Road to Climate Action Leader™: El Paso Pipeline Case Study

14th Annual Natural Gas STAR Implementation Workshop

Houston, Texas
October 23, 2007
El Paso Corporation provides natural gas and related energy products in a safe, efficient, and dependable manner.
El Paso Pipeline System

Premier pipeline franchise

- 19% of total U.S. interstate pipeline mileage
- 23 Bcf/d capacity (16% of total U.S.)
- 16 Bcf/d throughput (28% of gas delivered to U.S. consumers)

Source: El Paso Corporation
El Paso Pipeline Group—EPA STAR Program

- Participate in EPA Natural Gas STAR Program since 1993
- Best performer—Highest reported reductions compared to peers

Cumulative Methane Reductions as of 2005

<table>
<thead>
<tr>
<th>Bcf</th>
<th>MMtonnes of CO$_2$e</th>
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<tr>
<td>0</td>
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<tr>
<td>10</td>
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<td>60</td>
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55 Bcf = ~ 24 MMtonnes CO$_2$e

Source for methane reductions: EPA Natural Gas Star, 2005 Reporting Summary & Benchmarking Report
El Paso Corporate—Greenhouse Gas Commitment

- “Assess, Engage and Act”
  - Commitment statement
    http://elpaso.com/profile/mainneighbor.shtm
- Carbon Disclosure Project (CDP) 5 response
  - http://www.cdproject.net/online_response_pf.asp?cid=558&year=2
- California Climate Action Registry
  - First company in CCAR history to certify without significant errors
  - First company to achieve Climate Action Leader™ for 2007
  - First natural gas company to submit and certify
  - First natural gas company to join CCAR
Road to Climate Action Leader™—The Vision

• Develop a Sustainable GHG Inventory Management Strategy
  – Certified inventory forms the bedrock of most GHG strategies
    • Basis for assessing risks and opportunities
    • Development of sustainable programs and processes

• Create Management Culture
  – Ensure sustainability of GHG efforts
Road to Climate Action Leader™—Why CCAR?

• Reviewed several programs
  – Rigor
  – Credibility
  – Transparency
  – Flexibility
  – Advocacy and leadership opportunities

• Signed on to CCAR on August 3, 2007
  • Participate and lead regulatory, policy and technical discussions associated with T&D sector
Established a process focused on continuous improvement
Road to Climate Action Leader™—
2004 GHG Inventory

• 2004 GHG Emission Inventory
  – INGAA GHG Guidelines prepared simultaneously by IES
  – Direct and Indirect emissions from 5 El Paso pipelines
    • Operational Control
  – \( \text{CO}_2, \text{CH}_4, \text{N}_2\text{O} \)

• Third party GAP Analysis against CCAR and ISO
  • Completeness
  • Accuracy
  • Transparency

Goal = develop a GHG Inventory
Road to Climate Action Leader™—
2005 GHG Inventory

- Similar in scope to 2004
  - Developed internally
- Process Improvements
  - Enhanced spreadsheets
  - More comprehensive inventory of sources
  - Better Estimation
    - Vast improvement in activity data
    - Need for development of internal GHG database
- Third party pre-certification against CCAR

Goal = verifiable grade inventory
Road to Climate Action Leader™—
2006 GHG Inventories

• 2006 GHG Emission Inventory (CA)
  – Comprised of CA assets
  – Based on CCAR guidelines & INGAA GHG Guidelines for industry specific emissions
  – CCAR Certification

• 2006 GHG Emission Inventory (US Operations)
  – To be submitted to DOE 1605(b)
  – Currently undergoing verification

Goals: (1) Achieve Climate Action Leader
(2) Submit verified inventory to DoE 1605(b)
Road to Climate Action Leader™—Lessons Learned (Technical)

- Scope of GHG inventory is much broader than criteria pollutant inventory
- Expand knowledge base on emission estimation methodologies
- High uncertainty with fugitive emission factors
- No fugitive emission factors for LNG facilities
Road to Climate Action Leader™—Lessons Learned (Process)

- Efficient data management → GHG database
- Improve and/or establish internal processes for activity data needed for GHG inventory only
  - KW/hrs
  - Miles driven by vehicle fleet
  - Meter counts
  - Storage well data
Road to Climate Action Leader™—Lessons Learned (Management)

• Management support at Board and Executive Committee level is vital
  – Clear defined goals
    • Footprint? <<< Verifiable/Certifiable grade?
    – Level of effort is directly proportional to the goals chosen

• Communicate inventory goals and needs to Executives, mid-level management and other stakeholders

• Departmental/cross-functional team with a reporting structure and budget

• Inventory Management Plan and Technical Manual
  – Document policies, procedures, and estimation techniques

• GHG IMS or Not?

• Recognition of team efforts!
Questions?
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