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June 24, 2022

Ms. Abigail Daken
Manager, ENERGY STAR HVAC Program
United States Environmental Protection Agency
Washington, DC 20460
(Sent via email to WaterHeaters@energystar.gov)

Re: Final Draft ENERGY STAR Version 5.0 Residential Water Heaters specification

Dear Ms. Daken:

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) respectfully submit the following comments on the Final Draft ENERGY STAR® Version 5.0 Residential Water Heaters specification.

AHRI represents more than 300 manufacturers of air conditioning, heating, commercial refrigeration, and water heating equipment. It is an internationally recognized advocate for the heating, ventilation, air conditioning, and refrigeration (HVACR) and water heating industries and certifies the performance of many of the products manufactured by its members. In North America, the annual economic activity resulting from the HVACR industry is approximately \$256 billion. In the United States alone, AHRI's members, along with distributors, contractors, and technicians, employ more than 1.3 million people.

AHRI supports ENERGY STAR's mission to expand markets for more energy efficient products. Unfortunately, the updates to the final draft ENERGY STAR specification for residential water heaters will discourage consumers to purchase higher efficiency gas-fired products, especially gas-fired storage products. As proposed and acknowledged in the draft specification, there are only a fraction of products on the market that meet the proposed gas-fired storage efficiency levels. Considering that millions of non-ENERGY STAR rated gas-fired storage water heaters remain a sizable amount of the installed water heater base in the United States, significant efficiency and energy savings gains could be made by having high efficiency gas-storage equipment replace older and lower efficiency models. However, limiting the selection of ENERGY STAR water heaters that can be installed could potentially result in increased energy consumption and greenhouse gas emissions due to purchase of lower price, minimally compliant models that can be swapped out as part of a like-for-like replacement.

The current proposal, if adopted, would severely limit the number of ENERGY STAR compliant gas-fired water heaters given the “max-tech” efficiency levels being proposed for both gas-storage and gas-instantaneous product types. Given the current lack of product availability at the proposed efficiency levels, our equity concerns expressed in our previous comments¹ still exist related to an overall lack of gas-fired ENERGY STAR models on the market.

Additionally, AHRI has concerns about the NOx emissions reporting requirements for the Residential Duty Commercial Water Heater product-type that was added in this final draft specification. We could not identify in the draft specification any justification as to why this reporting requirement was added. Moreover, this requirement is not related to the energy efficiency of the product and does not align with the overall mission of ENERGY STAR to provide “trusted guidance and online tools to help ... make smart decisions about improving the energy efficiency of their existing homes”.² Additionally, this reporting requirement is not aligned with current NOx reporting practices in jurisdictions where these products are sold. Therefore, if the intent of the requirement is to provide consumers with information on the level of NOx that the product meets, then AHRI strongly recommends the specification be amended to simply add a compliance statement that the product meets the applicable NOx standard in an applicable jurisdiction. In this regard, AHRI recommends aligning with the product certification compliance database managed by the South Coast Air Quality Management District. Ultimately, AHRI would request that ENERGY STAR remove this NOx requirement from the specification. However, if this requirement is to stay in the specification, the recommendation outlined above is a current practice already in effect and would provide the same benefit to consumers without the increase burden added to manufacturers.

We would again reiterate our concern that by limiting the ENERGY STAR specification to a very limited portion of the market, ENERGY STAR water heaters would become unattainable to many low-income consumers due to increased costs. With no other key indicator of energy efficiency and a loss of utility incentives, most consumers will use price as their key decision-making tool. Consumers are likely to select the least expensive replacement units, which are often those at the federal minimum of efficiency levels.

AHRI would request that ENERGY STAR reevaluate their selected level to ensure that there will be sufficient product availability of ENERGY STAR products.

Additionally, AHRI supports EPA’s proposed changes to the ENERGY STAR Final Draft Connected Residential Water Heaters Test Method to Validate Demand Response, Version 1.2. The draft successfully denies a demand response event when the water heater is in an override state.

¹ AHRI comments to EPA on ENERGY STAR Version 5.0 Residential Water Heater Draft 1 Specification submitted on November 11, 2021.

² Energy Star, About ENERGY STAR: “ENERGY STAR for the residential sector,” available at <https://www.energystar.gov/about?s=mega>.

Specifically in Table 1, steps 1-6 end an ongoing demand response event when a consumer override is initiated, and steps 7-8 verify that a new event doesn't start due to an already active override. AHRI would finally request the EPA makes the connected criteria portion of this final draft become effective immediately on the date of publication of this revised standard.

We appreciate the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact me, kbergeron@ahrinet.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Kyle Bergeron", with a long horizontal flourish extending to the right.

Kyle Bergeron
Regulatory Engineer

cc: H. Walter-Terrinoni