



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
WASHINGTON, D.C. 20460

OFFICE OF  
AIR AND RADIATION

November 26, 2019

Dear ENERGY STAR® Water Heater Brand Owner or Other Interested Party:

The Environmental Protection Agency (EPA) maintains optional criteria for connected functionality in many ENERGY STAR specifications. In response to broad interest in criteria for large loads of particular value to the grid, the Agency is advancing this work by developing connected criteria for residential water heaters. EPA has updated its proposed optional connected criteria and the Department of Energy (DOE) proposes a corresponding test method to validate demand response (DR) for connected ENERGY STAR certified residential water heaters. There are proposed criteria applicable to all gas and electric products in scope, and models meeting the criteria will be identified as “connected” on the ENERGY STAR qualified products list. Currently certified products need not be affected.

In this Draft 2, EPA continues to seek harmonization with and expand on other efforts to define the performance of connected water heaters, including the California Optional Water Heating Demand Management Credit-- Title 24 Joint Appendix 13, the Northwest Energy Efficiency Alliance (NEEA) Advanced Water Heating Specification, and the CEE Water Heater initiative. In addition, our proposal is informed by the recently released Air Conditioning Heating and Refrigeration Institute (AHRI) 1380 Specification for Variable Capacity HVAC.

Draft 2 includes changes to the specification in the following areas.

Connected Criteria:

- While maintaining the set of DR requests defined in Draft 1, EPA has added a criteria to be able to shift a minimum amount of energy using a combination of those requests, in conditions defined in the test method. This was generally supported by utility stakeholders and aligns with the requirements of the California Title 24 Joint Appendix 13.
- The requirements for loss of connectivity and consumer override were updated to be clearer and more useful based on stakeholder feedback to the Draft 1 requirements.
- EPA has updated Appendix B which maps the responses required by the specifications to the specific messages in CTA-2045-A and OpenADR 2.0b that must be used for these communications.

Use of UEF as main criteria:

- As the U.S. Federal minimum efficiency standards have become effective with UEF criteria, EPA has moved the UEF ENERGY STAR Criteria to the main body of the specification and moved the EF criteria to Appendix A of the specification. This reflects the expectation that new models will be certified using the UEF criteria. Units originally certified using EF criteria may maintain their certification, but any units sold in the US

must submit a UEF rating. Partners that currently have units listed with only EF listed will be contacted to provide this information.

More information on these and other changes can be found throughout the Draft 2 specification.

The accompanying [Draft 1 Test Method to Validate Demand Response for ENERGY STAR residential water heaters](#) proposes procedures to confirm that products respond according to the criteria in the specification.

EPA and DOE will hold a webinar to discuss the proposed changes to the connected requirements and the proposed draft test method on **Tuesday, December 9 from 1pm to 3pm**; please RSVP [here](#) for the specification webinar. We encourage stakeholder input on the Draft 2, Version 3.3 ENERGY STAR Water Heater Product Specification and on Draft 1 of the Test Method to Validate Demand Response in Connected Residential Water Heaters.

Please submit any comments to [WaterHeaters@energystar.gov](mailto:WaterHeaters@energystar.gov) by **January 6, 2019**. All comments will be posted to the ENERGY STAR Product Development website unless the submitter requests otherwise.

Please direct any specific questions to Abigail Daken at EPA, [Daken.Abigail@epa.gov](mailto:Daken.Abigail@epa.gov), or 202-343-9375 and Julia Hegarty at ICF, [Julia.Hegarty@icf.com](mailto:Julia.Hegarty@icf.com) or 202-862-1163. Please direct test procedure questions to Catherine Rivest at DOE, [Catherine.Rivest@ee.doe.gov](mailto:Catherine.Rivest@ee.doe.gov) or (202) 586-7335.

Thank you for your continued support of the ENERGY STAR program.

Sincerely,



Abigail Daken, Product Manager  
ENERGY STAR for HVAC

Enclosures:

[Draft 2 Version 3.3 ENERGY STAR Water Heater Specification](#)

[Draft 1 Version 3.3 ENERGY STAR Water Heater Comment Response Matrix](#)

[Draft 1 Test Method to Validate Demand Response](#)