Appliance Standards Awareness Project
American Council for an Energy-Efficient Economy

December 9, 2020

Abigail Daken
U.S. Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: ENERGY STAR® Draft 1 Version 4.0 Specification for Water Heaters

Dear Ms. Daken,

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP) and American Council for an Energy-Efficient Economy (ACEEE) on the Draft 1 Version 4.0 ENERGY STAR Water Heaters Specification released on October 28, 2020. We appreciate the opportunity to comment.

We encourage EPA to establish a separate product category (or categories) for 120-volt and split-system electric water heaters with appropriate UEF values. We strongly support EPA raising the minimum UEF values for electric water heaters to reflect the significant market changes since the publication of the Version 3.2 specification. However, we understand that 120-volt and split-system heat pump water heaters that may soon be introduced to the market may not be able to achieve these higher UEF values. Since 120-volt and split-system products may represent lower-cost solutions for certain installation scenarios, enabling these product types to be able to qualify for ENERGY STAR certification would help to increase the market share of heat pump water heaters. Therefore, we encourage EPA, in consultation with the manufacturers of these products, to establish appropriate UEF values for 120-volt and split-system electric water heaters.

We encourage EPA to consider a minimum UEF of 3.30 for all sizes of electric water heaters (except for 120-volt and split-system products). In the Draft 1 specification, for electric water heaters, EPA is proposing UEFs of 3.30 and 2.70 for tank sizes ≤55 gallons and >55 gallons, respectively. EPA notes that more than 90% of heat pump models currently certified to ENERGY STAR would continue to qualify with the higher UEF requirements.[1] We appreciate EPA's commitment to increasing the market share of heat pump water heaters and recognize the potential concern that limiting the number of qualifying products could work against greater heat pump adoption. However, our understanding is that for tank sizes >55 gallons, many of the models with UEFs between 2.70 and 3.30 are older models and that the manufacturers of those models have since introduced updated versions with higher efficiency levels. Therefore, we encourage EPA to consider establishing a minimum UEF of 3.30 for all tank sizes. For the >55-gallon category, requiring a minimum UEF of 3.30 would allow utility programs to claim 70% greater savings compared to EPA's proposal in the Draft 1 specification, increasing the annual savings to almost $100.[2]

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[1] https://www.energystar.gov/sites/default/files/ENERGY%20STAR%20Draft%201%20Version%204.0%20Water%20Heaters%20Specification.pdf. p. 3.

[2] A UEF of 2.70 represents savings of 20.4% relative to the 2.15 UEF Federal minimum standard ((2.70-2.15)/2.70). A UEF of 3.30 represents savings of 34.8%.

We encourage EPA to consider requiring a 10-year warranty on the sealed system for electric water heaters. As noted above, we appreciate EPA's commitment to increasing the market share of heat pump water heaters, and we recognize the concern that requiring a longer warranty could potentially increase cost. However, the Northwest Energy Efficiency Alliance's (NEEA's) Advanced Water Heater Specification already requires a 10-year warranty for heat pump water heaters at Tier 2.0 and above.[3] Therefore, requiring a 10-year warranty may not imply higher cost in this case given the significant market share of products that already provide such a warranty. Ensuring that all ENERGY STAR-qualified heat pump water heaters have a warranty of at least 10 years could help to increase the market share of heat pump water heaters by providing additional value to consumers.

We encourage EPA to require reporting of efficiency at 50°F and 95°F for electric water heaters. Since the efficiency of heat pump water heaters varies significantly with ambient temperature, information about efficiency performance at additional ambient temperatures would allow utility programs to calculate estimated savings for specific climates. NEEA's Advanced Water Heating Specification requires testing at 50°F and includes an optional test at 95°F.[4] We encourage EPA to require reporting of efficiency at 50°F and 95°F in line with NEEA's specification. Specifically, we recommend that EPA require that the 50°F reported value be based on testing, while manufacturers could have the option of either testing at 95°F or extrapolating the 95°F value based on the 50°F and 67°F efficiency values. We understand that these additional reporting requirements would not significantly increase test burden since most manufacturers are already testing their products to the NEEA specification.

We support EPA revisiting the specification for gas water heaters. Compared to the specification for electric water heaters, the current specification for gas products offers little differentiation to consumers. Specifically, while the UEF level for electric water heaters ≤55 gallons in Version 3.2 represents energy savings of more than 50%, the level for gas storage water heaters of the same tank sizes represents savings of less than 10%. This discrepancy will further widen with the proposed update to the UEF levels for electric water heaters. EPA notes in the Draft 1 specification that "if more significant energy savings at a lower initial investment do not materialize, EPA will consider sunsetting [the gas water heater] product categories."[5] We support EPA revisiting the specification for gas water heaters.

Thank you for considering these comments.

Sincerely,

Joanna Mauer
Technical Advocacy Manager
Appliance Standards Awareness Project

Christopher Perry, PE
Research Manager, Buildings Program
American Council for an Energy-Efficient Economy

[3] https://neea.org/img/documents/Advanced-Water-Heating-Specification.pdf.
[4] Ibid.
[5] https://www.energystar.gov/sites/default/files/ENERGY%20STAR%20Draft%201%20Version%204.0%20Water%20Heaters%20Specification.pdf. p. 14.