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Role of State and Local Government and the Private Sector in the Development of Renewables  
and Alternative Energy in America

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Waste Heat to Energy as a Solution to America's Short- and Long-Term Energy Problems

My testimony today is to urge you to classify waste heat from industry as a renewable resource, to create an even playing field for using this valuable energy source to provide useful energy to our country.

In the energy policy roadmap prepared by the Department of Energy, "National Combined Heat And Power (CHP) 2001", the stated goal was to double our use of CHP by 2010. The roadmap further estimates that by accomplishing this target "the U. S. could annually produce:

- 1.3 trillion BTUs per year in reduced energy consumption
- 0.4 million tons reduced nitrous oxide emissions
- 0.9 million tons reduction in SO<sub>2</sub> emissions
- 35 million metric tons reduction in equivalent emissions"

These estimates are from 2001. Extrapolate these figures to 2006 and you get some serious numbers. In a 2003 follow up "Thermally Activated Technologies (TAT) Roadmap" the U.S. Department of Energy stated "American's power producers, buildings, and industrial sectors annually vent 29 quadrillion BTUs of thermal energy into the atmosphere, lakes and rivers. These thermal losses in conversion of fuel to electric power exceed the amount of energy annually consumed by the U.S. Transportation sector or by the entire Japanese economy."

In the CHP and TAT Roadmaps, the government is giving us a big clue as to where we should be placing our priorities. Waste heat, unused heat, the stuff blowing out your stack, is worth a lot of money. In addition, it has a relative short pay-back on your investment.

Technology has reached the state where the utilization of waste heat will top the list of sources of energy that will meet the short- and long-term goals of energy independence. On Tuesday, April 26, 2006, President Bush outlined steps that America will need to take to mitigate the oil industry's domination of our energy policies. Though he stressed the rapid deployment of ethanol, hydrogen fuel cell and hybrid driven automobiles, he never once mentioned the utilization of waste heat.

Please make use of all information that the federal government, especially the Department of Energy, has at its disposal. All federal agencies should know of the recommendations of their counterparts. You will understand the importance the Department of Energy places on the increased use of surplus heat in producing more useful heat, as sources of new supplies get tighter.

To quote a March 22, 2006 U.S. DOE "Energy Efficiency and Renewable Energy" report on Distributed Energy, "Thermal energy recycling is the largest opportunity for reducing energy consumption. American industry needs to accelerate the development of TAT to meet the energy and economic challenges of the future".

Thank you for hearing this important information, and acting to classify surplus heat as a renewable energy resource.