



The new degree of comfort.™

November 10, 2017

Via Electronic Mail (e-mail)

Ms. Abigail Daken
ENERGY STAR Water Heater Program Manager
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Re: Comments to ENERGY STAR Product Specification for Commercial Water Heaters – Eligibility Criteria Draft 1, Version 2.0

Dear Ms. Daken:

Rheem Manufacturing Company (“Rheem”) submits the following written comments to EPA ENERGY STAR in response to Draft 1, Version 2.0 of the Product Specification for Commercial Water Heaters Eligibility Criteria (“Energy Star Specification”) published on October 12, 2017.

Rheem is a privately held company with headquarters in Atlanta, Georgia, along with operations in Alabama, Arkansas, California, Connecticut, Florida, Indiana, North Carolina, Texas, and Utah. In its 92nd year of operation, Rheem is a global manufacturer of conventional and hybrid storage water heaters, tankless water heaters, solar water heating systems, pool and spa heaters, commercial boilers, residential hydronic and geothermal systems, residential and commercial heating, cooling, commercial refrigeration products, indoor air quality accessories, and replacement parts for all categories. The company’s premium brands include Rheem, Raypak, Ruud, Richmond, Eemax, and EcoSmart. Rheem products have been recognized with countless industry and consumer awards for reliability, innovative design and high quality.

The definitions in the subject Energy Star specification need to account for recent changes to U.S. Department of Energy (“DOE”) regulatory definitions surrounding the commercial water heater category for proper alignment with energy efficiency ratings and industry marketing efforts. Specifically, the gas-fired storage commercial water heater definition in this specification covers any gas storage type water heater with fuel input rates above 75,000 Btu/hour. However, recent changes to the DOE definitions provide for a new “residential-duty commercial” water heater category for gas storage, oil storage, and electric instantaneous water heaters. Energy Star did account for the residential-duty commercial gas-fired storage water heater category in its eligibility criteria published in the recent Energy Star Residential Water Heater specification, Version 3.2. Energy Star should similarly account for residential-duty commercial gas-fired storage water heaters in this commercial



INTEGRATED AIR & WATER



water heater specification by exempting those defined products from the gas-fired storage water heater definition. For example, the residential-duty commercial category for gas storage water heaters covers a fuel input rate range between 75,000 and 105,000 Btu/hour; this commercial gas-fired storage water heater category should cover products above 105,000 Btu/hour or that otherwise would not belong in the residential-duty commercial classification.

Additionally, the definitions in this commercial water heater specification establish a new “commercial-duty residential heat pump water heater” category. Rheem believes this category definition to be ambiguous and unclear as to what exactly would belong in this new category’s scope.

The commercial-duty residential heat pump water heater definitional language provides that, “tanks are not necessarily specified or supplied by the manufacturer and the heat pump is capable of heating water separate from a tank or a storage-type water heater.” We believe this definition intends to cover only “split-system” heat pump water heating equipment having heat pumps separate from the water tank, total electrical input below 12 kW, and marketed for commercial use, but the definition still allows for coverage of manufacturer-supplied water storage tanks or storage water heaters with the heat pump equipment. The coverage applying to manufacturer-supplied storage tanks or storage water heaters as well as the heat pump equipment can be interpreted as the definition encapsulating an integrated heat pump storage tank unit.

The commercial-duty residential heat pump water heater definition also accounts for the capability of the water heater to operate on a three-phase power supply. While three-phase power supply is a commercial operation indicator, Rheem is unaware of convertible three-phase/single-phase heat pump water heaters sold in either an integrated tank or “split-system” arrangement and under a 12 kW power supply. Therefore, the definition is potentially too broad and confusing in the types of heat pump water heaters it would cover.

Moreover, the fact that the total electrical input for the commercial-duty residential heat pump category would be at or below 12 kW places it into a residential electric water heater category by statute and DOE regulations. There is no UEF-based energy conservation standard in place for “split-system” heat pump water heaters rated at and under 12 kW. Energy Star should wait for a residential energy conservation standard to be promulgated by DOE for these types of water heating systems before embarking on setting its own Energy Star standard using the residential energy efficiency metric and defining a new category to validate such a standard. Rheem supports harmonization with DOE water heating categorization for Energy Star specifications, thus we cannot support the “commercial-duty residential heat pump water heater” definition.

With respect to the proposed Energy Star criteria levels, Rheem supports the draft numerical standards based on current energy conservation metrics. However, we do not support a separate Energy Star maximum standby loss category level for gas-fired commercial instantaneous water heaters with storage volumes greater than or equal to 10 gallons. There has not been a prescribed DOE test procedure for this specific classification and size of commercial gas-fired instantaneous water heaters until November 10, 2016, and that test procedure recently took effect on November 6,





2017. In correlation to this very new test procedure, there is not yet sufficient testing performed for these larger instantaneous models to know whether the maximum standby loss level proposed in this specification is appropriate for Energy Star designation.

Rheem appreciates the opportunity to comment on this Energy Star Commercial Water Heater Product Specification, Draft 1, Version 2.0. Should you have any concerns or questions regarding our comments, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell W. Pate".

Russell W. Pate
Regulatory Affairs Manager

Cc: Karen B. Meyers, Rheem Manufacturing Co.

