WASTE HEAT TO POWER III
Welcome and Introduction
Houston, TX
September 25-26, 2007
Dave Sjoding
WELCOME

To the third Waste Heat to Power conference
A joint effort of four groups
• Texas Industries of the Future
• Gulf Coast CHP Application Center
• Northwest CHP Application Center
• Pacific CHP Application Center
OUR SPONSORS – A BIG THANK YOU!

Our sponsors have helped us greatly in putting on this conference.

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WHY TEXAS AND THE GULF COAST?

Previous conferences held at UC Irvine

Turbosteam shared their waste heat to power potential data for the Western Governors Association CHP White Paper

- Texas is the national leader in potential with 2,726 MWs capacity
- Louisiana – 617 MWs
- Total of two states – Over 3,300 MWs
- Total U.S. 17,389 MWs
- Data includes steam pressure drop, natural gas compressor stations, flared tail & stack gas
- Other low temperature potential is additional
CONFERENCE OVERVIEW

Two one day workshops

September 25\textsuperscript{th}
  • The “nuts & bolts” of industrial waste heat to power
  • A training and exploration of the topic focus

September 26th
  • Waste Heat to Power Industrial Roundtable
  • Time for cross-talk
ALUMINUM SMELTING – BRIEF EXAMPLE

Gasses off the pot line cut 20 to one before environmental clean up

Why? - Too hot!

Potential? – We think YES!
THREE KEY DOE STUDIES ON WASTE HEAT
– from the Industrial Technologies Program

Energy Use, Loss and Opportunities Analysis: U.S. Manufacturing & Mining – December 2004


THE TOP FIVE ENERGY-INTENSIVE INDUSTRIES

Think about loss reduction and recovery opportunities
- Petroleum Refining
- Chemicals
- Forest Products
- Iron and Steel
- Food & Beverage

At lower temperature we add natural gas compressor stations

Opportunity knocks
OF THE TOP TWENTY OPPORTUNITIES FOR ENERGY-INTENSIVE INDUSTRIES

Six are waste heat recovery and CHP is a seventh.
Waste heat recovery from gasses and liquids in petroleum, chemicals and forest products ranks number one.

CHP ranks number two.
THE “NUTS & BOLTS”

How do you think through whether or not you have a viable Project?

Technologies vary
  • Some traditional and common
  • Some are less well known

Enjoy the day – Stay for the second workshop