



December 8, 2020

Abigail Daken
Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20460

Re: ENERGY STAR® Residential Water Heaters Draft 1 Version 4.0 Specification and Test Method to Validate Demand Response Draft 2

Dear Ms. Daken:

On behalf of Bradford White Corporation (BWC), I would like to express our appreciation for the opportunity to comment on the ENERGY STAR Draft 1 Version 4.0 Residential Water Heater Specification and Test Method to Validate Demand Response Draft 2. Please find our comments below.

Draft Specification

BWC is supportive of EPA maintaining the current ENERGY STAR levels for gas-fired storage water heaters, as well as gas-fired storage residential-duty commercial water heaters. We agree with the lack of savings potential and persuasive consumer payback. At this time, we also agree with not increasing the level for gas-fired instantaneous water heaters.

Regarding heat pump water heaters (HPWH), we don't fully understand raising the levels just because a majority of products are already there, yet the shipments for ENERGY STAR rated HPWHs continues to remain very low. In addition, we request clarification on what EPA used in its justification in raising the levels to "fully account for the energy savings these models achieve."

With a variety of parties advocating for other types of HPWHs, such as ones that run on 120V, it presents concerns on whether these lower cost and/or different technologies can achieve these same efficiency levels. And if they're not able to achieve them, they would not be eligible for a lot of the same rebates offered for most of the current HPWH products on the market today. Ultimately, this would work against the adoption of these other HPWH options. We recommend EPA consider in a future ENERGY STAR specification to introduce requirements that would be more appropriate for these other technologies.

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In the draft specification, EPA references HPWHs needing to comply with UL 174 and UL 1995. BWC wants to raise it to EPA's attention that HPWHs will transition to UL 60335-2-40 by January 1, 2024. While this doesn't need to be addressed in this version of the specification, it will be something that EPA will need to update ahead of the 2024 transition date, so HPWHs are technically not eligible due to the certifications required.

As EPA is aware, standard AHRI 1430 is currently being drafted with many elements of the optional criteria likely to be included and with a goal of completing it by the end of 2021. Given these and a similar implementation date to version 4.0 of the Residential Water Heater ENERGY STAR specification, BWC encourages EPA to consider shifting these criteria out of this specification and utilizing AHRI 1430.

If EPA proceeds with maintaining the connected criteria in this specification, we want to make EPA aware that CTA-2045 is undergoing a revision change from the "A" version to the "B" version. We understand that it may not be finalized before this specification is published, but we ask that this is kept in mind if a dot revision is required to the specification to accommodate this change.

BWC appreciates the clarification regarding the data freshness requirements. We agree with these requirements.

We do not understand the inclusion of electric resistance and gas-fired storage in the required messaging section. The first type of product is not eligible to be ENERGY STAR rated, and we are not aware of any gas-fired solutions available that have demand response or connected capabilities. At this time, BWC requests these items are removed from this section of the specification.

As previously stated in our January 6, 2020, letter, we maintain our concerns as it relates to some of the required messaging; the Current Available Energy Storage Capacity; and Advanced Load Up Operational Mode. BWC seeks clarification on these items, especially the expectations of the requirement for Current Available Energy Storage Capacity outside of a lab environment.

While it is noted as a suggestion at this time, BWC recommends that EPA revise information regarding connected capabilities on the product packaging and product itself. It must be recognized that a large percentage of water heaters are sold in a manner where the packaging is not consumer facing, nor do consumers necessarily see their water heater until after it is installed. Therefore, we do not see the value in this and feel it should ultimately leave it to the manufacturer's discretion on how to best present the product's capabilities, connected or otherwise.

In Appendix A, it states that gas-fired water heaters may optionally report EF criteria for models sold in both U.S. and Canada. We'd like to clarify that this optional reporting is only for compliance with Canada; would not be permitted for use in the U.S. to comply with DOE and FTC requirements; and would require a manufacturer to utilize a third party to verify the respective ratings and certify the ratings to Natural Resources Canada (NRCan).

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Draft Test Method

In the figures, it notes the volume or mass measurement is on the outlet of the water heater. BWC recommends that this is moved to the inlet side of the water heater. Through AHRI, the industry has found this to result in more accurate volume or mass measurements due to less fluctuations in the temperature range seen, and therefore minimizing the density range observed. In addition, we've found water meters and mass flow meters to have greater longevity on the inlet side.

To maintain test setup consistency, BWC recommends that a bypass loop is used.

While it was suggested the test method has a different outlet water temperature than used in the Title 24 Joint Appendix 13 (JA 13), we encourage EPA to harmonize with the temperatures used in the DOE Simulated Use Test (SUT) method since this test method is intended for a national audience.

In the draft test method, multiple acronyms used differ from what is used in CTA-2045-A. We recommend that the acronyms are harmonized, as much as possible, to reduce confusion.

Bradford White Corporation thanks you for this opportunity to provide comments on the ENERGY STAR Draft 1 Version 4.0 Residential Water Heater Specification and Test Method to Validate Demand Response Draft 2. Please let me know if you have any follow-up questions.

Respectfully Submitted,

Bradford White Corporation

Eric Truskoski
Senior Director of Government and Regulatory Affairs

Cc: B. Carnevale; M. Taylor; B. Hill; L. Prader; C. Sanborn; J. Robertson; K. Doyle; B. Wolfer;

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