

R.15.01.008 ARB/CPUC Workshop: Targets, Compliance and Enforcement ISP Presentation

April 12, 2016

Independent Storage Providers – ISPs:

Central Valley Gas Storage, LLC
Gill Ranch Storage, LLC
Lodi Gas Storage, LLC
Wild Goose Storage, LLC

ISPs “built in” methane emissions reduction

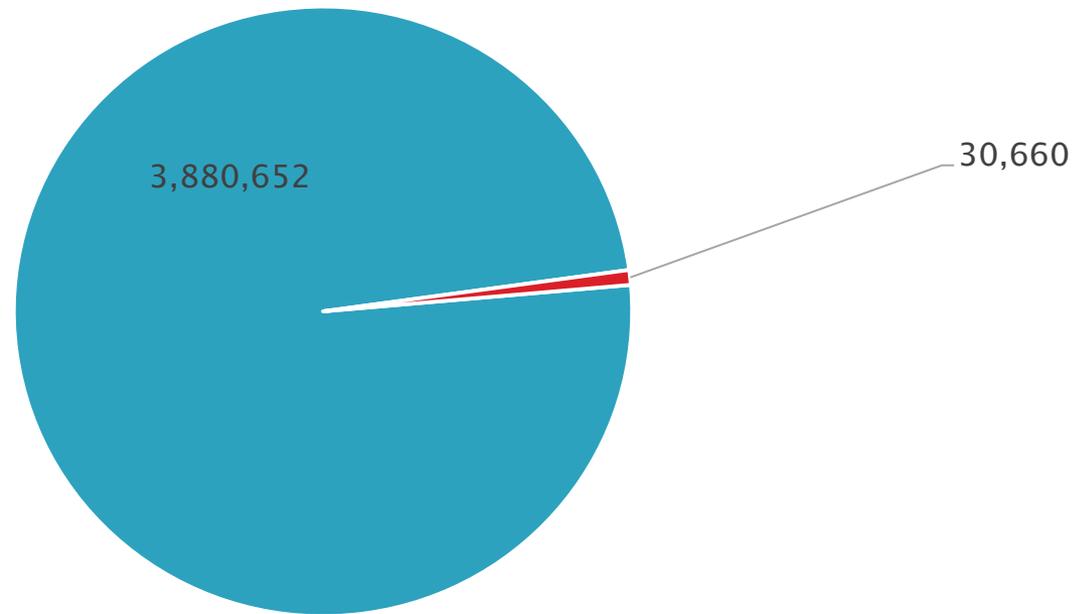
- ▶ Initial design and build out of our facilities focused on eliminating potential emission sources:
 - No high-bleed gas pneumatic devices; generally instrument air systems installed instead of gas pneumatics
 - Instead of natural gas starters, most compressors use pneumatic air or electric motors
 - Ultrasonic meters at the compressor station and at each wellhead in place of orifice meters
 - Gas from dehydration is routed to the reboiler firebox for fuel
 - Electric motor-driven triethylene glycol pumps rather than natural gas-driven pumps

ISPs support methane emission reduction

- Operations are actively managed to prevent and address leaks:
 - Daily facility walk-through of compressor stations & well sites
 - Facilities are staffed or monitored 24 hours per day
 - Robust SCADA system helps identify/isolate/minimize leaks
- Identified leaks are repaired in a timely manner based on size, hazard and effect on operations
- ISPs believe it is appropriate to consider additional, reasonable, cost-effective best practices that result in meaningful methane emission reduction

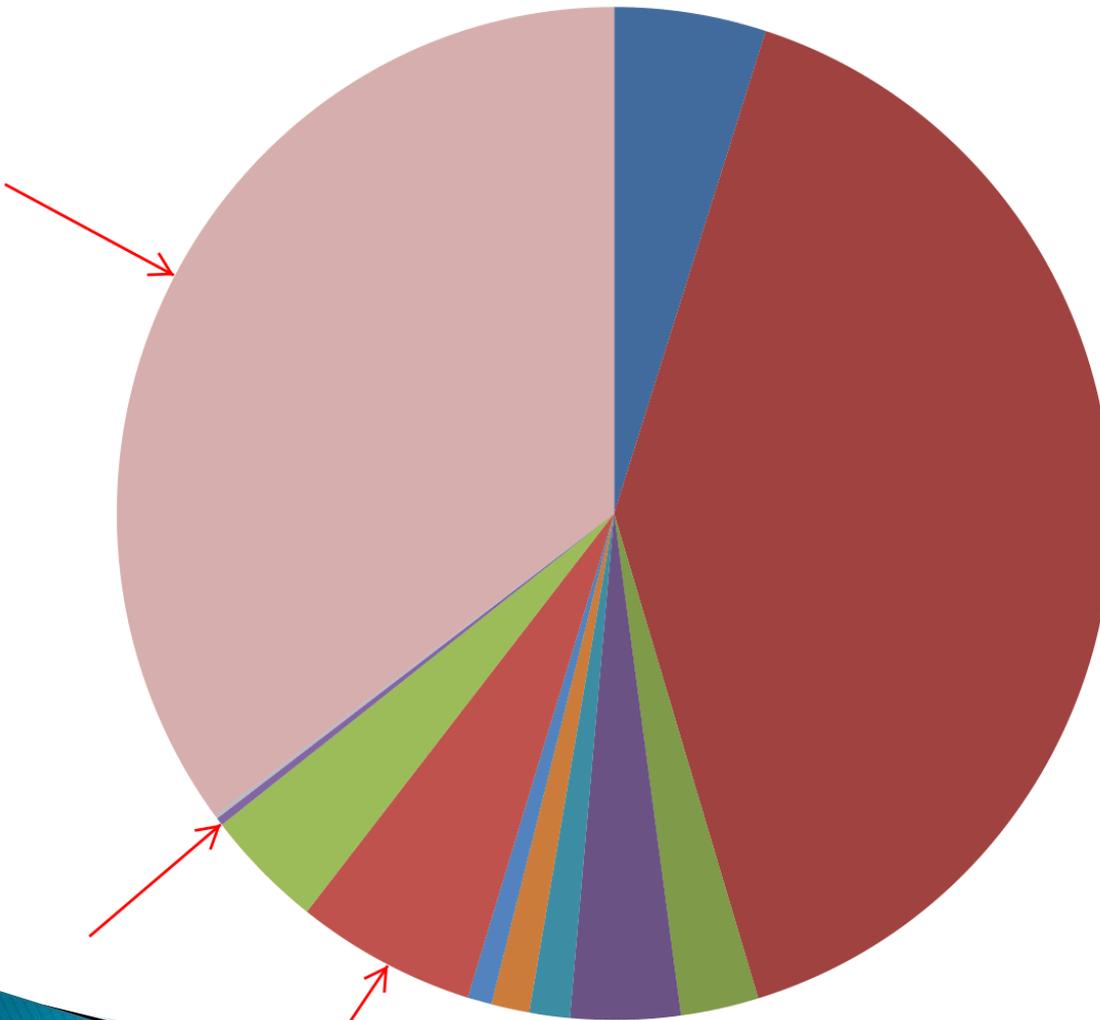
ISPs have an excellent track record of low emission levels

Total California Emissions (Mscf)



■ Total Emissions ■ ISPs

Non-Graded Leak and Emission Sources

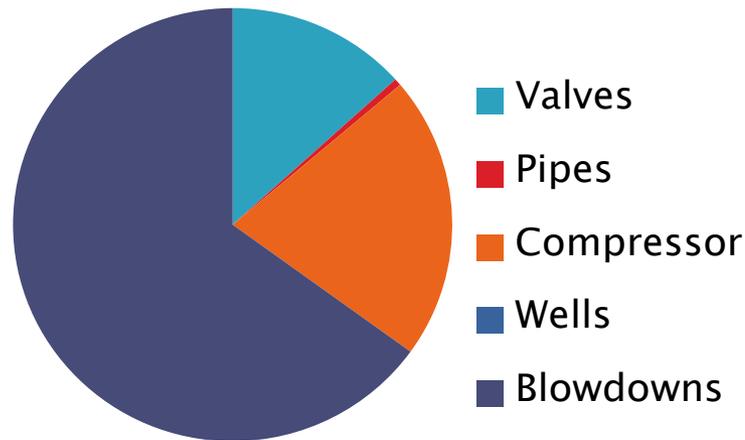


- Compressor station - leaks from valves, connections, vents, meters, packing, blowdowns, etc.
- Customer Meters & PHMSA "Minor" Releases
- Distribution Above grade M&R Station Leaks (assume > 300 psi)
- Distribution Below grade M&R Station Leaks (> 300 psi)
- Distribution Below grade M&R Station Leaks (100 - 300 psi)
- M&R Stations - Farm Taps & Direct Industrial Sales
- M&R Stations - Transmission-to-Transmission Company Interconnect
- Storage - control vents, leaks, blowdowns, storage compressors
- Transmission M&R Station Leaks
- Dehydrator Vents - Storage
- Distribution M&R Station Blowdowns
- Distribution Main & Service Pipeline Blowdowns
- Pressure Relief Valve Releases - Distribution Mains and Regulator emissions
- Transmission Blowdowns and M&R Station Blowdowns



ISP Emission Composition

2015 Mcf

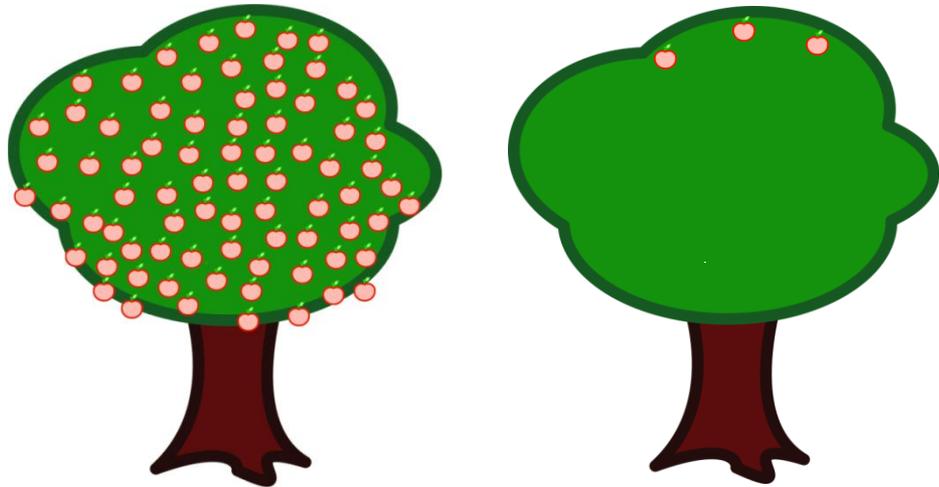


Total for all ISPs = 30,660 Mcf

65% of all emissions from blowdowns
as required for reliability and safety

ISPs have limited opportunities to further reduce emissions

- ▶ Storage only operations mean ISPs do not have opportunities to reduce emissions by fixing leaking mains, services or meter sets
- ▶ ISPs remain focused on maintaining existing success in keeping emissions to a minimum and further meaningful methane reductions that can be implemented cost-effectively
- ▶ Unlike others, ISPs cannot recover costs for leak reduction implementation from customers



ISPs believe overall target structure must reflect reduction opportunities

- ▶ Targets should be industry wide and by emission source/equipment type and not by company, with most cost effective measures taken first
- ▶ Overall industry objective is to reduce by 40% – this cannot equate to 40% for every company or facility because remaining opportunities to reduce are different, as some companies have already taken steps to reduce emissions
- ▶ Some industry players with better reduction opportunities may need to reduce by more than 40% to yield the best chance of meeting the overall state objective

Small utilities reduction targets should balance cost to implement & ability to achieve reductions

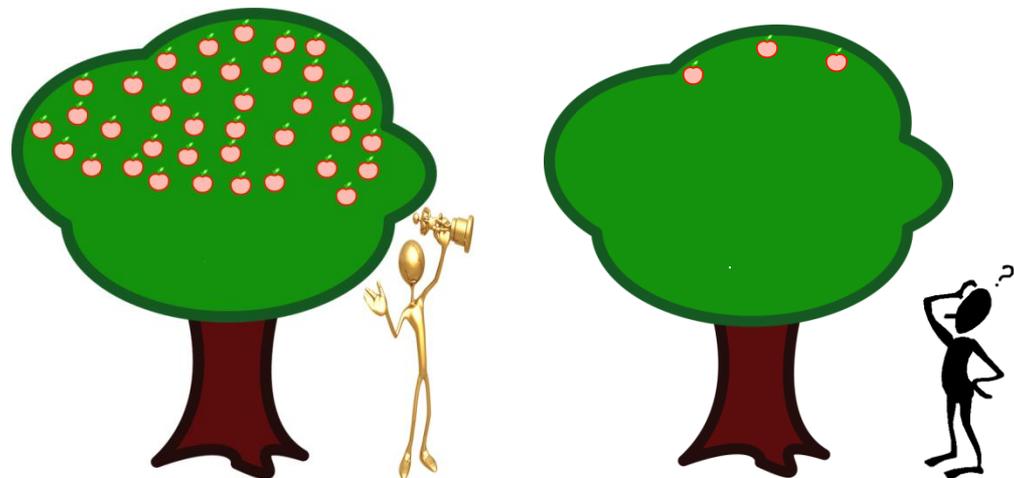
- Consider existing emissions levels
- Potential actual (vs. percentage) reductions
- Economies of scale
- Synergies with other activities
- Unintended consequences
- Impact on reliability
- Cost-effectiveness

Disproportionate Impact on Small Utilities

- The cost of mandatory compliance and enforcement may unfairly impact small companies:
 - Cost of training
 - Structure of enforcement mechanisms
 - Limited opportunities for economies of scale
 - Mandatory equipment

Like Small Utilities, ISP targets should be based on balance of cost & opportunity for reductions

- ▶ Within reason, ISPs want to use best practices/policies/procedures to maintain their low emission levels and improve upon them if possible
- ▶ ISPs support reporting emissions so they can be tracked
- ▶ Primary ISP concern is being handed a 'one size fits all' percentage reduction target that would entail unreasonable expenditures to meet and would make negligible contributions to state goals



ISPs have few emission sources & design focus on low emissions makes reaching a 40% reduction difficult

- ▶ 40% reduction from 2015 emission level total for all ISPs is 12,000 Mcf
- ▶ 65% of all 2015 ISP emissions, 20,477 Mcf, were from blowdowns that were necessitated by mandatory repairs and maintenance activities
- ▶ Compressor fitting leaks and valve leaks made up the majority of the non-blowdown emissions
- ▶ Three of our facilities had less than total 12,000 Mcf in emissions for the entire year
- ▶ Proposed best practices are not a clear path to avoid blowdowns or prevent mechanical wear and tear that result in emissions

Recommend establishing an effectiveness metric for small emitters

- ▶ Below a certain total emission threshold the cost to achieve a meaningful level of reduction can be very expensive
- ▶ Below the threshold, a company should be exempt from enforcement if they are employing best practices in controlling emissions
- ▶ The threshold for ISPs should be established at a reasonable level taking into account their operational considerations, not simply by applying an arbitrary percentage to current levels

Prioritization

- ▶ How does your company plan to prioritize emission reductions in disproportionately impacted communities?
- ▶ ISPs do not:
 - Operate in multiple communities
 - Have long line transmission
 - Distribute

Beyond 40% / Interim Targets

- ▶ Concentrating reduction targets on the best opportunities statewide to achieve meaningful emission reductions provide the best chance of meeting and exceeding the 40% statewide objective

Questions

