



WH2P: An American Opportunity

Kelsey Walker, Director of Government Relations, TAS

Contact for Heat is Power

kwalker@tas.com



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

Hard to Believe



Electricity generated from waste heat is exactly what America and Washington hopes **CAN** exist, but doesn't know already **DOES**

- New Source of Zero Carbon Emission Electricity
 - *in Southeast and Midwest America, traditionally renewable poor*
- Base-load and distributed- can be used onsite or sold to the grid
- Free Fuel
- Increased Competitiveness for U.S. Industry (read: American jobs)
- Potential for U.S. to Lead in Global Exports (read: American jobs)



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

IT'S COMPLICATED...

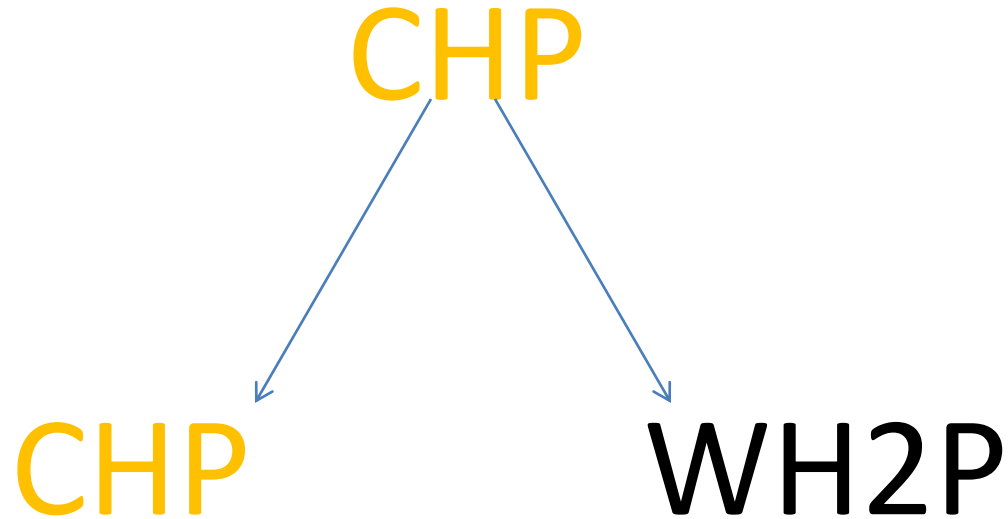


www.tas.com

www.heatpower.org

HEAT is POWER
Let's Capture It

Acronym Confusion



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

The Distinctions are Distinctive

Traditional combined heat and power (CHP), although generating electricity more intelligently by capturing useful thermal, results in the emission of new carbon from its process, and its fuel source is never heat.

Waste Heat to Power (WH2P) is a zero carbon resource with heat as its fuel source, sharing characteristics with traditional renewables.

These are important distinctions.



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

The Distinctions are Distinctive

CHP is the *sequential and intended* generation of electricity and heat where both are needed.
It is a 'new build' / 'green field'

WH2P is the generation of zero emission electricity from heat that is the byproduct of another, separate process- manufacturing or processing.
It is a retrofit / 'brown field'



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

Equations for Outputs CHP, WH2P, and RT

CHP = KWs & BTUs

New process (greenfield) – sequential generation of heat and electricity

WH2P = only KWs

Added to an old process (brownfield) – generation of zero emission electricity only from wasted heat

RT = only BTUs

Added to an old process (brownfield) – capture of useful thermal from wasted heat



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

Senate Energy Committee

The Chairman's Staff

DID NOT KNOW:

- Waste heat can be captured to generate zero emission electricity
- Waste heat to electricity can be/is separate (mutually exclusive) from a traditional combined heat and power process
- Waste heat can be captured to generate electricity with technology other than traditional steam turbine equipment- namely emerging technologies: ORC, Kilenia, and Sterling



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

“Think like a wise man, but communicate the language of the people.”

-William Butler Yeats



www.tas.com

www.heatpower.org

HEAT is POWER
Let's Capture It

Same Family – Not the Same

After learning how confusing the term ‘CHP’ is, we explained WH2P on its own, and CHP on its own; clarifying the distinctions.



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

When the Skies Cleared

5 months after clarifying what waste heat to power is we now have:

- draft language and a decision by the Chairman himself to introduce his bill
- The bipartisan Heat is Power Act (HIP Act), HR5977, introduced in the House for a 30% investment tax credit stage set for renewable recognition in a federal RPS
- A coalition of Senators considering introducing the Heat is Power Act during the lame duck session



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

Definition of WH2P

Zero carbon emission electricity generated through the capture of heat wasted from the byproduct of a process whose primary purpose is not the generation of electricity from a fossil fuel

- Prevents gaming- tax credits given to projects that should do this anyways
- Does not exclude WHE projects from landfill gas facilities
- Includes captured pressure

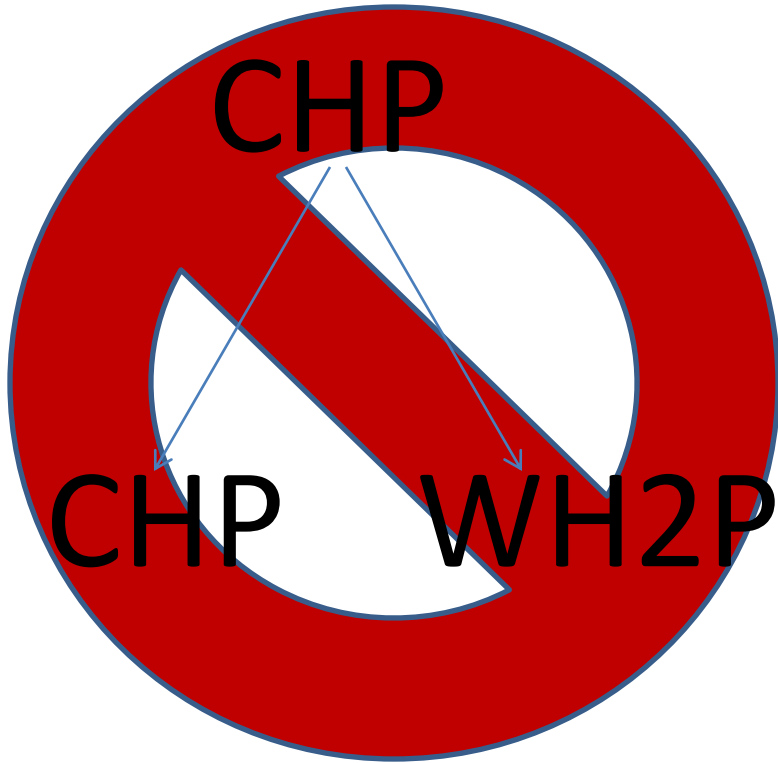


www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

Acronym Clarity



Recycled Energy

CHP

WH2P



www.tas.com

www.heatpower.org

HEAT is POWER
Let's Capture It

Team Heat -We Stick Together

CHP

WH2P

RT (Recovered Heat/District Energy)

Is one family with individual members.

**We need to condense and define our terms,
coordinate**

**and unify our message, and get more people
out there spreading it**



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

Heat is Power Coalition & Website

www.heatispower.org

Central hub for education on WH2P and for connecting and reaching WH2P developers and technology manufacturers

- WH2P corporate logos linked to corporate web pages
- WH2P case studies provided, more welcome
- Research Reports & News/Media
- Blog, Facebook, Twitter



www.tas.com

www.heatispower.org

HEAT is POWER
Let's Capture It

We Need YOU

- CONSISTENCY in communication
 - Condensed, Clear, Consistent Terms

Umbrella Term for the Heat Family- Recycled Energy

- Unified Messages
- More of the Community Engaged
 - HeatisPower.org company logo, case studies, coalition
- Op Eds, Letters to the Editor, Contacting Congress



www.tas.com

www.heatispower.org

HEAT'S POWER
Let's Capture It



WH2P: An American Opportunity

Kelsey Walker, Director of Government Relations, TAS

Contact for Heat is Power

kwalker@tas.com



www.tas.com

www.heatpower.org

HEAT is POWER
Let's Capture It