



# Regional Application Centers (Buildings & CHP Technologies)

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# Outline

- Concept: Regional Energy Technology Application Centers
- Keys to Center Success
- Midwest CHP Application Center (MAC)
- Midwest Buildings Technology Application Center (MBTAC)
- Center Metrics
- Q&A

# University Of Illinois at Chicago Energy Resources Center

- Illinois Board of Higher Learning Education Center
- Established in 1973
- Dedicated to Improving Energy Efficiency and the Environment
- Areas of Expertise:
  - > Engineering Solutions
  - > Distributed Energy Resources (fossil and renewable)
  - > Building Sciences
  - > Policy and Assessments
- Located Within the School of Engineering (non teaching entity)

# ERC- Regional Energy Center Concept

- An Effective Technology Outreach/Deployment Mechanism
- Provides a Forum & Mechanism for:
  - › Engages the State Energy Offices, their Partners, and Professional Associations
  - › Building Technical Capacity Within the States & Region During Tight Financial Times
  - › Fosters Coordination, Integration, and Exchange of Knowledge, Experiences, & Best Practices

# Two Midwest DOE Sponsored Application Centers

- Midwest CHP Application Center
  - > Established in late 2001
  - > Develop CHP application knowledge
  - > Reduce perceived implementation risks



- Midwest Buildings Technology Application Center
  - > Established in mid 2006
  - > Test case for broadening center concept
  - > Deploy bldg. efficiency technologies



# Application Center Strategy

- > Services: Offer a suite of education, outreach, and project support services
- > Focus: Direct their efforts on state and region specific target markets of end-user decision makers to maximize impact of services
- > Collaboration: Meet regularly to share lessons learned, products, and materials to optimize efforts of the entire program

# Application Center Services

- Education and Outreach / Market Transformation
  - Websites
  - Focused Training and Education
  - Targeted End User Market Workshops / Webinars
  - Regulatory Education
  - Project Profiles / Case Studies
- Project Support
  - Site Evaluations / Screening
  - Application Analysis (Tech / Financial)
  - Technical Assistance

# Application Center Focus

- Facilitate Deployment of DOE and Other Appropriate Technologies, Tools, Concepts, and Information
- Provide Feedback to DOE & Industry on R&D Needs
- Provide the State Energy Offices and their Partners
  - › Targeted Education
  - › Unbiased Information
  - › Technical Assistance

# Application Center Collaboration

State  
Energy Offices

U.S. DOE

SEO Partners

Industrial  
Assessment  
Center

Midwest CHP  
Initiative

EPA CHP  
Partnership

Midwest  
Cogeneration  
Association

USCHPA

National Labs  
NETL / ORNL



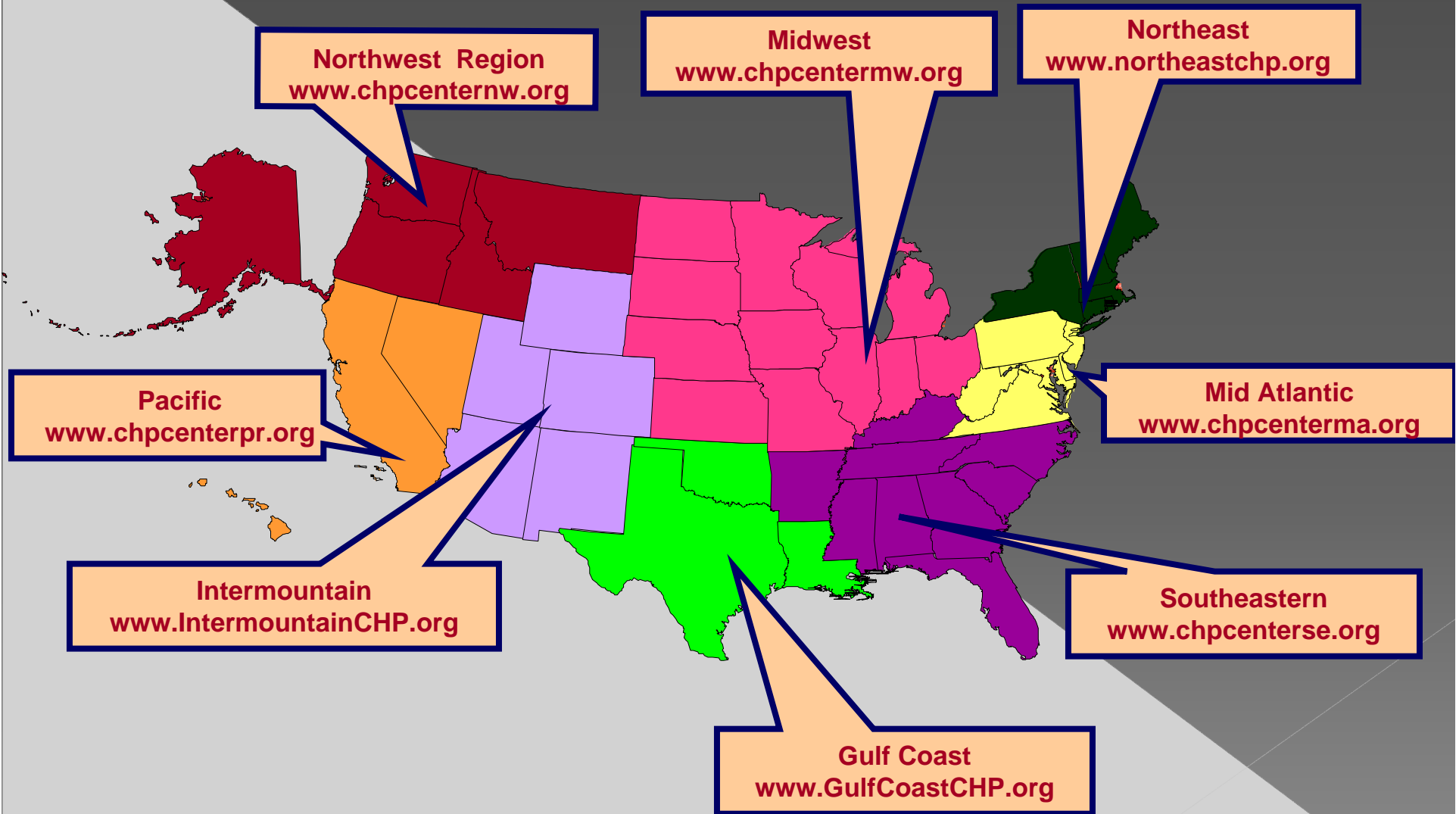
# Keys To Success

- “Buy In” by the client states (State Energy Office) and their industry partners
- Interactive website, with easy access to data, tools, results, & best practices
- Peer-to-peer transfer of knowledge (not a third party) – center is the facilitator / provides the forum
- Access to additional technical assistance & expertise through a central source
- Coordinate efforts with other regional & national organizations / activities
- Develop metrics to evaluate success

# Midwest CHP Application Center

- ◉ Mission Statement:
  - > Develop technology application knowledge and the educational infrastructure necessary to foster CHP as a viable energy option in the Midwest
  - > Reduce any perceived risks associated with CHP implementation
- ◉ Established in 2001 (pilot center)
- ◉ Supports 12 State Energy Offices (DCEO is primary supporter)
- ◉ 8 Regional Centers now exist

# CHP Regional Application Centers



# Midwest Buildings Technology Application Center

## ◎ Partnership:

- › Energy Resources Center – Univ. of Illinois at Chicago
- › Energy Center of Wisconsin
- › Midwest Energy Efficiency Alliance
- › Eight Midwest State Energy Offices
- › Status - Proposal was not in the top two but the top 5 and we are still alive for a possible center (DOE Buildings) in the Midwest if \$ are available in '08



# Midwest Buildings Technology Application Center

- ◎ Mission Statement:
  - > Grow the effectiveness of the U.S. DOE Buildings Technologies Program (BTP) outputs through fostering coordination, interaction, sharing, and transferring of activities & knowledge among the eight state energy offices and their partners in the Midwest region
- ◎ Program Sponsors: US DOE, NASEO, ASERTTI
- ◎ DCEO an Active Participant and Supporter

## Center Initial Services / Activities

- ◉ Focus on Commercial / Institutional Buildings
- ◉ Implement an Information Website
- ◉ Implement Targeted Workshops (Webinar Series) – Colleges and Universities
- ◉ Develop Project Profiles (Case Studies)
- ◉ Provide Technical Assistance

Emphasis on Deploying DOE Tools, Technologies,  
Concepts

# MBTAC – FIRST REGIONAL PROJECT

## Midwest Colleges and Universities

### Energy Efficient Building Technologies & Building Practices

- Series of interactive Internet-Teleconference webinars
- Bring industry experts to the targeted audience
- Archived webinars downloadable through the Center's web-site
- Additional support information and technical assistance available through the Center's web-site
- Certificate of Attendance available to attendees of the live broadcasts

## WEBINAR TOPICS

- Sustainable Energy Management ---  
March 6, 2007 – 95 Attendees
- Effective Energy Efficient Lighting  
Opportunities & Strategies --- April 10, 2007  
– 120 Attendees
- Combined Heat & Power --- May, 2007

# Other Webinar Topics

- Potential Topics:
  - › Advanced HVAC Technologies
  - › Commissioning
  - › Funding Energy Projects
  - › Geothermal Heat Pumps
  - › Purchasing Options (Electricity & Natural Gas)
  - › Sustainable Energy Design Case Studies
  - › Energy Efficient Laboratories
  - › Renewable Energy Applications

# Metrics - Information

## CHP (6 years)

Website:

[www.chpcentermw.org](http://www.chpcentermw.org)

- 114k hits/mo. (3.4M since 2002)
- 11.5 gigabytes/mo. data downloaded (267 gigabytes since 2004)
- All tools, presentations, data etc easily accessible

## Buildings (~1 year)

Website:

[www.ecw.org/mwbbuildings](http://www.ecw.org/mwbbuildings)

- 3.5k hits/mo. (last 3 months)
- March 6<sup>th</sup> webinar – over 2,000 downloads (presentations)
- 45 secure logins to view 2 hr. session (audio/visual)
- Building website information

# Metrics - Targeted Workshops

## CHP (6 years)

- Avg. 5 wkshops / yr.
- On site workshops
- Approx. 70 to 80 attendees / workshop
- 8 targeted sectors  
Hospitals – State Gov't. --  
Regulators – Small Ind. --  
Livestock & Food Proc. --  
Ethanol Plants – Munis --  
Arch./Engrs.

## Buildings (~1 year)

- 5 Webinars in 2007
- Interactive Internet Teleconferences
- 2 Webinars to date (Avg.107 attendees per webinar)
- Target Market –  
Colleges & Universities

# Metrics – Quantitative Results

## CHP (6 Years)

- 48 Assessments Completed – Potential 231.2 MW
- 18 Installations In Progress / Consideration – Potential 137.4 MW
- Installed – 25 Sites – 68.9 MW
- Region: Increased Installations 23.7% (84 sites) – Increased Capacity 5.4% (508 MW)

## Bldgs. (~1 Year)

- To early to tell
- Plans to quantify impact in energy saved, cost savings, and partners taking action
  - > Direct
  - > Indirect

# For Further Information

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