



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 Refrigerators and Freezers

Docket Number: EERE-2008-BT-STD-0012
RIN: 1904-AB79

Dear Ms. Edwards:

Thank you for the opportunity to comment on the recently released Preliminary Technical Support Document for Residential Refrigerators and Freezers. 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 the Notice of Proposed Rulemaking. The effort to set strong energy efficiency standards for residential refrigerators/freezers is of paramount importance for Northeast states, as they face some of the most aggressive energy reduction use goals, and consumers who live with energy costs that surpass most of the nation; costs that unnecessarily drain the economy. Strong energy efficiency standards on residential refrigerators/freezers will sharply reduce consumption of electricity, lower peak electricity demand, significantly reduce pollution and create new economic opportunities.

We view this as a crucial stage in the Department's process to set revised standard levels for refrigerators/freezers. The Department's initial analysis of the potential benefits to states and consumers supports meaningful improvements to the existing 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 address a number of issues that either threatens this goal or would improve the likelihood of achieving such a goal.

1. **Revision to the Federal Test Procedure for Refrigerators, one that measures energy use of icemaking activity, should be finalized in coordination with the efficiency standard's final rule**
 - o Ice making greatly effects electricity usage in refrigerators, both through the process of making ice as well as the effects through-the-door icemaking has on insulating effectiveness. The current test procedure does not account for the usage or efficiency of the actual ice making process. The Association of Home Appliance Manufacturers (AHAM) has launched an effort to update the current test procedure to account for this energy use. We support the active participation from industry as a new procedure is developed, but caution that an industry controlled process and timeframe may lead to missed deadlines and a missed opportunity to incorporate this significant energy use into an efficiency standard.
 - o DOE should consider a deadline for this industry-led process to finalize an updated test procedure (one that incorporates icemaking energy use). After such a date, DOE should proceed in a quick manner to revise the existing test procedure independently. Ideally, the test procedure would be updated prior to the development of a proposed rule (Due in June 2010).



- NEEP supports a limited amount of flexibility in this process. If an agreeable short-term delay to the standard setting process meant the completion of an updated test procedure, we would be supportive of such a compromise.
2. **NEEP generally supports the Department's use of Usage Adjustment Factors (UAFs) in their effort to align calculated energy projections with more accurate real world usage realities. While the use of these adjustment factors is supported, DOE needs to make changes to the way adjustment factors are developed.**
- DOE expects a number of test procedure amendments to be finalized by the time the revised standards take effect. In order to accurately model the expected savings for this updated standard, DOE utilizes usage adjustment factors to estimate where usage is currently and how electricity use will be affected under new standard conditions. To take real life in-field performance into account, the DOE relies on adjustment factors developed using EIA RECS data. While the DOE has developed a rigorous process to approximate in-field electricity usage in accordance with these updated testing conditions, the RECS data used misrepresents refrigeration-only energy use. The RECS data includes the energy used for icemaking activities. NEEP recommends taking this icemaking energy use in the RECS data into account when developing UAFs.
 - NEEP supports DOE's attempt to estimate actual energy usage versus relying on hypothetical calculations. However, NEEP feels that there are more accurate methods for developing adjustment factors. Adjustment factors would ideally be based on actual in field testing studies. NEEP urges the Department when using future in-field adjustments that they are based on statistically sizable studies of sub metered appliances.
3. **Need to quantify the economic benefits of demand reduction**
- While we applaud DOE for having made real progress in their effort to price the benefits from carbon emission reductions, we are concerned that the financial benefits of demand reductions are not being calculated and factored into the National Impact Analysis.
 - When the Department estimates the financial benefits to society due to improved refrigerator/freezer efficiency, they only include savings to the consumer based on a reduced purchase of electricity over the life of the product. The Department fails to include the monetary benefits of demand reduction associated with this improvement in efficiency.
 - Costs associated with avoided energy and capacity have not historically been included in DOE analyses. These standards will reduce the need for the development of further capacity, including electric generation, transmission, distribution, and reliability.
 - Economic benefits from demand reduction will be sizable in the Northeast compared to other regions, as our electrical grids are already strained.
 - NEEP recommends that DOE include the cost of deferred electrical generation as a benefit in its analysis of the impact of new refrigerator and freezers standards and include such analysis in all future rulemakings.
4. **Abundance of market pull programs mitigate transition costs of industry**
- "Market-pull" programs exist throughout the country working to promote ENERGY STAR qualified refrigerators/freezers (units 20 percent more efficient than the existing standard). These programs have been instrumental in creating the awareness and educating the public about the benefits of energy efficiency, efforts that have helped



transform the refrigerator/freezer markets. (Visit [ENERGY STAR Appliance Program Guide Fall 2009](#) for details)

- As part of the American Recovery and Reinvestment Act (ARRA), states will soon be provided a total of \$300 million to encourage the sale of ENERGY STAR qualified appliances, including refrigerators. Connecticut, Massachusetts, Maryland, Maine, New Jersey, New York, Rhode Island, Vermont and Washington D.C will all be utilizing part of their allocation to offer rebates for refrigerators and/or freezers. For more detail, visit <http://www.energysavers.gov>.
- Federal tax credits have been, and continue be (2008-2010), available to manufacturers for producing high efficiency products (efficiency levels 20 to 30 percent above current federal standard). These funds should certainly help to move production lines up the efficiency curve.
- The existence of a robust infrastructure of market pull programs does not mitigate the importance or need for strong federal standards. These programs do however reduce transition costs to manufacturers as they help build the demand and manufacturing capabilities at the higher end efficiencies. The success of these efforts to shift product efficiency has enabled the department to analyze higher levels of efficiency. Standards are the appropriate compliment to a strong presence of programs.

At this point in the rulemaking, we would like to communicate our strong hope that the Department earnestly consider the issues we have raised. By thoroughly addressing these areas, we believe that the DOE will be a stronger position to develop an informed proposed rule. Thank you for your consideration.

Sincerely,

Susan E. Coakley, Executive Director