Natural Gas STAR Leadership Package

Annual Implementation Workshop

Houston, TX
October 24-26, 2005

www.epa.gov/gasstar
Agenda

★ Focus on Leadership
★ Partner Highlights
★ Next Steps: What Can You Do?
Natural Gas STAR Leadership Package

★ Capture innovative activities that exemplify Gas STAR Program goals: a win for the partner, the Program, the industry, the environment

★ Selected examples convey Program’s flexibility
  ★ Cross-company collaboration
  ★ Communication and awareness-raising
  ★ Intra-company competition
  ★ Technology and process optimization

★ This is just a start . . . We look forward to hearing about other innovations
Agenda

★ Focus on Leadership
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★ Next Steps: What Can You Do?
El Paso Pipeline Mentors Enbridge Energy

Allows new partners to benefit from others’ experience and come up to speed quickly.

The Value of a Gas STAR Mentor

In early 2003, EPA contacted Enbridge to gauge the company’s interest in joining the Gas STAR Program. During initial discussions, the Environmental Health and Safety (EH&S) Specialist Fred Whittled expressed a desire to learn more about Gas STAR and what a partnership would entail before making a commitment. He attended the 2003 Gas STAR Implementation Workshop in Houston, Texas, where he learned about cost-effective emission reduction activities that his peers had implemented. During this time, he also met John Cordaway, an engineer and Natural Gas STAR Implementation Manager for El Paso Pipeline Group, who would prove to be a valuable resource.
Partnership and Award Press Releases

- Raise awareness internally and externally
- CEO and upper level management buy-in demonstrates commitment to goals
- Builds pride and ownership of program at all levels of staff

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**NEWS RELEASE**

**Occidental Partners with EPA to Further Reduce Emissions from Oil and Gas Operations**

(ELK HILLS, CA) — Occidental Oil and Gas Corporation announced today that it is partnering with the U.S. Environmental Protection Agency through its Natural Gas STAR program to evaluate, implement, and report on cost-effective technologies and practices, to reduce methane emissions from its oil and gas operations.

"Natural Gas STAR is a win-win approach to addressing concerns about global climate change," said Roger Fernandez, Program Manager for the EPA. "Natural Gas STAR partners reduce gas losses, improve operational efficiencies, and save money while protecting the environment by reducing emissions of greenhouse gases and other air pollutants. EPA is excited to be working with Occidental to meet these important economic and environmental goals."

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**EPA Recognizes Pioneer as Processing Partner of the Year**

November 20, 2002

Pioneer Natural Resources was recently recognized by the United States Environmental Protection Agency (EPA) as the 2002 Natural Gas STAR "Processing Partner of the Year" at its awards ceremony and Annual Conference in Houston. Representing Pioneer at the ceremony were Will Doxey, Jim Sherrer, James Mace, Joe Strey and Henry Galpin.

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**News**

For Immediate Release: January 22, 2004

OGE Contact: Brian Afton
EPA Contacts: Kevin Tingley

Enogex Joins EPA's Natural Gas STAR Program

Company also reduces transmission system fuel percentage, resulting in pipeline customer savings

OKLAHOMA CITY — Enogex, Inc., a subsidiary of OGE Energy Corp., today announced it has partnered with the Environmental Protection Agency in its Natural Gas STAR Program to reduce methane emissions.

"We look forward to being a part of the Natural Gas STAR Program. This program is an excellent example of government and industry working together to find solutions to environmental issues. By participating, we will keep up-to-date on the latest approaches for reducing methane emissions while improving our efficiency," said Pete Delaney, OGE Energy Corp. Executive Vice President and Chief Executive Officer of Enogex.
Partner Signing Ceremonies

★ Raise awareness of company and upper management commitment to Gas STAR partnership

Natural Gas STAR Rookie of the Year

Devon Energy Corporation—Since joining the Program in July 2003, Devon has been very active and supportive of Gas STAR by holding a high-profile signing ceremony, assisting in the development of technical documents, contributing to an article in the Gas STAR Partner Update, and volunteering its Bridgeport Gas Plant as a location for filming the new Gas STAR Program video. Devon is implementing a significant number of emission reduction activities and will submit its first annual report next year.

Napo River; Ecuador; Long Beach operations, California; Salalah field operations, Oman; Natural Gas STAR signing ceremony, Elk Hills field, California

N.O. Oil & Gas
U.S.A.
Devon Energy Monthly Newsletter

- Tracks Gas STAR participation month-to-month
- Communicates new technologies/practices
- Creates competition among divisions
Dynegy Midstream Services
Aerial Pilot Study

Partner Profile
Dynegy—Successful Initiatives Leading to Reduced Methane Emissions

The Aerial Pilot Study
After Dynegy was introduced to the aerial imaging technology, the company hired a consultant to visit its New Mexico pipelines to conduct a pilot project that entailed flying over and analyzing its pipelines. Fugitive methane emissions were then located via the infrared imaging camera mounted on a helicopter. (Information on aerial imaging is available in the Winter 2004 Partner Update.)

This aerial imaging pilot study covered 150 miles of pipeline per day. Previously, only 10 to 15 miles a day could be monitored by driving a sniffer truck looking for lifeless vegetation (and other indications of natural gas leaks). Leaks discovered in Dynegy’s pipelines were fixed; and other companies were notified if leaks were found in their lines. The pipeline repairs, conducted as a result of the pilot study, reduced Dynegy’s methane emissions by approximately 146 million cubic feet (MMcf) per year. Shanker Ananthakrishna, Dynegy’s Gas STAR Implementation Manager, explained that emission savings were calculated by running a system balance check—comparing the amount of gas going into the system versus what was coming out of the system. After fixing the leaks in the pipelines, the balance was much closer than when calculated before the aerial imaging.

★ Implementing new technologies provides benefits for partner company
★ Reporting experience and learnings can benefit whole industry
Northern Natural Gas Compressor Station Field Demonstration

★ Hands on demonstrations of tools and technologies drive home real benefits of recommended activities
Developing novel ways to manage technology and process design can reduce emissions and increase profitability.

Sharing experiences adds to success of Program and other partners.
Study of Methane Losses at Processing Plants

Volunteering facilities for technical studies advances technology development and provides benefits to host companies.
Next Steps

★ These are just a few examples of the work being done by Gas STAR Partners
★ Gas STAR will be formalizing document in Q1’06
★ Please communicate other activities for inclusion
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