

November 23, 2021

Ms. Abigail Daken
1200 Pennsylvania Ave. NW, MC 6202A
Washington, DC 20460

Dear Ms. Daken:

The Consortium for Energy Efficiency (CEE) respectfully submits the following comments in response to the ENERGY STAR® Version 5.0 Residential Water Heater Draft 1 Specification, released by the Environmental Protection Agency (EPA) on October 5, 2021.

CEE is the binational organization of energy efficiency program administrators. Historically, the CEE Board of Directors determined to build a single brand for efficiency and elected to create standing for the ENERGY STAR Program rather than advance the name recognition of CEE or other endeavors that existed at that time. The ENERGY STAR Program adopted specifications supported by CEE and program administrators, providing the confidence that utility ratepayer programs needed to invest in incentives in association with ENERGY STAR. This was a conscious investment and contribution of equity and the sanctioned obligations of utility members, which include responsibility for delivering safe, reliable, and affordable service. The staff and membership of the Consortium continue to perform diligence relative to the ENERGY STAR brand promise and associated performance specifications, given the very serious obligations entrusted to US and Canadian utilities as well as others sanctioned with advancement of voluntary market transformation efforts.

CEE members are responsible for ratepayer-funded efficiency programs in 38 US states, the District of Columbia, and four Canadian provinces. In 2019, CEE members directed approximately 70% of the \$9.3 billion in energy efficiency and demand response program expenditures in the two countries. These comments are offered in support of the local activities CEE members carry out to actively leverage the ENERGY STAR brand. CEE consensus comments are offered in the spirit of strengthening ENERGY STAR, so it may continue to serve as the national marketing platform for energy efficiency.

CEE highly values the role ENERGY STAR plays in differentiating energy efficient products and services that the CEE membership supports locally throughout the US and Canada. We appreciate the opportunity to provide these comments.

Gas Storage Water Heaters Remain a Central Offering within CEE Members’ Residential Energy Efficiency Portfolios

Many CEE members continue to manage programs for gas storage water heaters, with 43 organizations promoting this measure in 2020, as shown in Table 1. This product type remains a fundamental offering within many natural gas and dual fuel utility members’ residential portfolios. Accordingly, CEE specifications continue to offer multiple gas storage tier options to serve these program administrators.

Table 1. CEE Member Gas Storage Water Heating Programs, 2020

| | |
|---------------------------------------|--|
| Avista—Idaho | National Grid—New York Upstate |
| Avista—Oregon | National Grid—Rhode Island |
| Avista—Washington | New Jersey Natural Gas |
| Berkshire Gas | New Mexico Gas Company |
| Columbia Gas of Massachusetts | New York State Energy Research and Development Authority |
| Columbia Gas of Ohio | Nicor Gas |
| Connecticut Natural Gas | NW Natural—Washington |
| Consumers Energy | PSEG Long Island |
| DC Sustainable Energy Utility (DCSEU) | Puget Sound Energy |
| Dominion Energy Utah | Sacramento Municipal Utility District |
| DTE Energy | San Diego Gas & Electric Company |
| Efficiency Maine | SoCalGas |
| Énergir | South Jersey Gas |
| Energy Trust of Oregon—Oregon | Southern Minnesota Municipal Power Agency |
| Energy Trust of Oregon—Washington | TECO Peoples Gas |
| Eversource—Connecticut | Union Gas |
| Eversource—Eastern Massachusetts | Unitil—Massachusetts |
| FortisBC | Vermont Gas |
| Great Plains Natural Gas | Xcel Energy—Colorado |
| National Grid—Downstate Long Island | Xcel Energy—Minnesota |
| National Grid—Massachusetts | Xcel Energy—North Dakota |
| National Grid—New York City Downstate | |

Product Market Availability is a Critical Prerequisite for Members to Effectively Administer Programs

Having available products on the market is valuable to consumers, utilities, and the ENERGY STAR brand. EPA’s Products Program Strategy and Guiding Principles states that the ENERGY STAR standard is “established to recognize products that (3) *are proven and broadly available.*” CEE is uncertain as to whether there will be gas storage water heaters

≥1.00 UEF commercially available when the proposed specification goes into effect in 2023. We are interested in better understanding any information EPA has regarding both product availability and cost effectiveness of models that would qualify with the proposed ENERGY STAR specification.

56.3 million US households used natural gas to heat their water in 2015; of these, a third are estimated to be more than 10 years old,¹ indicating likely need for replacement in the next few years. Emergency replacements account for approximately 85 percent of all water heater purchases in retrofit applications,² and customers typically want immediate, low-cost replacements to avoid the inconvenience of lacking hot water in their home. “Like-for-like” purchases prevail, where customers replace their existing water heater with a similar one with respect to fuel type, capacity, and technology. Customers in many parts of the country also face barriers to fuel switching due to electric panel restrictions, space constraints when considering heat pump water heaters, high up-front costs, and low gas prices in many jurisdictions. ENERGY STAR labeled products could help customers who are looking for energy savings recognize these higher-performing products.

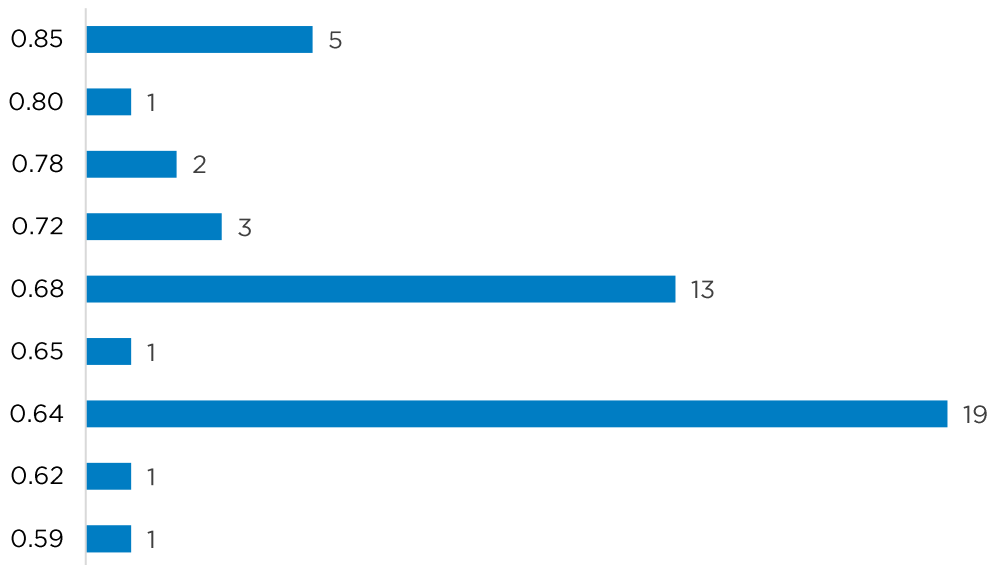
CEE Recommends a Gas Storage Specification Level That Differentiates Highest Performing Models Available

Water heating programs are the most common measure in residential efficiency portfolios following HVAC. More than half of CEE member programs currently incentivize CEE Tier 1 / ENERGY STAR labeled gas storage water heaters (UEF ≥ 0.64 for medium draw products and UEF ≥ 0.68 for high draw products). The present landscape reflects members’ desire to leverage the ENERGY STAR brand for promotion of gas storage water heaters, and also suggests that there are performance levels above ENERGY STAR Version 4.0 that demonstrate increased energy savings. As shown in Figure 1, some members are promoting gas storage water heaters with UEF levels of ≥ 0.78, ≥ 0.80, and ≥ 0.85.

¹ “Table HC8.1 Water heating in U.S. homes by housing unit type, 2015,” Residential Energy Consumption Survey (RECS), U.S. Energy Information Agency, last modified May 2018, <https://www.eia.gov/consumption/residential/data/2015/hc/php/hc8.1.php>.

² Josh Butzbaugh, Linda Sandahl, and Michael Baechler, “US HPWH Market Transformation: Where We’ve Been and Where to Go Next,” PNNL, September 15, 2017, https://rpsc.energy.gov/tech-solutions/sites/default/files/resources/attachments/ECEEE_EEDAL_Paper-159_US-HPWH-Mkt-Transformation_7-21-2017%5B1%5D.pdf.

Figure 1. CEE Member Gas Storage Water Heater Program UEF Levels, 2020



CEE recognizes that there are different ways to measure cost effectiveness. Some CEE members find the current ENERGY STAR Version 4.0 levels cost effective, but others do not, or find CEE Tier 2 (UEF \geq 0.78) cost effective.

The Northwest Power and Conservation Council's Regional Technical Forum currently identifies multiple cost-effective water heating measures, including ENERGY STAR gas storage models.³ A Massachusetts utility does not find the *current* ENERGY STAR / CEE Tier 1 level cost effective, but notes that condensing gas storage water heaters (CEE Tier 2) may be cost effective within the Massachusetts Social Cost of Carbon (SCC) assumptions.

It appears UEF \geq 0.78 would be a good level to set the ENERGY STAR Version 5.0 specification for gas storage water heaters at this time. This level represents a substantive increase from Version 4.0 and encompasses condensing units. CEE requests additional information on EPA's process for determining cost effectiveness to understand how EPA reached the conclusion that there is no cost-effective level below 1.00 UEF.

³ <https://rtf.nwccouncil.org/measure/residential-gas-water-heaters-0>

Gas Heat Pump Water Heaters Present an Exciting Future Energy Savings Opportunity, Pending Necessary Conditions Are Met

CEE members are enthusiastic about natural gas advancements and the prospective of widely available gas heat pump water heaters. Many CEE program administrators are already looking ahead to potential program inclusion and promotional opportunities for high performing gas heat pump water heaters. As an emerging technology, gas heat pump water heaters represent a category outside widely available program offerings.

Those wishing to leverage the ENERGY STAR label for cost-effective energy saving measures in the market will not be able to rely on the EPA platform until there are commercially available and accessible models. CEE looks forward to promoting this technology once these conditions are met. In the interim, one option is for EPA to utilize the Most Efficient platform for distinguishing gas storage models with a UEF \geq 1.00

Support for Proposed Gas Tankless Water Heater Specification

CEE supports EPA's proposed gas tankless water heater specification set at UEF \geq 0.95. As of 2020, 44 members were promoting tankless water heaters, only four of which required this ambitious of a level. We anticipate that, when ENERGY STAR goes into effect, this aspirational level will be the direction member programs go in. While it may be a stretch for some program administrators at this time, we believe UEF \geq 0.95 reflects an appropriate level for the next version of this specification and is one that more programs will adopt.

CEE would once again like to thank EPA for the opportunity to comment on the ENERGY STAR Version 5.0 Residential Water Heater Draft 1 Specification. Please contact CEE Principal Program Manager Alice Rosenberg at arosenberg@cee1.org or 617-337-9287 with any questions about these comments.

Sincerely,



Ed Wisniewski
Executive Director