

Water Heater Version 2.0 Spec - Stakeholder Comments Draft 3 - Hybrid

Topic	Comment	EPA Responses
Hybrid Units		
Hybrid Units	The EPA with this Draft 3 proposal has appropriately dropped the POU and Add-On Heat Pump product categories because of this in part, and should do the same with the Gas Hybrid category until a test procedure is approved.	EPA understands that the NAECA test method for hybrid units is close to completion. With the modified definition proposed in the Updated Draft 3 proposal, EPA hopes to have these units qualify as soon as the test method is available.
General	We encourage further investigation of this category and notes that the information provided in Draft 3 does not satisfy traditional ENERGY STAR program tenets and is not likely sufficient to compel support from energy efficiency program administrators.	EPA welcomes any information or data that CEE can share to better understand why these products may not be supported by the energy efficiency program administrators.
FVIR	EPA should not be establishing additional safety requirements for Energy Star products. Gas equipment safety standards are complex documents whose requirements have both direct and subtle effects on product design and ultimately, the market. EPA has neither the authority nor the broad range expertise to establish its own safety requirements for gas-fired equipment. If EPA has a concern regarding some aspect of the safety of gas water heaters, it should present that concern to either the Z21/83 Committee or the U.S. Consumer Product Safety Commission.	EPA understands the challenges associated with requiring FVIR technology, and after much deliberation with stakeholders, has decided to remove the requirement for FVIR compliance. EPA understands that there is an ANSI committee defined to review the safety requirements of water heaters and EPA will continue to rely on the expertise of this committee. Please refer to the updated Draft 3 released on July 9, 2012 for additional details on the rationale behind this decision.

	<p>FVIR will require significant additional review before program administrators can endorse these products with rebates and other incentives.</p>	
	<p>First and foremost, whether equipped with FVIR technology or not, all water heaters are safe products. It is notable that the agency that regulates consumer products, the Consumer Products Safety Commission (CPSC), has never recalled any water heater, whether floor mounted or wall mounted, because the heater was not equipped with FVIR technology. EPA's apparent stance (that floor mounted gas water heaters are less safe than wall mounted ones) actually may have the consequence (we assume unintended by the EPA) of giving owners of tankless products a "false sense of security" that they are protected from their misuse of flammable materials because tankless products do not ignite flammable vapors.</p>	
	<p>Fundamentally, FVIR is one of several technologies that would be available to manufacturers to reduce the risk of fires started by consumer error (such as spilling gasoline near a water heater, or leakage from gasoline containers that violate law and/or good judgment). At minimum, "power direct vent" achieves the same end, with additional safety benefits. If safety is the motivating concern, this certainly should be an acceptable alternative. We also infer that substantial product and process investment would be required to bring to market a 50 gallon, 75 kBtu, FVIR-equipped product. Why should manufacturers make that investment instead on one that might respond to EnergyStar signals that condensing products are a much better opportunity for this capacity?</p>	
<p>Definitions</p>	<p>Definitions, lines 33-35 – the definition of hybrid is "... intended to limit the coverage of this specification to units with hot water delivery capability appropriate for residential use." – storage heaters above 75,000 Btuh input (with a capacity/input ratio over 1 gallon per 4,000 Btuh) can (and do) provide equivalent water delivery capability, and should also be included.</p>	<p>The updated Draft 3 proposal includes a new definition for residential EPACK covered water heaters, which include storage water heaters with an input rate greater than 75,000 British thermal units (Btu) per hour but not greater than 100,000 Btu per hour, and storage volume between 20 and 100 gallons.</p>

	<p>We recommend revising the definition for “Hybrid type units.” The definition should inclusive of gas water heaters with the following requirements: Input >75,000 Btu/hr; Storage volume > 2 gallons and <20 gallons.</p>	<p>Thank you for your comment. The definition in the proposal distributed on July 9, 2012 contains these parameters.</p>
	<p>To our knowledge there are currently very few products of this type being manufactured, and this category falls outside of definitions for storage and tankless water heaters.</p>	<p>EPA hopes to have the units of this type able to qualify once the DOE test method is defined.</p>
	<p>The definition of “Hybrid type” residential water heaters is confusing and inconsistent. The accompanying “Note” indicates that the intent is to include a subset of units defined by DOE regulations as instantaneous and which are appropriate for residential use. We are supportive of this intent but believe that this objective can be achieved by implementing something which EPA already has planned as a new program. Using terms to define a system as “hybrid” or “marketed for” brings about a considerable gray area between what is readily known as residential and commercial equipment.</p>	<p>The latest proposal contains a much more succinct and hopefully easy-to-understand definition.</p>
	<p>The specification as written allows inclusion of hybrid products up to 200,000 Btu/hour input. This is at odds with the written intent of including products that can be installed “without requiring a larger gas line to be installed in retrofit applications.” The typical ½” gas line found in residential buildings can supply up to around 100,000 Btu/hour.</p>	<p>As defined in the updated proposal which was distributed on July 9th, EPA anticipates that certain hybrid water heaters may require a larger gas line. In certain cases, a larger gas line is required to install a gas tankless water heater. EPA will amend any language in the specification that suggests larger gas lines won't be necessary for installation in certain cases.</p>
Scope	<p>We ask EPA to include all small water heaters designed to provide potable hot water to homes to qualify regardless of whether their input rate is less than or greater than 75,000 BTU/h. We disagree with this size limitation and urges EPA to include all EPACT-covered residential water heaters in the ENERGY STAR program, including larger storage units designed for residential use that use over 75,000 BTU/h.</p>	<p>The latest proposal allows EPACT covered gas water heaters which heat and store water at a thermostatically controlled temperature of 160 F or less, with an input rate greater than 75,000 British thermal units (Btu) per hour but not greater than 100,000 Btu per hour, and storage volume between 20 and 100 gallons.</p>

	<p>Excluded Products, lines 98-100 – excludes “...products intended only for commercial use...” – just because a storage heater is EPACT-covered (input above 75,000 Btuh), it is NOT automatically “intended only for commercial use”. Some higher input storage heaters can be (and are) designed specifically for residential use – just like some hybrid heaters.</p>	<p>EPA recognizes that certain EPACT-covered hybrid water heaters are suitable for both residential and commercial applications. EPA's intention is to exclude products that are sold only for commercial applications. The updated definition of EPACT and Hybrid water heaters should make this distinction clearer.</p>
	<p>As the scope of this ENERGY STAR® program is Residential, we want to re-emphasize our continued support of the U.S. Department of Energy (DOE) definition for the Residential Water Heater Product Classes. Rheem strongly believes that before the EPA considers the addition of any new product category into the ENERGY STAR Residential Water Heater Program that the new product category is appropriately listed in the DOE Residential Product Classifications.</p>	<p>Thank you for your comments.</p>
<p>Criteria</p>	<p>The proposed thermal efficiency for units above 75,000 BTU/h is too low. As proposed in our previous comments, we suggest a thermal efficiency of 90 percent to harmonize with the Section 25C level and to encourage manufacturers to market their existing condensing products rather than worsening their performance to allow lower costs.</p>	<p>EPA agrees with this comment and it has been proposed to make the minimum thermal efficiency level $\geq 90\%$ in the next draft.</p>