



SEE Action

STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

**State & Local Energy Efficiency
Action Network:
Industrial Energy Efficiency (IEE) & CHP
Working Group
CHP Regulatory Recommendations**

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IEE / CHP Working Group Staff

ACEEE Conference: Energy Efficiency as a Resource

September 2011



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This information was developed as a product of the State and Local Energy Efficiency Action Network (SEE Action), facilitated by the U.S. Department of Energy/U.S. Environmental Protection Agency. Content does not imply an endorsement by individuals or organizations that are part of SEE Action working groups, or reflect the views, policies, or otherwise of the federal government.

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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 policymakers, business leaders, utilities, NGOs, associations
- Provides visionary leadership, strategic direction, and prioritization
- Facilitated and co-chaired by DOE and EPA



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 and CHP Working Group:

- Two Co-Chairs
- 17 Members
 - State programs
 - Coordinating organizations
 - Utilities
 - Research/Academia
 - Industry/End-users
- Four DOE/EPA Staff

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 Staff	
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



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)
 - 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



Impact of IEE/CHP Working Group 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:

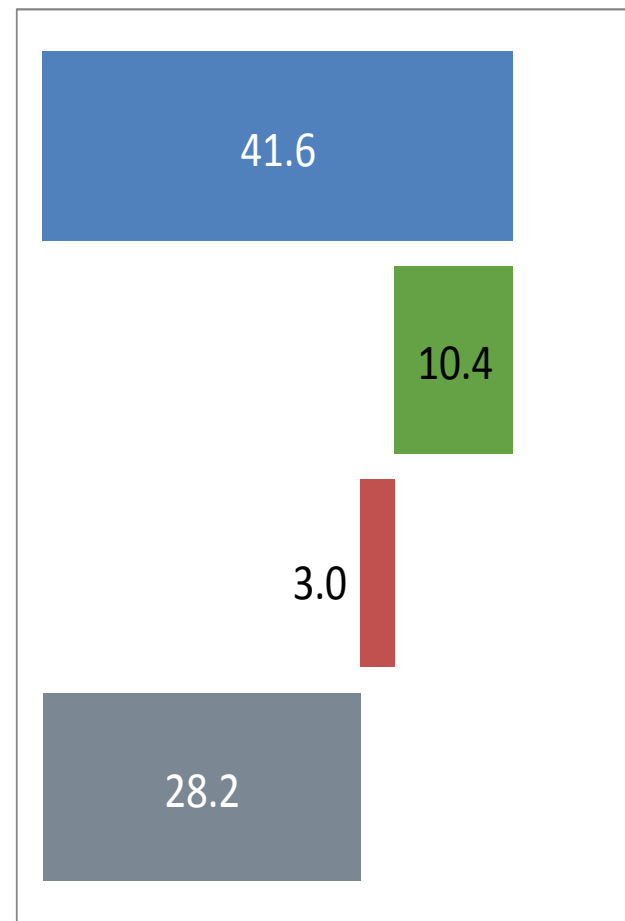
Based on the McKinsey report, 13.4 quads of potential industrial Btu savings by 2020 exist.** The working group's goals to reduce industrial energy intensity by 2.5% annually through 2020 and install 40 GW of new, cost-effective CHP by 2020 will achieve a reduction of 10.4 quads.***

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:

Energy, quadrillion primary Btu



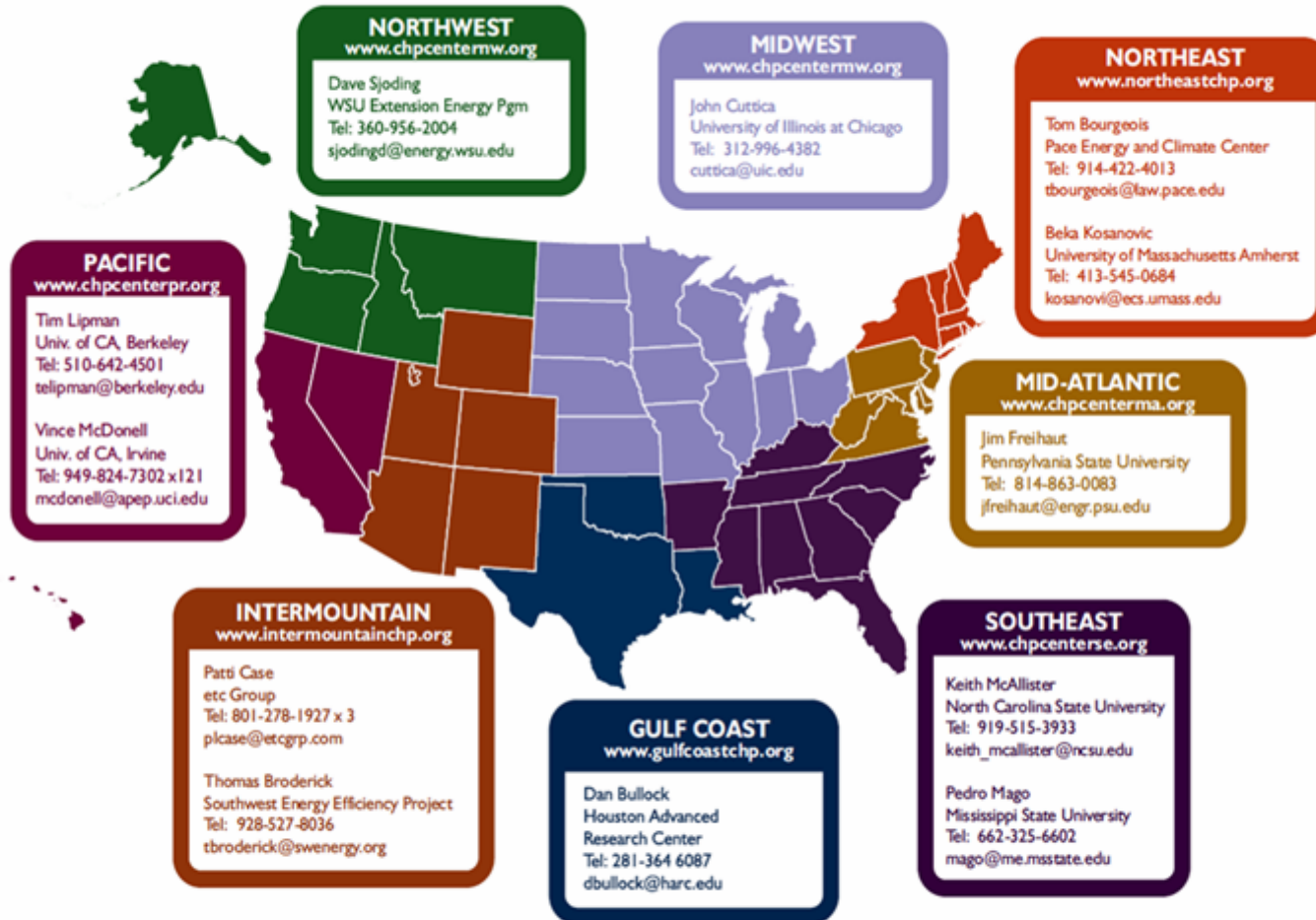
* Total industrial sector energy consumption includes refining-related efforts.

** 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.

Regional Clean Energy Application Centers

DOE Clean Energy Application Center Locations, Contacts, and Web Sites



DOE Clean Energy Application Center Program Contacts

Ted Bronson
DOE Clean Energy Application Center Coordinator
Power Equipment Associates
Phone: 630-248-8778
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CEAC Role in SEE Action

The Clean Energy Application Centers play an important role in assisting the IEE/CHP Working Group

- Policy Support

- Promote CHP as an effective clean energy resource to policy-makers and regulators and educate this audience on the barriers that prevent the widespread adoption of CHP.

- Technical Assistance

- Support CHP project development through providing assistance on project feasibility studies, permitting issues, and assessment of applicable utility tariffs/rates

- Targeted Education and Market Development

- Inform prospective CHP users on the resources and incentives available to help implement CHP projects.



First Year Activities

- **Drive demand for CHP**
 - Host September 2011 Utility-Manufacturing Workshop
 - White paper on CHP
 - Engage states and utilities on enhancing data collection on what works
 - EPA to hold webinars in Spring 2012 addressing working group's CHP recommendations
 - Develop program guidebook for states highlighting opportunities for CHP
- **Build the Workforce**
 - Identify and promote valuable licenses and certifications
 - Support CHP training programs at universities and community colleges
 - Engage utilities in hosting new CHP trainings
- **Promote Efficient Operations and Investment**
 - Update information clearinghouse
 - Develop CHP efficiency calculations
- **Move the Market**
 - Engage states, utilities, Public Utility Commissions in harmonizing CHP interconnection standards



Utility-Manufacturing Workshop

- September 28, 2011 in Denver, Colorado
- Engage industry with states, utilities and other stakeholders
- Participants will work to identify strategies for overcoming key barriers to industrial energy efficiency and CHP implementation
- Working group drafted three primers to provide background information for workshop discussions.
- “Policy Framework” primer and discussion will address policies and regulations to support CHP
- Results of workshop will be used to guide and inform the IEE/CHP working group



CHP White Paper

- Provide background information about the current state of CHP in the United States and opportunities for improvement
- Capture key elements of successful, existing policies and programs at the federal, state and utility level
- Present strategies for advancing CHP
- White paper will be used as a basis to address policy and regulatory barriers to greater CHP implementation
 - Available early in 2012
 - Web-based reference for best practices
 - Tool to guide regulators, utilities and potential users of CHP



Industry/Manufacturers

Industry Can:

1. Provide essential feedback on key issues and barriers facing industry that hinder CHP implementation
2. Attend dialogues and workshops to work with utilities and regulators in identifying how to move forward to meeting industry needs
 - Develop a common message when speaking about CHP
 - Emphasize the competitive advantages CHP offers
3. Utilize and promote licensing and certification programs as related to CHP
4. Act as host to showcase successful CHP implementation



Utilities and Regulators

Utilities and Regulators Can:

1. Develop collaborative strategies to face the issues and hurdles in CHP implementation
2. Highlight innovative industrial financing or incentives offered by utilities
3. Work with us to improve data collection and reporting metrics to enable better measurement of program impact
4. Develop appropriate trainings on CHP for industry in increase workforce awareness of energy savings potential



National/Nonprofit Organizations

National Organizations and Non-Profits Can:

1. Promote valuable national energy policies and programs in order to ensure broad delivery 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 CHP
3. Develop appropriate trainings on CHP for industry in increase workforce awareness of energy savings potential
4. Promote accepted protocols to increase adoption of standardized licensing and certification for energy efficiency service professionals



States/Regions

States and Regions Can:

1. Disseminate, promote, and adopt SEE Action recommendations as they are developed 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



Contact Information

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SEE Action Website:

www.seeaction.energy.gov

IEE/CHP Working Group Website:

www1.eere.energy.gov/seeaction/combined_heat_power.html

Clean Energy Application Centers Website:

www1.eere.energy.gov/industry/distributedenergy/racs.html

