



# State Energy Policy and Technology Outlook Conference

## Combined Heat and Power Update Panel

Panelists:

Jessica Bridges – Exec. Director, U.S. Clean Heat & Power Association

Rob Thornton – President, International District Energy Association

Ted Bronson – President, Power Equipment Associates (Coordinator U.S. DOE Clean Energy Application Centers)

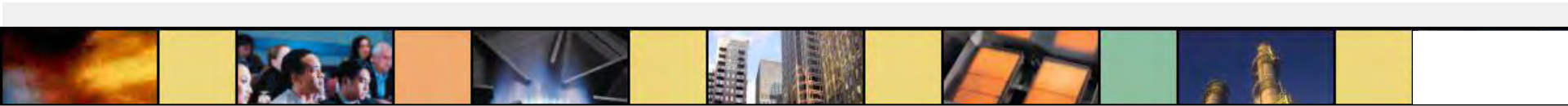
Panel Moderator: John Cuttica – Director Energy Resources Center, University of Illinois @ Chicago

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# Combined Heat & Power

- Three Technology Categories:
  - CHP: The sequential production of electric and thermal power from a single dedicated fuel source
  - Waste Heat Recovery: Captures heat otherwise wasted in an industrial process and utilizes it to produce electric power. These systems may or may not produce additional thermal energy.
  - District Energy CHP: Central heating & cooling plants that incorporate electricity generation along with thermal distribution piping networks for multiple buildings (campus / downtown area).



## COMBINED HEAT AND POWER

Effective Energy Solutions for a Sustainable Future

December 1, 2008



OAK RIDGE  
NATIONAL LABORATORY

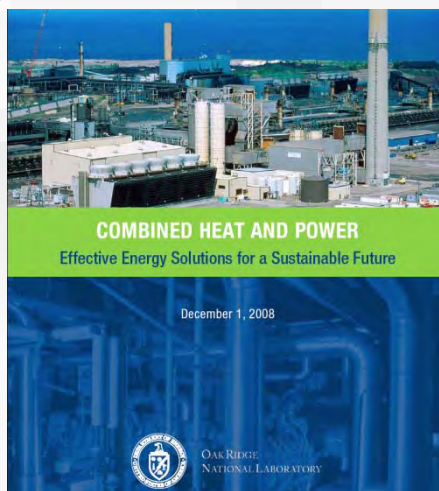
- Enhances Energy Efficiency
- Ensures Environmental Quality
- Promotes Economic Growth
- Increases Energy Security Through Fuel Flexibility
- Fosters a Robust Energy Infrastructure
- Combines Environmental Effectiveness with Economic Viability & Improved Competitiveness

## Today

- 85 GW Installed
- 9% of U.S. Generating Capacity
- Avoids 1.9 Quads of Fuel Consumption
- Avoids 248 MMT of CO<sub>2</sub> Emissions Annually

## 2030 Target

- 240 GW Installed
- 20% of U.S. Generating Capacity
- Avoids 5.3 Quads of Fuel Consumption
- Avoids 848 MMT of CO<sub>2</sub> Emissions Annually





# Today's Panel

**With increased awareness of Combined Heat and Power as a near term viable solution to a more sustainable energy future, this session will discuss recent policy developments at the federal and state levels intended to accelerate CHP implementation.**