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June 23, 2021

Via E-Mail

Katharine Kaplan
U.S. Environmental Protection Agency
ENERGY STAR Appliance Program

appliances@energystar.gov

Re: ENERGY STAR Program Requirements, Product Specification
for Consumer Refrigeration Products, Eligibility Criteria, Draft Version 5.1

Dear Ms. Kaplan:

The Association of Home Appliance Manufacturers (AHAM), respectfully submits the following comments regarding the ENERGY STAR Product Specification for Consumer Refrigeration Products, Eligibility Criteria, Draft Version 5.1 (hereafter referred to as Draft Version 5.1).

AHAM represents manufacturers of major, portable and floor care home appliances, and suppliers to the industry. AHAM's membership includes over 150 companies throughout the world. AHAM members employ tens of thousands of people and produce more than 95% of the household appliances shipped for sale. The appliance industry directly employs over 377,000 workers in the U.S. and AHAM members produce more than 95% of the household appliances shipped for sale domestically. The industry's total economic impact exceeds \$198 billion. The home appliance industry, through its products and innovation, is essential to consumer lifestyle, health, safety and convenience. Through its technology, employees and productivity, the industry contributes significantly to jobs and economic security. Home appliances also are a success story in terms of energy efficiency and environmental impact as new appliances often represent the most effective choice a consumer can make to reduce home energy use and costs.

AHAM supports the U.S. Environmental Protection Agency (EPA) and the Department of Energy (DOE) in their efforts to provide incentives to manufacturers, retailers, and consumers for energy efficiency improvement, as long as product performance can be maintained for the consumer. Nevertheless, AHAM has concerns with the methodology that EPA used in developing Draft Version 5.1. Additionally, strongly opposes EPA's plan to begin phasing out the five percent allowance for demand response-capable products.

I. EPA Should Evaluate ENERGY STAR Criteria Based on Shipment Data Instead of Model Counts.

AHAM urges EPA to consider the shipments that would meet EPA’s proposed eligibility criteria instead of simply counting the number of models that would meet the proposed levels. AHAM recognizes that a model-based approach is outlined in the Guiding Principles, but that approach is flawed because simply counting models can miss the penetration of those models in the market. It could be that the models meeting the levels are low volume models and thus, those models may not be representative of the market. If the models meeting the proposed criteria are relatively unavailable, that could mean that the proposed levels will not actually achieve the consumer and environmental benefits EPA estimates in its analysis. AHAM has consistently urged EPA to change its methodology to evaluate shipments instead of model counts, and we continue to do so.

In this specific case, the shipments tell a different story than the model count. EPA’s model-count analysis shows a weighted average of 23 percent of models meet the proposed specification for coolers. But AHAM’s shipment data shows that for coolers in the built-in and built-in compact product classes, just four percent of shipments meet the ENERGY STAR criteria. Contrast this with the 23 percent and 32 percent of models meeting the proposed criteria that EPA’s analysis shows for each of these classes, respectively. For the freestanding compact product class, shipment data show that just 16 percent of shipments would qualify at the draft specification level, as opposed to EPA’s model-count of 22 percent.

Moreover, the overall shipments in this category are low—we question whether EPA’s proposed specification would achieve a significant savings of energy. AHAM collected shipment information from members to understand trends in the industry. The below chart shows shipments, as collected from AHAM members, of miscellaneous refrigeration products over the last five years. Although these shipment numbers do not include shipments of the full industry, they do account for a significant portion of it and based on these data, shipments are significantly lower than DOE estimated under its 2016 Direct Final Rule establishing energy conservation standards for MREF products (81 Fed. Reg. 75194, Oct. 28, 2016).

2016	2017	2018	2019	2020
86,656	97,714	108,613	98,812	113,958

II. EPA’s Methodology For Evaluating Consumer Payback Is Flawed.

As AHAM has commented previously, EPA’s methodology for evaluating consumer payback is flawed and needs to be revised. Currently, EPA selects models it believes are similar but for efficiency and calculates a retail price differential between them. The theory is that by selecting models with similar features, EPA can isolate the cost of improved efficiency. In many instances, EPA has selected only one set of models for comparison.

EPA's approach is flawed in part because it does not take into account that different manufacturers have different cost structures. Thus, EPA could be comparing apples to oranges. Moreover, EPA often relies upon a single data point or only a couple of data points which may or may not be representative. If EPA continues with this methodology, it should at least know the shipments associated with the model pairings it selects so that it can identify whether the models are representative of the market. Its partners can assist in providing that data.

In this particular case, we note that EPA used data from April 2021 in some of its analysis. We note that selecting that single point in time may not represent an accurate analysis. Manufacturers are currently facing unprecedented supply chain challenges including semiconductor chip shortages, delays in obtaining key components and materials such as metals, and increased tariffs. These are the result of a number of converging issues, including the COVID-19 pandemic, natural disasters in key component producing regions, material and component shortages, and international trade relationships. This, combined with all-time high demand for home appliances as consumers spend more time at home, is impacting product cost. As a result, appliance manufacturers are not operating in a market with predictable supply and demand. EPA's analysis should account for these challenges and ENERGY STAR partners can provide more detailed information to EPA.

EPA calculated a payback period of 4.6 years which is very close to the edge of the Guiding Principles' two to five year payback. AHAM questions whether the payback period would fall within EPA's target range if the analysis is revised based on our comments.

III. EPA Should Evaluate The Impact Of Its Proposal On Manufacturers.

EPA does not currently evaluate the incremental costs manufacturers would incur in reaching the proposed criteria and does not always consider in detail the technology options manufacturers could avail themselves of to meet the criteria. These analyses, of course, rely on confidential data from manufacturers. DOE's analysis for minimum energy conservation standards is a good starting place and can often provide the analysis necessary. If that data is out of date, EPA should reach out to manufacturers to fill any gaps. It is important that EPA consider not only the environmental and consumer benefits associated with a specification change, but also the impact on manufacturers. Although the ENERGY STAR program is technically voluntary, its success essentially mandates it in the market for home appliances. Moreover, manufacturers are EPA's partners in the program—without manufacturer innovation, the program could not succeed. Thus, the impact on manufacturer partners should be of utmost importance to EPA.

In this case, we note that AHAM commented in response to DOE's Request for Information on amending energy conservation standards for miscellaneous refrigeration products that there is no new technology that would allow for significant per-unit reduction in energy consumption. Rather, improvements would require tinkering around the edges through modifications of components, adding insulation, changing controls, etc.

This does not mean that any specific manufacturer has used all technologies in any particular product or that each product class uses a particular technology. As a rule, manufacturers make component changes first and, only if this is not sufficient to reach the necessary levels of

efficiency, do they make design changes. This is because the more radical or comprehensive the design change, the more likely that retooling is necessary and, thus, the greater the product cost and the investment. Importantly, efficiency improvements in miscellaneous refrigeration products are not cost-free. Rather, all energy efficiency improvements involve either additional or more expensive components.

IV. EPA Should Not Eliminate The Five Percent Allowance For Connected Products.

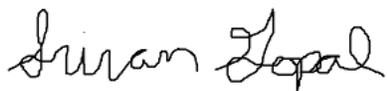
EPA cites “dwindling interest” in demand response programs for residential refrigerators and most other traditional appliances to justify a planned phasing out of the five percent credit for connected appliances and for not providing that credit to coolers.

AHAM does not agree that there is dwindling interest in demand response programs. AHAM is engaged with the California Energy Commission and the Consortium for Energy Efficiency, both of whom are developing energy management programs for smart homes. Furthermore, the DOE’s *National Roadmap for Grid-interactive Efficient Buildings* calls for connected appliances to play a role in meeting the Biden Administration’s climate and efficiency goals.

Connected technologies are on the cusp of reaching maturation and the time is ripe for demand response and flexible load capabilities to take hold. One goal of the ENERGY STAR program is to drive innovation. Energy savings from connected appliances could be greater than the savings gained through appliances meeting ENERGY STAR criteria alone. This is the wrong time to remove this market incentive and EPA should not signal a loss in value, particularly if EPA is considering removing the five percent credit from other product specifications. Therefore, EPA should not eliminate the credit for other appliance categories—AHAM would strongly oppose any proposal to do so. And EPA should consider extending the credit to coolers.

AHAM appreciates the opportunity to submit these comments on the ENERGY STAR Product Specification for Consumer Refrigeration Products, Eligibility Criteria, Draft Version 5.1 and would be glad to discuss these matters in more detail should you so request.

Respectfully submitted,

A handwritten signature in black ink that reads "Sriram Gopal". The signature is written in a cursive, flowing style.

Sriram Gopal
Director, Technology and Environmental Policy

