



UNITED STATES CLEAN  
HEAT & POWER ASSOCIATION

# Where Does Waste Heat to Power Fit?

Sean Casten

Chairman

US Clean Heat & Power Association

Presented to

Waste Heat to Power Workshop

September 26, 2007

Houston TX

## **Goals are more important than paths.**

---

- Homestead Act encouraged people to go west, not to buy Conestoga wagons
- Kennedy urged us to put a man on the moon, not to develop Titan rocket technology
- Energy policy ought to encourage clean, cheap energy, not pick favorite technologies.



# USCHPA Rebranding: Clean, not Combined

---

- Founded to encourage the deployment of combined heat and power. Developed advocacy and membership based around goals of:
  - Environmental & Energy policy that rewards energy efficiency (output based standards, decoupling, etc.)
  - Removal of barriers to local energy sources (standby rates, interconnection, etc.)
  - Regulatory reform to allow clean energy to earn some/all of the benefits it creates (location specific pricing, emissions trading markets, etc.)
- Traditional cogen is one of many beneficiaries of these reforms.
  - Both advocacy and membership handicapped by perception that we were motivated only by the desire to deploy a particular technology.



# “Where does waste heat to power fit” is the wrong question.

---

- Waste-heat-to-power is one of the most cost-effective ways to lower carbon emissions
  - Only end-use efficiency is better
  - But not the only one!
- Framing in terms of any given technology is bound to create counter-productive conflict with other technologies.
  - Clean, cheap energy vs. Dirty, expensive energy is a winnable fight.
  - Waste-heat-to-power vs. Solar/Wind/Biomass is not.



## Define success, don't pick technologies.

Goal	Explanation
Maximize CO <sub>2</sub> reduction / \$ of investment	<i>Denominator is critical, since all wallets are finite</i>
Minimize <u>delivered</u> cost of energy	<i>Economy depends on retail, not wholesale prices; have to factor in wires &amp; losses</i>
Minimize fossil fuel use / unit of useful energy	<i>Only solution to most significant energy issues, from national security to global warming that doesn't lower standard-of-living</i>
Be pro-market, not pro-business	<i>Competitive markets will preferentially deploy lowest cost technologies; preferential rewards to specific businesses will not</i>

***WHTP is a slam-dunk on these metrics, but it's much easier to make a case for the goal than the path.***



**UNITED STATES CLEAN  
HEAT & POWER ASSOCIATION**