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STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

State & Local Energy Efficiency Action Network

Industrial Energy Efficiency (IEE) & CHP Working Group

Todd Currier

IEE / CHP Working Group Co-Chair

NASEO Industrial Committee Meeting

September 2011

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STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

Outline

- SEE Action Network
  - Structure
  - DOE and EPA Role
- IEE/CHP Working Group
  - Members
  - Scope
  - Goals
  - First Year Activities
- Current Activities
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- Getting Involved

What is SEE Action Network?

SEE Action Goal

To help the nation achieve all cost-effective energy efficiency by 2020 through assisting state and local governments in their implementation of energy efficiency policies and programs

- SEE Action is a federal-state-local effort to assist state governments, utilities, and other local stakeholders in:
  - Advancing efficiency policies and programs
  - Removing barriers and disincentives to realizing energy savings through efficiency
  - Growing state-level investments in cost-effective energy efficiency

SEE Action Network Structure

SEE Action Working Groups

Executive Group

- Approx. 30 members, representing diverse stakeholders, including state policy makers, business leaders, utilities, NGOs, associations
- Provides visionary leadership, strategic direction , and prioritization
- Facilitated & co-chaired by DOE and EPA

State/local co-chairs

Diverse WGs

Aggressive Goals

Blueprint to Achieve Goals
- Goal
- Where are we today
- What we need to do
- Roles/responsibilities
- Coordination/outreach

Implementation

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www.seeaction.energy.gov

DOE and EPA Role

- While SEE Action is focused on guidance and resources for non-federal entities, success will require that all parties work to complement each other. Generally, the federal role includes:
  - Convene stakeholders to identify needs and to collaborate on program design / development
  - Provide technical assistance
  - Ensure that programs document and share results and performance data
  - Develop tools and programs
  - Promote outreach efforts
  - As appropriate, elevate cross-agency policy issues to senior management

IEE /CHP Working Group Members

Industrial Energy Efficiency (IEE) & CHP Working Group:

- Two Co-Chairs
- 17 Members
  - State Programs
  - Coordinating Organizations
  - Utilities
  - Research/Academia
  - Industry / End-Users
- Four DOE / EPA Leads

Co-Chairs	
Todd Currier	Washington State University Extension Energy Office
Greg White	Michigan Public Service Commission
State Programs	
Brian Platt	New York State Energy Research and Development Authority
Coordinating Organizations	
Ron Edelstein	Gas Technology Institute
Neal Elliott	American Council for an Energy-Efficient Economy (ACEEE)
Rich Herweck	Texas CHP Initiative
John Holt	National Rural Electric Cooperative Association
Bruce Lung	Alliance to Save Energy
Rick Marsh	Southeast Energy Efficiency Alliance (SEEA)
Richard Meyer	American Gas Association
Lisa Schwartz	Regulatory Assistance Project
Becky Stanfield	National Resources Defense Council
Ed Wisniewski	Consortium for Energy Efficiency
Utilities	
James Earley	Southern Company
Chris Goff	Southern California Gas Company
Research/Academia	
John Cuttica	Energy Resources Center, University of Illinois – Chicago
Dr. Michael Muller	Rutgers University
Industry/End-User	
Stephen Coppinger	CalPortland
Brad Runda	Saint-Gobain
DOE / EPA Leads	
Elizabeth Dutrow	EPA ENERGY STAR for Industry
Bob Gemmer	DOE Industrial Technologies Program
Sandy Glatt	DOE Industrial Technologies Program
Neeharika Naik-Dhungel	EPA CHP Partnership

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IEE / CHP Working Group Scope

- IEE / CHP Working Group addresses:
  - Industrial sector/manufacturing:
    - Large-, medium-, and small-sized industries
    - Varying levels of energy intensity
  - Energy efficiency in terms of systems and processes
    - Energy intensity (as a measure of efficiency)
    - Combined heat and power (CHP)
- Working Group does not address:
  - Building envelope
  - Small commercial*
  - Other issues that do not affect industrial energy efficiency / CHP uptake of state and utility programs

* EIA: Industrial sector includes "all facilities and equipment used for producing, processing, or assembling goods," whereas the commercial sector is more encompassing and includes "service-providing facilities and equipment of businesses" (EIA Glossary).

IEE / CHP Working Group Goals

Achieve an average 2.5% reduction in industrial energy intensity annually through 2020; install 40 GW of new, cost-effective CHP by 2020

Drive Demand for IEE & CHP

1. State, Local, & Utility Programs for Industry
Programs that better meet the needs of industry

2. State Policy Models
Broader adoption of model policies

3. National Energy Efficiency Policy
Enhance national policy with regard to industrial energy efficiency and CHP

4. Education & Outreach
Build corporate culture; foster greater understanding of the economic value of industrial energy efficiency and CHP

Build the Workforce

5. Education & Workforce Development
Identify industry's needs and workforce needs; develop new programs to address needs

6. Develop Training & Academic Curricula
From the plant floor to the corporate level

7. Licensing & Certification Protocols
Certified Energy Manager (CEM); DOE Qualified Specialists; Continuous Energy Improvement, etc.

Promote Efficient Operations & Investment

8. Financing Innovation
Loan guarantees, energy service companies (ESCOs), etc.

9. Financial Incentives
Address industry ROI and refit cycles

10. Technical Solutions
Improve availability of energy efficiency and CHP information and tools for industry

11. Energy Management Programs/Continuous Energy Improvement
Ex: ISO 50001, Superior Energy Performance (SEP), ENERGY STAR, and others

Move the Market

12. Technology Demonstration
Adoption of existing technologies

13. Regulatory Recommendations to Support CHP
Offer comprehensive CHP policies

14. Reduce Uncertainty Related to State Interconnection
Harmonization across broad regions and states

15. Financing Reform
Depreciation rules and Sarbanes-Oxley Act

Green = IEE **and** CHP solution
Purple = CHP only solution

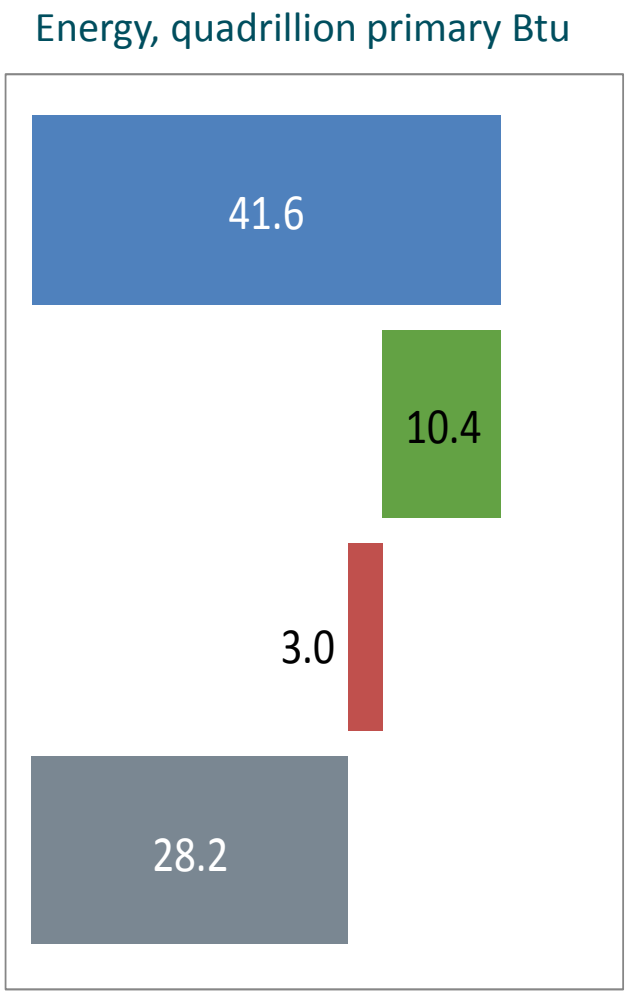
Impact of IEE / CHP WG Goals

Where We Are Today: According to the Energy Information Administration, gross domestic product (GDP) growth estimates with fixed energy intensity, the industrial sector will consume 41.6* quads of primary energy in the year 2020 (Business as Usual).

Working Group Goals: Based on the McKinsey report, 13.4 quads of potential industrial Btu savings by 2020 exist.** The working group's goals to reduce industrial energy intensity by 2.5% annually through 2020 and install 40 GW of new, cost-effective CHP by 2020 will achieve a reduction of 10.4 quads.***

Scope: Reaching goals would capture 78% of the potential energy efficiency in the industrial sector, leaving 3.0 quads to address through other activities.

Resulting 2020 Energy Use if all potential is addressed:



* Total industrial sector energy consumption includes refining-related efforts.
** The McKinsey non-transportation industrial estimates were used to calculate the potential for the full industrial sector.
*** 2020 efficiency potential is based on an estimated 25.2% growth in GDP by 2020 (Annual Energy Outlook 2008) and a fixed industrial energy intensity (energy consumption per value of shipments) through 2020.

First Year Activities

➢ Drive demand for IEE and CHP

- Host September 2011 Utility/Manufacturing Workshop
- Draft white papers on IEE and CHP
- Engage states and utilities on enhancing data collection
- Host webinar series addressing barriers to IEE program participation
- Develop program guidebook for states

➢ Build the Workforce

- Identify and promote valuable licenses and certifications
- Support IEE / CHP training programs at universities and community colleges
- Engage utilities in hosting new IEE/CHP trainings

➢ Promote Efficient Operations and Investment

- Update information clearinghouse
- Develop CHP efficiency calculations

➢ Move the Market

- Engage states, utilities, PUCs in harmonizing CHP interconnection standards

Utility-Manufacturing Workshop

- September 28th in Denver, CO
- Engage industry with states, utilities and other stakeholders
- Participants will work to identify strategies for overcoming key barriers to industrial energy efficiency
- Working Group is drafting 3 primers to provide background information for workshop discussions:
  - Policy Framework
  - IEE Program Design
  - Evaluation, Measurement and Verification (EM&V)
- Follow-up report will describe workshop outcomes

Utility-Manufacturing Workshop

- Primer 1: Policy Framework
  - Describes current policies and regulations that influence the types of IEE programs offered by utilities
  - Discusses regulatory and policy barriers to successful IEE programs
  - Presents least-cost regulatory frameworks that have proven successful in some cases:
    - Long-term energy savings goals
    - Cost recovery options
    - Project timing and utility rate cycles
  - Suggests opportunities for action

Utility-Manufacturing Workshop

- Primer 2: Program Design
  - Introduces the purpose and design of utility demand-side management (DSM) programs
  - Describes common barriers to successful DSM program design for the industrial sector
  - Discusses features of effective industrial DSM programs in the areas of:
    - Partnerships and administration
    - Customer relations
    - Program design and management
  - Provides examples of successful industrial DSM programs
  - Suggests opportunities for action

Utility-Manufacturing Workshop

- Primer 3: DSM Program Evaluation, Measurement and Verification (EM&V)
  - Introduces the purpose and objectives of EM&V activities for utility-administered industrial DSM programs
  - Describes EM&V needs for industrial DSM programs
    - Data independently collected by evaluator
    - Data provided by industrial customer
  - Discusses barriers to effective EM&V
  - Describes model approaches to EM&V for industrial DSM programs
  - Suggests opportunities for action

IEE Webinar Series

- November 2011 – April 2012
  - First Tuesday of every month (except January)
  - 12:00 PM (Eastern time)
- 5 webinars will address ways to advance IEE policies and programs, remove barriers, and grow state-level investment in energy efficiency
- Feature expert speakers from federal agencies, regulatory commissions, utilities, research labs, academia, non-profit organizations, and the private sector
- Open to states, utilities, manufacturers, and other local stakeholders interested in industrial energy efficiency

Webinar Series

- Schedule and Topics:
  - Nov 1 – *Federal Resources for IEE*
  - Dec 6 – *Understanding the Value of IEE*
  - Feb 7 – *Model Programs and Policies for IEE*
  - March 6 – *Building an IEE Workforce: Needs and Opportunities*
  - April 3 – *Facilitating Peer-to-Peer Dialogues on IEE*
  - Registration information will be available on the IEE/CHP Working Group section of the SEE Action website (http://www1.eere.energy.gov/seeaction/combined_heat_power.html)

Industrial Energy Efficiency White Paper

- Provide background information about the current state of IEE in the U.S. and opportunities for improvement
- Capture key elements of successful, existing policies and programs at the federal, state and utility level
- Present strategies for advancing IEE with approximately a dozen focused chapter discussions
- White Paper will be a web-based resource
  - Available for download as stand-alone PDF chapters and as one comprehensive document

Industry / Manufacturers

How Industry Can Engage:

1. Provide essential feedback on key issues and barriers facing industry that hinder IEE and CHP implementation
2. Attend dialogues and workshops to interact with utilities and states in identifying how to move forward with meeting industry needs
3. Utilize and promote licensing and certification programs
4. Host a technology demonstration event

Utilities and Regulators

How Utilities Can Engage:

1. Engage regulators on collaborative strategies to face the issues and hurdles in IEE implementation
2. Highlight innovative industrial financing or incentives that your utility offers
3. Work with us to enhance your utility's data collection and reporting metrics to improve program impact measurements
4. Develop appropriate trainings on IEE and CHP for industry in order to bolster education, training, and workforce programs

National / Nonprofit Organizations

How National Organizations and Non-Profits Can Engage:

1. Promote valuable national energy policies and programs in order to ensure broad delivery of IEE and CHP incentives, financing, and workforce development
2. Hold educational workshops on model policies for regulators and legislators to enhance key stakeholders' understanding of the economic value of IEE and CHP
3. Develop appropriate trainings on IEE and CHP for industry in order to bolster education, training, and workforce programs
4. Promote accepted protocols to increase adoption of standardized licensing and certification for energy efficiency service professionals

States / Regions

How States Can Engage:

1. Disseminate, promote, and adopt SEE Action recommendations within your state or region
2. Inform SEE Action Working Groups of working programs / policies your state has in place or is working toward
3. Highlight innovative industrial financing or incentives that are available in your state
4. Work with us to enhance state energy efficiency data collection and reporting for the industrial sector to improve capabilities for measuring program / policy impacts

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