Natural Gas STAR and NiSource

A Winning Partnership

Reducing Emissions
Increasing Efficiency
Maximizing Profits

http://www.epa.gov/gasstar/
Outline

Gas STAR Program Overview
New Gas STAR Features
Gas STAR and NiSource
Today’s Agenda
The Natural Gas STAR Program is a flexible, voluntary partnership between EPA and the oil and natural gas industry designed to cost-effectively reduce methane emissions from natural gas operations.
Natural Gas STAR’s role in Climate Change

“We will challenge American businesses to further reduce emissions…”
President G.W. Bush, February 14, 2002

- Natural Gas STAR is a key component of President Bush’s climate change policy
- API Climate Challenge Program
  - 100% member participation in Natural Gas STAR
- Endorsed by 11 industry organizations including the Interstate Natural Gas Association of America
Emissions by Industry Sector (per year)

- Transmission and Storage: 111 Bcf (37%)
- Processing (including Gathering and Booster Stations): 61 Bcf (20%)
- Production: 53 Bcf (17%)
- Distribution: 78 Bcf (26%)
Program Accomplishments

- 217 Bcf in total reductions
- Annual Emissions Reductions:
  - Previous: 3.6 Bcf
  - 1993: 7.3 Bcf
  - 1994: 12.4 Bcf
  - 1995: 14.8 Bcf
  - 1996: 17.9 Bcf
  - 1997: 23.8 Bcf
  - 1998: 29.2 Bcf
  - 1999: 33.3 Bcf
  - 2000: 34.0 Bcf
  - 2001: 40.6 Bcf
  - Total: 216.9 Bcf
Transmission Partner Accomplishments

- Transmission partners have reported 79.3 Bcf in methane emission reductions through 2001
  - 11.6 Bcf reported in 2001 alone

- Source of Reductions
  - 32% of reductions from directed inspection and maintenance (DI&M) activities
  - 55% of reductions from Partner Reported Opportunities (PROs)
Distribution Partner Accomplishments

★ Distribution partners have reported 10.6 Bcf in methane emission reductions through 2001
  ★ 1.2 Bcf reported in 2001 alone

★ Source of Reductions
  ★ 30% of reductions from directed inspection and maintenance (DI&M) activities
  ★ 49% of reductions from rehabilitation of leaky pipe
  ★ 11% of reductions from replacement of high-bleed pneumatics
Gas STAR Program Benefits

Save time identifying the “right” technologies and practices to reduce methane emissions

- Technical studies and fact sheets based on real company applications
- Case studies describing successful partner experiences
- Economic analysis software to estimate financial returns
- One-on-one assistance
Gas STAR Program Benefits

Build network with industry peers and draw upon their experience and successes

- Technology Transfer workshops
- Annual Implementation Workshop
Gas STAR Program Benefits

Enhanced corporate reputation

- *Environmental message*
- *Public recognition by EPA and industry*
- *Achievement awards*
- *Communications Toolkit*
- *Easy methods to equate environmental benefits*
Gas STAR Program Benefits

Voluntary record of reductions & internal benchmarking capability

• Methodology to track and record methane emission reductions
• Data to develop internal benchmarks
• Flexibility and assistance in preparing methane emissions reduction summary
Minimal resources required to manage Program & “real-time” assistance

- Standardized forms and methane emission default values
- Data collection software
- On-line record keeping and reporting
- Technical support staff available to partners
Guide to Program Participation

★ Sign the Memorandum of Understanding
  - Agree to evaluate technologies and practices that reduce methane emissions and implement where cost-effective

★ Develop an implementation strategy
  - Determine objectives of participation and which emission reduction activities will be considered

★ Submit an Implementation Plan
  - Summarize how STAR Program will be incorporated into operations

★ Plan annual reporting process
  - Document emission reduction activities undertaken
New Features - Lessons Learned Studies

* 12 existing studies under revision

* Four new studies nearing completion
  - Composite Wrap
  - Desiccant Dehydration
  - DI&M at Gas Processing Plants
  - Reducing Pressure in Distribution Systems
New Features - Individual Partner Accomplishments Report

- Summarizes partner’s historical participation in Gas STAR
- Compares emissions reduction with industry peers
- Suggests additional practices that may be cost-effective
- Coming this Summer
New Features - Other

- Participation Certificates
- New partner packets
- Website overhaul
- Collaboration with industry trade associations (API, GPA, AGA, DPC, INGAA)
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<tr>
<th>Distribution Companies</th>
<th>Year Joined</th>
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<tr>
<td>Columbia Gas of KY</td>
<td>1993</td>
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<td>Columbia Gas of OH</td>
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<td>Bay State Gas</td>
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<td>Northern Indiana Public Service Co.</td>
<td>1994</td>
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<td>Kokomo Gas and Fuel Co.</td>
<td>2001</td>
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<td>Northern Indiana Fuel and Light</td>
<td>2001</td>
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### Gas STAR and NiSource

<table>
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<th>Transmission Companies</th>
<th>Year Joined</th>
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<td>Columbia Gas Transmission</td>
<td>1999</td>
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<td>Columbia Gulf Transmission</td>
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### Production Companies

| Columbia Natural Resources             | 2001        |
Emissions Reductions: Distribution

★ 6,808,629 Mcf since 1993
(includes 2002 reports received by 5/29/03)

★ @ $3/Mcf : $20.4 million
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Emissions Reductions: Transmission

★ 23,938,146 Mcf since 1999

★ @$3/Mcf : $71.8 million
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Distribution PROs
★ Walking surveys on a 3-year cycle
★ Install excess flow valves
★ DI&M at remote sites
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Transmission PROs

- Use fixed/portable compressors for pipeline pump-down
- Replace wet seals with dry seals
- Composite wrap repair
- Redesign ESD system
- Install flares on dehydration equipment
- Reroute glycol skimmer gas
Today’s Agenda

- Reports on NiSource transmission, distribution experiences with Gas STAR
- Technical presentations on BMPs, PROs
- Demonstration of on-line tools
- Discussion of emissions inventory development
Natural Gas STAR: Voluntary and Effective

- Fosters private initiative and innovation
- Achieves economic and environmental goals
- Enables future government and industry cooperation
- Proves that non-regulatory, cooperative programs work
- Simple to participate, a win-win approach
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