

Industrial Program Planning Committee Breakout Session: 1:30-3:00pm

Utilizing Member Experience to Identify and Explore New Program Opportunities

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Committee Background

- In 2007, CEE launched the **Industrial Program Planning Committee** to:
 - provide a forum for members to share program strategies in the industrial sector
 - tap into the collective experience of member industrial efficiency programs
 - identify and prioritize industrial opportunities (by sector, process, cross-cutting)
 - recommend program strategies, as appropriate
- One of five active industrial committees at CEE

Industrial Program Planning Committee: Structure

Member Participation: 160 individuals

Co-Chairs: Brian Platt, NYSERDA
 Bryan Warren, So Cal Gas

Subcommittee: Energy Management
– Co-Chair: Sergio Dias, NW Energy Efficiency Alliance

Program Interests:

- Across fuel types (electric, gas, other)
- Cross-cutting systems/processes
- Targeted markets
- Emerging technologies
- Innovative program strategies

Industrial Program Planning Committee - 2008

- Took stock of industrial program needs and approaches
- Identified energy management as a new area for CEE to explore
 - Explored how member programs are supporting energy management and continuous energy improvement
 - Started to track national and international energy management developments (e.g., ISO 50001, and the Plant Energy Efficiency Certification Program).
 - Reviewed ASME energy assessment standards for pumps, compressed air, steam and process heating systems
- Explored program implications of DOE's Save Energy Now program and Super Boiler project

Today's Agenda

- Workplan Priorities for 2009
- Introduce “All Things Industrial” Forum
 - Criteria, Process
 - Identify Potential Topics
- Programs Targeting Natural Gas Savings
 - Survey Results
 - Member Discussion

Industrial Program Planning Committee Workplan Priorities for 2009

- Continue to define energy management as a program opportunity
 - highlighting member program experience,
 - identifying specific energy management program components, and
 - cataloging supporting resources, such as the ASME energy assessment standards.
 - Draft a set of program guidelines on energy management
- Continue to coordinate member industrial programs with relevant DOE and EPA programs
 - Testing a procedure to alert CEE members when DOE Save Energy Now plant assessments are scheduled in your service territory
 - Explore resources that support energy management including benchmarking tools and identifying corporations that have made corporate commitments (with plants in member service territories)

New Committee Function

Context

- There are too many outside projects and developments relevant to CEE's industrial committee work for individual members to keep track of
- Conceptually this function occurs on an *ad hoc* basis within individual committees
- Need a better system to identify relevant projects & developments, share information with members and track them over time

“All Things Industrial” Forum

Objective

- Improve our collective knowledge of industrial projects and developments that are relevant to CEE’s industrial committee work.
- Provide CEE program administrators with a consistent, peer-driven forum to track the increasing number of developments relevant to the scope of work addressed by CEE committees

Approach

- Rely on individual program administrators to identify projects, report information relevant to CEE’s industrial committees and help the committee track them over time as appropriate
- Member-driven

“All Things Industrial” Process

- Identify candidate organizations, projects and/or developments of relevance to CEE’s work
- Invite members to give status updates on a consistent basis
 - Reporters should have a program implementation role, working knowledge of subject matter, disclose any project affiliations
- Determine type of information to be reported
- Determine frequency and length of reporting
- Ensure that reports are captured and organized for efficient future use – ideally on a secured website

Candidate Projects Relevant to CEE's Industrial Work – Which Ones, Why?

CEE Work Area	Reporting Topics
Industrial Motors and Motor Systems	Compressed Air Challenge Pump Systems Matter DOE Best Practices
Motor Management	Green Motors Initiative Motor Decisions Matter – NEMA, EASA, DOE, EPA
Municipal Water-Wastewater	ENERGY STAR Benchmarking, EPA Office of Water WERF – OWSO Project AWWA Research Foundation
Industrial Program Planning	Superior Energy Performance (SEP) DOE-Save Energy Now, IACs Energy Star for Industry NIST Manufacturing Extension Partnerships Energy Solutions Group Emerging Technologies ANSI/ISO Standards Others??

Criteria for Discussion

- Most relevant to CEE Committee work
- Could provide value to efficiency programs
- Outside organization is open to input from CEE member committees
- A manageable number
 - How many can be reported on per committee?

“All Things Industrial” Discussion Items

- Type of information to be reported
- Frequency and length of reporting
 - Function as a standing agenda item?
 - Dedicated Committee meeting?
- How to capture and organize reports for future use – ideally on a secured website.

“All Things Industrial” Reporters

Criteria

- Has a program implementation role
- Working knowledge of subject matter (direct experience)
- Comprehend the spirit of this function
- Disclose any affiliations with the project
- Willing to report to the committee on a regular basis

Next Steps



Working Together, Advancing Efficiency

Exploring Natural Gas Efficiency Opportunities for Industrial Programs

Background

- Industrial customers use large amounts of energy for process heating and steam
 - Approximately 38% of energy used in manufacturing and mining is for process heating; approximately 35% is steam*
- Committee is exploring opportunities to enhance the effectiveness of member industrial gas efficiency programs
 - Conducted a survey to better understand the scope and direction of member efficiency programs that target natural gas savings in the industrial sector.

* Robert Gemmer, DOE, presentation at June 2008 CEE Meeting on SuperBoiler

Industrial Gas Efficiency Program Survey Results: Overview

- 9 Respondents
- 90% have been serving industrial programs for over 5 years, the rest of 3-5 years.

Industrial Gas Efficiency Program Survey Results

Why does your gas efficiency program serve industrial programs?

- Our gas efficiency program is mandated to serve all customers - residential and commercial and industrial.
- Our program for manufacturers focuses on energy efficiency for that sector. It is not a program specific for gas, but rather energy efficiency that would include gas projects.
- Largest potential therm savings of all customer classes
- We serve industrial customers. Customers come to us with integrated facilities, not separate gas and electric facilities
- Industrial sites contribute to a public benefits fund and we are the administrators of that fund. Equity is a serious issue for us.

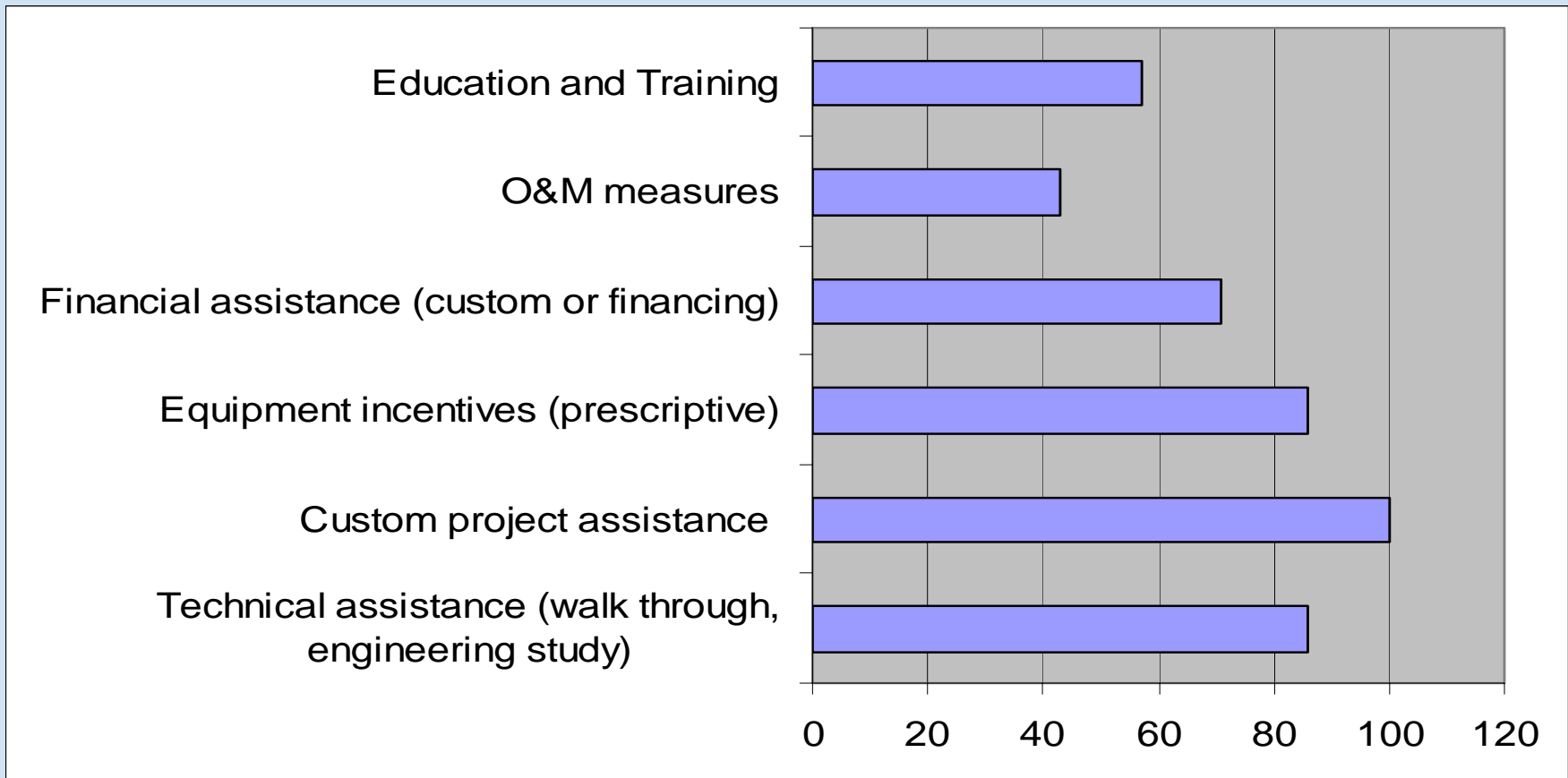
Industrial Gas Efficiency Program Survey Results

How large is your industrial program (budget)? Is it multi-year??

- 2009 is the third year of a three year program. The budget for 2008 was \$3.37 million
- \$4.2 million through 2010.
- We are currently in a 3 year program. For 2008 our budget was approximately \$3 million.
- Multi year budget that varies by state
- Budget is not split specifically to industrial. It is a C&I budget.
- Out of a total \$21M budget, \$500k is devoted to gas program incentives, development, and delivery with a total therm goal of 150,000.

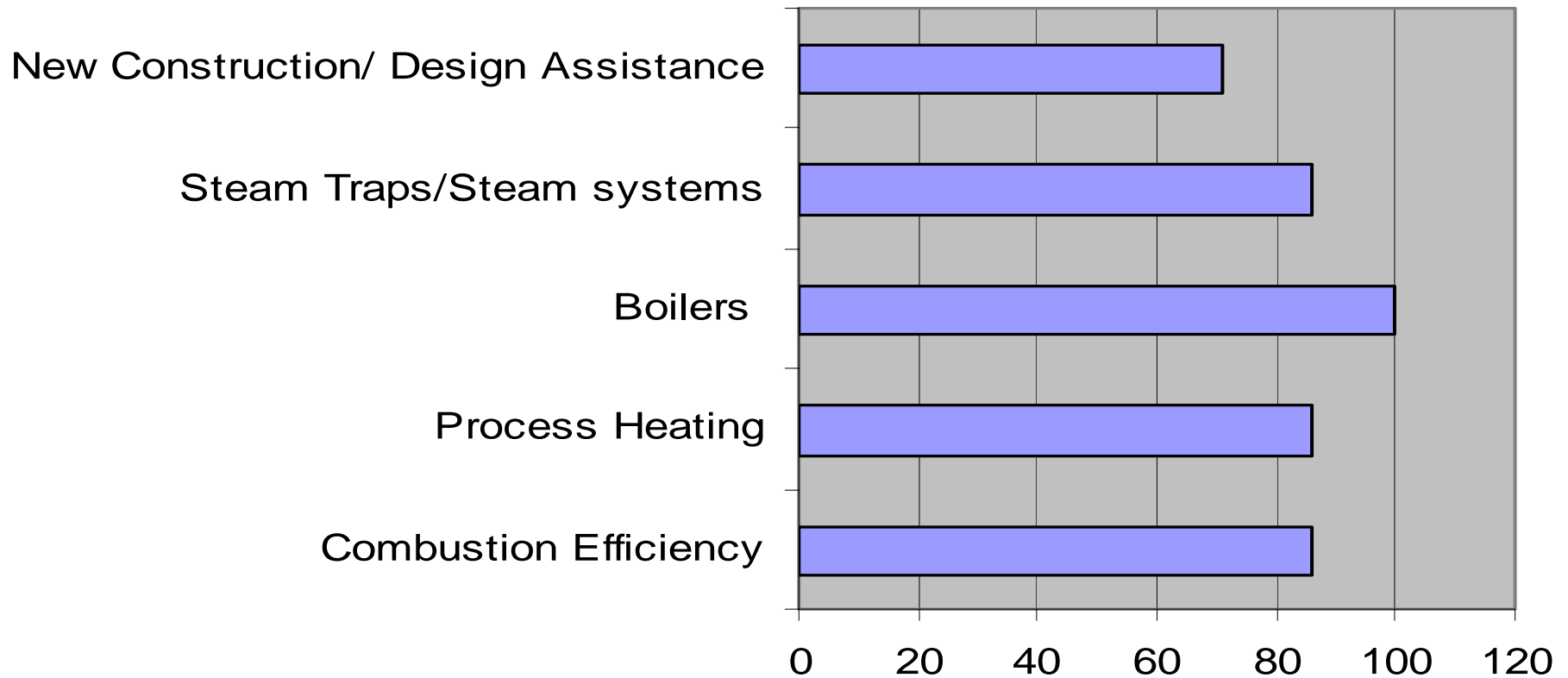
Industrial Gas Efficiency Program Survey Results

What does your gas efficiency program offer industrial customers?



Industrial Gas Efficiency Program Survey Results

What types of measures does your industrial program support?



Industrial Gas Efficiency Program Survey Results

What are your industrial program's most common gas efficiency measures?

- Boilers (install, upgrade, retrofit), Heat Recovery, Steam Trap repairs
- Replace/improve boiler efficiency, envelope improvements, waste heat recovery, process heat assessment
- The Steam Saver Program has been our flagship program covering boiler and boiler related efficiency measures as well as steam traps and insulation.
- Combustion controls, heat recovery
- High efficiency Boilers
- Boilers

Industrial Gas Efficiency Program Survey Results

Other gas efficiency program offerings for industrial customers?

- Additional incentive for equipment installations deemed cutting edge (Demonstration Projects)
- Equipment incentives that are customized for each application.
- Consider other gas efficiency measures on a case by case basis as industrially there are numerous applications which fall outside those listed above.
- On the electric side, anything custom. Gas is mostly HVAC related - radiant heat, nursery bed heating (boiler)

Industrial Gas Efficiency Program Survey Results

Do you have programs designed around specific target markets, such as food processing or pulp and papers??

- Our program consists of generic offerings available to all industrial sectors
- Our programs are cross-cutting in nature and focus on major gas uses such as steam, HV and process.
- Our industrial market is diverse so we have some of everything but not a huge concentration of natural gas use in one particular industry sector.
- Yes, pulp and paper, food processing and high tech have specific program focus because these industries have unique market barriers to participation and have active industry associations we can team with.

Industrial Gas Efficiency Program Survey Results

Which measure category (project type) provides the most gas savings and what is the average savings per project?

- Heat recovery - approximately 600,000 m³ average savings per project
- Our average savings per project in 2007 was approximately 330,000 m³ per project.
- CHP & Heat recovery projects, therm savings vary widely, 40,000 to 600,000
- Combustion efficiency
- We don't have enough of a project history to really contribute. We only help with very small projects

Industrial Gas Efficiency Program Survey Results

Does your program use tools, software, training or case studies provided by DOE or others? If so, which ones have you found valuable to your program?

- Yes PHAST Insulation calculation
- Our facilitators use tools from DOE (PHAST, MotorMaster, etc)... as part of their assessment
- We have developed our own software industrial e-tools. We have used our own in-house developed training as well as externally developed training.
- DOE's SSAT, SSST, and 3E insulation software
- No.

Industrial Gas Efficiency Program Survey Results

What is your program's marketing and outreach strategy to industrial customers?

- Utilize strategies targeting the technical representatives from our customers, including customer meetings, technical training sessions
- Website, field contacts, regional seminars, utility collaboration
- Our main program delivery is through our in-house Energy Solutions Consultants (Industrial Sales) who work with a variety of external business partners.
- Organizations customers are members of, direct contact with customers, speak at events, partner with utilities
- We work through vendors for small industrial so we don't even really market to participants

Industrial Gas Efficiency Program Survey Results

Are there any constraints on who your gas efficiency program can and cannot serve?

- We are not allowed to offer our program to non-Union Gas customers.
- The facility must be located in the service territory of Ohio's investor owned utilities.
- We are essentially limited to operating within our service area.
- Must be on a rate that pays into the energy efficiency fund
- We have one rate class that currently is ineligible but that will change next year due to the Green Communities Act
- Must contribute the our fund

Industrial Gas Efficiency Program Survey Results

What is the biggest program opportunity or barrier that you would like CEE's to address?

- How to reach the customers senior management to convince them that Energy Efficiency should be a priority worth pursuing.
- Integrated energy management plans instead of single project approaches.

Next Steps

Ongoing efforts

- ASME Energy System Assessment Standards
 - Process heating and steam systems
- Member resource guide for process heating and steam
- Coordination with DOE Save Energy Now Plant Assessments
- Others?