

Case Study: Texas Gas Pipelines

Provided by: KGRA Energy

Description:

Given Texas's abundance of natural gas pipelines, this state should be a prime target for wasted heat developers.

Unfortunately, low energy prices, Texas's lack of recognition that wasted heat is a renewable or renewable equivalent on equal footing with geothermal, solar, and wind energy, and lack of other incentives conspire to force developers of wasted heat recovery projects to avoid Texas.

A short example can demonstrate this case and how the implementation of a 30% investment tax credit at the federal government level (something all traditional renewables receive) would likely change developers' perspectives on pursuing projects in Texas.

Texas has over 58,000 miles of natural gas pipelines. Assuming there is a compression station every 100 miles and furthermore assuming there are roughly 10,000 of horsepower at each location (this is conservative), we would assume there are some 580 stations with a total horsepower of 5,800,000. 1 horsepower is equivalent to .746 kilowatts, so this 5.8 million horsepower is equivalent to 4.326 million kilowatts of power.

Assuming an electrical conversion factor of 15% to these wasted kilowatts provide 649,020 kilowatts of wasted energy, that can be recovered. These 649 megawatts (1,000 kilowatts = 1 megawatt) could annually produce 5.4 million megawatt-hours of power and at an average installed cost per megawatt of \$3,250,000, and would result in over \$2.1 billion of capital expenditures to occur in Texas.

The White House estimates that one job is created for every \$92,000 spent, which equates to nearly 23,000 jobs for Texans.

However, with energy prices near recent lows, \$3,250,000 per megawatt of installation costs help make projects in Texas unprofitable. Something must be done to lower the cost to developers for generating electricity from wasted heat in order for them to focus on projects in this state.

By instituting a 30% investment tax credit (something all traditional renewables receive), and therefore lowering the installed cost per megawatt from \$3.25 million down to \$2.275 million, projects which had previously been overlooked would suddenly become profitable. This would very quickly attract the attention of project developers and would allow Texas to realize its full potential in being a wasted heat recovery epicenter.

Visit our website at www.heatispower.org to learn more about how you can help your state meet its Waste Heat to Power potential today.

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