

May/June 2006

STEAMING AHEAD

Energy-Efficiency News for Steam Plant Managers

Published by the Alliance to Save Energy and the U.S. Department of Energy

Read this Newsletter online at: <http://www.steamingahead.org/>

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For the Steaming Ahead events calendar, visit:

www.steamingahead.org/calendars/

“Save Energy Now” Identifies \$92 Million in Annual Energy Savings So Far

As of May 5th, Energy Savings Teams from the Department of Energy (DOE) have completed **76** Energy Savings Assessments (ESA) of DOE’s “Save Energy Now” campaign. Working with plant staff, the first 39 ESAs identified 11.5 trillion Btu/year in energy savings, translating to a potential cost savings of over \$100 million/year. DOE received over 200 applications during the application phase in late 2005. Throughout 2006, Process Heating and Steam ESA Experts will continue to work with qualifying plants to identify energy savings that may approach \$500 million across all 200 industrial facilities.

In addition to offering comprehensive energy assessments, each DOE Energy Expert conducts software-oriented training sessions for assessing systems and identifying immediate opportunities for energy-efficiency savings. The energy assessments focus primarily on steam and process heating systems, which consume a significant portion of all energy used in U.S. industry today. A complete list of participating plants can be found at

http://www.eere.energy.gov/industry/saveenergynow/partners/selected_plants.cfm.

A written report is being prepared for each assessment. As these reports become available, they are being posted at

<http://www.eere.energy.gov/industry/saveenergynow/partners/results.cfm>

For additional information about the “Save Energy Now” campaign, please visit

<http://www.eere.energy.gov/industry/saveenergynow/>

Energy Savings Assessment at Goodyear Tire and Rubber Plant Identifies Over \$1 Million in Annual Savings

An Energy Savings Team visited the Goodyear Tire and Rubber Plant in Union City, TN and identified three short-term opportunities among the plant’s four dual-fueled (natural gas and #6 fuel oil) boilers with a total potential savings of over \$1 million/year in energy cost savings. Opportunities include waste heat recovery, revising operating practices, and additional insulation.

A summary of this Energy Savings Assessment can be found at

http://www.eere.energy.gov/industry/saveenergynow/partners/pdfs/esa-031_final_public.pdf.



**ALLIANCE TO
SAVE ENERGY**

Creating an Energy-Efficient World

Steaming Ahead: <http://www.steamingahead.org>

DOE BestPractices Steam: <http://www.eere.gov/industry/bestpractices/>

Alliance to Save Energy: <http://www.ase.org/>



U.S. Department of Energy

**Energy Efficiency
and Renewable Energy**

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Two “Save Energy Now” Webcasts Coming Soon

The final two webcasts of the four-part Industrial Assessment Centers (IAC) National Webcast Lecture Series are coming up soon, and are in support of the “Save Energy Now” campaign. Internationally recognized experts will present the free one-hour lectures from an IAC university location. The lectures are for anyone involved in industrial energy-efficiency projects and discuss the impacts of energy prices, project cost estimation and energy-efficiency implementation methods. The schedule is as follows:

- May 10: Optimizing Combustion Systems
- June 14: Steam System Management

For more information on these lectures, please visit the IAC website at <http://iac.rutgers.edu/lectures2006/>

Register for any of the lectures at http://iac.rutgers.edu/lectures2006/wc_register.php

Gas Utility’s “Steam Saver” Program Saves Customers Over \$31 Million per Year

Enbridge Gas Distribution Inc. of Toronto began a “Steam Saver” program of steam plant audits and performance tests in 1997. The program has since expanded to include steam trap surveys, insulation surveys, metering, and other services. Over the first nine years of the program, 92 plants were audited and 510 energy savings projects were identified. The identified projects represented a natural gas savings of 13.7% on average. The combined services from Enbridge Gas identified over \$59 million in potential savings. Many of the identified projects have been implemented, resulting in a savings of over \$31 million/year by Enbridge Gas customers.

A report detailing the Enbridge “Steam Saver” program can be found on the Steaming Ahead web site at <http://www.steamingahead.org/library/enbridge05.pdf>.

How Much Does That Steam Cost Me, Anyway?

Did you know that the Department of Energy has assembled several technical briefs on steam best practices? With the cost of fuel continuing to rise, these documents become increasingly relevant to plant personnel. There is a brief worth reading if you want a better handle on your steam costs. The document explains the process of setting up a simulation model and using the model to evaluate potential energy savings opportunities.

The brief, [How to Calculate the True Cost of Steam](http://www1.eere.energy.gov/industry/bestpractices/pdfs/tech_brief_true_cost.pdf), can be found at http://www1.eere.energy.gov/industry/bestpractices/pdfs/tech_brief_true_cost.pdf.

Taming Natural Gas Prices

A study performed for the Department of Energy by Lawrence Berkeley National Laboratory reinforces the economic justifications for pursuing energy efficiency projects. The study, which focuses on the potential price impacts of reduced natural gas consumption by industry, evaluates several existing modeling studies. Among other conclusions, the study reports that savings of \$5 to \$45/MWh is readily achievable.

An overview of the [Easing the Natural Gas Crisis: Reducing Natural Gas Prices through Increased Deployment of Renewable Energy and Energy Efficiency](http://www.eere.energy.gov/industry/bestpractices/energymatters/articles.cfm/article_id=14) is available at http://www.eere.energy.gov/industry/bestpractices/energymatters/articles.cfm/article_id=14 and the full report is available at <http://www.lbl.gov/Science-Articles/Archive/sabl/2005/February/assets/Natural-Gas.pdf>.

Time to Wrap It Up

The previous issue of Steaming Ahead discussed the Department of Energy’s Tip Sheets, which are available for reading and download from the BestPractices web site, and referenced Steam Tip Sheet #1, which relates to steam traps. This month’s tip sheet link is to Steam Tip Sheet #2, [Insulate Steam Distribution and Condensate Return Lines](#). This tip sheet provides information

and an example quantifying heat losses for various pipe sizes and steam pressures. Insulating steam and condensate return lines often has very attractive payback periods. **3E Plus**, developed by the North American Insulation Manufacturers Association, is a software tool that provides a straightforward method of determining the optimum insulation thickness, and calculates an estimated payback period.

This tip sheet can be found at <http://www1.eere.energy.gov/industry/bestpractices/pdfs/39306.pdf>.

DOE Industrial Technologies Program Solicitations

The DOE-ITP provides cost-shared funding for qualified research and development projects. Awards are based on a competitive process open to collaborative teams which may include academia, suppliers, universities, national labs, and others. There are currently no active solicitations. Future solicitations will be listed on the DOE-ITP "Solicitations" Web page: <http://www.eere.energy.gov/industry/financial/solicitations.html>.

Note: Official notices of solicitations can be found at <http://www.fedbizopps.gov> or in the Federal Register. This list is for information only—it may not be inclusive of all solicitations. Funding amounts and schedule dates are subject to change.

Upcoming Steam Events and Training

If your organization is interested in hosting a U.S. DOE Steam Training session, please contact Ann Deming of Project Performance Corporation at 703-748-7096.

U.S. Department of Energy Steam System Specialist Qualification Training

The DOE BestPractices Steam Specialist Qualification Training program is a two-and-a-half day course teaching the effective use of DOE BestPractices Steam software tools. The DOE recognizes participants who pass the final exam as Qualified Specialists in the use of the BestPractices Steam Software Tools.

No courses are currently scheduled.

For a full course description, visit: http://www1.eere.energy.gov/industry/bestpractices/event_detail.asp?event_id=2056

U.S. Department of Energy Steam System Assessment Workshop

This one-day workshop covers operations of typical steam systems and presents methods for improving system efficiency. The workshop will help steam system staff to better identify opportunities for saving energy.

For a full listing of courses and course descriptions, visit the DOE BestPractices Training Calendar:

<http://eereweb.ee.doe.gov/industry/bestpractices/calendar.html>

- May 16, 2006: Newark, Delaware
Charlie Smisson: 302-739-1530, csmisson@state.de.us
- May 19, 2006: Newport, Rhode Island
Eric Winkler: 413-545-2853, winkler@ecs.umass.edu
- May 23, 2006: Lake Jackson, Texas
Kathey Ferland: 512-232-4823, kferland@mail.utexas.edu
- May 24, 2006: Charlotte, North Carolina
Dr. Singh: 336-334-7575, x626, singh@ncat.edu
- May 25, 2006: Downey, California
Larry Bennett: 562-803-7570, lbennett@semprautilities.com
- June 6, 2006: Akron, Ohio
Jessica Bayles: 216-361-3100, jbayles@cesnet.org
- July 11, 2006: Hahnville, Louisiana
David McGee: 225-342-8573, davidmc@dnr.state.la.us