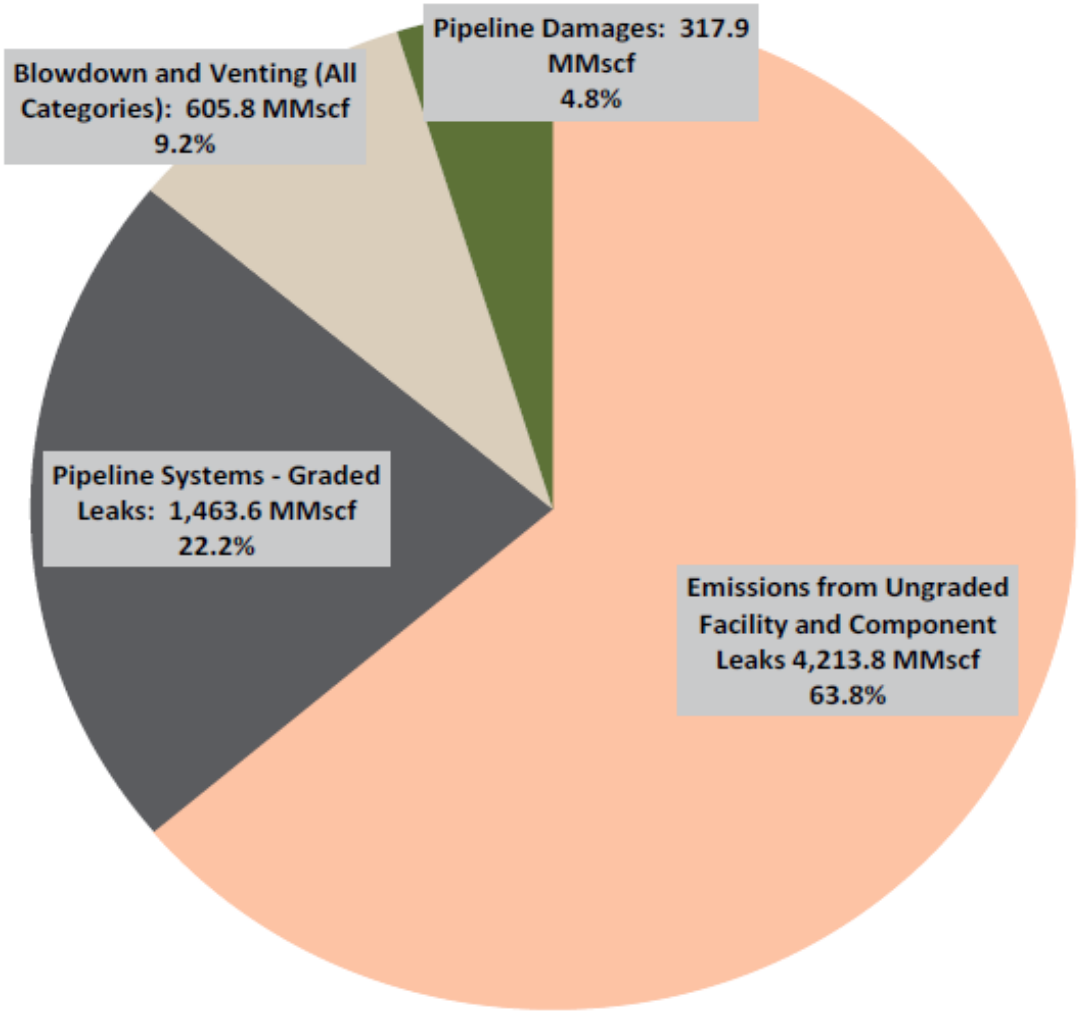
- The majority of 2015 emissions of 6,601.2 MMscf (million standard cubic feet), as reported, are from 3 main sectors:
  - Transmission and Distribution Metering and Regulation Stations 35.7%.
  - Distribution Main & Service and Transmission Pipeline systems 34.1%.
  - Customer Meters 24.8%.

- 2015 Graded pipeline leaks make up 22% of reported emissions.

SB 1371 and Methane Leaks

System Categories	Category Total MMscf	%
Transmission Pipelines	549.2	8.3%
Transmission M&R Stations	1,007.2	15.3%
Transmission Compressor Stations	162.7	2.5%
Distribution Main & Service Pipelines	1,702.9	25.8%
Distribution M&R Stations	1,348.1	20.4%
Customer Meters	1,638.3	24.8%
Underground Storage (without Aliso Canyon)	192.8	2.9%
	6,601.2	100.0%

2015 Graded Leaks, Ungraded Leaks, Venting and Damages
6,601.2 MMscf



Areas of Possible Research

Direct measurement over use of emissions factors:

- Use of EFs may be acceptable in the short term for establishing the baseline emission levels. However, in order to better quantify emission reductions over time, utilities must devise better ways to measure actual leak volumes.
- The overall goal is use as much actual discrete leak and emission data to provide as close to actual emissions estimates as possible.
- Many emissions factors are based on studies that are more than 20 years old.
- CARB has some updated studies, but they are inconsistent.
- In short term, more work is needed to develop and improve California specific EFs until actual emissions measurements are available for the sources where it is feasible to directly measure emissions.

Areas of Possible Research

In several instances, there is not enough information about the ***technological feasibility*** of emerging technologies, their ***costs*** or ***effectiveness*** in detecting or reducing methane emissions.

Several Best Practices allow for Research & Development or utility Pilot programs

- BP 17 Enhanced Methane Detection
- BP 18 Stationary Methane Detectors
- BP 20 a & b Quantification and Geographic Tracking
- BP 22 Pipe Fitting Specifications
- BP 23 Minimize Emissions from Operations, Maintenance and Other Activities

Possible areas:

- Measuring effectiveness of leak survey technology that requires utilities to use a mobile mounted atmospheric methane analyzers with a detection capability on the parts per billion level.
- Developing software and networks that automatically upload field measurement information into data bases for tracking leaks, scheduling repairs and analyzing aggregate data.

Areas of Possible Research

Statutory directive on utility research projects found in PUC Code Sec. 740.1 (d):

> *Projects should not unnecessarily duplicate research currently, previously, or imminently undertaken by other electrical or gas corporations or research organizations.*

This suggests that there are areas ripe for research as long as they are coordinated with the needs of utilities to meet D.17-06-015.

Thank You!

For further information related to R.15-01-008, please contact :

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