

ENERGY STAR Water Heaters Final Draft Version 4.0 Comment Matrix

Topic	Stakeholder Comment Summary	EPA Response
120 Volt / 15 Amp circuit Integrated Heat Pump Water Heaters	<p>One stakeholder advocated for EPA to refine the definition of 120-volt Heat Pump Water Heaters, arguing that only products designed to operate on a shared circuit need separate requirements..</p> <p>One stakeholder requested that EPA reconsider the minimum First Hour Rating for 120-volt integrated HPWH and either allow the low or medium draw patterns or allow a minimum FHR of 38 gallons in alignment with the Uniform Plumbing Code minimum.</p>	<p>Thank you for your comments. EPA is maintaining both the definition and the minimum FHR for 120-volt / 15 amp circuit integrated HPWHs in the Final Version 4.0 specification. EPA will consider differentiating between shared-circuit and dedicated-circuit products in the next specification revision, once the market for 120-volt HPWHs has had time to mature. Regarding the First Hour Rating, EPA understands that low-usage draw pattern units have limited use cases and would not be appropriate for most whole-home installations. As such, EPA is maintaining the current requirement to avoid potential undersizing issues. As contractors and homeowners become more familiar with sizing by FHR rather than storage volume, and as demand for heat pump water heaters for small apartments and homes grows, EPA may reconsider coverage of this product type.</p>
Split System Heat Pump Water Heaters	<p>Stakeholders generally expressed support of the inclusion of the new split system heat pump water heater category.</p> <p>One stakeholder requested that EPA increase the minimum UEF for split system heat pump water heaters from 2.20 to 2.60 in order to better recognize higher performing models within this category.</p>	<p>Thank you for your support and comments. In order to allow the market for efficient split-system HPWHs to mature, EPA is maintaining the minimum UEF of 2.20 proposed in the Final Draft specification. Should there be a significant number of products with higher performance, EPA will consider increasing the minimum UEF in the next revision process.</p>
Reporting of Performance at Alternate Temperatures and Cold Climate Efficiency	<p>Two stakeholders requested that EPA allow for the voluntary reporting of heat pump water heater performance data at ambient temperatures of 50F and/or 95F.</p> <p>Two stakeholders requested that EPA include a definition of Cold Climate Efficiency in alignment with the NEEA Advanced Water Heating initiative and Washington State Residential Energy Code.</p>	<p>Thank you for your comment. EPA will consider adding these reporting options at a later time, if it becomes clear that there is market demand for them and if the test procedure for measuring performance at alternate ambient temperatures is sufficiently well-defined.</p>
Solar Water Heaters	<p>One stakeholder expressed support for the new Solar Uniform Energy Factor (SUEF) metric and requested that EPA clarify the test method to be used for solar water heaters in the final specification.</p>	<p>The ICC 900/SRCC 300 Solar Thermal System Standard (2020), Appendix A: Solar Uniform Energy Factor Procedure for Solar Water Heating Systems has been finalized and referenced in the specification.</p>

Gas Water Heaters	<p>One stakeholder expressed support for the updated first hour rating and minimum GPM requirements for gas water heaters, but requested that EPA reference usage bins instead of setting numerical requirements for FHR and minimum GPM.</p> <p>One stakeholder encouraged EPA to reconsider sunsetting gas water heater product categories and instead integrate criteria for gas storage water heaters with a UEF > 1 in future specification revisions.</p>	<p>Thank you for your comments. EPA received a range of feedback regarding the requirements for gas water heaters and will release a proposal in summer 2021 after further deliberation.</p>
DR Communications Protocols	<p>One stakeholder requested that EPA align specifically with CTA-2045-B, rather than allowing either CTA-2045-A or B. Other stakeholders expressed support for both CTA-2045-A and B, whereas others supported CTA-2045-A.</p> <p>Several stakeholders requested that EPA require CTA-2045 compliance for all connected water heaters, rather than allowing OpenADR 2.0b as an option for meeting the connected criteria.</p> <p>One stakeholder expressed support for the current protocol options and requested that EPA align with the AHRI 1430 standard once it is completed.</p>	<p>EPA understands that current programs and state requirements are written explicitly including CTA-2045-A, and so will allow products that can meet this specification using either version of this protocol to be recognized as connected.</p> <p>Noting that California is adopting OpenADR 2.0b as a standard DR protocol, EPA is maintaining the flexibility proposed in the Final Draft.</p> <p>EPA encourages the development of the AHRI 1430 Standard and will continue to monitor and support this effort. EPA hopes the standard will align with the optional connected criteria in Version 4.0. Once the standard is completed and published, EPA will consider how our criteria and AHRI 1430 work together.</p>
Physical communications port	<p>Several stakeholders requested that EPA require the CTA-2045 physical communications port for products seeking optional connected recognition.</p>	<p>Thank you for your comment. EPA is maintaining the flexibility proposed in the Final Draft due to commenter support. EPA does believe that there will be widespread availability of CTA-2045 products across the market, so that utilities looking to require that standard or the physical communications port should be able to do so.</p>
Minimum Load Shift	<p>One stakeholder expressed a preference for having DR requests control water heater setpoint instead of specifying a minimum load shift. The stakeholder commented that this would minimize the impact of DR responses on users with water heaters of varying tank sizes and efficiencies.</p>	<p>EPA will maintain the focus on load shift to allow water heater brand owners to continue to have primary responsibility for their customer's comfort. EPA will monitor the market as DR programs develop and may reconsider in future revisions.</p>
Basic or Advanced Load Up	<p>One stakeholder requested that EPA clarify instructions regarding the use of resistive heating elements in response to a load up command and consider requiring that the CWHP provide the DRMS (or other third party) with the ability to specify whether resistance elements may be used during a specific load-up event.</p>	<p>Thank you for your comment. Allowing utilities to specify the use of electric resistance heating elements is contrary to the intentions of the ENERGY STAR program, as it could result in higher electric bills for consumers. As such, EPA is maintaining the Basic and Advanced Load Up definitions from the final draft.</p>

ENERGY STAR Water Heaters Draft 2 Test Method Comment Matrix

Topic	Stakeholder Comment Summary	EPA Response
DR Requests and Responses	One stakeholder encouraged DOE to expand the language in the Test Method to Validate Demand Response to include OpenADR 2.0b requests and responses.	The DR requests and responses used within Test Method to Validate Demand Response refer to definitions within the test method or Appendix B of the ENERGY STAR Specification and are not specific to CTA-2045 or OpenADR.