

# **Senate Bill 1371 Workshop**

## **California Air Resources Board Oil & Gas and GHG Mitigation Branch**

**Sacramento  
April 12, 2016**

# Agenda

- 9:30 Introduction
- 9:45 ARB Presentation
- 10:30 CPUC Presentation
- 11:15 EDF Presentation
- 12:00 Lunch
- 1:00 Sempra Presentation
- 1:45 PG&E Presentation
- 2:30 Break
- 2:45 ISPs Presentation
- 3:30 Next Steps
- 4:00 Adjourn

# Topics

- How should the targets be set up?
  - ✓ Industry wide;
  - ✓ By company; or
  - ✓ By emission source/equipment type.
- Should small utilities have a different target?
- Should storage companies have a different target?
- How can we go further than a 40% reduction?
- Should there be interim targets?
- How does your company plan to prioritize emission reductions in Environmental Justice (EJ) or Disadvantaged Communities?

# Outline

- Emissions Target
- Emission Sources
- Best Practices
- Compliance
- Enforcement
- Environmental Justice
- Next Steps

# Emissions Target

- Executive Order B-30-15:
  - 40 percent GHG reduction below 1990 levels by 2030
- ARB Short Lived Climate Pollutant Plan:
  - 40-45 percent GHG reduction below 2012 levels by 2025
  - Similar to U.S. EPA goals
- Harmonizing both targets
- Potential reductions beyond the above targets

# How To Achieve Emissions Target?

- Options:
  - ✓ Industry-wide
  - ✓ Per company
  - ✓ By system or emissions source category
- Considerations:
  - ✓ Small companies
  - ✓ Certain activities

# Types of Emissions

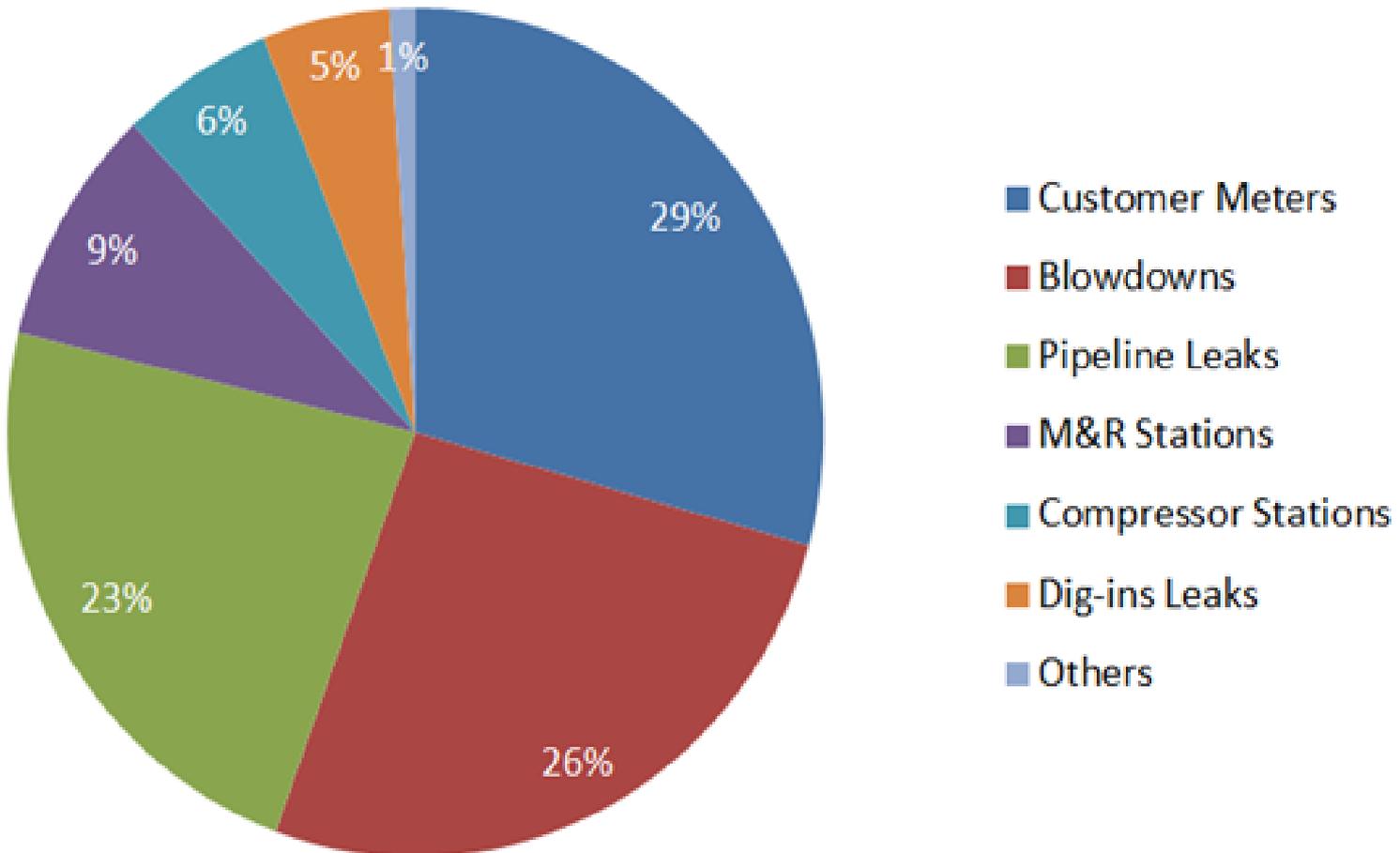
- **Graded Leaks**
  - hazardous or could potentially become hazardous
- **Vented Emissions**
  - gas release due to operation/maintenance
- **Ungraded Leaks**
  - Remaining non-hazardous leaks (e.g., above ground, remote location)

# Emission Data Reports (May 15, 2015)

| <b>Calendar Year</b>        | <b>NG Volume (Bscf)</b> | <b>CO<sub>2</sub> Mass [MMTCO<sub>2</sub>e]*</b> |
|-----------------------------|-------------------------|--|
| <b>2014</b><br>(SB 1371)    | <b>3.9</b>              | <b>5.4</b>                                       |
| <b>2013</b><br>(SB 1371)    | <b>3.8</b>              | <b>5.3</b>                                       |
| <b>2007</b><br>(ARB Survey) | <b>8.2</b>              | <b>11.3</b>                                      |

\*IPCC, AR 4, 20-yr horizon, GWP = 72

# Major Sources of Emissions, 2014



Source: SB 1371, May 2015 Emission Data Reports

# Data Discrepancies

- No standardized emission factors (EFs)
- No comprehensive activity data
- Not all emission sources reported
- Others:
  - ✓ Metering accuracies
  - ✓ Incorrect units: activities or EFs
  - ✓ Gas losses: own use, temp. adjustment & theft

# New Reporting Templates

- Baseline emission inventory
  - ✓ CY 2015
- Comprehensive emission sources
  - ✓ System-wide extrapolation
  - ✓ Unusual large leaks
- Standardized emission factors
  - ✓ Widely used by the industry
  - ✓ Update periodically
  - ✓ California specific

# California Specific EFs

- Updating EFs for distribution pipelines (completed):
  - ✓ Gas Technology Institute, contractor (\$250K)
  - ✓ Measured 78 leaks in CA (GRI 1996, nationwide, 43 leaks )
  - ✓ Unprotected steel and plastic pipelines
  - ✓ Both above and below ground measurements
  - ✓ ARB evaluating the results: some lower and some higher than GRI 1996
- Updating EFs for customer meters (in process):
  - ✓ Gas Technology Institute, contractor (\$150K)
  - ✓ Random sample of 500 households throughout the State
  - ✓ Measure and identify leak sources
  - ✓ Tentative starting date, August, 2016

# Best Practices (BPs)

- CPUC, in consultation with ARB, to
  - Establish and require the use of BPs for
    - ✓ Leak surveys
    - ✓ Leak patrols
    - ✓ Leak prevention
    - ✓ Leak reduction
  - Require BPs and repair standards be incorporated into the safety plans

## (cont'd)

- CPUC formed BP working group:
  - ✓ Utility companies
  - ✓ Independent storage providers
  - ✓ Labor unions
  - ✓ Environmental community
- Five workgroup meetings:
  - ✓ Oct 2015 - Jan 2016.
  - ✓ 100+ BPs presented
- Some BPs already implemented
- Other BPs follow in the future

# BPs Selection Criteria

- Target “Low Hanging Fruit”
- Adopt new leak detection technologies
- Incorporate industry’s policies, training & education
- Use better emissions quantification/characterization & repairs coordination
- Combine industry standards for both public and environmental safeties
- Consider incentives for reductions beyond the emission targets

# Recommended BPs

- Recommended BPs are categorized into:
  - Mandatory BPs:
    - ✓ Minimum requirements to mitigate emissions
  - Voluntary BPs:
    - ✓ Additional requirements from the presented or new BPs
- Consistent with or complementary to other regulations
  - State: DOGGR and ARB
  - Federal: U.S. EPA

# Some Examples of BPs

| Emission Source | Recommended BPs*   |
|-----------------|--|
| Customer meters | <ul style="list-style-type: none"> <li>-Use better materials</li> <li>-Automatic detection: Smart Meters</li> <li>-Update emission factors (Proposed GTI study, \$150K)</li> </ul>   |
| Blowdowns       | <ul style="list-style-type: none"> <li>-Capture large releases from point source</li> </ul>  |
| Pipeline leaks  | <ul style="list-style-type: none"> <li>-Replace susceptible materials (phase out cast iron)</li> <li>-More frequent inspection, using new tech detection</li> <li>-Shorten repair time: "Find It, Fix It," policy</li> <li>-Update emission factors (Completed GTI study, under evaluation)</li> </ul> |
| Compressors     | <ul style="list-style-type: none"> <li>-Reroute blowdown gas</li> <li>-Replace wet with dry seals (Oil &amp; Gas Regulation)</li> </ul>  |
| Pneumatics      | <ul style="list-style-type: none"> <li>-Use no bleeds</li> </ul>   |
| Gas Storage     | <ul style="list-style-type: none"> <li>-Consider additional requirements, if any, to prevent future leaks beyond DOGGR &amp; ARB regulations</li> </ul>  |
| All Sources     | <ul style="list-style-type: none"> <li>-Employ LDAR (Leak Detection and Repair) for above ground facilities</li> </ul>   |

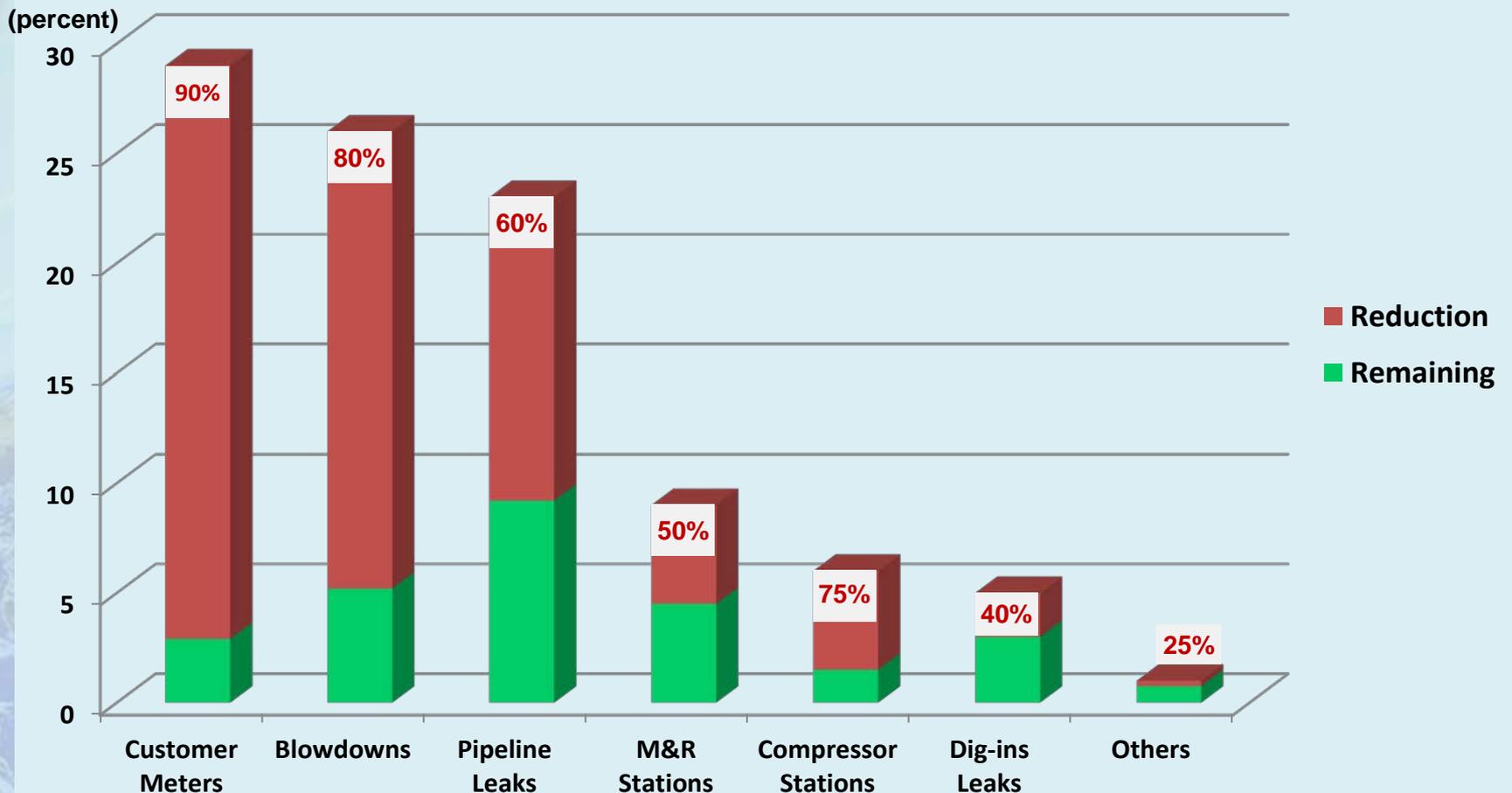
\*Red = Mandatory BPs

# Compliance

- **Submit annual compliance plan to CPUC/ARB**
  - ✓ Starting May 2018 (?)
- **Emission reductions must be real & verifiable**
  - ✓ Agreeable methodologies
  - ✓ Work order or maintenance records
  - ✓ Purchase records
- **Unfulfilled emission target must be offset**

# An Example of Compliance Plan

➤ A 40+ percent reduction by 2025 (SB 1371 May 2015 data reports, CY 2014)



# Unusual Large Leaks

- **Definition:**

“Any event at a gas storage facility or gas transmission system that results in the uncontrollable release of natural gas to the atmosphere for more than 24 hours.”
- **Review current practices to prevent future occurrence**
- **Additional emissions to annual compliance plans**
  - ✓ Must be offset in certain time period
  - ✓ Could face financial penalty

# Enforcement

- CPUC will conduct unannounced random inspection
- Industry must provide prior notification to CPUC/ARB
  - ✓ Large blowdown, compressor station modification
  - ✓ At least two weeks in advance, unless for emergency reasons

# Environmental Justice

- Prioritize EJ / disadvantaged communities
  - ✓ Mapping of leaks by GIS
  - ✓ Responding to complaints
  - ✓ Replacing old pipe materials, meters
  - ✓ Progress on SLCPs and the importance of reducing fugitive methane emissions:

[http://www.arb.ca.gov/cc/ejac/meetings/041014/final\\_ejac\\_recommendations.pdf](http://www.arb.ca.gov/cc/ejac/meetings/041014/final_ejac_recommendations.pdf)

[http://www.arb.ca.gov/cc/ejac/meetings/041014/appendix\\_a.pdf](http://www.arb.ca.gov/cc/ejac/meetings/041014/appendix_a.pdf)

# Next Steps

- Finalize BPs Report
- Review new data submittals
- Next workshop
- Others?

# Discussion

Questions or Comments?

# ARB Points of Contact

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