

Tuesday Webcast for Industry: Regional Energy Efficiency Programs

December 13, 2011

MEEEA's Midwest Industrial Initiative

Stacey Paradis
Deputy Director

The Source On Energy Efficiency



Midwest Energy Efficiency Alliance Mission

MEEA is a collaborative network whose purpose is to advance energy efficiency to support sustainable economic development and environmental preservation.



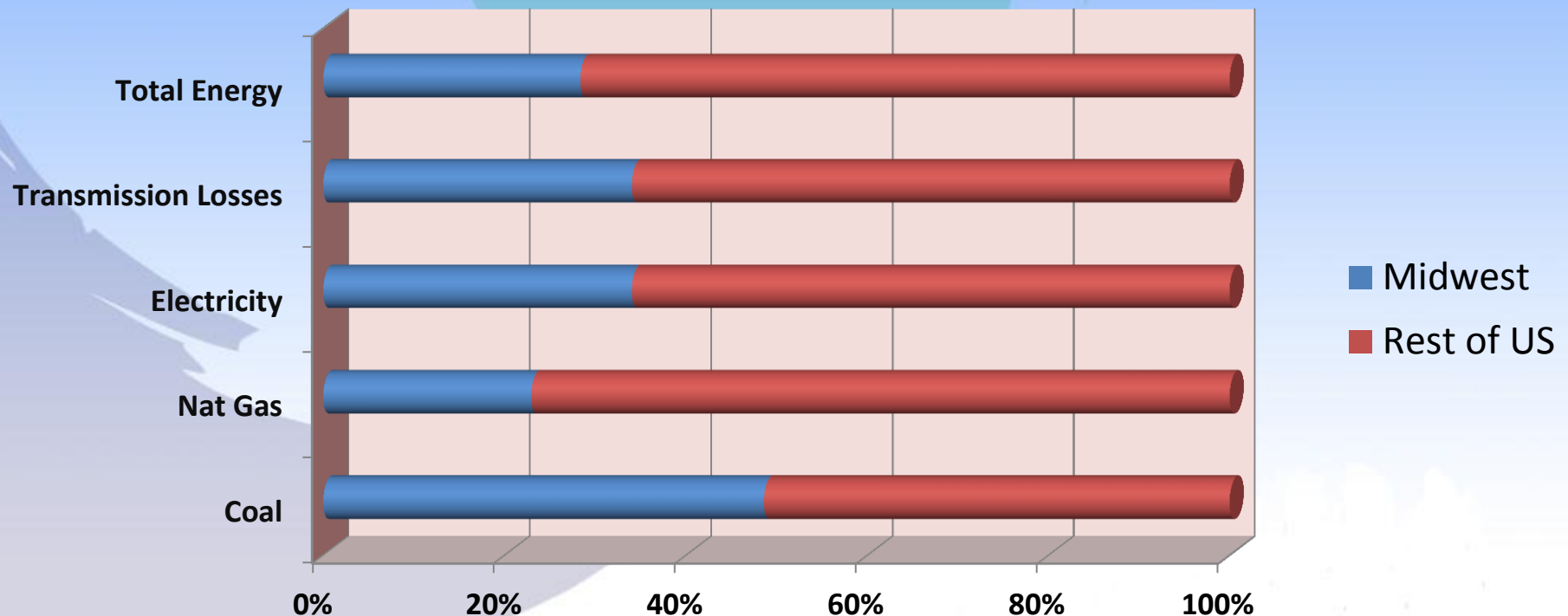
MEEA's Role in the Midwest

- Designing and Evaluating Programs & RFPs
- Administering Programs
- Delivering Training & Workshops
- Developing Marketing and Outreach
- Advancing Energy Efficiency Policy
- Coordinating Utility Program Efforts
- Regional Voice for DOE/EPA & ENERGY STAR
- Evaluating & Promoting Emerging Technologies



Need for Industrial EE in the Midwest

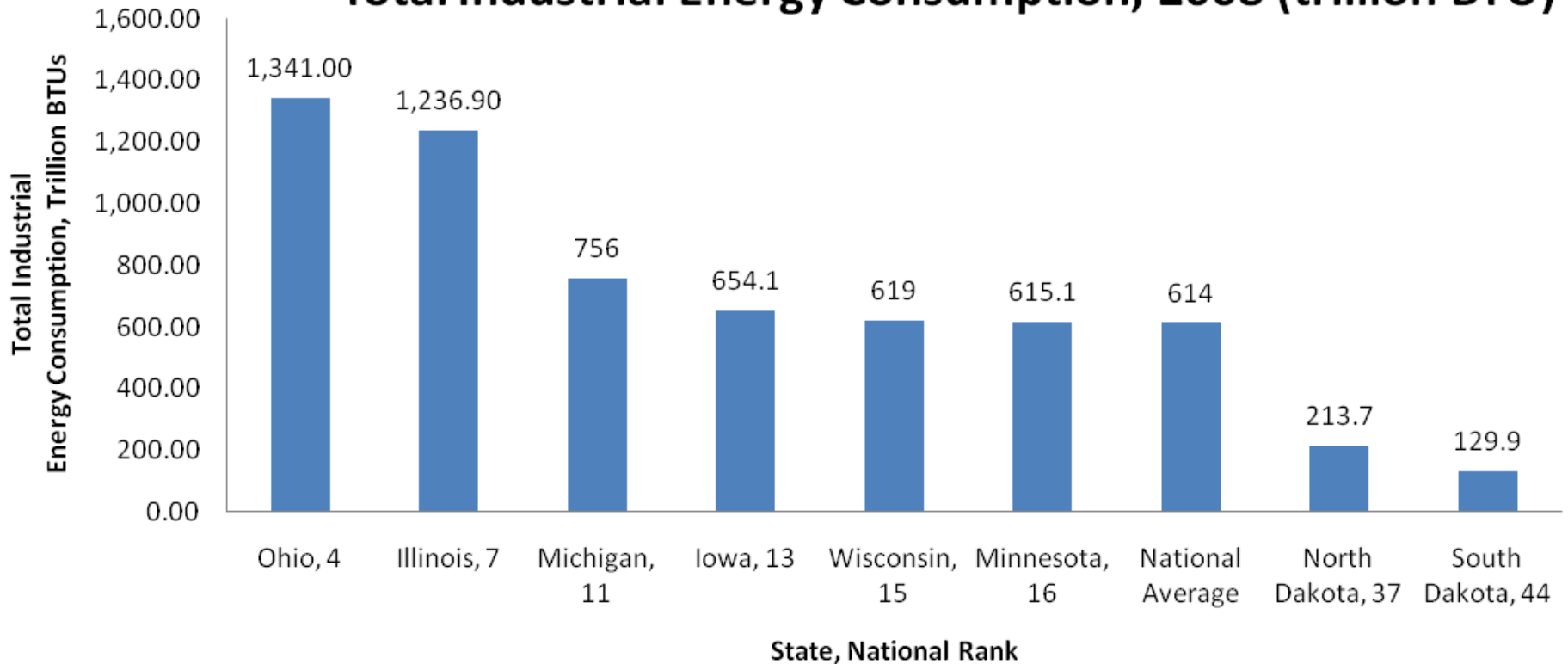
- Midwest accounts for >28.3% of industry energy usage in the US
 - 48.3% of total industrial coal consumption (870.1TBtu)
 - 22.9% of total natural gas electricity (1,853TBtu)



Regional Industrial Overview

Total Use: 6,179.70 Trillion BTU

Total Industrial Energy Consumption, 2008 (trillion BTU)



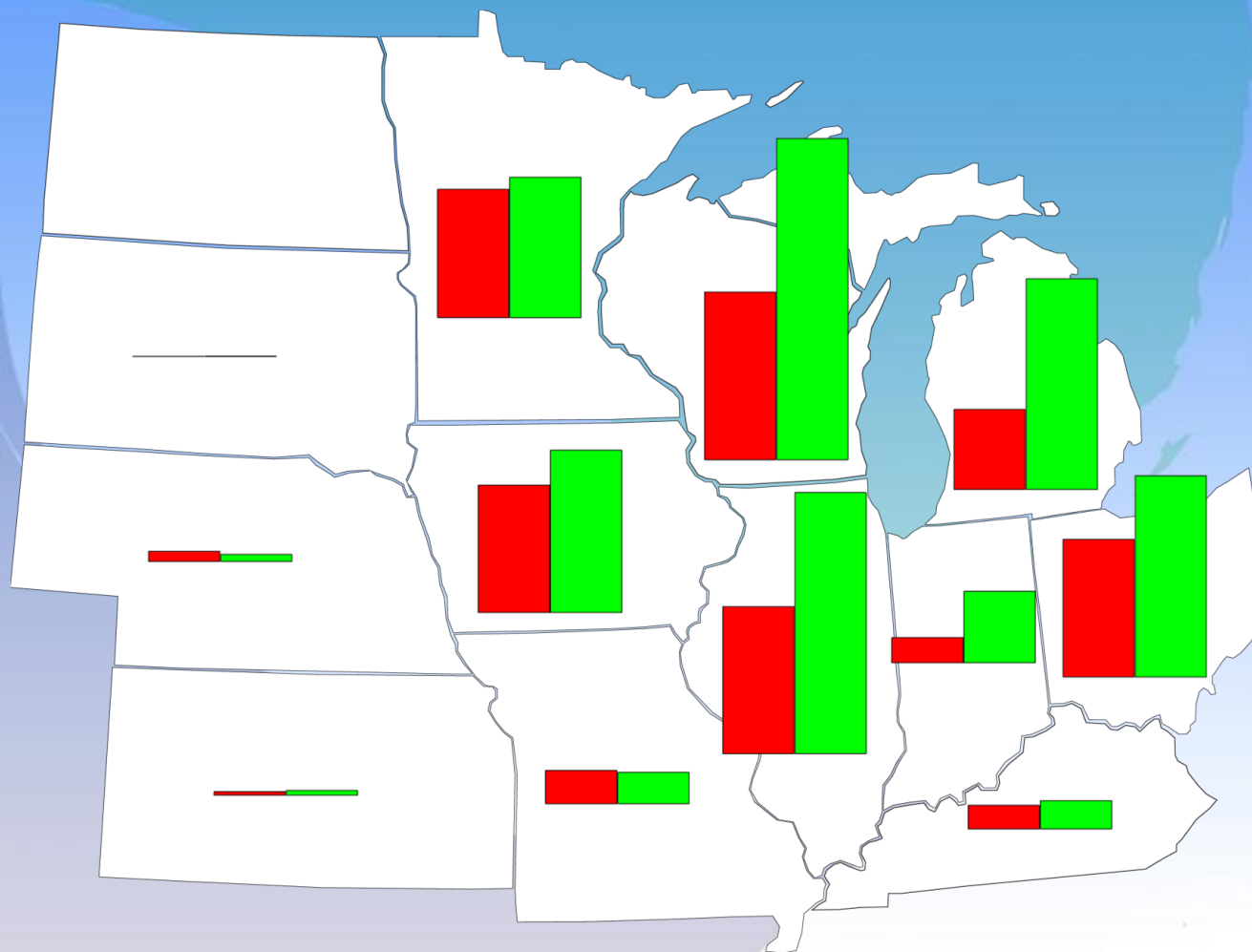
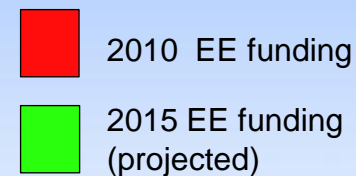
Regional Industrial Activities

- Key Industries
 - Food manufacturing
 - Machinery manufacturing
 - Transportation equipment manufacturing
 - Fabricated metal product manufacturing
 - Chemical manufacturing
 - Computer and electronic product manufacturing

Combined Electric & Gas Ratepayer-Funded Efficiency is on the Rise

Midwest Total Efficiency Funding Projections

2010	\$1.06 billion
2011	\$1.24 billion
2012	\$1.41 billion
2013	\$1.57 billion
2014	\$1.67 billion
2015	\$1.72 billion



Projected Total Electric & Natural Gas EE Budgets

State	2010	2015
IA	\$ 151,864,307	\$ 193,097,488
IL	\$ 175,105,135	\$ 309,888,951
IN	\$ 31,000,000	\$ 85,733,283
KS	\$ 5,400,000	\$ 6,997,727
KY	\$ 29,000,000	\$ 34,482,657
MI	\$ 95,750,832	\$ 250,275,342
MN	\$ 152,912,628	\$ 167,138,000
MO	\$ 40,500,000	\$ 38,245,504
ND	\$ 200,000	\$ 200,000
NE	\$ 12,987,000	\$ 9,345,853
OH	\$ 163,800,000	\$ 239,028,467
SD	\$ 1,460,046	\$ 1,673,570
WI	\$ 199,368,218	\$ 381,100,000
TOTAL\	\$ 1,059,348,166	\$ 1,717,206,842

Industrial Self-Direct/Opt Out

- YES

- Illinois
- Indiana
- Michigan
- Minnesota
- Missouri
- Ohio
- Wisconsin

- NO

- Iowa

- N/A

- Nebraska
- North Dakota
- South Dakota

Regional Industrial Energy Efficiency Programs

- Characteristics of Utility Funded Rebate Programs, varied across utilities
 - Common Prescriptive Incentives
 - Lighting, Refrigeration, HVAC, Variable Speed Drives, Sensors, and Weatherization among others
 - Program Cost Rebates
 - Utilities fund 25%-75% of project costs, under a certain threshold, often \$50,000, but can be more
 - Energy Audits
 - To guide management in adopting EE technology

Midwest Industrial Initiative Focus

- Regional allies
- Industrial areas of opportunity
- Support existing efficiency programs
- Measures of success
- Other potential strategies



Regional Allies

- Create ally network within the region
 - Especially utility and state contacts
- Facilitate discussions with industrials on what would increase participation of EE programs
 - Work through sticky issues as they arise
- Launch Midwest Industrial Utility Forum
 - Utility discussion group to discuss industrial strategies
- Goal is to reach Executive level support across industrial plants (corporate buy-in and support)

Industrial Areas of Opportunity

- Lots of opportunities to promote EE
- Need to prioritize target areas and technologies
- Sample technologies include:
 - Process energy
 - Compressed air
 - Steam
 - Fans
 - Pumps
 - Motors
 - Chilled water systems
 - Waste heat recovery & CHP
 - Building envelope

Support Existing EE Programs

- Government
 - Save Energy Now, Superior Energy Performance, Environment, Energy and Economics and state-run initiatives
 - Work with SEEAAction and other initiatives
- Utility-based incentives
 - Develop web portal mwalliance.org/industrial
 - Database of industrial policies in Midwest
 - Catalogue of case studies
 - Network of utility contacts and program information

Measures of success

- Regional network solidified and runs autonomously
- Quality case studies with measurable savings
- Heavy enrollment in DOE's SEP program or other long term energy management plan (ISO 50001, etc.)
- Heavy traffic to MEEA's industrial page
- Interest in emerging technologies
- Increased uptake of utility and state EE funding
- Increased industrial participation in the program
- Long term funding for the Initiative

Other Potential Strategies

- Leverage existing regional infrastructure (IAC, RAC, MEP, etc) to increase industrial involvement
- Outreach to state and regional trade associations
- Standardization of Industrial Education and Training certification across region/nation
- Emerging Tech Working Group
 - Bridge new technologies and utility program design needs
- Support of regional activities aligned with goals
 - Midwestern Governors Association, others
- Regional Industrial-Utility Summit in 2012

The Size of the Prize: *Midwest Industrial Energy Efficiency Summit*

- *What are the economic development and employment opportunities with IEE and through the supply chains?*
- *Which US manufacturing sectors are poised for growth?*
- *Which states and sectors provide the greatest opportunity for industrial efficiency savings?*
- *What are the biggest factors that influence capital investment?*
- *Which policies would improve the investment environment?*
- *How do different fuel types, energy prices and air regulations influence investment decision?*

January 11, 2012 – 8:30am-1:00pm

The Fairmont Hotel – Chicago

<http://www.wri.org/event/2012/01/size-prize-midwest-industrial-energy-efficiency-summit>

MIDWEST ENERGY SOLUTIONS CONFERENCE

2012

10th Anniversary

January 11-13, 2012
Fairmont Hotel Chicago
Chicago, IL



The Source On Energy Efficiency

www.meeaconference.org

Contact Info

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Industrial Energy Efficiency Network

A Resource for Southeast Manufacturing



Rick Marsh
Program Director
Industrial Energy Efficiency Network
December 13, 2011

Presenter Overview



- Rick Marsh
 - Has worked in various capacities in the SE most recently with the Southeast Energy Efficiency Alliance
 - Participant in national level EE work groups
 - State Energy Efficiency Action Network
 - IETC Advisory Board
 - Arranged resources to launch the Industrial Energy Efficiency Network as a stand-alone group that supports the manufacturing sector

Network Overview



- Regionally focused collaborative effort that unites cross-sector industrials
- Peer-to-peer manufacturing network
 - Elevate best practices & project implementation
 - Link industry to financial & technical resources
 - Promote energy efficiency opportunities

State of the Southeast Region



- SE Industry consumes 29% of total US manufacturing energy annually (EIA Consumption 2008)
- Annual growth rate for industrial GDP was 10% higher compared to national average 2002-2007 (Census Bureau 2007; Census Bureau 2002)
- Energy consumption per dollar of GDP is 17% higher than national average (EIA Expenditures 2008; BEA 2008)

**Consumption is outpacing growth =
Opportunity**

Network - Execution



- Platform for collaboration, education and a link to key financial & technical resources
- Open to any manufacturing firm
- Meetings held quarterly throughout central part of Southeast region
- Information sharing between meetings

Quarterly Meetings



- Agenda focuses on collaboration & open discussion among attendees – not a day of presentations
- Round Robin Activity
 - Key topics
 - Questions from the group
- Project Presentations
 - One sheet format
 - Archive
- Peer Dialogues



Networking at Meetings



- Networking is a focus:
 - Open times before & after meeting
 - No speaker during lunch
 - Dedicated breaks
- Relationships lead to collaboration between quarterly meetings



Q4 Meeting Recap



- 60 Attendees & 21 Different Companies Represented



Baldor Electric Company
Beaulieu
Buckeye Technologies
Cooper Tire & Rubber Company
Covidien
Energizer
General Motors
Honda Manufacturing
Johnson Controls
JPS Composite Materials
Kimberly Clark

Leggett & Platt
M-TEK Inc.
McKee Foods
Michelin North America, Inc.
SABIC Innovative Plastics
Saint-Gobain NorPro
Schneider Electric
Shaw Industries Group Inc.
Toyota Manufacturing
Yates Services - Nissan

Alabama Power
ARCADIS
Pathway Lending

Tennessee Tech - IAC
TVA

Q4 Meeting Recap - Agenda



- Open Discussion Topics:
 - What have been the primary obstacles or barriers to implementing EE projects or program initiatives?
 - How is your company engaging your supplier network in energy efficiency?
 - Has your company developed a specific Corporate Energy Policy document? What was the process? How has this helped your energy program?
- Project Examples from SABIC Innovative Plastics
- Metering Discussion Topics:
 - To what levels are you tracking - plant, department, corporate?
 - Discuss tangible benefits achieved through capturing energy data
 - Employee engagement & metering – holding managers accountable for departmental use or visibility of real time data shared with shop floor employees
- Schneider Electric’s “Standard Practice Energy Manual”

Connections Between Meetings



- Best Practice Discussion Board
- Project One Sheets
- Technology Briefs & Webcasts

- 2012 Summit
- Utility / Industry Workshop

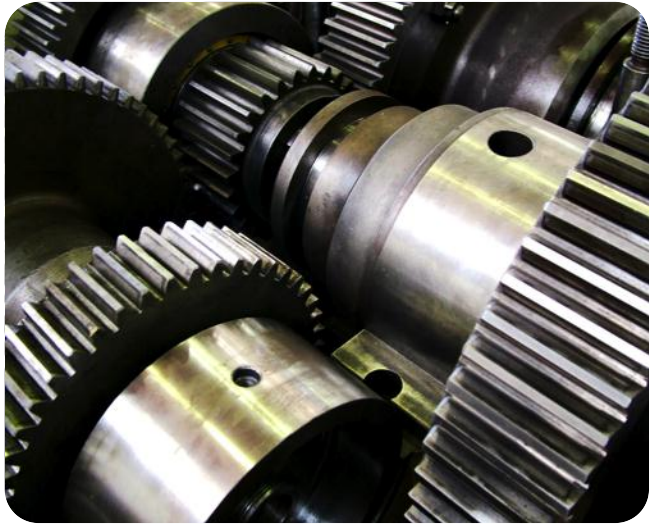
- Industrial **ee**.org Website

Value to Participants



- Elevation of project ideas lead to implementation successes – the spark!
- Exchange of qualified vendor references between peer energy managers in manufacturing can shorten the time to project initiation
- Activity at individual companies is being validated and celebrated by energy management peers

Desired Results



- Inspire manufacturers to become more energy efficient thereby driving region-wide change
 - Drive implementation
- Leverage successes to grow availability of industrial energy efficiency resources
 - Utility & State level
- Adoption of Energy Management resources
 - ISO 50001
 - Superior Energy Performance

For Additional Information



Rick Marsh

Director

Industrial Energy Efficiency Network

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Industrial Energy Efficiency Resources in the Southwest

Neil Kolwey, Senior Associate



**DOE AMO Webinar
December 13, 2011**

Overview

- Colorado program
- Utah program
- Other resources

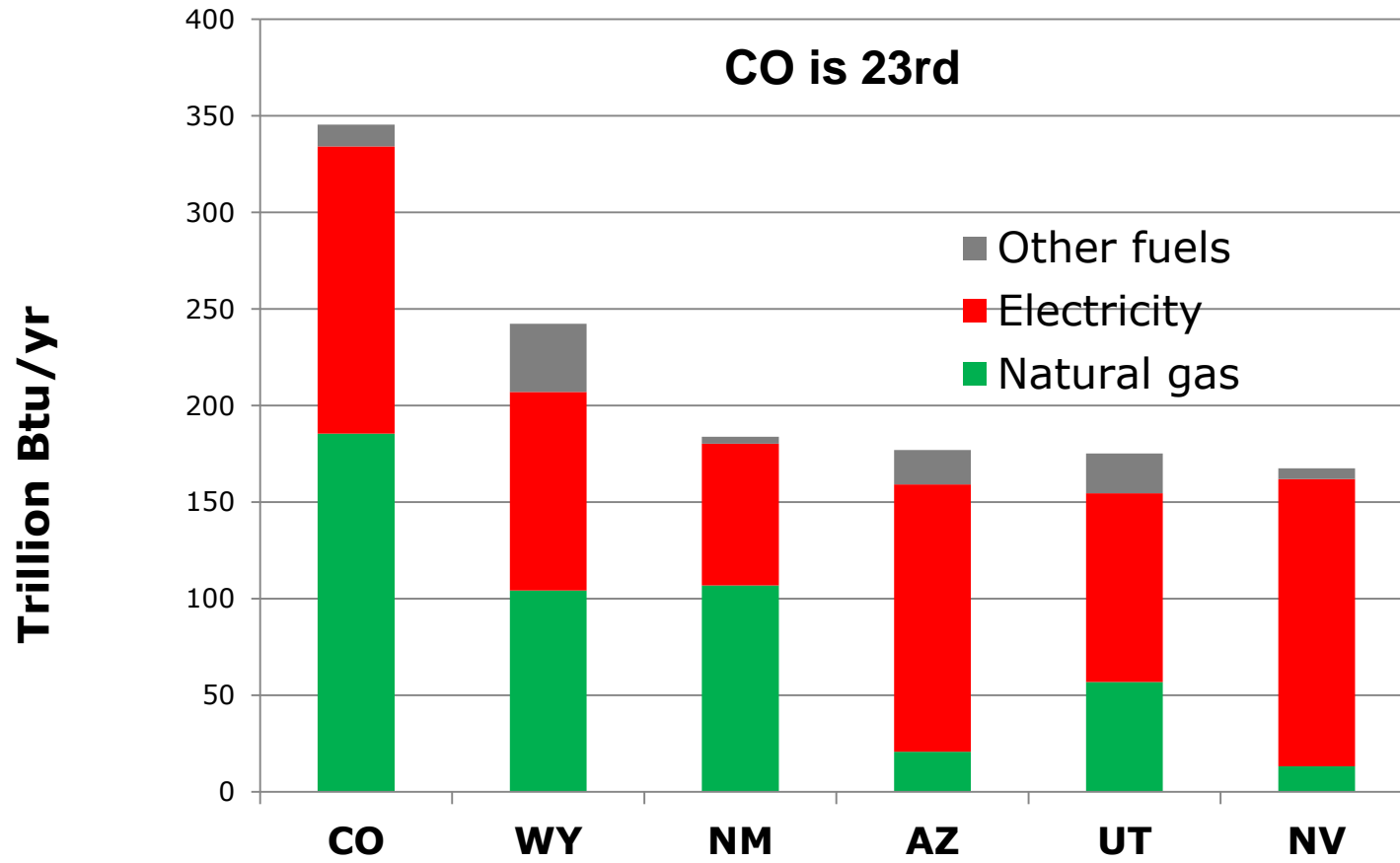
Who is SWEEP?



Southwest Energy Efficiency Project;
Non-profit focused on promoting
energy efficiency in 6 Southwestern
states

- Utility efficiency programs (including industrial), building codes, transportation policies
- State industrial EE programs in Colorado and Utah

Industrial Energy Consumption





COLORADO INDUSTRIAL ENERGY CHALLENGE

Improving Efficiency, Reducing Costs and Emissions



Knowledge to Go Places



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



Governor's
Energy Office



COLORADO INDUSTRIAL ENERGY CHALLENGE

Improving Efficiency, Reducing Costs and Emissions

Benefits:

- Governor recognition
- Energy assessments
- Networking and trainings

Requirements:

- At least \$200k per year energy costs
- Set 5-yr energy goal
- Report energy use annually

Governor Recognition



Goal Flexibility

Partner	Industry Type	Energy Goal
Amgen	Biopharmaceutical products	Reduce total energy consumption by 20% from 2007-2012
Avago Technologies	Semi-conductor devices	Reduce energy consumption per unit of production by 40% from 2008-2013
Carestream Health	X-ray photographic materials	Reduce total energy consumption by 12% from 2009-2014, based on estimated savings from projects compared to 2009 consumption
Crested Butte Resort	Ski resort	Reduce total energy consumption by 8% from 2008-2015
Hunter Douglas	Window coverings	Reduce energy consumption per production unit by 18% from 2008-2013
MillerCoors	Brewery	Reduce energy consumption per barrel of beer by 12% from 2010-2015.
Corden-Pharma	Pharmaceutical products	Reduce total energy consumption by 10% from 2009-2014

Quarterly Networking Meetings



- Discussion of strategic energy management topics
- Presentations of successful projects
- Open discussions of challenges, upcoming projects
- Site tour

Energy Assessments

- ❑ Scoping
- ❑ 2-3 days on-site
- ❑ Steam
- ❑ Process heating
- ❑ Compressed air
- ❑ Pumps and fans
- ❑ Hybrid



Workshops

- Compressed air – fundamentals and advanced
- Steam system optimization
- Strategic energy management
 - Management support
 - Meaningful goal
 - Good metrics and tracking
 - Break-down of energy use, sub-metering
 - Energy teams that meet regularly

CIEC Partner Companies

Advanced Energy	King Soopers Bakery
- Amgen	MillerCoors
Anheuser-Busch	New Belgium Brewing
Atmel	Owens -Illinois
Avago Technologies	Rocky Mountain Bottle Co.
Carestream Health	Rocky Mountain Metal Container
Corden Pharma	Sandoz
Encana	Synthes
Frito-Lay	Western Sugar
Golden Aluminum	Woodward
Hunter Douglas	2 ski resorts – Aspen and Crested Butte

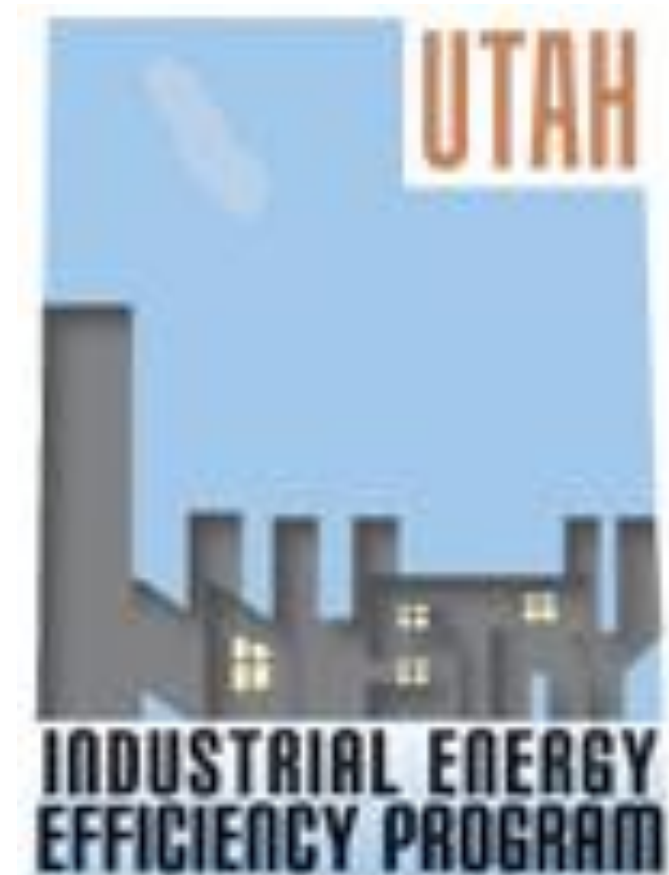
More information

- CIEC web site, with case studies, other resources:

<http://www.swenergy.org/programs/industrial/ciec/index.html>

Utah Industrial EE Program

- ❑ Recognition
- ❑ Workshops
- ❑ Networking
- ❑ Open to all Utah industrial firms



Utah IEE Program, cont.

- Governor's Energy Summit, Feb. 15
 - Highlights Utah's 10-yr Strategic Energy Plan
 - 90 minute session on IEE

- For more information:
utahefficiency@nexant.com
<http://utahindustryleaders.com/index.html>

Other Resources

CHP and heat recovery

Intermountain Clean Energy Application Center

<http://www.intermountaincleanenergy.org/>

Utility efficiency programs

- ❑ Technical assistance and custom rebate programs
- ❑ Prescriptive rebate programs
- ❑ Self-direction programs

Contact Info

- nkolwey@swenergy.org
- 303-499-0213

Slides from Previous Webcasts

The screenshot shows the EERE website's 'Advanced Manufacturing Office' section. The header includes the U.S. Department of Energy logo and navigation links like 'EERE Home', 'Programs & Offices', and 'Consumer Information'. The main navigation bar lists categories such as 'HOME', 'ABOUT', 'RESEARCH & DEVELOPMENT', 'TECHNOLOGY DEPLOYMENT', 'INDUSTRIES & TECHNOLOGIES', 'INFORMATION RESOURCES' (highlighted), 'FINANCIAL OPPORTUNITIES', 'NEWS', and 'EVENTS'. A search bar is located in the top right.

The main content area is titled 'Tuesday Webcasts for Industry'. It provides information on the Industrial Technologies Program (ITP) Tuesday Webcasts, including a description of the program and a list of topics. A sidebar on the left contains links for 'Publications', 'Databases', 'Program News', 'Online News', 'Energy Matters', 'E-Bulletin', 'Subscribe', 'Videos', and 'Webcasts'. A 'Stay Connected' box on the right encourages users to subscribe to receive announcements for upcoming webcasts.

Tuesday Webcasts for Industry
Here you will find information on the Industrial Technologies Program (ITP) Tuesday Webcasts for Industry, including past presentations.

ITP's Tuesday Webcasts for Industry help industrial personnel learn about ITP's software assessment tools, technologies, partnership opportunities, *Save Energy Now* energy assessments, and other resources that can be used to find ways to save energy and reduce carbon emissions. The webcasts are held on the first Tuesday of every month from 2:00 to 3:00 p.m. Eastern time and are presented by ITP staff, partners, and experts.

You can register to participate in upcoming Tuesday webcasts by visiting the ITP [events calendar](#) or [best practices training calendar](#). Each entry includes the webcast's date, topic, and registration link, and provides a detailed description of the webcast.

Past Tuesday and Thursday Webcasts for Industry
Presentations from previous webcasts can be found below by topic, then by date. All are available as Adobe Acrobat PDFs. [Download Adobe Reader](#). Webcasts from 2010 on are also available as audio files.

- [Data Center Efficiency](#)
- [Energy Assessments](#)
- [Energy Management and Financing](#)
- [Energy Systems](#)
- [ITP Program Overview](#)
- [ITP Software Tools](#)
- [New and Emerging Technologies](#)
- [Partnerships](#)

Data Center Efficiency

- April 23, 2009 – [Data Center Assessment Case Study: Verizon](#)
- November 13, 2008 – [Assessing Data Center Energy Use](#)

Energy Assessments

- October 11, 2011 – [Unveiling the Implementation Guide](#)
- May 7, 2009 and April 16, 2009 – [Energy Assessment Results: Most Commonly Identified Recommendations](#)
- February 19, 2009 – [Energy Assessments: What are the Benefits to Small- and Medium-Size Facilities?](#)
- February 12, 2009 – [Energy Assessments: What are the Benefits to Large Facilities?](#)
- November 6, 2008 – [Energy Assessments: What are the Benefits to Small and Medium Facilities?](#)
- October 16, 2008 – [Energy Assessments: What are the Benefits to Large Facilities?](#)

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http://www1.eere.energy.gov/industry/resources/tuesday_webcasts.html

Next Month's Webcast

**Please
join us for
our next
Webcast.**

Topic: Key Energy-Saving Activities for Smaller Facilities

Presenter: Richard Feustal of Briggs & Stratton

Date and Time: Tuesday, January 10 at 11:00 a.m. PST/2:00 p.m. EST

To Register:

<https://www1.gotomeeting.com/register/453056753>
