

# PARTNER UPDATE

WINTER 2006



## Natural Gas STAR International Charter Members Inducted

**S**ince 1993, EPA's Natural Gas STAR Program has accomplished a great deal, and because of this success it is now expanding. Building on the success of Gas STAR's domestic program, Natural Gas STAR International was launched on September 26, 2006, as part of EPA's commitment to the Methane to Markets Partnership. The launch ceremony was held in conjunction with IPIECA's and Gas STAR's "Natural Gas as a Climate Change Solution" workshop in Washington, DC. Gas STAR International charter partners include ConocoPhillips Canada Ltd, Devon Energy Corporation, Enbridge Inc., ExxonMobil Corporation, Marathon Oil Corporation, Occidental Oil and Gas Corporation, and TransCanada.



James Connaughton speaking before the signing ceremony.

During the signing ceremony, the charter partners were praised for their domestic efforts and their dedication to global methane emission reductions. They were greeted by James

### 2006 Gas STAR Award Winners

**Production Partner of the Year:**  
Marathon Oil Company

**Processing Partner of the Year:**  
Duke Energy Field Services

**Transmission Partner of the Year:**  
Kinder Morgan, Inc.

**Distribution Partner of the Year \*and\* Continuing Excellence Award – 5 Years:**  
Atmos Energy Corporation

**Rookie of the Year:**  
ONEOK Partners GP, L.L.C.  
(formerly Northern Plains Natural Gas Company)

**Implementation Manager of the Year:**  
Shankar Ananthakrishna (Targa Midstream Services, L.P.)

**Implementation Manager of the Year:**  
Krish Ravishankar (Occidental Oil and Gas Corporation)

A complete article on the awards ceremony is located on page 2.

Connaughton, Chairman of the White House Council on Environmental Quality; Marcus Peacock, EPA's Deputy Administrator; and Dina Kruger, Director of EPA's Climate Change Division.

This new program and its partners will be working under the Methane to

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## And the Winner Is...

**T**his past year was a successful one for EPA's Natural Gas STAR Program—partners reported record-breaking methane emission reduction activities. Natural Gas STAR partners achieved nearly 75 billion cubic feet (Bcf) of methane emission reductions—compared with 60 Bcf in 2005. Moreover, partner reports continued to include a wide variety of innovative technologies and practices, including several never before reported to EPA. To acknowledge partners who are achieving such methane emission reduction success, EPA has been annually recognizing partners for their activities. Based on annual emission reduction information, and other achievements throughout the year (award selection criteria is provided on page 6), EPA has selected the following companies as Natural Gas STAR award winners.

Congratulations to all the award winners and their achievements!



Workshop attendees.

### Production Partner of the Year: Marathon Oil Company

Marathon is a charter partner of the Natural Gas STAR Program. Since 1994, when Marathon joined, it has

reported more than 25 individual methane mitigation activities, resulting in greater than 46 Bcf in cumulative emission reductions, the largest of any Gas STAR partner. In 2005, Marathon achieved the second highest normalized and fifth highest total emission reductions of all production sector partners. These reductions were realized through the implementation of more than 10 technologies and practices. Marathon also expanded its participation in the Program by hosting a Technology Transfer Workshop in 2005, immediately following last year's Annual Implementation Workshop. The company also conducted operational efficiency studies on several representative production and processing facilities. These studies formed the basis for the development of operational efficiency work plans, which are being implemented in 2006 in Marathon's upstream business units. Finally, Marathon contributed to the Program's international efforts in 2006, signing on as one of seven founding partners of Natural Gas STAR International.

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Marathon

## 13th Annual Natural Gas STAR Implementation Workshop

***More Methane to Markets in an Era of High Gas Prices***

**October 23-25, 2006  
Houston, Texas**

The 2006 Natural Gas STAR Annual Implementation Workshop recently held in Houston, Texas, provided Gas STAR partners with an opportunity to learn about the most current cost-effective methane emission reduction technologies and practices. This was also an occasion for partners to exchange ideas with more than 150 other Natural Gas STAR partners and interested parties. The theme of this year's event was *More Methane to Markets in an Era of High Gas Prices*.

The workshop kicked off on Tuesday with a welcome reception. The next day included a discussion of the state of the oil and gas industry, sessions on advanced technologies for finding gas leaks, recommendations for measuring difficult gas leaks, as well as the Natural Gas STAR partner awards ceremony. In addition, a keynote presentation by Texas Railroad Commissioner, Victor Carrillo, was a highlight on Wednesday.

The full agenda, presentations, and a summary of the three-day event are available online at [epa.gov/gasstar/workshops/imp\\_workshops.htm](http://epa.gov/gasstar/workshops/imp_workshops.htm).

# Technology Spotlight

## Pacific Gas & Electric—Using Technology to Make a Positive Impact

**L**ike other Natural Gas STAR partners, Pacific Gas & Electric Company (PG&E) is continually investigating ways to take meaningful steps to address climate change. One way the company meets this goal is by implementing practices and technologies to reduce methane emissions from its operations. In the past year, as part of this continued environmental commitment, PG&E began looking for ways to practice cross-compression, which is very similar to the Natural Gas STAR technology referred to as a pipeline pumpdown technique. (For more information on pipeline pumpdown techniques, see the *Natural Gas STAR Lessons Learned* document titled, “Using Pipeline Pumpdown Techniques to Lower Gas Line Pressure before Maintenance” available at [epa.gov/gasstar/pdf/lessons/ll\\_pipeline.pdf](http://epa.gov/gasstar/pdf/lessons/ll_pipeline.pdf)).



Photo provided by PG&E.

Cross-compression is a technique that can often be implemented during large pipeline construction and repair projects. Simply stated, it is a process by which natural gas is transferred from one



Photo provided by PG&E.

pipeline to another prior to starting repairs. In the past, PG&E would isolate the pipe from its supply and “draft,” that is, allow normal customer consumption to lower the pipeline pressure as low as possible (maybe by 50 percent) or until there was a risk of customer outages. PG&E would then vent the remaining natural gas to the atmosphere prior to performing the pipeline repairs. Cross-compression now allows PG&E to use a set of special hoses and a compressor to pump much of the remaining natural gas from the pipeline (on which repairs will be done) to another pipeline in the system. This process keeps the natural gas in the system for immediate use by customers. It also allows repairs to be completed without venting to the atmosphere and without causing any service interruptions. Cross-compression reduces the amount of natural gas vented to the atmosphere by 85 to 90 percent. This results in cost savings to the customer because there is increased volume of gas in the receiving pipeline to meet demand.

“Cross-compression is another tool that gives us the ability to reduce our operational ‘footprint’ on the environment,” said Carol Burke of PG&E.

Because PG&E does not own the gas in their pipelines, the company does not realize any direct cost savings by using cross-compression; however, the company cites its commitment to combating climate change as an important driver for the program.

PG&E’s efforts also avoid the negative impact venting natural gas to the atmosphere might have on the local communities. By doing its part to reduce emissions from these pipelines, PG&E is helping improve air quality in the communities in which it operates by reducing the emissions of nonmethane hydrocarbons (also present in natural gas) as these are compounds that contribute to the formation of ground level ozone.

### Benefits of Cross-Compression to PG&E

- Reduced methane emissions
- Savings to customers
- Improved air quality
- Reduced exposure of workers to vented methane
- Reduced noise levels
- Positive corporate image

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# Partner Profile

## TransCanada Benefits From New Data Tracking System

In late 2005, TransCanada, a long-time Natural Gas STAR partner and new charter Natural Gas



STAR International partner, began developing a new automated emissions tracking system, appropriately named the Air Emissions Data Management System or ADMS. The goal of the new project was to simplify and refine the air emissions data tracking process, which will help the company further manage and reduce fugitive emissions. Although TransCanada has significantly reduced total methane emissions since 1990, the company believes further opportunities for improvement still exist (See *2004 Climate Change and Air Issues Annual Report*: [transcanada.com/pdf/social/Climate\\_Change\\_Air\\_Issues\\_Annual\\_Report\\_2004.pdf](http://transcanada.com/pdf/social/Climate_Change_Air_Issues_Annual_Report_2004.pdf)). ADMS will help the company manage, categorize, and more effectively evaluate emissions data and focus efforts for further reductions.

TransCanada maintains a network of approximately 25,600 miles of pipeline that transports the majority of Western Canada's natural gas production to Canadian and U.S. markets.

Virtually all of the company's methane emissions come from this pipeline network. As of 2004, nearly 30 percent of TransCanada's methane emissions from pipelines resulted from blowdowns during pipeline repair, while the remaining 70 percent was attributed to fugitive

emissions. To address these losses, the company implemented technologies and practices, such as hot tapping and valve sealing, to reduce blowdown emissions. In addition, it has utilized portable compressors and air powered expellers to capture emissions that could not be prevented. Since 2000, TransCanada has used high-flow samplers throughout its pipeline network to measure fugitive emissions and has used aerial leak inspection, infrared cameras, and gas detectors to find leaks in buried facilities where high-flow sampling is not practical.

detection and repair program. With the addition of ADMS, the team is better equipped to plan, schedule, set targets, and track performance for fugitive emissions work.

Prior to ADMS, many different TransCanada staff were responsible for manually collecting, tracking, and calculating all of the company's emissions information. Over time, management realized that the manual process was not efficient for a number of reasons. First, there were inherent errors in the very complex data management spreadsheet system that the company relied upon. Second, since only the analysts intimately involved with the spreadsheet system understood all of

the technical details and assumptions, the data was only truly accessible to, or comprehended by, a small group of people. Finally, emissions data and reports need to be precisely accurate, which the ADMS system provides.

According to Jim Cormack, TransCanada's Implementation Manager, ADMS will be in "full" production mode by early 2007, but is already in use in many

locations. The system uses a software package, provided by a third party software vendor, as the base for organizing, calculating, and reporting all air emissions—including fugitive methane. The software relies on data from many

Name	Begin Date	End Date	Fuel Consumption 19.3m3	AP42 CO from comb. AD
1. LACHE UNIT 1	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	30,527.10	44.93
2. ALICE RIVER UNIT 1	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
3. ALICE RIVER UNIT 2	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	4,898.90	1.20
4. ANGO #1 CROWNEST UNIT 805	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	71.20	0.10
5. ANGO #1 CROWNEST UNIT 105	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	6.54	0.01
6. ANGO #1 CROWNEST UNIT 107	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	4,729.40	4.90
7. ANGO #1 CROWNEST UNIT 108	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	3,305.00	2.83
8. ANGO #1 CROWNEST UNIT 109	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	2,108.10	2.83
9. ANGO #1 CROWNEST UNIT 110	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	29,388.70	7.20
10. ANGO #1 CROWNEST UNIT 115	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	125.70	0.17
11. ANGO #2A ELKO UNIT 101	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	15,429.90	20.68
12. ANGO #2A ELKO UNIT 102	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	7,562.90	1.85
13. ANGO #2B MOVE UNIT 101	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	2,718.00	3.64
14. ANGO #2B MOVE UNIT 102	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	7,738.80	10.26
15. ANGO #2B MOVE UNIT 104	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	1,940.40	2.60
16. ATHOL COMPRESSION STATION UNIT 1	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
17. ATHOL COMPRESSION STATION UNIT C1	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.15	0.00
18. BEAVER CREEK UNIT 1	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
19. BEAVER CREEK UNIT 2	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
20. BEAVER CREEK UNIT 3	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
21. BEAVER CREEK UNIT 4	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
22. BEAVER CREEK UNIT 5	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
23. BEAVER CREEK UNIT 6	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
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38. BEAVER CREEK UNIT 21	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
39. BEAVER CREEK UNIT 22	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
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43. BEAVER CREEK UNIT 26	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
44. BEAVER CREEK UNIT 27	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
45. BEAVER CREEK UNIT 28	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
46. BEAVER CREEK UNIT 29	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
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48. BEAVER CREEK UNIT 31	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
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56. BEAVER CREEK UNIT 39	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
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64. BEAVER CREEK UNIT 47	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
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76. BEAVER CREEK UNIT 59	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
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81. BEAVER CREEK UNIT 64	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
82. BEAVER CREEK UNIT 65	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
83. BEAVER CREEK UNIT 66	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
84. BEAVER CREEK UNIT 67	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
85. BEAVER CREEK UNIT 68	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
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99. BEAVER CREEK UNIT 82	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00
100. BEAVER CREEK UNIT 83	1/1/2006 12:00:00 AM	1/1/2007 12:00:00 AM	0.00	0.00

Screenshot of ADMS.

TransCanada's Fugitive Emissions Management Team, which includes representatives from the company's environmental department, field operations, and senior management, is responsible for maintaining a leak

# In the News

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## Processing Partner of the Year: Duke Energy Field Services

Duke Energy Field Services (DEFS) joined the Natural Gas STAR Program in 2001. 2005 marked the company's first year reporting, and it submitted the highest overall emissions reductions and third highest normalized reductions of the processing partners. These reductions were achieved by implementing six different technologies and practices. Vital



DEFS

to this effort, DEFS launched its companywide BTU Efficiency Program to reduce gas loss and operate more efficiently. The program consists of cross-functional teams whose goal is to increase the efficiency of each company asset group through improved measurement and best practices for reducing gas losses. The teams' outcomes were highlighted in the company's internal newsletter and in a presentation at this year's Gas Star Annual Workshop; there was also an internal companywide memo highlighting the commitment to Gas STAR. In addition, DEFS' activities were also detailed in an article in the *Fall 2006 Gas STAR Partner Update*.

## Transmission Partner of the Year: Kinder Morgan, Inc.

Kinder Morgan originally joined the Natural Gas STAR program in 1993,

but the company recently highlighted its commitment to the Program by signing a new Memorandum of Understanding in 2005. Kinder Morgan achieved the fourth highest normalized and fifth highest overall reductions of the transmission sector in 2005, implementing eight technologies and practices. The company's newsletter even featured an article on Natural Gas STAR, in conjunction with the company's sustainability program. Kinder Morgan's *Sustainability Report* also contains a section on the Natural Gas STAR Program.



Kinder Morgan

## Distribution Partner of the Year \*and\* Continuing Excellence Award – 5 Years: Atmos Energy Corporation

Atmos Energy joined the Natural Gas STAR program in 1999. Since then, it has reported five years in a row, submitting reports for activities from 2001 through 2005. During this time, the company has significantly increased activities and emission reductions. In fact, in 2005, Atmos reported the highest overall reductions and third highest normalized reductions of distribution partners. Atmos also has the third highest cumulative reductions of all distribution partners. To achieve its 2005 reductions, Atmos implemented four technologies and practices—reporting activities from more than



Atmos

seven locations and including a significant amount of additional historical emission reduction data in its annual report.

## Rookie of the Year: ONEOK Partners GP, L.L.C. (formerly Northern Plains Natural Gas Company)

ONEOK Partners GP, L.L.C. joined the Natural Gas STAR Program as a transmission sector partner in 2005 (as Northern Plains Natural Gas Company). This was the company's first year reporting, and it submitted reports for three subsidiaries, achieving the highest normalized reductions for the transmission sector and implementing numerous technologies and practices. Since joining, the company has been very proactive, no doubt a result of the influence of Implementation Manager, Ruth Jensen. Detailed information about Ms. Jensen and her work with the company, as well as with other Gas STAR partners, is available in the *Spring 2006 Natural Gas STAR Partner Update*.



ONEOK Partners GP, L.L.C.

## Implementation Manager of the Year: Shankar Ananthakrishna (Targa Midstream Services, L.P.)

Shankar Ananthakrishna has been a big supporter of the Natural Gas STAR Program since starting as Implementation Manager with Dynegy Midstream Services, L.P. in 2000. When Dynegy was acquired by Targa Resources, Mr. Ananthakrishna was instrumental in bringing the Targa management on board to join Natural Gas STAR in March 2006. Mr. Ananthakrishna has committed

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# In the News

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himself to participating in Gas STAR in a variety of ways. In the past, he worked with EPA to involve several Dynegy facilities in processing plant studies, and then encouraged another independent study, funded by Dynegy, at another plant. He contributed to the *Fall 2005 Natural Gas*



Shankar Ananthakrishna

*STAR Partner Update* with an article about Dynegy's directed inspection and maintenance (DI&M) activity, including efforts using optical leak imaging. He also presented at the 2005 Annual Implementation Workshop, and in 2006, presented Targa's optical imaging experience at the Processing Technology Transfer Workshop held in Farmington, New Mexico. He was instrumental in the success of the Gas STAR workshop held in Hobbs, New Mexico, which was sponsored by Targa and was one of the most highly attended workshops of the year.

## Implementation Manager of the Year: Krish Ravishankar (Occidental Oil and Gas Corporation)

Krish Ravishankar is the Implementation Manager for Occidental Oil and Gas Corporation (Oxy), a company that joined the Natural Gas STAR Program in 2004 largely as a result of Mr. Ravishankar's influence. In just two years, he has led Oxy to be one of Natural Gas STAR's top reporters. Under his direction, the company has submitted highly detailed annual emission reduction reports for five loca-

tions around the United States, including data on historical reductions dating back to 1990. Mr. Ravishankar also contributed to the success of the Oxy-sponsored Technology Transfer Workshop in Midland, Texas, which included a field demonstration of leak detection equipment at an Oxy tank battery. He is currently coordinating Oxy sponsorship of a March 2007 Technology Transfer Workshop and field demonstration at its Elk Hills, California facility. Mr. Ravishankar also has conducted methane emission reduction work internationally. In 2005, he led the organization of a Natural Gas STAR/Methane to Markets technical conference in Bogota, Colombia. This year, he has been working with Natural Gas STAR and representatives of Oxy's Colombia operations on a potentially significant emission reduction project at Oxy's Caño Limon facility. Mr. Ravishankar's support was also influential in Oxy signing on as a founding partner of Natural Gas STAR International in September 2006.



Award accepted by Greg Hardin on behalf of Krish Ravishankar.

## New Partners

- ★ CDX Gas (Production)
- ★ Enbridge Inc. (Transmission)
- ★ Southern Union Gas Companies (Transmission): Sea Robin Pipeline, Trunkline Gas, Panhandle Eastern Pipeline
- ★ Targa Resources (Processing)



New Partners

## Award Selection Criteria

Each year, EPA recognizes the efforts and achievements of outstanding Natural Gas STAR partners during a special awards luncheon at the Program's Annual Implementation Workshop. At this year's event, Gas STAR announced the criteria used for evaluating partner accomplishments and recognizing particularly successful participation in the Program. Recognition is based on methane emission reductions achieved; implementation of innovative technologies and practices; and most importantly, support of Program activities, initiatives, and outreach. To be eligible, partners must submit an annual report to EPA each spring. The following are the evaluation criteria that EPA considers when choosing Natural Gas STAR award winners.

- **Partner of the Year** is based on normalized emission reductions for the prior reporting year, achieved by implementing a variety of Gas STAR technologies and practices. EPA also considers positive reporting trends such as increasing reduction totals or expanded implementation of new technologies and practices; internal corporate programs to promote Gas STAR; internal and external outreach and education; and support for Gas STAR Program activities, such as *Partner Update* articles or Technology Transfer Workshops. One Partner of the Year award is generally named in each major natural gas sector: production, processing, transmission, and distribution.
- **Implementation Manager of the Year** is awarded for outstanding leadership in outreach and technology transfer of Natural Gas STAR Program goals. EPA also considers internal outreach and education and support for Gas STAR Program activities.
- **Rookie of the Year** recognizes new Program partners that demonstrate strong Program participation. Normalized emission reductions for the prior reporting year, implementation of a variety of technologies and practices, and participation in other Program activities are considerations in awarding Rookie of the Year.
- **Continuing Excellence** is presented based on a company submitting an annual report on a regular basis throughout the years, in conjunction with a high level of performance according to the criteria used for Partner of the Year.

## NYSERDA Funding Opportunity Available

The New York State Energy Research and Development Authority (NYSERDA) announces its Program Opportunity Notice (PON) 1111: Natural Gas & Petroleum Exploration & Production, Emissions Reduction, and Carbon Sequestration. NYSERDA anticipates making multiple awards in the following categories:

Type 1: Resource Characterization (\$100,000 maximum NYSERDA funding per project);

Type 2: Resource Development (\$150,000 maximum NYSERDA funding per project);

Type 3: Efficiency Increases and Emissions Reduction in Resource Extraction, Transportation, and Distribution (\$150,000 maximum NYSERDA funding per project);

Type 4: CO<sub>2</sub> Sequestration (\$400,000 maximum NYSERDA funding per project).

Proposals can be submitted by individual companies, research institutions, or teams. Teaming arrangements are encouraged, including the use of outside technical expertise or joint ventures between companies/organizations. Due dates for proposals are 12/28/2006 and 8/8/2007. The full solicitation can be found under Funding Opportunities on NYSERDA's funding opportunities Web site: [nyserda.org/funding/funding.asp?i=2](http://nyserda.org/funding/funding.asp?i=2). Please contact John Martin with any questions at (518) 862-1090 x3265 or [jpm@nyserda.org](mailto:jpm@nyserda.org).

## Partner Profile

*Continued from page 4* ★ ★ ★

sources; including many systems that were developed in-house that now interface with ADMS. The system was designed to be a comprehensive resource—it tracks all air emission sources related to the company's operations. Among other things, this includes:

- ★ Greenhouse gases (GHGs) from all sources, including combustion of fuel from compressor stations and power plants. Data can be evaluated at any level or combustion source, including large sources and

**"Our new Air Emission Data Management System is already allowing us to better analyze areas where we can focus our work on emission reductions."**

— Jim Cormack,  
TransCanada

thousands of small equipment sources, such as building heaters, company vehicles and rental cars used by company personnel, office buildings, and HVAC systems.

- ★ GHGs from fugitive emissions itemized to the level of each specific component.
- ★ Indirect GHGs produced by the consumption of electricity.
- ★ All criteria contaminants (NO<sub>x</sub>, SO<sub>x</sub>, PM, VOCs, etc).

Most data are collected and transmitted to ADMS via automated interfaces—a process that allows data that reside in one source to be copied to ADMS so it can be more effectively used.

These interfaces, along with the software, are designed to allow for transparent data tracking and auditing. This allows the Emissions Management Team to ensure data validity and accuracy. In areas where automated collection is not practical, emissions data can also be manually entered by the appropriate personnel. Data entry, analysis, and reporting are available through a Web

portal—giving many people access to both standard and customizable reports. Some of these reports are for internal use (to efficiently manage the company's facilities and to compare results to targets and objectives), and others are for external reporting (for regulatory reporting requirements and inputs into financial reports). To help ensure comprehensive data entry and evaluation, TransCanada management ties the number of facilities that undergo the leak detection process—which is a key business performance indicator—to its performance management system.

Even though the reasons for investing in ADMS were clear, the company did



Photo provided by TransCanada.

*Continued on page 8* ★ ★ ★

# Technology Spotlight

Continued from page 3 ★ ★ ★

## Accomplishments and Costs related to Cross-Compression

PG&E has significantly reduced methane emissions by using cross-compression, whenever feasible.

2005 Methane Emissions Reductions = 49,150 thousand cubic feet (Mcf)

PG&E estimates the costs of cross-compression at approximately \$20,000 to \$50,000 per event.

“Clearing pipelines is a necessary part of our gas business. By utilizing portable compressors, we can save much of the gas by compressing into an adjacent pipeline, rather than releasing it to atmosphere. This reduces our greenhouse gas emissions,” explained Ms. Burke.

In 2005 and 2006, PG&E used the cross-compression technique approximately 13 times throughout its system. When large pipeline repairs were scheduled, the company evaluated each pipeline repair on a case-by-case basis to determine if using cross-compression was feasible. In addition, as PG&E conducts its annual analysis to determine projects for the upcoming year, the company also considers whether cross-compression is a feasible option in each of the new circumstances. Current plans for



Photo provided by PG&E.

2007 include the use of cross-compression, as feasible, during major pipeline repairs. Feasibility depends on several factors, including cost and the availability of a nearby pipeline to which PG&E can evacuate the natural gas.

Evaluating and utilizing technologies, such as cross-compression, allows PG&E to reduce its methane emissions while improving system performance

and saving customers money. Many Natural Gas STAR partners in the transmission, distribution, and production sectors who transport natural gas via pipelines can benefit from the implementation of pipeline pumpdown during a variety of pipeline repairs. These benefits can include economic benefits from keeping the gas in the pipelines, as well as environmental and safety benefits from reducing natural gas venting.

For more information on pipeline pumpdown techniques, see the Natural Gas STAR Lessons Learned document available at [epa.gov/gasstar/pdf/lessons/ll\\_pipeline.pdf](http://epa.gov/gasstar/pdf/lessons/ll_pipeline.pdf). To learn more about PG&E's environmental commitment visit [pge.com/environment](http://pge.com/environment).

## Partner Profile

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face challenges. To begin, the company had to ensure that its information technology infrastructure would interface with the new software and allow for automated data collection. Therefore, some of its hardware had to be updated. Next, TransCanada wanted to plan ahead to ensure that the system was designed not only for today's data track-

ing and reporting obligations, but also to be flexible and accommodate changing conditions in the future. As a result, ADMS was designed so it can be expanded as needed.

After just one and half years, TransCanada is already beginning to see its investment pay off. ADMS allows the company to more efficiently capture, manage, and evaluate its air emissions data. Over time, the new system will help the Emissions Management Team identify and target areas poised for further emission reductions.



Photo provided by TransCanada.



## Charter Members Inducted

Continued from page 1 ★★

Markets Partnership to help decrease methane emissions from oil and gas operations worldwide. Specifically, Gas STAR International aims to help partner companies from around the world identify, implement, and track cost-effective methane emission reduction practices and technologies. To join Natural Gas STAR International, companies sign a Memorandum of Understanding (MOU) signifying the company's commitment to the Program. After

signing the MOU, the company is asked to do the following:

- ★ Submit an Implementation Plan summarizing how the company plans to incorporate Natural Gas STAR International in its operations.

- ★ Plan for the annual reporting process by documenting current and past emission reduction activities.

Further information is available online at [epa.gov/gasstar/international.htm](http://epa.gov/gasstar/international.htm).



Natural Gas Star International Signing Ceremony.



## GAS STAR TECHNOLOGY TRANSFER WORKSHOPS

### DISTRIBUTION

- ★ **WEB CAST**  
WEDNESDAY, DECEMBER 6, 2006  
1:00–2:30 PM EST

TOPICS DISCUSSED INCLUDED: DIRECTED INSPECTION & MAINTENANCE (DI&M), OPTICAL IMAGING, REDUCING METHANE EMISSIONS FROM PNEUMATIC DEVICES AND THE APPLICATION OF SMART REGULATORS/CLOCKING SOLENOIDS AND PARTNER EXPERIENCE IN METHANE EMISSION MITIGATION. A SUMMARY WILL BE AVAILABLE ONLINE AT [EPA.GOV/GASSTAR/WORKSHOPS/TT\\_WORKSHOPS.HTM](http://EPA.GOV/GASSTAR/WORKSHOPS/TT_WORKSHOPS.HTM).

### PRODUCTION

- ★ **ELK HILLS, CALIFORNIA**  
MARCH 20-21, 2007  
SPONSORED BY: OCCIDENTAL OIL & GAS.
- ★ **COLLEGE STATION, TEXAS**  
MAY 17, 2007  
SPONSORED BY: ANADARKO PETROLEUM CORPORATION.

- ★ **GLENWOOD SPRINGS, COLORADO**  
SEPTEMBER 12, 2007  
SPONSORED BY: WILLIAMS.

### PROCESSING

- ★ **CALGARY, ALBERTA, CANADA**  
JANUARY 15-17, 2007  
SPONSORED BY: CANADIAN ENVIRONMENT TECHNOLOGY ADVANCEMENT CORPORATION (CETAC) - WEST, ENVIRONMENT CANADA, AND PETROLEUM TECHNOLOGY ALLIANCE OF CANADA (PTAC).  
REGISTRATION INFORMATION IS AVAILABLE ONLINE AT [PTAC.ORG/SHOP/PRODUCT\\_INFO.PHP?PRODUCTS\\_ID=56](http://PTAC.ORG/SHOP/PRODUCT_INFO.PHP?PRODUCTS_ID=56).
- ★ **HOUSTON, TEXAS**  
APRIL 24, 2007  
SPONSORED BY: DUKE ENERGY FIELD SERVICES.

THESE ARE EVENTS THAT THE NATURAL GAS STAR PROGRAM IS CURRENTLY PLANNING. FOR UPDATES AND FURTHER INFORMATION, PLEASE CHECK OUT [EPA.GOV/GASSTAR/WORKSHOPS.HTM](http://EPA.GOV/GASSTAR/WORKSHOPS.HTM) OR CONTACT CAREY BYLIN AT [BYLIN.CAREY@EPA.GOV](mailto:BYLIN.CAREY@EPA.GOV) OR ROGER FERNANDEZ AT [FERNANDEZ.ROGER@EPA.GOV](mailto:FERNANDEZ.ROGER@EPA.GOV). ADDITIONALLY, ARE YOU A GAS STAR ENDORSER AND HAVE AN EVENT YOU WOULD LIKE LISTED HERE? PLEASE NOTIFY GAS STAR ABOUT IT.

## METHANE TO MARKETS WORKSHOP

- ★ **ADVANCING PROJECT DEVELOPMENT IN INDIA THROUGH PUBLIC PRIVATE PARTNERSHIPS**  
FEDERATION HOUSE  
TANSEN MARG, NEW DELHI, INDIA  
FEBRUARY 22-23, 2007

SUPPORTED BY: FEDERATION OF INDIAN CHAMBERS OF COMMERCE AND INDUSTRY (FICCI), MINISTRY OF PETROLEUM AND NATURAL GAS, U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA), UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID), UNITED STATES TRADE AND DEVELOPMENT AGENCY (USTDA).

THIS IS A TWO DAY WORKSHOP ON THE METHANE TO MARKETS PARTNERSHIP AND METHANE RECOVERY AND PROJECT OPPORTUNITIES IN INDIA. THE WORKSHOP WILL PROVIDE AN INTRODUCTION TO THE PARTNERSHIP AND SPECIFIC TECHNICAL AND PROJECT LEVEL DISCUSSIONS IN THREE INDUSTRY SECTORS: COAL MINING, LANDFILLS, AND OIL AND NATURAL GAS.



## Deadline Extension for U.S. Government Methane to Markets Grant Solicitation

The deadline for submitting proposals for the U.S. Methane to Markets request for proposals (RFP) has been extended. The new deadline is now January 3, 2007, at 4:00 PM Eastern Standard Time. Additionally, there is now a listing of frequently asked questions posted on the grants Web site, [epa.gov/methane-to-markets/grants.htm](http://epa.gov/methane-to-markets/grants.htm).

EPA hopes this additional time will enable more applicants to contemplate this opportunity and that those considering it will have additional time to develop a winning proposal. If you have any questions on this extension, or on the RFP, please read through the frequently asked questions. If your question is not listed there, please contact Erin Birgfeld in the Methane to Markets Program at [birgfeld.erin@epa.gov](mailto:birgfeld.erin@epa.gov). For more information about the grant: [epa.gov/methanetomarkets/grants.htm](http://epa.gov/methanetomarkets/grants.htm) or from U.S. Government grants site at: [grants.gov/search/search.do?opId=11145&mode=VIEW](http://grants.gov/search/search.do?opId=11145&mode=VIEW).

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