

January 10th, 2012
Via Electronic Mail



Ms. Amanda Stevens
U.S. Environmental Protection Agency
Ariel Rios Building 6202J
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Energy Star® Refrigerator Specification v5.0, Draft 1

Dear Ms. Stevens:

The following comments are submitted for the record of the Agency's above-referenced specification, released for public comment on November 7th, 2011. They are submitted on behalf of the Northwest Energy Efficiency Alliance. While we understand that the public comment period officially ended in December, we hope you will consider this input on an issue critical to our work with the Energy Star® brand.

The Northwest Energy Efficiency Alliance is a non-profit organization working to encourage the development and adoption of energy-efficient products and services. NEEA is supported by the region's electric utilities, public benefits administrators, state governments, public interest groups and efficiency industry representatives. This unique partnership has helped make the Northwest region a national leader in energy efficiency. NEEA values its longstanding collaboration with the Energy Star® program in bringing the significant benefits of energy savings to the Pacific Northwest Region and its citizens.

Overview

NEEA strongly supports regular and timely updates of the Energy Star® specifications for the program's many covered products. The program's specifications have traditionally focused on delivering significant, reliable, quantifiable and durable energy savings for consumers while maintaining consumer choice of product features and performance. **We believe that EPA stepped outside the bounds of these important specification goals when it proposed a 5 percent credit (hereinafter "the credit") for appliances capable of being "connected" appliances.**

We strongly urge EPA to drop this element of its proposed specification for the reasons explained below.

EPA's Credit Proposal is Premature

In the simplest terms, there is no current justification for an energy savings credit of any kind on the basis of an appliance simply being capable of being "connected."

While NEEA certainly has no doubt that there are benefits to the rapidly expanding “smart grid” capabilities of our utility systems, most of those benefits have yet to be identified in any detail, much less quantified. This is especially true in the case of household appliance “connectivity.” In spite of our attempts to find data that would identify and quantify specific energy and/or demand savings associated with the management of smart-grid connection-capable household appliances, we have yet to find any.

The U.S. Department of Energy (DOE) has consistently failed to find data, as well. In September 2010, DOE stated that information provided by manufacturers “did not clearly indicate that smart grid controls could provide significant benefits when used in refrigeration products comparable to the benefits associated with proposed” energy reductions. (75 FR No. 186, September 27, 2010, at 59530) Nearly a year later, in the same docket, DOE also concluded that, “demand response would not contribute significantly to energy use.” (76 FR No. 179, September 15, 2011, at 57561)¹

The DOE also directly considered the credit issue and rejected it based on a lack of evidence of energy savings. Specifically, they said, “DOE next considered whether a credit may be allowed for demand response features. DOE understands that such features, when applied to refrigeration products, could be used to reduce energy costs by shifting portions of the energy use associated with defrost or icemaking to times when the electricity cost is lower, **but that they would not contribute significantly to reduction of energy use.** (Emphasis added.) EPCA does not allow establishment of energy conservation standards if, “the establishment of such standard will not result in significant conservation of energy” (42 U.S.C. 6295(o)(3)(B)).” (75 FR No. 186, September 27, 2010, at 59530)

In September 2011, DOE issued an RFI seeking information on the nature and definitions of “smart” appliances, on the costs and benefits of “smart” appliances, how appliance test procedures should measure the behavior and impact of the “smart” features of appliances, and other information relevant to the energy use of “smart” appliances. To our knowledge, no hard data on energy use impacts has been submitted to DOE at this time.

Given the primary focus of the Energy Star brand - significant, reliable, quantifiable and durable energy savings for consumers - EPA’s credit proposal in the draft refrigerator specification is clearly premature.

Other Concerns

We have some other concerns about implementing any sort of energy use performance credit for appliance models that otherwise wouldn’t meet the Energy Star® specifications. These include:

1. “Smart” appliances are not new. Appliances such as clothes washers and refrigerator-freezers have been getting “smarter” for many years. These days, many appliances have

¹ Specifically, DOE said, “AHAM’s comments did not provide any information quantifying the potential energy savings associated with implementation of demand response in refrigeration products. The highlighted conclusions of the Electric Power Research Institute study cited by AHAM do not even explicitly indicate that refrigeration product demand response contributed to energy savings. (Id.)” (76 FR No. 179, September 15, 2011, at 57562)

electronic controls that are designed to optimize the performance of the product, including optimizing its energy use. In some cases, the optimal performance may involve an increase in energy use. **It's not at all clear at this time that all "smart grid" interventions with "connected" appliances will result in energy use reductions. In fact, some interventions that interfere with the product's own "intelligent" controls could increase energy consumption. Only data from an appropriately crafted test method, and field data from actual installations, can shed light on this issue. Again, to our knowledge, there is no such data for refrigerator-freezers at this time.**

2. The kind of energy use impacts seemingly envisioned by the credit's proponents can only be realized in "smart grid" applications where utility activation of or data provision to a "connected" appliance's "smart" capabilities is possible. Utility investment in such capability is very limited at this time. **Therefore, even if such benefits can be identified and quantified for specific appliances in specific "smart grid" circumstances, it is impossible to know when such benefits might be realized by individual consumers.**
3. Consumers will understand none of this. Today, the Energy Star® brand is a simple, straight-forward indicator of significant, reliable, quantifiable and durable energy savings. This is the brand's most important value in the marketplace, and one that NEEA values highly. It is quite clear that many consumers – those whose utilities have not yet invested in such capabilities - will not see any benefits from their choice of a "connected" appliance. Their alternative choices – appliances that qualified for the Energy Star® label *without* the need for a credit – would have delivered energy savings and financial benefits with certainty. **We believe that such situations will have the effect of damaging the Energy Star® brand while diminishing energy savings. It will also penalize the manufacturers whose products meet the specifications without the credit, calling the fairness of the program and its rating regime into question.**
4. Several manufacturers have consistently argued against including the IEC-defined network mode in federal test procedures for measuring standby and off-mode energy use. **It would be highly inappropriate to grant any sort of energy use reduction credit for network-connected appliances without also measuring the energy use associated with this feature. To argue for a credit without measuring the debit side of the equation is highly disingenuous.**

Summary

While the time may indeed come for a serious consideration of some sort of credit for appliances capable of response to a "smart grid" system, we believe such a move is premature at this time, particularly for refrigerator-freezers – a product for which no grid-response data exists, to our knowledge. We strongly urge EPA to drop this element of its proposed specification until such time as there is field data sufficient enough to support it. We welcome the opportunity to help EPA craft a proposal at that time.

Thank you for consideration of our comments on this important and complex set of issues.

Charles M. Stephens



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