**Frequently Asked Questions**

**Request for Information Pertaining to**
**Test Procedures for Consumer Water Heaters and Certain Commercial Water Heaters**

## 1. What is the purpose of this notice?

This Request for Information ("RFI") initiates the review process outlined by the Energy Policy and Conservation Act and seeks input from the public to assist the U.S. Department of Energy ("DOE") with its determination about whether amended test procedures are warranted for consumer and certain commercial water heaters defined as "residential-duty commercial water heaters."

Information received in response to this request will help DOE determine whether amending the test procedures for consumer and residential-duty commercial water heaters would more accurately or fully comply with the requirements for the test procedures to not be unduly burdensome to conduct and be reasonably designed to produce test results that reflect energy efficiency, energy use, and estimated operating costs during a representative average use cycle or period of use.

This RFI is part of DOE's ongoing commitment to consider feedback from all interested stakeholders and promote an open and transparent rulemaking process.

## 2. What type of information is the Department looking for?

In this RFI, DOE seeks information related to test procedure issues that have arisen since the adoption of the uniform energy factor ("UEF") test procedure in July of 2014, including those regarding definitions, applicability of test procedure conditions to certain niche consumer water heaters, the first-hour rating metric, recovery efficiency, and standby loss portions of the test procedure; and any additional topics that may inform DOE's decisions in a future test procedure rulemaking, including methods to reduce regulatory burden while ensuring the procedure's representativeness. Residential-duty commercial water heaters must be tested according to the test procedure for consumer water heaters. To the extent DOE is considering amendments to the test procedure for consumer water heaters, the issues are also being considered in the context of testing such commercial equipment.

## 3. What is a consumer water heater?

A product which utilizes oil, gas, or electricity to heat potable water for use outside the heater upon demand, including—

- Storage type units which heat and store water at a thermostatically controlled temperature, including gas storage water heaters with an input of 75,000 Btu per hour or less, oil storage water heaters with an input of 105,000 Btu per hour or less, and electric storage water heaters with an input of 12 kilowatts or less;
- Instantaneous type units which heat water but contain no more than one gallon of water per 4,000 Btu per hour of input, including gas instantaneous water heaters with an input of 200,000 Btu per hour or less, oil instantaneous water heaters with an input of 210,000 Btu per hour or less, and electric instantaneous water heaters with an input of 12 kilowatts or less; and
- Heat pump type units, with a maximum current rating of 24 amperes at a voltage no greater than 250 volts, which are products designed to transfer thermal energy from one temperature level to a higher temperature level for the purpose of heating water, including all ancillary equipment such as fans, storage tanks, pumps, or controls necessary for the device to perform its function.

(42 U.S.C. 6291(27); 10 CFR 430.2).

**4. How much energy do consumer water heaters consume?**

The average per-unit energy consumption is approximately 19 MMBtu/year for gas and oil-fired consumer water heaters and 3,300 kWh/year for consumer electric water heaters. In 2018, the national annual primary energy consumption of consumer water heaters was approximately 2.6 Quads, which accounts for 13% of residential household primary energy use in the U.S.

**5. How many consumer water heaters are shipped annually in the United States?**

In 2018, shipments of consumer water heaters were approximately 9.5 million units.

**6. What is a residential-duty commercial water heater?**

Any gas-fired storage, oil-fired storage, or electric instantaneous commercial water heater that meets the following conditions:

1. For models requiring electricity, uses single-phase external power supply;
2. Is not designed to provide outlet hot water at temperatures greater than 180 °F; and
3. Does not meet any of the following criteria:

| Water heater type | Indicator of non-residential application |
|---|---|
| Gas-fired Storage | Rated input >105 kBtu/h; Rated storage volume >120 gallons. |
| Oil-fired Storage | Rated input >140 kBtu/h; Rated storage volume >120 gallons. |
| Electric Instantaneous | Rated input >58.6 kW; Rated storage volume >2 gallons. |

10 CFR 431.102.

**7. How much energy do residential-duty commercial water heaters consume?**

The baseline per-unit energy consumption is approximately 105 MMBtu/year for gas-fired storage residential-duty commercial water heaters. The baseline per-unit energy consumption for residential-duty commercial oil-fired storage and electric instantaneous have not been examined.

**8. How many residential-duty commercial water heaters are shipped annually in the United States?**

Shipments data is not readily available for residential-duty commercial water heaters as this equipment class was only recently created. However, in the commercial water heater energy conservation standards notice of proposed rulemaking ("NOPR") published on May 31, 2016, DOE estimated that in 2019 approximately 19,500 residential-duty commercial gas-fired storage water heaters would be shipped. Shipments for residential-duty commercial oil-fired storage and electric instantaneous water heaters were not examined in this rulemaking as it was determined that amended standards would not yield a significant amount of energy savings.

**9. Who are the parties that may be interested in this notice?**

Interested parties include manufacturers of consumer water heaters, trade associations, distributors, energy utilities, state agencies, international organizations, and consumer, energy, and environmental advocacy groups.

**10. How does an interested party comment on this notice and when are comments due?**

The comment period for this rule will be 45 days, beginning on the date in which this document publishes in the *Federal Register*. Interested parties may submit comments via the Federal e-Rulemaking Portal at http://www.regulations.gov or via email to WaterHeaters2019TP0032@ee.doe.gov , identified with docket number EERE-2019-BT-TP-0032. Comments may also be submitted via postal mail or hand delivery by following the instructions found in the document.