



November 11, 2021

Abigail Daken
EPA Manager, ENERGY STAR HVAC Program
U.S. Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: ENERGY STAR® Residential Water Heaters Version 5.0 Draft 1 Specification

Dear Ms. Daken,

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP), American Council for an Energy-Efficient Economy (ACEEE), Colorado Energy Office, Green Energy Consumers Alliance, Interfaith Power & Light, New York State Energy Research and Development Authority (NYSERDA), Southwest Energy Efficiency Project (SWEEP), and Washington State Department of Commerce on the Residential Water Heaters Version 5.0 Draft 1 Specification released on October 5, 2021. We appreciate the opportunity to comment.

The Biden Administration has committed to a net-zero economy by 2050, and EPA’s ENERGY STAR water heater specification can play an important role in this transition. With water heating being the second largest component of home energy use and accounting for almost 20% of residential energy bills,¹ setting ambitious efficiency levels for water heating equipment is crucial. Since ENERGY STAR products can help accelerate the development and adoption of more efficient and cutting-edge technologies, the

¹ Farnsworth, D., Lazar, J., and Shipley, J. (2019, January). *Beneficial electrification of water heating*. Montpelier, VT: Regulatory Assistance Project.

net-zero climate goals should act as a framework for setting the criteria for ENERGY STAR certified products. We applaud EPA for proposing more ambitious efficiency levels for gas-fired storage water heaters based on heat pump technology, but we encourage EPA to go further and consider specifying a Uniform Energy Factor (UEF) of 1.3 for all gas-fired water heaters to ensure that the specification promotes the highest level of gas water heater efficiency.

We support the proposal to advance the ENERGY STAR residential gas-fired storage water heaters criteria to heat pump levels. For more than a decade, manufacturers of electric water heaters have had to utilize heat pump technology in order to earn the ENERGY STAR designation. The most recent ENERGY STAR specification requires a minimum UEF of 3.3 for electric water heaters,² which represents energy savings of about 70% relative to the current DOE standards.³ In contrast, the current ENERGY STAR specifications for gas storage and gas instantaneous water heaters represent savings of only about 10% relative to the DOE standards.⁴ Considerable energy savings can be realized from the adoption of gas-fired heat pump water heaters (HPWHs) while maintaining performance and reducing harmful greenhouse gas emissions. EPA estimates that the proposed ENERGY STAR criteria for gas-fired storage water heaters less than 55 gallons can reduce lifetime CO₂ emissions by over 12,000 lbs per unit compared to the current federal standard, and lifetime operational savings are estimated to be over \$1000 per unit.⁵

With the growing need to facilitate decarbonization of water heating to meet the 2050 climate goals, we encourage EPA to look towards the future and be even more ambitious in its approach to setting ENERGY STAR specifications for gas-fired water heaters. While the proposed criteria are a big step in the right direction, we believe EPA should go even further. First, we encourage EPA to require heat pump efficiency levels for all gas-fired water heaters, including both storage and instantaneous water heaters, so that all gas water heaters are subject to the same requirements. In addition, we encourage EPA to require a minimum UEF of 1.3, which is equivalent to the Tier 3 UEF level outlined in the Northwest Energy Efficiency Alliance (NEEA) Advanced Water Heating Specification.⁶ Strengthening the specification for all gas-fired water heaters to a UEF of 1.3 can help provide greater differentiation of products in the market and ensure that EPA fosters the development of improved heat pump technology that advances progress on decarbonization goals.

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https://www.energystar.gov/sites/default/files/ENERGY%20STAR%20Version%204.0%20Water%20Heaters%20Final%20Specification%20and%20Partner%20Commitments_0.pdf. With the exception of 120 V and split-system heat pump water heaters, which are subject to a minimum UEF of 2.2.

³ The current DOE standard for 50-gallon electric storage water heaters with a “medium” draw pattern is 0.92.

⁴ The current range of savings for 40- and 50- gallon gas-fired units with both medium and high draw patterns is 6-12%, and for gas-fired instantaneous water heaters, the current ENERGY STAR specification represents savings of 7% relative to the DOE standard.

⁵ ENERGY STAR Version 5.0 Residential Water Heaters Draft 1 Data Package.

<https://www.energystar.gov/sites/default/files/ENERGY%20STAR%20Version%205.0%20Residential%20Water%20Heaters%20Draft%201%20Data%20Package.xlsx>.

⁶ <https://neea.org/img/documents/Natural-Gas-Advanced-Water-Heating-Specification.pdf>.

Thank you for considering these comments.

Sincerely,



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