April 15, 2015

The Honorable Orrin G. Hatch
Chairman
Committee on Finance
United States Senate
219 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Ron Wyden
Ranking Member
Committee on Finance
United States Senate
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The Honorable Dean Heller
Co-Chair, Community Development &
Infrastructure Working Group
United States Senate
324 Hart Senate Office Building
Washington, DC 20510

The Honorable Michael Bennet
Co-Chair, Community Development &
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United States Senate
458 Russell Senate Office Building
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Comments: Energy Tax Reform

The Heat is Power Association (HiP) is pleased to provide input to the Senate Finance Committee as you evaluate and recommend modifications to the federal tax code. We appreciate your efforts at comprehensive tax reform and, in particular, improving the country's infrastructure while ensuring the tax code provides parity for all clean and efficient sources of power. HiP and its members are interested in advancing the market for waste heat to power (WHP) projects and technologies by educating decision makers about the value of waste heat as a resource for clean electricity generation and an economic driver for global competitiveness. HiP members, including project developers, technology innovators, equipment suppliers and installers are collaborating to develop a robust market for WHP technologies nationwide.

WHP should be treated on par with other technologies that generate power without emissions.

WHP is gaining attention as a source of clean and reliable power. The term WHP encompasses a suite of technologies and applications that can reduce emissions and improve the long-term competitiveness of American industry anywhere heat is vented or wasted.

Waste heat is generated in substantial quantities at industrial facilities every day and, if harnessed to make power, could generate 15 GW of emission-free electricity in the U.S. A report released last month by DOE's Oak Ridge National Lab identified 766 MW of existing WHP projects, 605 MW (nearly 80%) of

which are in the petroleum refining, chemicals and metals industries. The report also identified about 15,000 MW of WHP technical potential, 10,300 MW of which is in those same three industries. According to these data, 94 percent of the WHP opportunity in those three industries is yet untapped. Other energy intensive industries with meaningful WHP potential include cement, lime, fabricated metals, paper, wood products, food, printing and general manufacturing.[1]

By capturing otherwise wasted heat from industrial processes and using it to generate power with no additional fuel, no combustion, and no incremental emissions, WHP increases efficiency while reducing the need for electricity from the grid. These unique characteristics of WHP make it especially well-suited to addressing critical public policy objectives related to increasing industrial efficiency and reducing emissions of greenhouse gases and criteria pollutants like sulfur dioxide, nitrogen oxides and particulates. In fact, WHP is considered a renewable energy source in seventeen state renewable portfolio standards and an efficiency resource in three energy efficiency resources standards for many of the reasons stated above.[2]

The process to convert industrial waste heat to electricity is similar to the process used to convert geothermal energy to electricity; both processes can use the same technologies and produce the same emission-free electricity as other renewable resources such as wind and solar. As such, WHP should be provided the same tax incentives as the energy sources included in the Section 48 investment tax credit (ITC) that produce no incremental emissions.

Current tax policies incent known technologies rather than encouraging innovation and new approaches.

For many years, the tax code has been used to promote the deployment of numerous energy technologies that had specific strategic, environmental or geographic benefits which were deemed important at the time. The need for many of these benefits continues to this day. Unfortunately, the tax code incented only specific known technologies; it fails to anticipate new, innovative technologies. Therefore, systems like WHP have been left out, making it more challenging for WHP and others to successfully compete in the marketplace.

The effect of these policies has been to establish an energy landscape dominated by preferred technologies that receive tax support while other, often new and sometimes even more beneficial technologies, receive no tax incentives and thus do not find a foothold in the marketplace. In some cases, this has led to burgeoning industries leaving the U.S. to go abroad where they are better able to compete and their products are deployed more readily.

[1] Waste Heat to Power Market Assessment, ICF for Oak Ridge National Lab, March 2015, http://www.heatispower.org/wp-content/uploads/2015/02/ORNL-WHP-Mkt-Assessment-Report-March-2015.pdf

[2] Catalog of States in Which Waste Heat to Power is Provided Incentives in Renewable Energy and Energy Efficiency Policies and Programs, The Heat is Power Association, November 2014.

Every year, the tax writing committees of Congress are faced with numerous requests to add new technologies to the tax code to address the artificial barrier to competition that is created by the system of specifying particular technologies for tax credit. Although it is rare for legislation addressing these requests to make it out of Committee, through the Congress, and to the President's desk, thankfully the Senate Finance Committee took the first step in passing legislation earlier this year which would add WHP to the current ITC. We hope this bill will move to the floor for consideration in this Congress.

We strongly endorsed the draft tax proposal circulated in the 113th Congress by Chairman Baucus that endeavored to promote the principals of simplification, technological neutrality and cost effectiveness. The draft included WHP as an example: "Furthermore, our existing energy incentives provide different levels of subsidies for different technologies, picking winners and losers with no discernable policy rationale. For example, some clean energy production, such as generating electricity by capturing excess heat at manufacturing facilities, is ineligible for the production tax credit (PTC) because it is not expressly listed in the code."

HiP supports tax reform which provides a level playing field for all clean and efficient power generating technologies. The federal government should transition from picking the technologies it wants to see deployed, often at the expense of stifling innovation, and move toward encouraging the desired outcome. We'd like to see the Committee identify their preferred real outcome and write policy to achieve it. For example, Congress could identify zero- and low-emitting power generation as a desired outcome, allowing power generated from wind, solar, hydro and geothermal resources, as well as WHP and other resources and technologies, to avail themselves of the ITC and PTC because all generate power with no additional emissions.

To elaborate, it helps to look to some uses of WHP technology. A number of our members sell their technologies into both the geothermal and WHP markets. When the technology is deployed to a geothermal project, a 30 percent ITC is applied; however when the same technology is deployed to a manufacturing setting, no such credit is offered, even though power is produced with no emissions in both cases.

We recommend technology neutral incentives that identify outcomes (*e.g.,* power generated from readily available on-site resources that generate no additional emissions) should the committee move forward with full tax reform. In lieu of that, however, we recommend adding WHP to the existing 30 percent ITC and allowing MLP opportunities for WHP.

Our industry has worked with champions in both the Senate and the House to change the tax code to specifically define WHP in the list of eligible technologies and ensure WHP receives the support that other technologies delivering the same benefits receive. Examples of this support include three bills introduced in 113th Congress which would have provided a 30 percent ITC for WHP property: HR 4916 - the Power Efficiency and Resiliency "POWER" Act, S. 2189 - the Energy Efficiency Tax Incentives Act, and HR 2972 - The Heat is Power Act. Supporters have also offered amendments to Tax Extenders legislation to provide a 30 percent ITC for WHP. We applaud this Committee for reporting a proposal in February to

incent investment in clean energy technology that can transform waste heat into power, and we urge its adoption.

Included as an attachment is the formal legislative definition of WHP used in the bills mentioned above. Should Congress fail to adopt comprehensive, technology neutral reform, we hope this committee will use this same language to include WHP as a qualifying technology in the tax code.

In addition, the Master Limited Partnership Parity Act would extend the publicly traded partnership ownership structure, currently limited to fossil fuels, to energy power generation projects, transportation fuels, and related energy activities, including WHP (S. 795 and companion bill HR 1696 from the 113th Congress). Allowing WHP and other distributed generation resources to take advantage of MLP structures would enhance the attractiveness of WHP for investors and industrial waste heat producers.

Key questions the Committee should be asking as it pursues comprehensive tax reform:

1. Should we continue to pick and choose technologies to incent or should we define the desired outcomes and allow all approaches and technologies capable of achieving the results to compete for the opportunity?
2. If technology neutral tax reform is not possible, should we ensure that all technologies used to produce power without emissions are added to the list of qualified technologies and offered the same tax treatment?

We thank you again for the opportunity to provide input and stand ready to provide additional detail regarding any of these points if and when there are additional opportunities to do so.

Sincerely,

Susan Brodie
Executive Director

attachment

Attachment

Legislation to Include Waste Heat to Power (WHP) in Section 48 of the U.S. Tax Code

Three pieces of legislation that would add WHP to the list of qualifying resources for the thirty percent investment tax credit (ITC) in Section 48 of the U.S. tax code were introduced in the 113th Congress. Two, the POWER Act (HR 4916) and the Energy Efficiency Tax Incentives Act (S 2189), use the following language to define waste heat to power property and qualified waste heat resource. The Heat is Power Association supports these bills and recommends using this language to add WHP to the list of qualifying resources for the thirty percent ITC.[3]

(A) Waste heat to power property

The term *waste heat to power property* means property comprising a system which generates electricity through the recovery of a qualified waste heat resource.

(B) Qualified waste heat resource defined

The term *qualified waste heat resource* means—

(i) exhaust heat or flared gas from any industrial process,
(ii) waste gas or industrial tail gas that would otherwise be flared, incinerated, or vented,
(iii) a pressure drop in any gas for an industrial or commercial process, or
(iv) such other forms of waste heat resources as the Secretary may determine.

(C) Exception

The term *qualified waste heat resource* does not include any heat resource from a process whose primary purpose is the generation of electricity utilizing a fossil fuel.

Sources:
POWER Act - https://www.govtrack.us/congress/bills/113/hr4916/text
Energy Efficiency Tax Incentives Act - https://www.govtrack.us/congress/bills/113/s2189/text

[3] While the language in the third piece of legislation, the Heat is Power Act, is comparable, for consistency we support the language in the POWER Act and the Energy Efficiency Tax Incentives Act.