

# Greenhouse Gas Technology Verification News

NEWSLETTER

Issue 3

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A third-party verifier of greenhouse gas (GHG) technology applications. The Center is supported by the U.S. EPA Environmental Technology Verification (ETV) program and by technology vendor contributions. It is managed by Southern Research Institute.

## Second Executive Stakeholder Group Meeting Yields New Technology Directions

The Second Annual Executive Stakeholder meeting was held in April in Washington, DC (see photo). A diverse group of 32 stakeholders and observers attended the meeting including representatives from private industry, finance groups, state and federal government organizations, international organizations (World Bank, United Nations, Global Environment Facility), research groups, industry trade organizations, and other stakeholders. During the meeting, the Center's progress was reviewed and input was sought to identify new technology areas the Center should pursue. The group was addressed by several GHG mitigation and monitoring technology experts, and was updated on trading and verification issues by the United Nations Conference on Trade and Development (see related story on page 3).

*(continued on page 3)*



**Executive Stakeholders are addressed by The Distributed Power Coalition of America**

## Center to Test New Municipal Solid Waste To Energy Process

In September 1999, the Center entered into an agreement with Eastern Power of Ontario, Canada to verify the GHG reduction performance of their new municipal solid waste

(MSW) to electricity technology. The technology, referred to as Super Blue Box Recycling or SUBBOR, converts MSW into biogas and a suite of saleable recycled materials including metals, plastics, and peat. The biogas, which according to the vendor is of higher quality than competing MSW to biogas conversion processes, is used to produce electricity for on-site use and/or sale to the grid. Emissions from the SUBBOR will be compared to emissions associated with conventional landfilling of MSW.

Development of the verification test plan has begun and testing is planned at the Guelph, Ontario facility for the spring of 2000. A technical advisory panel is being established to assist the Center in developing broadly acceptable verification strategies and providing peer review of the Verification Test Plan and Report.

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## Center Completes 5 Technology Verifications



In August, field-testing was completed on the fifth GHG technology evaluated since January 1999. "It's been a busy year" said Bill Chatterton, the Center's field-testing coordinator. With test sites spread across five states from Arizona to North Carolina, Bill laments "I've seen enough hotel rooms and rental cars for a while, but I'm proud of the high quality testing EPA's program allows us to do".

In the summer of 1998, GHG Center staff met with representatives from the oil and natural gas industries. In that meeting, industry representatives voiced support for the mission of ETV and identified GHG mitigation technologies of interest. By the winter of 1998, verification test plans were under development for several technologies, host sites were being identified, and test protocols were being prepared with stakeholder guidance. "What has happened is that the technology purchasing community, primarily

oil and gas companies, expressed interest in technologies that both reduce GHG's and provide economic benefits" said Steve Piccot, Director of the Center. "The purchasers asked us to verify environmental and economic performance, so they could justify their purchase decisions to management. Several technology vendors stepped forward and said OK".

A group of three natural gas compressor technologies were evaluated, all of which are designed to reduce leaks of natural gas from compressor rod packing seals (see photo of rod testing). All three devices were evaluated at actual compressor stations and include: a new leak capture and reuse device marketed by A&A Environmental Seals, and two static sealing systems for use during compressor standby (C. Lee Cook and France Compressor Products). Testing is complete, and Verification Reports for these three compressor technologies will be posted on the Center's Web site in October ([www.sri-rtp.com](http://www.sri-rtp.com)).

Two new technologies, with applicability to the oil, gas, and other industries, were also evaluated. A computer-based continuous emission monitor (ANR Pipeline Company), which is applicable to gas-fired IC engines, was evaluated at a compressor station in Ohio. This technology belongs to a class of new monitoring technologies referred to as Parametric Emission Monitor Systems (PEMS). PEMS use computer algorithms and existing engine sensor outputs to predict emissions of CO<sub>2</sub>, NO<sub>x</sub>, CO, and THC, and can eliminate the need to purchase and maintain expensive continuous emission monitoring hardware. The second technology represents an innovative design for petroleum storage tank pressure relief valves (PRV). The PIN-TECH PRV is offered by The Protectoseal Company, and is designed to leak less while in the non-venting mode due to a patented pin-type release technology (see photo). Verification Reports for both of these technologies will be completed by the end of 1999, and will be posted on the Center's Web site soon after.



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**At a recent CADER/DPCA Conference in San Diego, Sushma Masemore, the Center's Deputy Director, discusses the future of distributed power technologies with staff from the California Department of General Services.**

*(Continued from page 1)*

After technical presentations on a wide range of technology areas, the Stakeholders recommended the Center continue to pursue technologies in the oil and gas industries. It also recommended an effort begin to identify and verify the performance of new electricity generation technologies. It was agreed that the initial focus should be on (1) distributed electrical power technologies, (2) SF6 mitigation and monitoring technologies, (3) innovative GHG monitoring technologies, and (4) new waste to energy technologies.

Since the meeting, a new Electricity Generation Stakeholder Group has been formed, and as of September the group contained about 40 individuals representing electricity producers, technology vendors, industry trade groups, and other organizations. The first meeting is planned for the fall of 1999,

where it is expected that specific technologies will be identified for testing, and verification testing strategies will be developed. The Center has already started to get the word out to the distributed generation industry by publishing announcements and cosponsoring the international symposium *Distributed Energy Resources*, presented by the California Alliance for Distributed Energy Resources (CADER) and the Distributed Power Coalition of America (DPC). AlliedSignal's new microturbine is the first technology evaluation planned.



## GHG Policy Update

### GHG Trading and Early Action Efforts Move Ahead....Slowly

Frank Joshua, head of Greenhouse Gas Emissions Trading for the United Nations Conference on Trade and Development in Geneva, addressed the Center's Executive Stakeholder Group in Washington, DC (see photo). Mr. Joshua outlined the current state of the Kyoto Protocol negotiations, outlined various proposed GHG trading schemes, and discussed the role of verification in international trading. Mr. Joshua said "It may be several years before formal trading

under the Kyoto Protocol can begin, however work on trading guidelines is needed to support a credible system". A similar sentiment was expressed at a recent Early Action conference sponsored by the Pew Center on Global Climate Change. Separate Credit for Early Action bills by John Chafee, Frank Murkowski, and Rick Lazio were described at the conference by Senate and House staff. Although support is strong for early action legislation, the three bills sponsors acknowledge that the prospects for passage in the next few years are slim.

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## HOST SITES & TECHNOLOGIES NEEDED



*NEED CREDIBLE ECONOMIC OR TECHNICAL PERFORMANCE DATA ON NEW TECHNOLOGY? HAVE A NEW TECHNOLOGY OTHERS SHOULD KNOW ABOUT?*

***WE CAN HELP IF YOU BECOME A HOST SITE  
OR TEST CANDIDATE***

**JOIN THESE FIRMS ALREADY PARTICIPATING IN VERIFICATIONS**

A&A Environmental Seals, Inc.  
AlliedSignal Power Systems, Inc.  
ANR Pipeline Company  
C. Lee Cook Company  
Eastern Power  
Enron Gas Pipeline Group  
Florida Gas Transmission Company  
France Compressor Products  
International Fuel Cells, Inc.  
Sonat Power Systems, Inc.  
The Protectoseal Company  
Transwestern Pipeline Company

*We have technology interests in: methane mitigation in the oil and gas industries, distributed power technologies, SF6 mitigation and monitoring technologies, biogas to energy technologies, methane mitigation technologies, other GHG mitigation and monitoring technologies.*

Contact the GHG Technology Verification Center by calling Stephen Piccot at Southern Research Institute (919-806-3456), or David Kirchgessner at the USEPA (919-541-4021). View our site at [www.sri-ntp.com](http://www.sri-ntp.com).

