

NATURAL GAS STAR



PARTNER UPDATE

API Commits to 100% Gas STAR Participation

Last month Natural Gas STAR endorser the American Petroleum Institute (API) announced that it is aiming for 100 percent participation in EPA's Natural Gas STAR Program and in federal Combined Heat and Power (CHP) Programs. The announcement was made in conjunction with the President's "Climate VISION"—a voluntary partnership to pursue cost-effective initiatives that will reduce the projected growth in America's greenhouse gas emissions. API is also committed to increasing aggregate energy efficiency of members' U.S. refinery operations by 10 percent from 2002 to 2012. API members will develop greenhouse gas management plans to identify and pursue opportunities to further reduce emissions. Similar announcements were made by other associations representing the energy, manufacturing, transportation and forest sectors.

On February 14, 2002, President Bush announced a new strategy to address the long-term challenge of global climate change. He committed to reducing America's greenhouse gas intensity—the ratio of emissions to economic output—by 18 percent in the next decade and challenged American businesses and industries to undertake broader efforts to help meet that goal.

"The President has the right idea on climate change," said Red Cavaney, the CEO and President of API. "We are committed to using our new technologies to help him meet his goals for reducing greenhouse gas intensity."

The Natural Gas STAR Program will be working closely with API in the coming months to help API meet its goal of 100 percent Gas STAR participation. In addition

American Petroleum Institute



to encouraging additional API members to join Gas STAR, the program will explore opportunities for current Gas STAR partners who are API members to increase their methane emissions reduction activities.

For more information, go to <http://www.energy.gov/HQPress/releases03/febpr/ClimateFactSheet.pdf> and <http://api-ec.api.org/media/index.cfm>.

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9th Annual Natural Gas STAR Implementation Workshop

With generous co-sponsorship from the American Gas Association, Heath/Indaco Professional Services, and Sealweld Corporation, EPA held its 9th Annual Natural Gas STAR Implementation Workshop in Houston, Texas, in October 2002. More than 70 participants gathered to:

- Discuss emerging technologies and practices
- Note the accomplishments of the Natural Gas STAR Program and its partners
- Learn what companies are doing to profitably reduce methane emissions
- Present new program tools and documents

The workshop focused on how partners have maximized gas savings and efficiency gains, as well as introducing partners to the tools developed over the past year.

Keynote Speakers

Two keynote addresses were highlights of the workshop: one by George Walker of Unocal and the other by Kedin Kilgore of Natsource. Mr. Walker spoke about Unocal's global climate change goals and how various business units in the company are achieving greenhouse gas



George Walker, Unocal Corporation

(GHG) emissions reductions through responsible, energy-efficient, and cost-effective programs. He also described how Unocal employees share information about Gas STAR by hosting global climate change meetings and workshops, making information available on Unocal's Web site, and publishing an internal newsletter.

In the second keynote address, Mr. Kilgore provided an update on international climate policy, U.S. measures to reduce GHG emissions, and a GHG emissions market

analysis. He explained how the past 12 months have been the most active to date for the GHG emissions trading market with the development of various new compliance tools, including Verified Emission Reductions, the Clean Development Mechanism, and Joint Implementation. He also noted that addressing GHG emissions is becoming an increasingly important factor in a company's overall risk management strategy.

Technology Transfer Through Industry Experience

Pioneer Natural Resources USA

James Meier described Pioneer's active participation in the Natural Gas STAR Program since the company joined in 2000. One of Pioneer's first steps was to identify cost-



James Meier, Pioneer Natural Resources

effective options for reducing methane emissions, such as replacing gas pneumatics with instrument air systems, installing flash tank separators, and conducting directed inspection and maintenance (DI&M) at gas

plants and booster stations. Pioneer then implemented several Best Management Practices (BMPs) and Partner Reported Opportunities (PROs) companywide, which reduced total methane emissions by more than 342 million cubic feet (Mmcf) and saved over \$900,000.

Workshop Summary

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ChevronTexaco

Robert Martin described what ChevronTexaco is doing to support the Natural Gas STAR Program. His company's Energy Conservation Initiative includes the development of the REMVue Engine Control Technology, a computer-based data management system. The company tested it in the Gulf of Mexico Shelf REMVue Pilot, in which complete systems were installed on three engines. Resulting benefits included an 18-24 percent reduction in fuel use, improved runtime, and a 28 percent average reduction in CO₂ emissions. Then, by installing 25 automated air/fuel ration controls on selected engines in the Gulf of Mexico, ChevronTexaco reduced methane emissions by more than 473 Mmcf, worth over \$1.1 million per year.

El Paso Corporation

John Cordaway described how El Paso organizes and coordinates its Gas STAR partnership activities across the corporation. El Paso regularly holds organizational meetings to discuss ongoing leak reduction efforts and evaluations of vendor products and to estimate corporate payback. El Paso pipeline STAR representatives are chosen based on their operations background, field experience, and ability to appeal to management. Because they are well positioned to understand the internal processes of

their particular business units, representatives then decide which projects they will propose to their management. Mr. Cordaway listed some of the benefits of El Paso's approach to organizing its Gas STAR program, including improved coordination, reduced redundancy, and increased ease in attaining management approval by using documented results from other El Paso business units. Finally, Mr. Cordaway provided an example of a compressor station rod packing upgrade that illustrated how coordination among El Paso business units has resulted in improved operations efficiency and decreased methane emissions.

Research Update

Two presentations focused on current emissions reduction research projects. In the first, Kirby Chapman of Kansas State University highlighted the findings of a recently completed Gas Research Institute (now the Gas Technology Institute) study on emissions sources at gas processing plants. He also discussed a new study, led by the university's National Gas Machinery Lab that is further investigating the cost effectiveness of DI&M programs at gas processing and production facilities. In the second presentation, Kevin Tingley, Gas STAR Program Manager, gave an update on



Kirby Chapman, Kansas State University

the Environmental Technology Verification (ETV) program and its recent report on the Environmental Vapor Recovery Unit (EVRU). The report shows that the EVRU technology decreased the amount of downtime for maintenance and saved 32.1 Mmcf per year (worth over \$349,000) compared to a site that currently vents its gas to the atmosphere. Brian Boyer of COMM Engineering, the company that developed the EVRU, elaborated on the operating principles and capabilities of the technology. (See related stories on both of these research studies in the Fall 2002 *Natural Gas STAR Partner Update*.)

To obtain a copy of the report, see <http://www.epa.gov/etv/verifications/vcenter3-10.html>.

Workshop Summary

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New Tools

The Gas STAR team unveiled three new online implementation tools in a hands-on demonstration. Now accessible on the Natural Gas STAR Web site, the tools are:

- **BMP/PRO Analysis Tool:** Provides the means for partners to estimate the economic and environmental benefits of methane emissions reduction activities on a site-specific basis.
- **Data Collection and Management Tool:** Helps partners collect and manage information on methane emissions reduction activities occurring at various locations across their companies by allowing remote users to record site-specific data via the Internet.
- **Online Reporting Tool:** Enables partners to submit their annual reports through the Natural Gas STAR Web site instead of traditional paper forms.

Don Robinson of ICF Consulting presented the newest additions to two of Gas STAR's most popular publications: the PRO Fact Sheets and the Lessons Learned studies. The Natural Gas STAR Program produced six new PRO Fact Sheets in 2002, encompassing all natural gas industry sectors. The new PRO Fact Sheets are:

- Green Completions
- Lower Purge Pressure for Shutdown
- Reduce Frequency of Replacing Modules in Turbine Meters
- Replace Bi-Directional Orifice with Ultrasonic Meters
- Replace Burst Plates with Secondary Relief Valves
- Use of Improved Protective Coating at Pipeline Canal Crossings

Gas STAR also began updating 11 of the existing Lessons Learned studies and will soon release three new ones—Composite Wraps, DI&M at Gas Processing Plants, and Desiccant Dehydrators.

For copies of Gas STAR publications, see <http://www.epa.gov/gasstar/tech.htm>.

Partner Roundtable Discussions

Workshop attendees split into two groups to discuss general program issues and sector-specific topics: the production and processing roundtable session and the transmission and distribution roundtable session. Production and processing session attendees discussed upcoming technology transfer workshops, BMP default values and sunset periods, development of PRO Fact Sheets, and inclusion of PROs in annual reports. Topics discussed in the transmission and distribution session included default value analysis, technology transfer workshops, and Gas STAR implementation techniques.

Both groups concluded that default value analysis is one of the most important and complex issues facing Gas STAR. The purpose of default values is to allow partners to report amounts of methane emissions reduced from various activities even when they have incomplete project information. Although the Gas STAR default values are derived from extensive studies (such as the 1996 fifteen-volume "Methane Emissions from the Natural Gas Industry" by GRI [now GTI]), new data and new industry practices suggest that it may be time to reconsider some of the values. Several attendees agreed to participate in discussions on this subject later in the year.

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EPA thanks all of the participants for making this year's workshop one of the most well attended and successful held to date. Next year's implementation workshop will again take place in Houston in October. Please feel free to send suggestions for discussion topics to Kevin Tingley or Roger Fernandez.



PARTNERS OF THE YEAR

Awards and Acknowledgments

EPA announced the recipients of the 2002 Partner of the Year Awards at a special luncheon ceremony held during the 9th Annual Natural Gas STAR Implementation Workshop. The annual awards are presented to companies that have displayed excellence in their pursuit of methane emissions reductions and in their continuing support of the Natural Gas STAR Program. The 2002 Partners of the Year are:

- Phillips Petroleum Company—Production Sector
- Duke Energy Gas Transmission—Transmission Sector
- Southwest Gas Corporation—Distribution Sector
- Pioneer Natural Resources—Processing Sector

EPA also presented Continuing Excellence Awards to two partners for their ongoing program support and enduring commitment to finding and implementing new emissions reduction opportunities:

- BP—Production Sector
- Columbia Gas and Columbia Gulf Transmission—Transmission Sector

Rookie of the Year Awards for outstanding implementation of the Natural Gas STAR Program during the first year of participation were presented to Murphy Exploration and Production in the Production Sector and North Carolina Natural Gas Company in the Distribution Sector.

EPA recognized John Cordaway of El Paso Energy Corporation as the Implementation Manager of the Year for his outstanding leadership in outreach and technology transfer of Natural Gas STAR Program goals.

EPA also welcomed four new partners to the Natural Gas STAR Program: Dominion Exploration and Production and three transmission companies—Houston Pipeline Company LP and Louisiana Intrastate Gas (American Electric Power companies) and South Carolina Pipeline (a SCANA company).

Production Partner of the Year

Phillips Petroleum Company

Phillips Petroleum Company joined the Natural Gas STAR Program in May 1999 and one year later submitted an exemplary implementation plan. The company followed up on its commitment by implementing numerous BMPs and PROs, including identifying and replacing high-bleed pneumatic devices, installing low-bleed controls and actuators, installing vapor recovery units on condensate storage tanks, performing directed inspection and maintenance, installing flash tank separators, installing plunger lift systems, and implementing green completions.

The implementation of these BMPs and PROs has produced impressive results to date. The company reported approximately 235 Mmcf in methane emissions reductions for 2001, bringing its cumulative total to just over 1 billion cubic feet (Bcf).

Phillips demonstrates its commitment to the program through active communications and outreach efforts. Robert Wirtanen, Senior Environmental, Regulatory, and Safety Specialist, presented an overview of the Phillips Natural Gas STAR Program at the 2001 Natural Gas STAR Annual Workshop. The company's success in reducing methane emissions and saving money was featured in the September 2001 PhilNews, an internal company newsletter. Phillips also created a Natural Gas STAR Program Engineering Design Criteria document to facilitate installation of methane emissions reduction equipment at new facilities both domestically and internationally.



Phillips Petroleum Company accepts the Production Partner of the Year Award. From left to right, Roger Fernandez, Natural Gas STAR Program Manager; Ryan Lance, Phillips Petroleum Company; and Kevin Tingley, Natural Gas STAR Program Manager.

Transmission Partner of the Year

Duke Energy Gas Transmission

Duke Energy Gas Transmission (DEGT) has been an extremely active partner since joining the Natural Gas STAR Program in September 2000. The company's first annual report to the program was impressive, documenting historical reductions of 4.0 Bcf from 1993 to 2001 and new reductions of 535 Mmcf for 2001. Reductions are attributed to the company's implementation of numerous PROs, including pipeline pulldowns, sleeve repairs, hot taps, emergency shutdown practices, and installation of dry compressor seals.



Duke Energy Gas Transmission accepts the Transmission Partner of the Year Award. From left to right, Roger Fernandez, Natural Gas STAR Program Manager; Diana Phelps, Duke Energy Gas Transmission; and Kevin Tingley, Natural Gas STAR Program Manager.

DEGT is a strong supporter of Natural Gas STAR Program outreach activities. The Manager of Environmental Compliance, David Felcman, presented a paper on DEGT's Natural Gas STAR activities at the Canadian Energy Pipeline Association's Climate Change Workshop in Calgary, Alberta, in September 2002.

DEGT regularly participates in activities to strengthen its involvement in the program. At a recent meeting with EPA Gas STAR representatives, company officials provided insightful feedback on their experiences in implementing the program and on EPA's new online reporting and economic analysis tools. DEGT staff regularly attend Natural Gas STAR meetings and other GHG-related workshops.

Distribution Partner of the Year

Southwest Gas Corporation

Since joining the Natural Gas STAR Program in 1997, Southwest Gas Corporation has consistently reported significant emissions reductions. The company's reported reductions for 2001—nearly 445 Mmcf—were considerably higher than those reported by any other distribution partner. Cumulative program reductions total 1.7 Bcf. Southwest Gas achieved these impressive emissions reductions by implementing just three key BMPs: replacing pipe, implementing directed inspection and maintenance (DI&M), and replacing high-bleed pneumatic devices.

Southwest Gas proved its commitment to the Natural Gas STAR Program by enthusiastically spreading the word about program benefits. The company recently provided a testimonial at the American Gas Association's annual conference acknowledging the benefits of participating in Gas STAR and contributed to a Natural Gas STAR article for the *American Gas Journal*.

Processing Partner of the Year

Pioneer Natural Resources

Pioneer Natural Resources joined the Natural Gas STAR Program as a charter processing partner in September 2000. The company's sound implementation of the Natural Gas STAR Program has

produced significant emissions reductions and natural gas savings. Reported reductions in methane emissions for 2001 topped the list for processing partners at 7.3 Mmcf, and historical reductions totaled nearly 1.5 Bcf. These reductions were largely achieved through the identification and implementation of four PROs: modifying compressor shutdown logic, installing a larger wet stabilizer reboiler, installing vapor recovery on a three-phase separator, and installing BTEX (benzene, toluene, ethylbenzene, and xylene) removal units.

Pioneer shared its formula for success at this year's annual workshop in an overview of its implementation of the Natural Gas STAR Program.



Henry Goplan (c), Pioneer Natural Resources, accepts the Processing Partner of the Year Award from Roger Fernandez and Kevin Tingley, Natural Gas STAR Program Managers.

Continuing Excellence

BP

BP is one of two recipients of the 2001 Continuing Excellence Awards for their continued success in implementing the Natural Gas STAR Program. Since joining as a charter production partner (as Amoco) in 1995, BP has exhibited leadership as a Gas STAR partner by consistently achieving significant emissions reductions, and engaging in outreach and technology transfer activities. BP's cumulative program reductions have reached nearly 5.6 Bcf. The 2001 reported methane emissions reductions were among the highest reported for production partners—508.3 Mmcf.

BP continues to find and implement new emissions reduction opportunities and to generously support Natural Gas STAR Program outreach activities and technology transfer. BP staff made presentations on the company's Gas STAR activities at the 2001 Natural Gas STAR Annual Workshop and this year's processors' workshop. They actively assist in the development of journal articles, Lessons Learned studies, and PRO Fact Sheets.

BP has supported numerous regional Natural Gas STAR producer technology transfer workshops with excellent technical presentations. The company played an integral role in launching the processing program for Natural Gas STAR and participated in the recently finalized EPA-sponsored study of emissions reduction opportunities at gas processing plants. (To obtain a copy of the report, see <http://www.gri.org/webroot/app/xn/xd.aspx?xd=10AbstractPage\13198.xml>.)



Reid Smith (c), BP, accepts the Continuing Excellence Award from Roger Fernandez and Kevin Tingley, Natural Gas STAR Program Managers.

Continuing Excellence

Columbia Gas Transmission and Columbia Gulf Transmission

This year's second Gas STAR Continuing Excellence Award winners are Columbia Gas Transmission and Columbia Gulf Transmission, the Transmission Partners of the Year in 2000 and 2001. Columbia Gas and Columbia Gulf have shown outstanding implementation of the Natural Gas STAR Program during their first



Columbia Gas Transmission and Columbia Gulf Transmission accept the Continuing Excellence Award. From left to right, Roger Fernandez, Natural Gas STAR Program Manager; Wayne Crocker, Columbia Gas Transmission and Columbia Gulf Transmission; and Kevin Tingley, Natural Gas STAR Program Manager.

3 years of participation. Their nearly 5 Bcf of new reductions reported this year were the highest methane emissions reductions achieved among transmission partners, and their cumulative program reductions total more than 18 Bcf. The companies have implemented many PROs since joining the program and continue to find and implement new emissions reduction opportunities. They are actively working with other companies and business units within the parent company NiSource to educate them on the value of GHG reductions.

Their program technology transfer efforts continue to be noteworthy—developing a PRO Fact Sheet, writing an implementation case study, and providing the keynote speaker at the 2001 Natural Gas STAR Annual Workshop (Arthur Smith, NiSource Senior Vice President of Environment, Health and Safety.)

..... Rookie of the Year

Murphy Exploration and Production

Murphy Exploration and Production joined Natural Gas STAR in November 2000. The company has exhibited outstanding implementation of the Natural Gas STAR Program during its first year of participation, mounting an extensive effort to collect, quantify, and submit data on past emissions reductions. The combined implementation plan and annual report for 2001 contained detailed information on the company's emissions reduction accomplishments to date, totalling an impressive 1.1 Bcf. Murphy achieved these reductions by using glycol flash tank separators, lowering heater-treater temperatures, installing instrument air systems, and optimizing triethylene glycol (TEG) circulation rates.



Chuck Bedell (c), Murphy Exploration and Production, accepts the Rookie of the Year Award from Roger Fernandez and Kevin Tingley, Natural Gas STAR Program Managers.

Murphy plans to incorporate Natural Gas STAR practices into several new production projects planned for the upcoming year and to review and report methane emissions reduction activities back to 1990. The company recently completed a corporate-wide GHG emissions inventory, which included operations in the United States, Canada, England, and Malaysia. Murphy has joined the American Petroleum Institute's GHG Emissions Workgroup and is a sponsor of the Michigan Institute of Technology's Global Change Program.

Rookie of the Year

North Carolina Natural Gas Company

Having joined as a distribution partner in June 2001, North Carolina Natural Gas Company has exhibited outstanding implementation of the Natural Gas STAR Program during its first year. The company's sound implementation plan, submitted in February 2002, included implementation of DI&M at gate and compressor stations as well as turbine installations. Since the full rollout of its Gas STAR Program began during the second quarter of 2002, approximately 60 gate stations and all compressor stations have undergone detailed leak inspections.

North Carolina Natural Gas is currently working to collect and quantify past emissions reductions at the Bladenboro, North Carolina, compressor station. The company has assigned Corporate Gas STAR Champions to oversee the implementation of BMP 1 (Directed Inspection and Maintenance at Gate Stations and Surface Facilities) and BMP 3 (Directed Inspection and Maintenance at Compressor Stations).



Gil Venzani (c), North Carolina Natural Gas Company, accepts the Rookie of the Year Award from Roger Fernandez and Kevin Tingley, Natural Gas STAR Program Managers.

Implementation Manager of the Year

John Cordaway, El Paso Energy Corporation

For his strong leadership supporting Natural Gas STAR goals through outreach and technology transfer, John Cordaway of El Paso Energy Corporation earned the Implementation Manager of the Year Award. John's leadership in gathering and submitting methane emissions reduction data from all five El Paso subsidiary companies—El Paso Natural Gas, Tennessee Gas Pipeline, Southern Natural Gas, ANR Pipeline, and Colorado Interstate Gas—is only one example of his enthusiastic program support. He willingly shares El Paso's experience in emissions reduction activities, providing extensive technical information to peers and Natural Gas STAR program.



John Cordaway (c), El Paso Energy Corporation, accepts the Implementation Manager of the Year Award from Roger Fernandez and Kevin Tingley, Natural Gas STAR Program Managers.

Throughout the year, John reviewed every methane emissions reduction project implemented at each subsidiary and ensured that the activities and results of all projects implemented were reported in detail to the program. Projects completed to date include: DI&M at compressor stations, installation of vapor recovery units, clockspring repair, pipeline pumpdown, turbine starter replacement, and reciprocating compressor packing removal due to horsepower replacement.

In 2001, El Paso reported just under 2.8 Bcf of methane emissions reductions—more than 15 percent of all Natural Gas STAR reported transmission sector reductions.

Press Release

From *ChevronTexaco.com*

Gas STAR Partner ChevronTexaco Releases Greenhouse Gas Management System to Industry

SAN RAMON, Calif., Feb. 10, 2003 — ChevronTexaco is making its proprietary system for estimating and managing greenhouse gas emissions available free to anyone in the energy industry. The company is doing this to promote standardization in gathering of greenhouse gas inventory information. The SANGEA™ Energy and Emissions Estimating System 2.0 is an automated data management information system designed to assemble greenhouse gas emissions and energy usage data from all sectors of the energy industry.

“Making our greenhouse gas emissions estimating system available publicly demonstrates our commitment to addressing the important issue of global climate change,” said ChevronTexaco Chairman and CEO Dave O'Reilly. “We believe it is essential to have the ability to measure and calculate industry data consistently on a global basis.”

SANGEA™ is a trademark of ChevronTexaco Corporation. For more information, go to <http://www.chevrontexaco.com/news/press/2003/2003-02-10.asp>. To obtain a 90-day license to review the software, please contact Michele Andreetta of ChevronTexaco at mchn@mssite01.ion.chevron.com.



NATURAL GAS STAR NEWS

Call for Papers

3rd International Methane and Nitrous Oxide Mitigation Conference Beijing, China September 14 – 19, 2003



The Methane and Nitrous Oxide Conference is the only major international conference series focusing on the mitigation of methane. The first two conferences in the series were held in Kiev, Ukraine, in 1997 and Novosibirsk, Russia, in 2000. More than 200 participants from 30 nations attended the Novosibirsk meeting.

The 3rd International Methane and Nitrous Oxide Mitigation Conference in Beijing offers many educational and professional opportunities. Participants will:

- Learn firsthand about possibilities for implementing joint projects to promote natural gas savings.
- Network with natural gas industry experts and members of government from many countries, including China, Japan, and Russia, and gain an international perspective on the potential for reducing methane and other GHG emissions.
- Find out about the potential for transferring GHG emissions credits to help developed countries meet emissions reduction targets.
- Learn techniques and processes for methane emissions reductions from others in the natural gas industry and, in turn, showcase their methane reduction successes.

Finally, the conference provides a rare opportunity to visit natural gas projects in China. Natural Gas STAR partners alone have reduced their methane emissions by more than 220 Bcf since 1994, and have much to share with an international audience.

The Natural Gas STAR Program, a sponsor of the conference, strongly encourages partners, natural gas

industry contractors, equipment manufacturers, educators, and other interested parties to submit technical papers on topics related to the reduction of methane

emissions—from wellhead to burner tip. Past papers have covered measurement approaches, mitigation technologies, venting and flaring methods, fugitive emissions mitigation techniques, case studies, and project opportunities.

Those who wish to present a paper at the conference are asked to submit an abstract to EPA not exceeding one page in length. The abstract may include up to two diagrams or figures as an attachment but must include the following:

- Title of the paper
- Names of all authors with the principal author listed first
- General subject area
- Organization and address of the corresponding author
- Telephone, fax, and e-mail address of the corresponding author
- Summary of the topic to be presented

Please submit abstracts in MS Word in either English or Chinese no later than March 31, 2003, to Roger Fernandez of the Natural Gas STAR Program by e-mail to fernandez.roger@epa.gov. Call Roger at 202-564-5235 for further information.

Please pass this call for papers to other interested parties within your organization. A copy of the conference brochure is available at http://www.ergweb.com/methane_china.

Natural Gas STAR Partners Join Emissions Trading Program

American Electric Power (AEP), the parent company of Gas STAR partners Houston Pipeline Company LP and Louisiana Intrastate Gas, has announced its founding membership in the Chicago Climate Exchange (CCX®). CCX is a voluntary cap-and-trade program for reducing and trading greenhouse gas emissions in North America. AEP and the other 13 founding members have made legally binding commitments to reduce their greenhouse gas emissions by 4 percent of their average 1998 – 2001 baselines by 2006.

"AEP has considerable experience with existing sulfur dioxide and nitrogen oxide emissions credit

markets," said Dale Heydlauff, AEP's Senior Vice President, Governmental and Environmental Affairs. "Our participation in CCX is a natural next step, since it takes the market-based approaches that lowered the costs of emissions reductions for the other gases and applies them to greenhouse gas emissions. Through CCX, we hope to demonstrate the viability of a multi-sector greenhouse gas trading program. CCX also serves as a mechanism for the company to participate in the Bush Administration's voluntary climate change program."

For more information, see the official press release at <http://www.chicagoclimatex.com/pdf/CCXPressRelease011603.pdf>.



Call for Technical Papers in Future Gas STAR Partner Updates

To provide a new forum for partners and other natural gas service providers to exchange information, the Natural Gas STAR Program now welcomes the submission of technical abstracts for publication in future editions of the *Partner Update*.

To be considered for publication, each abstract must strictly adhere to the following rules:

- The technology or information presented must relate directly to the reduction of methane emissions from the natural gas system.
- If the article is about a particular technology, the abstract must refer to the results of a study or an in situ demonstration. This study/demonstration must be performed by an independent party, such as a university or a natural gas company.
- The abstract must be 300 words or less.

When space in the *Update* permits, the author(s) may include one graph, table, or photo to accompany the abstract. Gas STAR will publish the abstract in the *Update* and, if provided by the writer, a Web link to the complete technical paper. There is no size limit for the actual technical paper.

Gas STAR partners and natural gas system service providers are encouraged to submit abstracts to Roger Fernandez by e-mail (fernandez.roger@epa.gov) or call him at 202-564-5235 to discuss this opportunity.

See page 13 for an abstract EPA recently received.

PARTNER TECHNICAL ABSTRACT: Innovative Methane Emissions Reduction Tool

Ophir Corporation of Littleton, Colorado, has developed and demonstrated an optical remote sensing product—*duoThane*[®]—for detecting and potentially reducing the emissions of methane from fossil fuel sources such as natural gas and oil processing, production, and transmission operations. Independently and simultaneously, *duoThane*[®] detects methane and ethane, the primary constituents of natural gas. Ethane emissions also provide an excellent means of detecting and locating leaks in crude oil pipelines. The system has sufficient speed and sensitivity to enable cost-effective stationary surveys over gas and liquid pipelines. At a fence line monitoring distance of 600 meters, the *duoThane*[®] detection sensitivity is 50 parts-per-billion (ppb) for methane and 33 ppb for ethane. The *duoThane*[®] sensor employs the optical technique of Active Gas Correlation Radiometry, which uses an active infrared source and an optical, spectral correlation detection method. The benefits of *duoThane*[®] are threefold: reduced methane emissions, improved pipeline safety, and reduced gas and liquid industry pipeline operating costs.

Under an EPA contract, a *duoThane*[®] system demonstration on an operational natural gas transmission pipeline operated by Williston Basin Interstate Pipeline Co., Inc., in Glendive, Montana, was recently conducted to illustrate the ability of the sensor to independently detect and quantify methane and ethane in Class 1, 2, and 3 leaks. Additional ground-based demonstrations are slated for early this year for El Paso Pipeline Group and for the Department of Energy (DOE) on a carbon sequestration site in Hobbs, New Mexico. An Alaskan liquid pipeline services company is also interested in a field demonstration for the ground-based detection of ethane over a crude oil pipeline. Through a DOE grant, an airborne *duoThane*[®] system is being evaluated for remote sensing of natural gas pipeline leaks.

For more information, contact Lisa Spaeth and Martin O'Brien, Ophir Corporation, at 303-933-2200 or go to <http://www.ophir.com/publications.htm>.

Gas STAR Welcomes New Partner

Dominion Exploration & Production

Dominion Exploration & Production, Inc., is the natural gas exploration and production subsidiary of Dominion. With offices in New Orleans and Houston, Dominion E&P is one of the largest independent natural gas and oil operators and one of the top five Large Cap E&P companies for North American reserves and production.

After absorbing two acquisitions in the past 5 years, the company's reserve base has been increased by more than 4,000 Bcf equivalent and annual production by more than 250 Bcf equivalent. Reserves span the continent, onshore and off: central Alberta, northeastern British Columbia, basins in the Rockies, the Mid-Continent, the Gulf Coast, the Appalachians, and the Gulf of Mexico.

Parent company Dominion has more than 950 Bcf in storage capacity and 5,100 Bcf of natural gas reserves. With the nation's largest underground natural gas storage system, Dominion serves its customers in the Midwest, Mid-Atlantic, and the Northeast through 7,600 miles of transmission pipeline.



Joan Elterman(c), Dominion Exploration & Production, Inc., accepts the New Partner Plaque from Roger Fernandez and Kevin Tingley, Natural Gas STAR Program Managers.

Welcome Roger Fernandez Program Manager Natural Gas STAR Program

An 8-year EPA veteran, Roger Fernandez joined EPA's Natural Gas STAR Program in September 2002 as a Program Manager. Roger is responsible for marketing the program to the natural gas industry and providing ongoing support for half of our current partners. Other responsibilities include developing new and updated technology transfer and communication tools such as case studies, publishing the *Partner Update*, and organizing technology transfer conferences.



PROGRAM TOOLS

2003 Natural Gas STAR Reporting Season Quickly Approaching

We look forward to hearing about your 2002 accomplishments! This year, Gas STAR partners can expect the reporting package in the mail by early April and should anticipate submitting their reports to EPA 6 to 8 weeks later.

The annual reporting package will include:

- Options for submitting emissions reductions—online or by e-mail, fax, or standard mail
- Contact information for questions and assistance

If you would like to get a jump on the 2003 reporting season, feel free to use last year's forms, available on the Natural Gas STAR Web site as downloadable MS Word files or Adobe PDF files.

Last year, nearly 50 percent of the emissions reduction reports were submitted using EPA's online system! If you did not try the online method last year, why not try it in 2003?

Natural Gas STAR encourages all partners to take advantage of this streamlined reporting method. The annual reporting package will include instructions and your passwords for accessing the Online Reporting System.

The 2003 reporting season marks the first year that partners may also report annual emissions reductions using the online Data Collection and Management Tool. Information on using this tool for annual reporting will also be included in the package.

The conventional forms and the online tools are designed to help Natural Gas STAR partners easily communicate the success of their methane emissions reduction efforts; their use, however, is optional. EPA will accept emissions reduction data in whatever form is most convenient for partners, including data tables, worksheets, or text documents.

If you have any questions about the annual reporting process, please contact Roger Fernandez, Kevin Tingley, or your STAR Service Representative.

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