

Better Buildings, Better Plants: AMO Technical Assistance Overview

Andre de Fontaine



Better Buildings, Better Plants Overview

- Better Buildings, Better Plants is a national, voluntary industrial energy efficiency leadership initiative.
- It is a key component of the President's Better Buildings Initiative, which seeks to improve the energy efficiency of commercial and industrial buildings by 20% by 2020.
- Through Better Plants:
 - Companies set long-term efficiency goals
 - Receive technical assistance and national recognition for their leadership
- Manufacturers have two opportunities to engage in Better Plants:
 - 1. Broader-based Program level
 - 2. Higher-level *Challenge*



Better Plants consists of over 120 companies, close to 1,800 plants and about 8% of the U.S. manufacturing energy footprint

- 2012 average energy intensity improvement = 2.7%
- Cumulative Energy Savings = 190 TBtus
- Cumulative Cost Savings = \$1 billion

Several of these companies have stepped up to the Better Plants Challenge, agreeing to transparently share energy performance data, exceptional showcase projects, and energy efficiency implementation playbooks



Better Buildings, Better Plants Accomplishments

Partners recently joining Better Plants Program





NOVELIS

Better Buildings, Better Plants FY14 Plan

New opportunities this year

- 1. Supply chain pilot:
 - Partners are working with DOE to help suppliers improve efficiency
 - Suppliers will receive technical assistance through group webinars, some 1-on-1 assistance, and priority access to IAC audits.
 - Goal is to help suppliers establish energy baselines, set up energy management systems and reduce energy intensity.
 - DOE will manage supplier data and provide a rolled-up report of supplier performance to customer
- 2. Water pilot:
 - DOE is working with a few Challenge partners to expand resource management strategies to include water
 - Partners will establish baselines, set goals, report progress, and showcase solutions
 - Pilot will be assessed in early 2015 and recommendations made for next steps



Better Buildings, Better Plants Outlook

- Grow the program to cover currently under-represented industrial sectors, such as petroleum refining, mining, and textiles
- Expand supply chain initiative
- Continue integrating Better Plants with other key DOE manufacturing programs, such as Superior Energy Performance, CHP deployment, and Industrial Assessment Centers



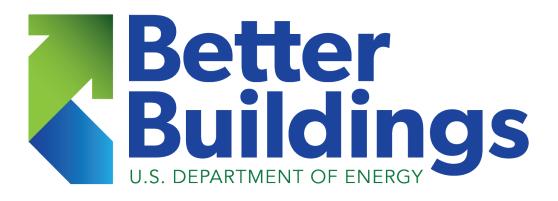
Better Buildings, Better Plants: Get Involved

For more information on Better Plants contact Andre or <u>BetterPlants@ee.doe.gov</u>

Better Buildings, Better Plants: http://www1.eere.energy.gov/manufacturing/index.html

Better Buildings Challenge: http://www4.eere.energy.gov/challenge/

> Andre de Fontaine Advanced Manufacturing Office <u>Andre.defontaine@ee.doe.gov</u> 202-586-4927



Superior Energy Performance (SEP): AMO Technical Assistance Overview

Paul Scheihing



DOE Advanced Manufacturing Office has two complementary programs:

- Better Plants
 - <u>Corporations</u> set a goal, establish baseline, track energy use, and report data
 - Corporations report to DOE on an annual basis on a portfolio of facilities.
- Superior Energy Performance (SEP)
 - <u>Facility-level</u> certification and recognition program to demonstrate energy management excellence and sustained energy savings.
 - Energy performance improvement is verified by a third party SEP verification body retrospectively in past 3 to 10 years.



Better Plants & SEP: Complementary Programs

DOE's Better Plants

Corporate-wide Recognition Aspirational Focus: Pledge to improve energy performance by 25% in the next 10 years

Superior Energy Performance

Facility-level Certification Achievement Focus: Energy performance improved 5% or more over the past 3 to 10 years

Better Plants Helps SEP Participants

- Provides structure for corporate-wide energy efficiency goals
- Fosters replication of SEP at other facilities
- Helps individual plants to accelerate energy savings that contribute toward corporate goal
- Provides rigor of energy performance measurement at the facility level

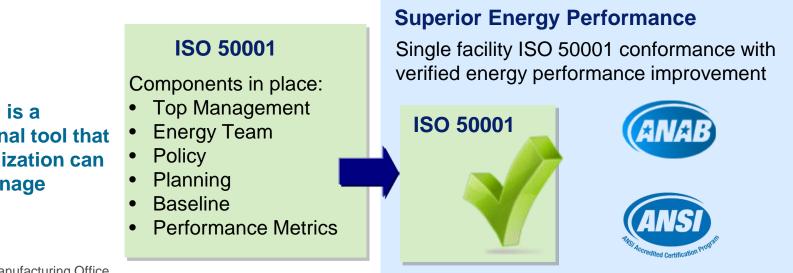
SEP Helps Better Plants Partners



SEP certification recognizes facilities that demonstrate energy management excellence and sustained energy savings.

Certification Requirements: An ANSI-ANAB Accredited Verification Body conducts a third-party audit to verify the following:

- 1. Energy management system conformance to ISO 50001
- 2. Applicant meets energy performance improvement and additional requirements in **ANSI/MSF 50021**



Reliewable Ellelu

ISO 50001 is a foundational tool that any organization can use to manage energy.

SEP Program Overview

SEP goal: Foster market-based services to capture 120 and 450 TBtu per year energy savings by 2018 and 2023, respectively, for a total benefit-cost ratio to tax payer of \$46 and \$217 industry's energy cost savings per \$1 Federal investment by 2018 and 2023, respectively.

Industrial Participants:

- **3M**
- Allsteel
- Ascend Performance **Materials**
- **Bentley Prince Street**
- **Bridgestone Tire**
- Coca-Cola •
- **CCP Composites** ۲
- **Cooper Tire** ۲
- **Cummins**

- Curtiss-Wright Flow **Control Company**
- **Didion Milling, Inc**
- **Dixie Chemical** •
- Dow Chemical
- Eaton
- Freescale **Semiconductors**
- General Dynamics
- Gerdau •
- Harbec Inc.

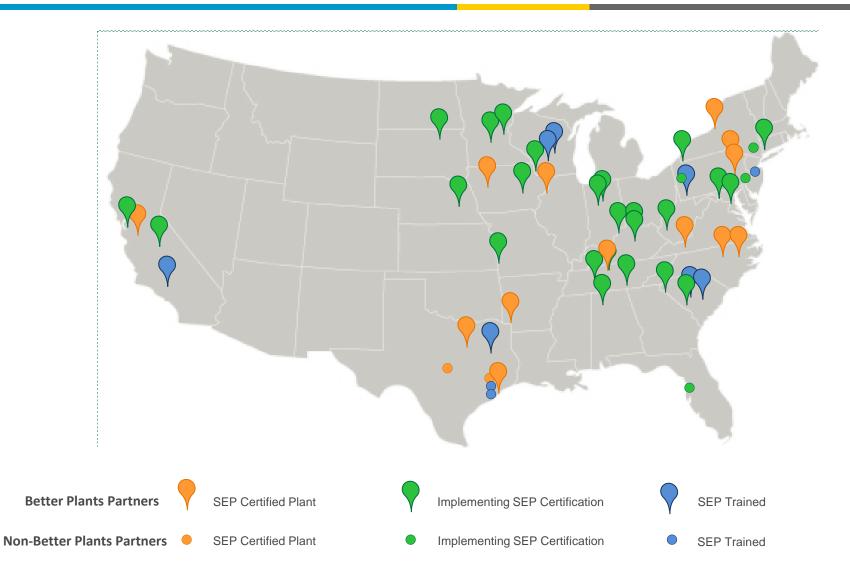
- Haynes International
- Ingersoll Rand
- Land O' Lakes
- Lockheed Martin
- Mack Trucks
- MedImmune
- Neenah Foundry Company
- Nissan
- North American Höganäs
- **OLAM Spices**

- **Owens Corning** •
- **Republic Conduit**
- **Schneider Electric**
- **Spirax Sarco**
- UTC/Sikorsky
- **United States Mint**
- **Volvo Trucks** •
- World Kitchen

Blue highlight participants have been SEP certified



SEP Program Overview, continued



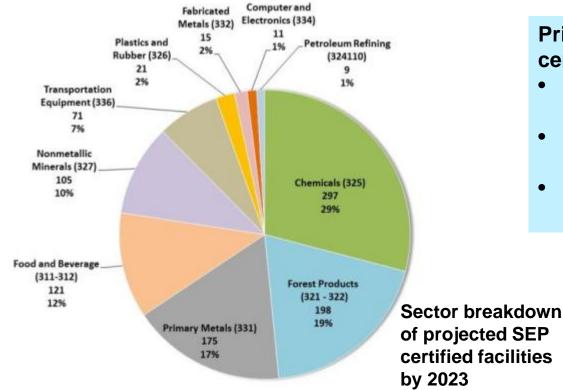
* Map data points are intended for illustrative purposes only.

13 | Advanced Manufacturing Office



SEP Manufacturing Sector Market Potential

- DOE market analysis has identified initial 3,000+ specific manufacturing facilities to target for SEP certification
- DOE projects the number of SEP certified facilities to grow to 1,000+ (23% of U.S. manufacturing energy footprint) by 2023, representing a wide array of industrial sectors



Prime facilities for SEP certification

- >\$1 million annual energy bill
- **Prior ISO management** • system certification
- Strong sustainability program

14 | Advanced Manufacturing Office

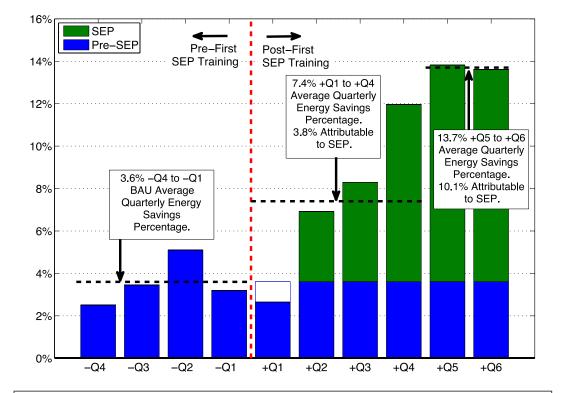


Data and Metrics: Making the Business Case

Recently published study:

Nine industrial facilities certified to Superior Energy Performance:

- Improved their energy performance by an average of 10% and over \$500,000 per year over business-as-usual in the first 18 months of SEP implementation.
- Saved on average \$503,000 per year from operational improvements (low/no cost investment) attributable to SEP.



Average quarterly percentage energy savings as a function of average quarterly baseline energy consumption for all nine facilities. Results are aligned across facilities so that the first quarter starts when the facilities received their first SEP training. Subtracting the BAU quarterly energy savings percentage from quarterly post-first training energy savings percentages reveals savings attributable to SEP.

View full study at: <u>http://eetd.lbl.gov/sites/all/files/aceee_sep_paper.pdf</u>



SEP Payback

Plant's SEP costs (not including capital project costs) Marginal **Payback** Associated SEP operational energy savings beyond business-as-usual operational energy savings prior to SEP 8 Silver Gold SEP Payback Period (years) Platinum 0.8404x^{-0.501} 6 5 З 2 0 0.5 2.0 1.0 1.5 2.5 0 3.0 3.5 Baseline Annual Source Energy Consumption (TBtu)

SEP costs include internal staff time, including staff already employed.



SEP Accomplishments

- ISO 50001 energy management standard published June 2011
- 29 SEP demonstration plants -- represent 12 sectors
 - 17 plants complete saved 3 Trillion Btu cumulatively as of FY2013 and improved their energy performance between 6 and 25% over a three year period.
 - ➢ 12 still implementing
- Key SEP demonstration plants results (average): Nine plants have achieved 10% improvement above business-as-usual in the first 18 months of SEP implementation and saved \$500,000 per year with 77% of the savings from operational improvements with no/low capital investment.
- Workforce Development:
 - 74 Certified Practitioners in EnMS,
 - > 16 SEP Performance Verifiers, and
 - > 10 SEP Lead Auditors.



SEP Accomplishments, continued

Recent News: Six manufacturing companies and three utilities have joined with DOE in the **Industrial SEP Accelerator**:

<u>End users</u> - 3M, Cummins, General Dynamics, Nissan, Schneider Electric, Volvo Trucks

<u>Utilities</u> - Bonneville Power Administration, Northeast Utilities, Vermont Energy Investment Corporation

The Industrial SEP Accelerator is designed to:

1. demonstrate cost savings from <u>end users implementing SEP</u> <u>enterprise-wide</u>, and

 demonstrate strategic energy management through <u>SEP as an</u> <u>effective utility ratepayer-funded energy efficiency program</u> <u>offering</u> for industrial facilities.



SEP Accomplishments, continued 2

SEP Verification Bodies: SEP VBs perform the SEP audit and issue the SEP certificate to manufacturing plants seeking SEP certification.

SEP verification bodies:

- DEKRA (Accredited)
- UL DQS (Accredited)
- Advanced Waste Management (Applied)
- LRQA (Applied)





SEP FY2014 Plan

- Certify 25 SEP facilities
- 6 case studies
- SEP branding with DOE recognition for SEP certified plants
- 100 Certified Practitioners
- Outreach to top 140 targeted companies:
 - Better Plants partners,
 - companies with large plants, and
 - prior ISO management system experience
- Strategic Energy Management checklist available
- SEP Accelerator enterprise-wide data sampling & audit plans
- SEP Accelerator utility ratepayer program toolkit ready



SEP Outlook – FY2015

- SEP program redesign available in FY2015
 - > allow flexible alignment with Better Plants program baseline year
 - ➢ SEP achievement period − 3 to 10 years
 - Six Better Plants partners achieve enterprise-wide ISO 50001 certification with multi-plant SEP certification estimate of 28 plants to be SEP certified
 - Three utilities start working with industrial customers to implement SEP as a program offering



SEP - Get Involved

As a manufacturer you can engage SEP in many ways:

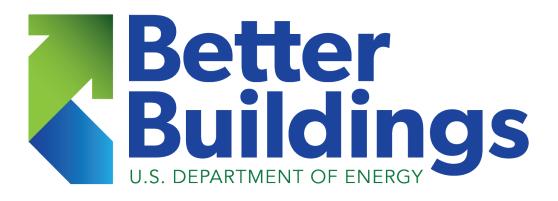
- 1. Figure out where you are in the SEM Continuum
- 2. Join the SEP Accelerator
- 3. Get assistance in piloting SEP, especially if already pursuing ISO50001
- 4. Speak to your peers that are already engaged in SEP

See the website for many resources:

http://www.superiorenergyperformance.energy.gov

Paul Scheihing Advanced Manufacturing Office <u>paul.scheihing@ee.doe.gov</u> 202-586-7234





CHP Deployment Program: AMO Technical Assistance Overview

Claudia Tighe

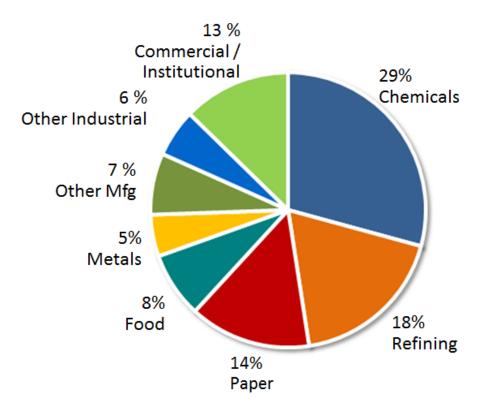


Combined Heat a Power (CHP): History

- First developed by Thomas Edison in 1880s and is one of the world's most common form of energy recycling
- Since the '70s CHP used mostly by large industrials (PURPA set the stage)
- Today there are hundreds of CHP facilities in the U.S. in both industrial, institutional and commercial settings in both stand-alone and district energy or microgrid configurations
- Trend towards "smaller" facilities where resiliency, costsavings, environmental impacts, economic development, and grid stabilization are significant drivers.



CHP Today in the United States (2012 Data)



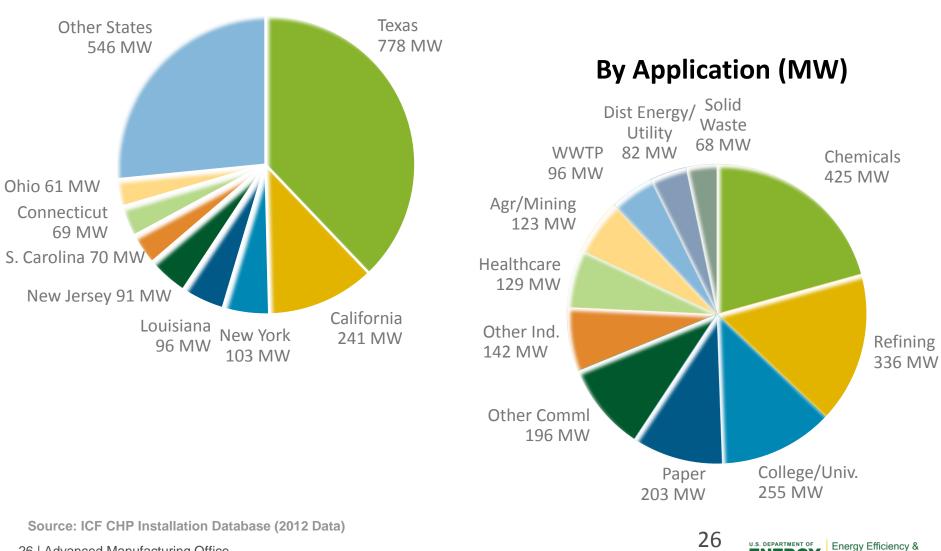
Sources: ICF CHP Installation Database (2012 Data); EIA <u>http://www.eia.gov/todayinenergy/detail.cfm?id=8250</u> Energetics, "US Manufacturing Energy Use and Greenhouse Gas Emissions Analysis, November 2012"

- 82.4 GW of installed CHP over 4,200 industrial and commercial facilities
- 7% of U.S. Electric Generating Capacity; 14% of Manufacturing
- Avoids more than 1.8 quadrillion
 Btus of fuel consumption annually
- Avoids 241 million metric tons of CO₂ compared to separate production



CHP Additions, 2010-2012 (2,054 MW)

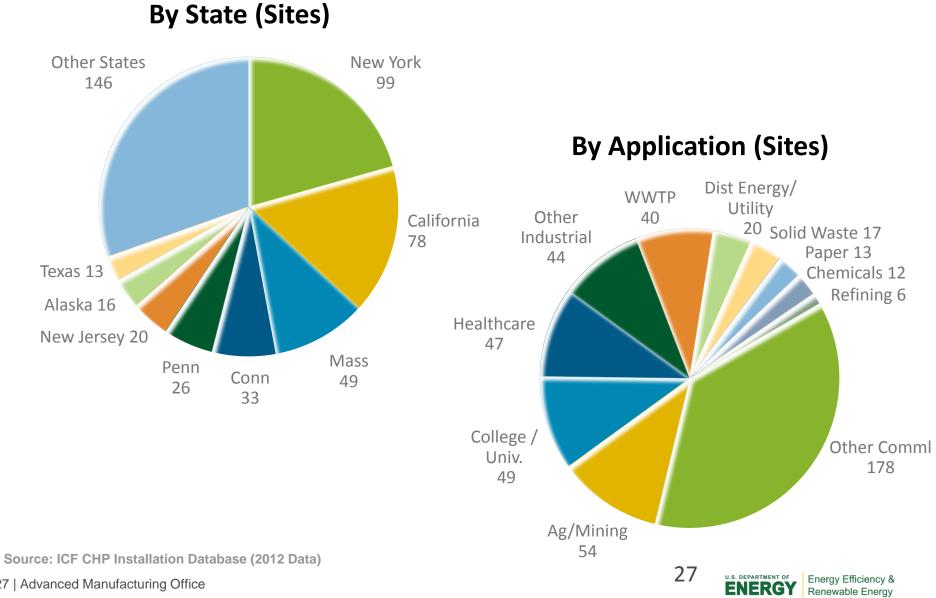
By State (MW)



ENERGY Renewable Energy

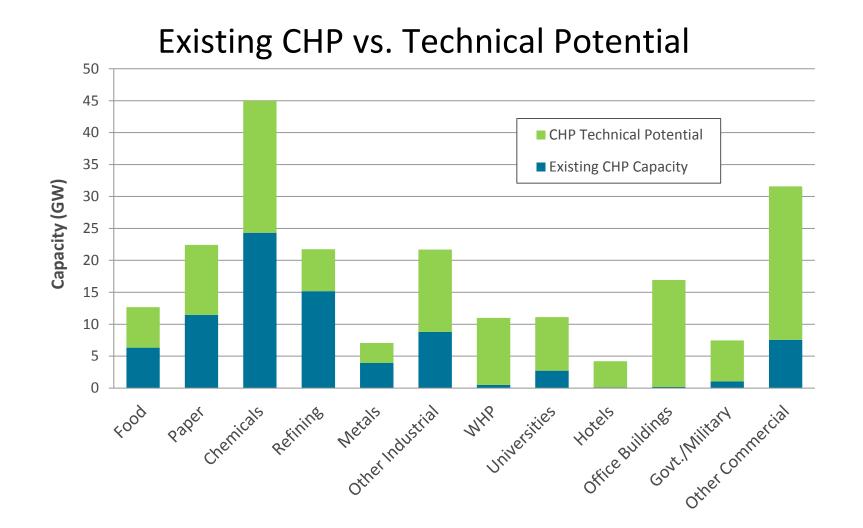
26 | Advanced Manufacturing Office

CHP Additions, 2010-2012 (480 Sites)



27 | Advanced Manufacturing Office

Where is the Remaining Potential for CHP?





The Role of CHP in Energy Strategy

CHP considered formidable energy efficiency solution on both sides of meter:

- CHP provides significant technical, economic, and environmental benefits
- CHP offers resiliency options when faced with manmade and natural disasters
- CHP provides additional economic development options in capacity constrained areas
- CHP can harden/stabilize the grid



DOE's CHP Deployment Program Overview

<u>History</u>

- Started as a pilot program in the Mid West in 2001
- Expanded to national coverage in 2005
- Name has changed from Regional Application Centers (RACs), to Clean Energy Application Centers (CEACs), and now are the CHP Technical Assistance Partnerships (CHP TAPs)
- Purpose the same assist in the installation of CHP (proven EE technology with market barriers)

<u>Program Vision</u>: Well-designed CHP installed in facilities and buildings that provide end-user, utility, state and national benefits

<u>Program Goal</u>: Support the installation of cost-effective CHP by providing technical and educational services to potential end-users, policymakers, and other stakeholders.

Key Feature: Flexibility to meet changing CHP market.



Executive Order: Game Changer

- August 30th, 2012: President Obama signed an Executive Order to accelerate investments in industrial energy efficiency (EE), including combined heat and power (CHP) with the goal of bringing together all stakeholders to seize this opportunity and ensuring that Federal agencies are taking the maximal steps to support private sector investment in this space.
- Sets a national **goal of 40 GW** of new **combined heat and power** installation over the next decade
- The Executive Order is part of the President's efforts to both **Revitalize American Manufacturing** and to pursue **an All-of-the-Above energy strategy**
- Often **barriers exist** that prevent otherwise economic investments in industrial EE and CHP from occurring.
- The Administration believes it is important to accelerate investment in industrial energy efficiency in a way that benefits all stakeholders.



National Goal of 40 GW of CHP by 2020

Achieving the President's goal would:

- Increase total CHP capacity in the U.S. by **50 percent** in less than a decade
- Save energy users **\$10 billion a year** compared to current energy use
- Save one quadrillion Btus (Quad) of energy the equivalent of 1 percent of all energy use in the U.S.
- Reduce emissions by 150 million metric tons of CO2 annually equivalent to the emissions from over 25 million cars
- Result in \$40-\$80 billion in new capital investment in manufacturing and other U.S. facilities over the next decade

Source: DOE/EPA, CHP: A Clean Energy Solution, August, 2012, www1.eere.energy.gov/manufacturing/distributedenergy/pdfs/chp_clean_energy_solution.pdf



DOE's Support of the President's 40GW Goal

DOE's AMO CHP Deployment Program's CHP Technical Assistance Partnerships (CHP TAPs) are critical components to achieve the President's CHP goal.

CHP TAPs provide:

- Regional CHP expertise
- Fact-based, un-biased information on CHP:
 - o Technologies
 - o Project development
 - o Project financing
 - Local electric and natural gas supplier interfaces
 - o State best practice policies
- Vendor, fuel, and technology neutral assessments of CHP viability.

Key Activities:

Market Opportunity Analysis: Supporting analyses of CHP market opportunities in diverse markets including industrial, federal, institutional, and commercial sectors.

<u>Education and Outreach</u>: Providing information on the energy and non-energy benefits and applications of CHP to state and local policy makers, utilities, energy end-users, trade associations and others.

<u>Technical Assistance:</u> Providing technical assistance to end-users and stakeholders to help them consider CHP, waste heat to power, and/or district energy with CHP in their facility and to help them through the project development process from initial CHP screening to installation



Technical Assistance:

- Between FY 2009 and 2013, CHP centers (RAC, CEAC, TAP) provided:
 - Technical support to over 590 CHP projects
 - About 350 of those projects received Technical Site Evaluations (either alone or in conjunction with other support) and the remainder were provided with other types of technical assistance, often on multiple occasions.
 - More than 190 are currently under development or online with a total capacity of 1540 MW.
- 869 MW of new, cost-effective CHP was installed in 2012, largest single year capacity additions since 2005

Outreach & Education:

- SEE Action "Guide to Successful Implementation of State CHP Policies" published
- CHP Regional Dialogues (Ohio, Arkansas, Maryland, Utah)
- Numerous state-specific policy engagement activities



CHP Deployment Program Accomplishments (2 of 2)

- Education and Outreach:
 - Focus on Strategic Target Market Working Groups Developed to focus on high-impact, low-penetration markets
 - Critical Infrastructure
 - Hospitals
 - Biomass
 - Federal Facilities
 - Microgrids with CHP
 - "Tool kits" developed to speak the audience's "language"
- Partners: CHP TAPs; EPA; FEMP; WIP; BTO; OE; CHPA



CHP Deployment Program FY14 Plan

Program Goals FY14: Support the installation of the President's 40GW goal

- <u>Technical Assistance</u>: Provide site-specific technical support to potential CHP projects
 - Move towards portfolio analyses
 - Continue to streamline the process
- <u>Policy Education:</u> Provide educational opportunities for policymakers to learn about CHP benefits and the constraints that certain policies place on CHP installations
 - State-specific policy Fact Sheets being developed
 - Policy-category Fact Sheets being developed (standby rates, interconnection standards, excess power sales, and Clean Energy Portfolio Standards – CEPS)
- <u>Education and Outreach</u>: Provide educational opportunities for prospective endusers and other stakeholders to learn about CHP applications
 - Strategic market focus (Critical Infrastructure, Federal Facilities, Hospitals, Biomass and Microgrids with CHP)
 - Designed for constituent drivers/motivations

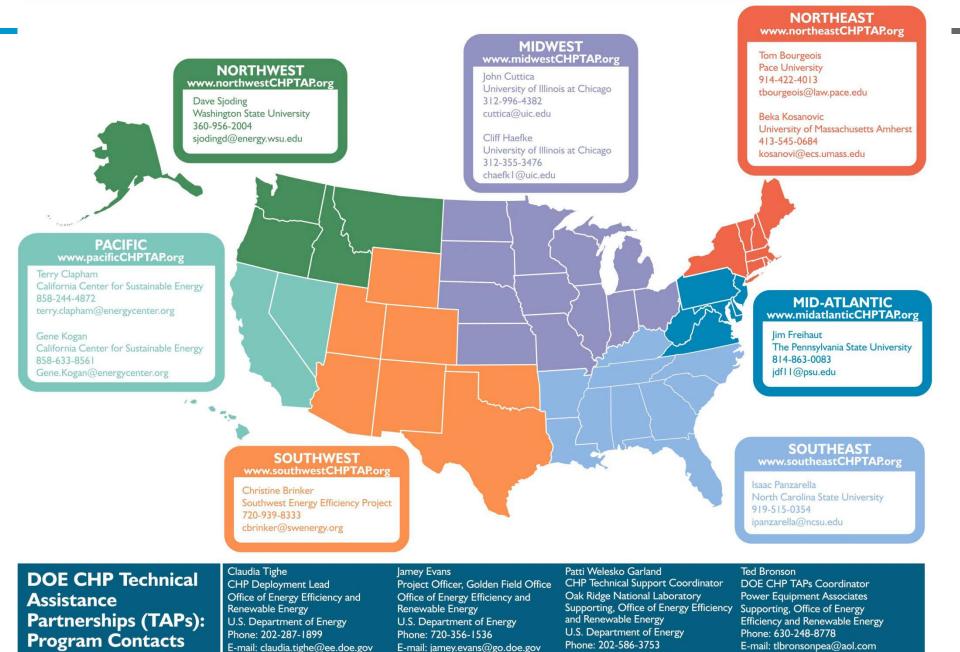


CHP Deployment Program Outlook

- Strategic Market Focused proactive approach to key-in on large, untapped CHP potential
- Synergize with Federal, State and utility efforts around CHP deployment
 - Reach the Better Plants and IAC recipients on potential
- Overarching Analyses:
 - Waste Heat to Power
 - CHP Equipment Cost and Performance Updates
 - State-Specific CHP Policy Fact Sheets
 - Standby Rates
 - Interconnection Standards
 - Excess Power Sales
 - Clean Energy Portfolio Standards (CEPS)



DOE CHP Technical Assistance Partnerships (CHP TAPs)



E-mail: garlandpw@ornl.gov

CHP Deployment Program Get Involved

Interested in learning if CHP is an energy efficiency solution for you?

Visit:

DOE Advanced Manufacturing Office's CHP Deployment Program Website: <u>http://www1.eere.energy.gov/manufacturing/distributedenergy/</u>

<u>Review:</u>

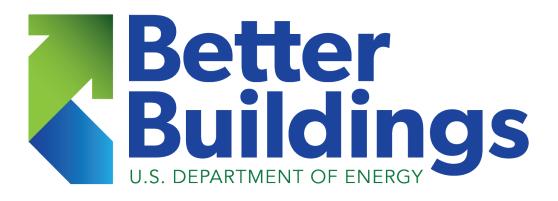
CHP Deployment Program Fact Sheet:

http://www1.eere.energy.gov/manufacturing/distributedenergy/pdfs/chp_taps_handout.pdf

<u>Contact:</u>

Claudia Tighe Advanced Manufacturing Office <u>Claudia.tighe@ee.doe.gov</u> 202-587-1899





Software Tools RFI and SEE Action: AMO Technical Assistance Overview

Sandy Glatt



- For decades, AMO has developed software tools to help plants identify energy savings opportunities
 - Assets include process heating, steam, motors,
 - AMO empowered companies to make informed decisions on their equipment and systems
 - Utilize these tools as part of various plant assessment protocols including, IACs and In-Plant trainings offered to BP
- Issue: Many of the Tools are Out-of-Date
 - AMO wants to expand the reach and impact of these tools
 - Seeking information from third parties on strategies to bolster the successful development, promotion, and market acceptance of key software tools



- AMO is preparing a RFI on Tools
- RFI will solicit innovative strategies to:
 - Keep tools available for free/low cost use
 - Enhance/improve the technical capacity
 - Expand delivery platforms for key software tools
 - Creative opportunities for market development and growth
- Seek responses from entities, organizations, or teams
- Strategies must preserve the quality and integrity of the prior work and ensure continued priority for maintaining the tools
- Responses will determine if a solicitation is needed



RFI FY14 Plan and Timeline (Anticipated)

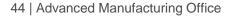
• Anticipated activities surrounding the software tools and expected timeline:

Activity	Date
Organize intellectual property rights statuses	3 rd Quarter FY2014
RFI issued	3 rd or 4 th Quarter FY2014
Responses due	3 rd or 4 th Quarter FY2014
AMO reviews responses	4 th Quarter FY2014
Release solicitation (if needed)	1 st Quarter FY2015



RFI Outlook

- AMO understands value of software tools
 - Pivotal role in plant assessments and In-Plant Trainings
 - Many widely used by industrials
- Key software tools will continue to be available online until at least 2015 during this process
 - Be available for hosting In-Plant Trainings during this process
 - Recently updated of the Steam System Modeler Tool
 - Update of Process Heating System Modeler Tool in 4th Quarter
 - Transitioning to new AMO TA website





- Key energy system software tools believed to have significant energy savings and market potential, *specifically* included for discussion in RFI:
 - AIRMaster+
 - AIRMaster+Log Tool
 - Fan System Assessment Tool (FSAT)
 - MotorMaster+
 - Plant Energy Profiler (PEP)
 - Process Heating Modeler Tool (PHMT)*
 - <u>Pumping System Assessment Tool (PSAT)</u>
 - Steam System Modeler Tool (SSMT)

*Not yet completed



- Tools Not on Key Tool List are being removed from the new AMO website.
 - Many are available from other sites
 - Links can be provided upon request
- Training Curriculum: Maintained "as is" until Tool future determined.
 - Training coordination services continue to be available (no longer cost-sharing training delivery)
 - Curriculum resources and instructors continue to be available
 - Online training resources continue to be available



Overview of SEE Action IEE/CHP Working Group



SEE Action IEE/CHP Working Group Overview

State and Local Energy Efficiency (SEE) Action Industrial Energy Efficiency & CHP (IEE/CHP) Working Group

- One of 8 SEE Action Working Groups
- Led by 2 Co-Chairs, 2 DOE staff leads, & 2 EPA staff leads
- ~21 Working Group Members
 - State Programs, Coordinating Organizations, Utilities, Research/Academia, Industry
- Goals:
 - 1. Achieve a 2.5% average annual reduction in industrial energy intensity through 2020
 - Install 40 gigawatts (GW) of new, cost-effective CHP by 2020



IEE/CHP Working Group Accomplishments

- Unlike many of AMO's other activities, activities focus on engaging states, local governments, industry and utilities on policy and program issues
- Recent IEE/CHP Working Group activities:
 - Regional dialogues in 2013 that brought together IEE and CHP stakeholders to consider how to overcome barriers
 - In March 2013, published Guide to the Successful Implementation of State CHP Policies
 - In March 2014, published Industrial Energy Efficiency: Designing State Programs for the Industrial Sector



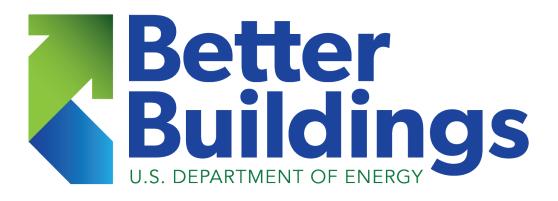
More information on the Working Group: http://www1.eere.energy.gov/seeaction/combined_heat_power.html

Interested in joining the IEE/CHP Working Group?

• Stakeholders wanting to participate can become a Member

Sandy Glatt Advanced Manufacturing Office <u>sandy.glatt@go.doe.gov</u> 720-356-1544





Industrial Assessment Centers: AMO Technical Assistance Overview

John Smegal

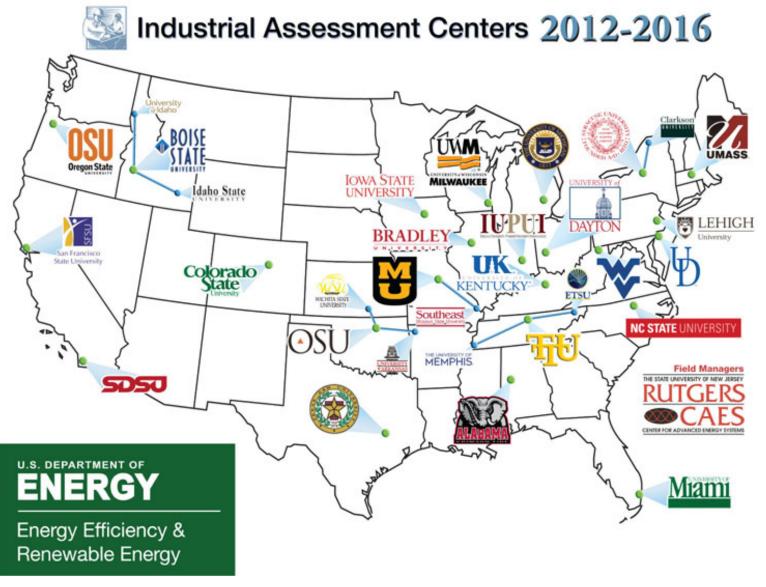


Industrial Assessment Centers Overview

- DOE funds engineering programs at national universities to provide free assessments to identify significant energy savings, water and waste reduction recommendations, and productivity improvements at small and medium-sized manufacturers
 - Typical IAC plant historically has not focused on energy management
 - Approximately one-third of IAC recommended savings opportunities involve operational changes requiring little or no capital investment
 - Most implemented recommendations have an estimated payback of less than one year
 - Better Plants supply chain participants can make substantial progress towards their savings goals simply by receiving an IAC assessment
- This experience give students first-hand knowledge of energy engineering skills needed by American manufacturers
 - Nearly 60 percent of IAC graduates go on to careers in the energy industry



Industrial Assessment Centers Overview



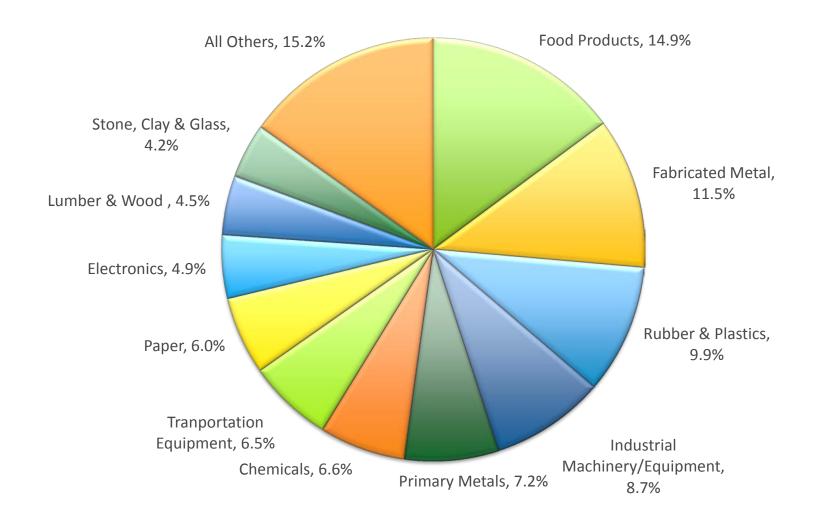


Industrial Assessment Centers Overview

- Plants served
 - Program concentrates almost exclusively on industrial operations
 - Standard industrial classification codes (SIC) 20 through 39
 - Limited number (1-2 per year per center) of "non-traditional" assessments are allowed – with DOE approval (e.g., wastewater treatment, hospitals/institutions)
 - Plant normally located within 150 miles (242 kilometers) of an IAC
- Directed at small and medium sized manufacturers primary customer:
 - Has gross annual sales of <= \$100 million
 - Consumes energy at a cost between \$100,000 and \$2.5 million/year
 - Employs no more than 500 people
 - Has no technical staff whose primary duty is energy management



Assessments at IAC Plants by Industrial Sector





Industrial Assessment Centers Accomplishments

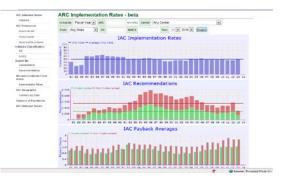
- Assessments have identified nearly \$542M in energy savings and nearly 3.6 million metric tons in CO2 emissions reductions since 2006
- On average, an IAC client will save more than \$47,000 in energy, waste and water savings, and productivity improvements
 - Annual energy savings to DOE cost ratio of 6 to 1
 - Accounting for persistence increases the ratio to more than 40 to 1
 - Annual savings do not account for any activities for IAC graduates
- Since 1981, IACs have participated in more than 16,000 assessments and provided nearly 121,000 recommendations for small and medium-sized manufacturing plants



Industrial Assessment Centers Database

- Publicly available
 - http://iac.rutgers.edu/database/
- Contains:
 - Facility data
 - Recommendation data
 - Implementation data
- Searchable by
 - Size (in energy usage, employees, etc...)
 - Industry Type (NAICS or SIC)
 - Location
 - Recommendation Type
- Updated in real-time as the assessments are completed









Industrial Assessment Centers FY14 Plan

Identify and Implement Energy Savings

- Conduct assessments of small and medium-sized manufacturers
- Establish recognition program for exceptional energy savings by IAC plants
- Launch Better Plants Supply Chain initiative
 - Pilot phase involves a group of Legrand, North America suppliers
- Increase stakeholder (e.g., Utilities, EPA, NIST, industry, States) collaboration on assessments to drive increased implementation rates

Workforce Development

- Maintain IAC student population
- Provide applied energy efficiency research awards to selected students
- Develop plan for ABET-accredited degree program
- Recognize outstanding achievements by IAC students and alumni



Industrial Assessment Centers Outlook

- Increased emphasis on water supply/wastewater treatment facilities
- Increased coordination with Better Plants and CHP TAPs
- Formal agreements with utilities and/or state energy offices to enhance implementation rates
- Greater outreach with IAC alumni
- Complete third-party evaluation of impacts of IAC alumni and assessment activity on clients
- Begin re-scoping and rebid of the programs in 2015



Industrial Assessment Centers Get Involved

As a manufacturer you can engage the IACs in many ways:

- 1. Participate in the Better Plants Supply Chain initiative
- 2. If your facilities fit the IAC criteria, sign up for an assessment
- 3. If your suppliers fit the IAC criteria, sign them up for an assessment
- 4. Recruit IAC grads as interns or employees
- 5. Sign up for the IAC quarterly newsletter for more information!

http://www.energy.gov/eere/amo/industrial-assessment-centers-iacs

John Smegal Workforce Development Lead Advanced Manufacturing Office john.smegal@ee.doe.gov (202) 287-6225 – Office (202) 288-7415 – Mobile



