



# EPA Technology Transfer Workshop

*Shaping Our Future*

**KINDER  MORGAN**

## Minimizing Pipeline Blowdown Emissions

November 10, 2016



# Agenda

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- 1. The Need**
- 2. The Status**
- 3. The Opportunity**
- 4. The Result**

# The Need

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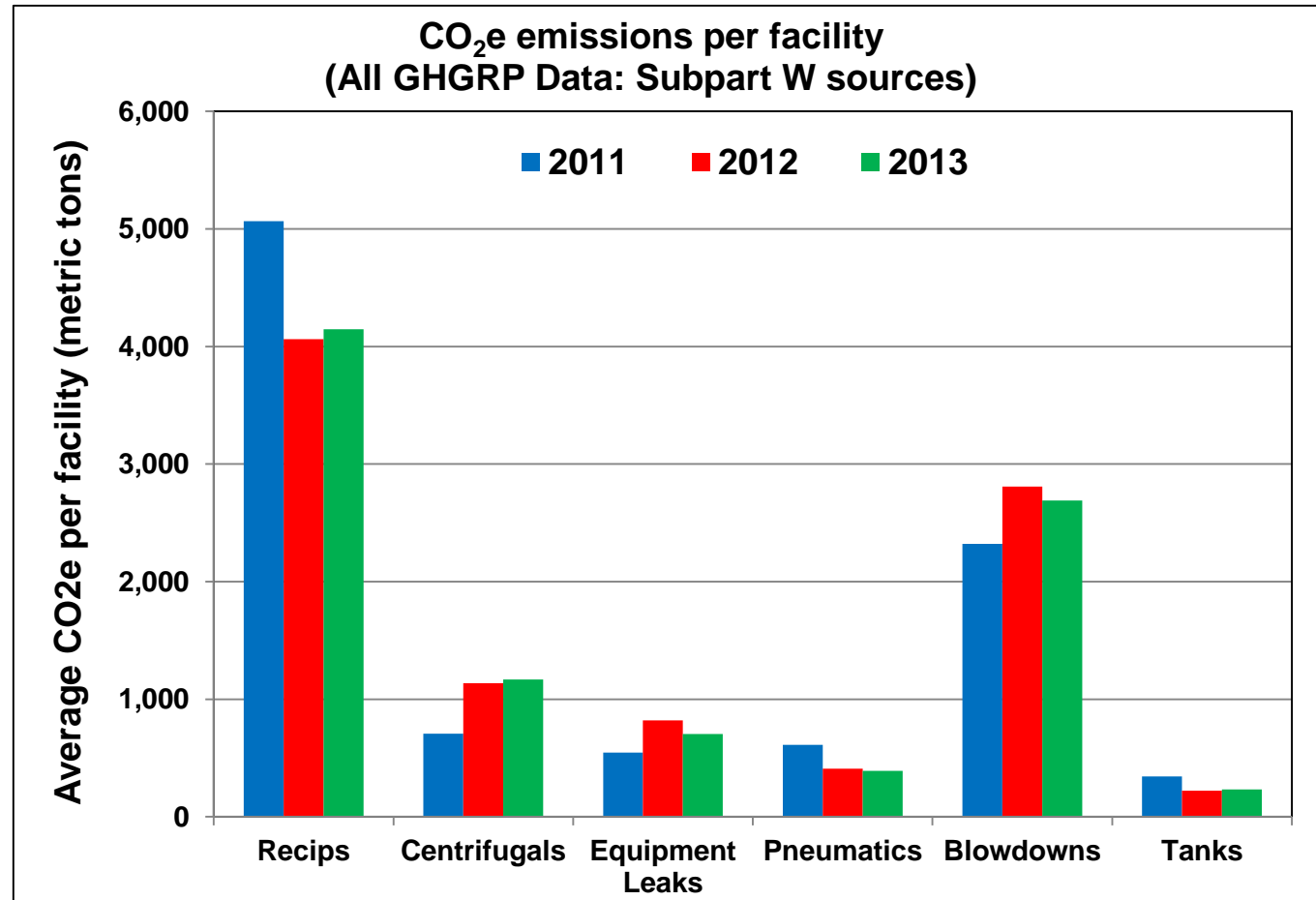
1. Expansion Project Blowdowns
2. Maintenance Project Blowdowns
3. Hydro-test Project Blowdowns
4. Anomaly Dig Blowdowns
  - Immediate vs Scheduled
5. Blowdown emissions compared to other GHG emissions
  - After recip emissions, blowdowns are the next biggest opportunity
  - We can and MUST minimize the emissions

# GHG Reporting Program: 3-year trend

## (Transmission 2011 – 2013 Subpart W Emissions)



- Three-year trend from EPA data (available online)
  - Decrease in Recip emissions from 2011 to 2012
  - Similar emissions for 2014 and 2015
- PRCI GHG data collection provides more insight into emissions



# The Status

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- *Consistent Process*
  - Evaluate Options
    - *Repair w/o Blowdown*
    - *Pump down w/ Downstream Compression*
    - *Use Portable Compression*
      - *Internal vs external*
    - *Flare after pressure reduction*

# The Status - Continued

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- Consistent Process, but
- Voluntary Process
- Not consistently applied
- No formal requirements
- Typically used for Anomaly, Maintenance & Hydro-test projects
- Hit and Miss on PM projects

# The Opportunity

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- *Consistent Formal Process*
  - *Required for all projects*
  - *Evaluate Options*
    - *Repair w/o Blowdown*
    - *Pump down w/ Downstream Compression*
    - *Use Portable Compression*
      - *Internal vs external*
    - *Flare after pressure reduction*
    - *Document decisions*

# The Opportunity

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- Consistent Formal Process
  - Required for all projects
- Document decisions and emission reductions
- Document costs and benefits
- Report results to EPA MC
- Work with PHMSA to minimize requirements and maximize IMP



# The Result

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1. Keeps natural gas in the pipeline
  - Which is our business, right!
2. Addresses one key point of opposition
3. Generally low hanging fruit, within our control and ability
4. Natural gas delivered to customer cost effectively, safely, reliably, and protecting the environment

# Questions??

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# Q&A