



Ms. Brenda Edwards
U.S. Department of Energy
Building Technologies Program
Mailstop EE-2J
1000 Independence Avenue, SW.
Washington, DC 20585-0121

Re: Preliminary Technical Support Document for Residential Heating Products (Water heaters)

Docket Number: **EERE-2006-BT-STD-0129**
RIN: **1904-AA90**

Dear Ms. Edwards:

Thank you for the opportunity to comment on the recently released Notice of Proposed Rulemaking for Residential Heating Products. Northeast Energy Efficiency Partnerships (NEEP) strongly encourages the Department of Energy (DOE) to consider a number of issues as a means of improving the analytical process of developing its Final rule, particularly with respect to water heaters. While we applaud the Department for many aspects of the proposed rule, there are specific areas we see opportunities for improvement. The effort to set strong energy efficiency standards for residential water heaters is of paramount importance for Northeast states, as they face some of the most aggressive energy reduction use goals, and are home to consumers who live with energy costs that surpass most of the nation; costs that unnecessarily drain the economy. Strong energy efficiency standards on residential water heaters will sharply reduce consumption of electricity and natural gas, lower peak electricity demand, significantly reduce pollution and create new economic opportunities.

We consider this as a crucial stage in the Department's process to set revised standard levels for water heaters, as we feel there are opportunities DOE is missing in proposing Trial Standard Level (TSL) 4. The Department's interpretation of the analysis of the potential benefits to states and consumers supports meaningful improvements to the existing proposed standard levels. In order for these standards to achieve the stated goal of affecting the maximum energy savings that is economically achievable, NEEP would like to directly address a number of issues that DOE has specifically solicited comment for.

In addition to the remarks below, our coalition wholly supports the comments submitted to this docket by the Appliance Standards Awareness Project (ASAP). While some of the issues we discuss echo the points raised by ASAP, we are eager to add a uniquely regional perspective.

1. **The Northeast would benefit greatly if the DOE were to improve their proposed standard level and adopt TSL 5 as the final rule. The region supports the role TSL 5 would play in responsibly drawing higher efficiency, next generation technologies into the water heater market.**
 - o Based on the documented ENERGY STAR qualified water heating units on the market, heat pump water heaters, as well as condensing gas water heaters, are commercially viable, manufacturable and come with a growing infrastructure of service/maintenance professionals. The list of ENERGY STAR qualified heat pump water heaters includes products from many of the major manufacturers including General Electric and Rheem. While manufacturers ramp up productions and promotion of these technologies, it's difficult to argue they do not or will not have the manufacturing capabilities. The



- attractiveness of TSL 5 is that it merely requires these advanced technologies for only the largest capacity electric and gas storage units, very small fractions of the overall markets.
- The Northeast believes that these technologies are the future of residential water heating. By requiring the use of these technologies on only a small fraction of the market, we are able to minimize some of the financial burdens on manufacturers as they begin to transition production lines from yesterday's water heater technologies to those of the future.
 - According to a recent advertisement by Rheem and the Home Depot, their ENERGY STAR qualified heat pump water heater "installs as easily as a standard electric storage water heater". Installation issues are clearly not as serious as many manufacturer claim.
2. Because many Northeast states have aggressive energy savings goals in the near to mid range future, strong federal minimum standards on water heaters can provide a smart, minimal-cost strategy to help them in achieving such goals.
 3. Efficiency programs throughout the Northeast have participated in a multi-regional process to develop "A Specification for residential water heaters installed in Northern Climates" (October 25, 2009) which provides guidance to manufacturers on important performance requirements specific to operation in colder climates. The "specification" highlights the region's desire to see the heat pump water heater market develop and grow.
 - Quoted in the specification; "The end goal of this effort is to ensure that the introduction of this new generation of HPWH products will be as successful as possible in order to pave the way for HPWHs to become the standard product for the electric water heating market."
 - Among our Sponsors on the *Northern Tier Heat Pump Water Heater Task Force* supporting the specification; Cape Light Compact, Connecticut Light and Power, Efficiency Maine, Efficiency Vermont, National Grid, New Jersey Clean Energy Program, Northeast Energy Efficiency Partnerships, NSTAR Gas and Electric Company, The United Illuminating Company, Western Massachusetts Electric Company
 4. The additional demand reductions as a result of TSL 5 (1 GW versus .25 GW) will provide important alleviation to capacity constraints, an important challenge faced by much of the Northeast
 - Minimum efficiency standards that enable retail customers to reduce their annual electricity use have a number of key energy cost benefits. The benefits from those reductions include some of the following avoided costs:
 - Avoided electric capacity costs due to a reduction in the annual quantity of electric capacity and/or demand reduction that ISO-NE requires load serving entities (LSEs) to acquire from the Forward Capacity Market (FCM) to ensure an adequate quantity of generation during hours of peak demand;
 - Avoided electric energy costs due to a reduction in the price of electric energy that is generated to serve remaining load, because that remaining load will be met at prices set by more efficient generating units.
 5. Due to very high energy costs in the Northeast, the cost effectiveness (Life Cycle Cost analysis and payback periods) of a more aggressive standard becomes even more attractive



for residents of this region. Depressed demand is also shown to drive energy prices down, a benefit that affects participants (water heater purchasers) and non-participants due to general price decreases.

- o Greater energy efficiency translates directly to lifetime cost savings which highly depend on the price of that energy. The Technical Support Document shows strong life cycle cost (LCC) analysis results for consumers at Trial Standard Level (TSL) 5 for both water heaters. Since Northeastern businesses and consumers face some of the highest electricity prices (~50 percent higher than the weighted national average) in the country, only strengthening our region’s call for strong water heater standards.

Electricity price comparison¹

Region	Residential Prices (cents/kWh)
New England	17.3
New York	19.2
Mid-Atlantic	15.6
U.S. Weighted Average	11.8

At this point in the rulemaking, we would like to communicate our strong hope that the Department earnestly consider the issues we have raised and improve the current proposal to TSL 5 in the Final Rule. By clearly addressing these areas of concern, we believe that the DOE will be in a more comfortable position to develop a more informed proposed rule. Thank you for your consideration.

Sincerely,

Susan E. Coakley, Executive Director

Supporting Organizations;

Philip Giudice
Commissioner
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Vice President for Climate Advocacy
Conservation Law Foundation

¹ Average Retail Price of Electricity to Ultimate Customers by End-Use Sector, by State, October, 2009, U.S. Energy Information Agency (http://www.eia.doe.gov/cneaf/electricity/epm/table5_3.html)



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