Regional CHP Application Centers

Southeast Regional CHP
Roadmap Meeting
September 20th, 2005

Ted Bronson, Power Equipment Associates
ORIGINS – RACs

- **BCHP Working Group**
  - USDOE, ORNL, Utilities, R&D Organizations
  - 1999 Consensus Roadmap

- **US DOE / EPA CHP Challenge (’98)**
  - 2000 CHP Roadmap

- **Selection of UIC’s ERC as Pilot RAC (2001)**

- **Initial Scope:**
  - Education and outreach
  - Project Support
U.S. DOE CHP Vision and Technology Roadmap

REGIONAL RECOMMENDATIONS:

1) Raise CHP Awareness - Create new and support existing CHP awareness efforts by Regional and State Groups

2) Conduct a coordinated outreach campaign to educate architects, building designers, and local building and other code officials about CHP

3) Provide SWAT team technical assistances to those interested in installing CHP Systems
Regional CHP Application Centers

• **Purpose:** DOE Headquarters Program to lead regional deployment of CHP technologies thru:
  - Educating regional players on benefits of CHP technologies, while reducing perceived risks
  - Providing project specific support
  - Providing feedback to DOE and industry regarding future R&D program needs
  - Providing regional coordination and implementation of DOE projects
The regional application centers will promote combined heating and power (CHP) technology and practices, serve as a central repository and clearinghouse of CHP information, and identify and help implement regional CHP projects.

- **Northeast Region**: www.northeastchp.org
- **Mid Atlantic**: www.chpcenterma.org
- **Southeastern**: www.chpcenterse.org
- **Gulf Coast**: www.GulfCoastCHP.org
- **Pacific**: www.chpcenterpr.org
- **Intermountain**: www.IntermountainCHP.org
- **Midwest**: www.chpcentermw.org
- **Northwest Region**: www.chpcenternw.org
RAC Services Offered

• **Education and Outreach**
  - Website (Available & Updated)
  - Focused Training and Educational Courses
  - Workshops / Conferences
  - Regulatory Interactions
  - Project Profiles / Case Studies

• **Project Support**
  - Site Evaluations (Screening)
  - Application Analysis (Tech / Financial)
  - Technical Assistance
RAC Operational Timeline

• Year 1
  – Getting word out that RAC exists
  – Regional Roadmap Workshop
    » Markets identified and prioritized
  – Website launched
  – Initial presentations at workshops put on by others
  – State Baseline studies for targeted states
  – Beginning of project profiles
  – Meetings of Initiative or RAC Advisory Board

• Year 2
  – Focused Training and Targeted Workshops
  – Focused Project Profile Development
  – Technical Assistance Program up and running
    » Beginning of Site Evaluations
Tools (Developed by RACs)

- Economic / Site Feasibility Analysis
- Training Courses / CHP Primer (MW)
- Best Practices Installation Seminar for Project Developers (NE, MW)
- CHP Graduate Level Education (MW, SE)
- CHP Site Walkthrough Screening Guide (MW)
- Environmental Permitting Guidebook (MW, NE)
- CHP Resource Guidebook (MW)
- Hospital / Healthcare Targeted Market Materials (ORNL, MW)
- Heat Map – District Energy Planning and Assessment
Tools (Developed by others)

- **US DOE / ORNL CHP Education and Outreach Projects**
  - University Case Studies (IDEA)
  - Opportunity Fuels Report (RDC)
  - Project Installation Database (EEA)
  - Industrial Association Outreach (USCHPA)
  - Urban Planning (GTI)
  - State Issue Project (EEA and ACEEE)
  - Numerous Market Studies

- **Recycled Energy Materials**

- **Other Govt Agencies**
  - HUD CHP Guidebook
  - Steam Program, CHP Analysis Tool

- **Economic Analysis Tools (ORNL CHP Assessment Tool)**

- **USDOE / ORNL Product Development and Deployment**
RAC Accomplishments

• Regional Roadmap Workshops
  » In 2004, all 6 RACs engaged in developing regional roadmaps to mobilize personnel and identify areas of focus
  » Some RACs used forum to build Stakeholder advisory groups or Initiatives – coalitions to drive policy change

• Websites
  » Each RAC has an established website as an educational source to end-users, policy makers and other stakeholders

• Collaboration with EPA CHP Partnership
  » Efforts to Develop CHP in the Ethanol Industry
  » Commencement of efforts for Waste Water Treatment and Hotel / Casino Facilities
RAC Accomplishments

• Market Specific Workshops / Forums
  » Hospitals and Healthcare
  » Waste Heat to Power, Heat-Map Training
  » CHP Best Practices for A/E Firms
  » CHP for Dairy Farms
  » Waste Water Treatment and Landfill facilities
  » CA University facility managers working group

• State Education & Outreach
  » PUCs – Interconnection and Tariffs; Economics; Grid Support & Project identification (University of Utah)
  » Influencing Strategic Energy Planning (NWPPC, Nevada EE-RE Task Force, City of Chicago, MADRI)

• Several 100 MWs affected
  » From small buildings to large industrials, project support efforts are paying off
RAC Coordination Activities

• **Purpose:**
  – To leverage work already done to optimize performance of RACs
  – To identify regional strengths that can be applied nationally
  – To coordinate ongoing work, especially for market sector development (i.e. hospitals, schools, industrial)
RACs vs. Initiatives

• RAC – DOE Funded entity providing Education and Outreach and Project Support to develop CHP market

• Regional Initiatives – Voluntary, Ad-hoc organizations driving roadmap actions and Advocacy efforts in the Regions
  - Provide insight and direction to RAC
  - Provide a mechanism to disseminate RAC results
  - RAC provides horsepower to implement ideas
Southeast Challenges & Opps

**Challenges**
- Low cost of power
- Strong IOUs
- No deregulation

**Opportunities**
- Gas on Margin in some states
- Good cooling and humidity loads with building issues
- Hurricanes / Storms – Need for reliable power
- Agriculture
For Further Information

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