

ENERGY STAR Most Efficient 2012 Proposal for HVAC: Stakeholder Comments and EPA Responses

Comment	EPA Response
<p>In regards to the Central Air Conditioners and Heat Pumps ENERGY STAR Most Efficient 2012 proposed criteria, one stakeholder noted that EPA had not yet clarified the requirements for communications, diagnostics, and autoconfiguration.</p>	<p>The change in terminology from "diagnostics" to "system status" is the clarification - intended to clarify the EPA is not asking manufacturers to provide consumers the kind of detailed information that service personnel are accustomed to referring to as diagnostics. Our intention is more closely akin to a "check engine" light on a car, though EPA considers some additional information, such as that the air handler filter needs changing/cleaning, appropriate as well. Stakeholders seeking additional clarification are encouraged to contact EPA.</p>
<p>Two stakeholders expressed support for the inclusion of central air conditioners and heat pumps in ENERGY STAR's Most Efficient and the associated recognition criteria for these products.</p> <p>However, one stakeholder urged EPA to clarify in the Most Efficient criteria and description whether ductless mini- and multi-split AC and heat pump systems, as well as variable refrigerant flow systems, may be recognized as ENERGY STAR Most Efficient 2012. The stakeholder noted that there are many products that meet the Most Efficient criteria, but which have not applied for the designation. Specifically, there are no mini- or multi-split systems currently designated as Most Efficient, despite the fact that there are products in this category that meet the criteria and are in fact more efficient than some of the currently designated Most Efficient air conditioners and heat pumps.</p>	<p>The Most Efficient designation is intended to cover highly efficient ductless mini- and multi-split AC and heat pump systems, and VRF systems. In individual conversations, manufacturers expressed an intent to apply now that they are less occupied with the new certification program for these units. Some manufacturers also indicated that they did not submit their models for consideration because of confusion over the "diagnostics" requirements, which we have made an effort to clarify.</p>
<p>One stakeholder expressed support for the 97 AFUE Most Efficient 2012 criterion for non-weatherized gas furnaces. The stakeholder noted that despite the value of alignment with the 25C tax credit levels and top CEE tier, recent data shows that 95 AFUE furnaces represent 30 percent of the market, which warrants a more stringent criterion for the Most Efficient designation.</p>	<p>EPA seeks to align with the requirements of other programs while staying true to program principles. As the commenter notes, this was not possible for furnaces. In addition, EPA notes that as of February 1, 2012, the ENERGY STAR level for furnaces in Northern U.S. states and in Canada will be 95 AFUE.</p>

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<p>One stakeholder expressed support for both EPA's decision to add boilers to the Most Efficient HVAC suite and the proposed 95 AFUE criterion. This criterion would allow over 150 models to qualify, but is more stringent than the top CEE tier and the Section 25C tax credit levels. While in general EPA should attempt to align Most Efficient criteria with other high performance specifications, given the high percentage of ENERGY STAR models that meet the proposed Most Efficient criterion, the stakeholder agreed that the more stringent 95 AFUE level is appropriate.</p> <p>In contrast, another stakeholder encouraged EPA not to include boilers in the Most Efficient 2012 pilot. This stakeholder commented that the "real world" AFUE for the type of boiler that would be eligible for this program is highly dependent upon the system in which it is installed. The stakeholder further stated that this runs counter to EPA's own requirement that Most Efficient recognized products deliver top performance regardless of where they are installed.</p>	<p>While EPA acknowledges that the system a unit is installed in has an impact on all HVAC products, the Agency believes there is value in directing consumers to top performing boilers. This approach, just as with the ENERGY STAR Most Efficient furnace designation, guides consumers in a complicated marketplace where the savings potential of a more efficient product over a conventional one within the same system is substantial.</p> <p>Understanding that the boiler field efficiency depends on the system it is installed in, EPA and DOE are currently exploring development of a quantitative metric that will allow EPA to take additional savings offered by combined hydronic heating and hot water appliances into account for ENERGY STAR qualification in the future.</p>
<p>One stakeholder commented that the residential boiler category should be divided into two sections:</p> <ul style="list-style-type: none"> <li>- Oil fired = AFUE 90% or higher</li> <li>- Gas fired = AFUE 95% or higher</li> </ul> <p>The stakeholder asked why EPA would exclude oil fired boilers if there is highly efficient technology available in the marketplace for purchase.</p> <p>Conversely, another stakeholder believes that condensing oil boiler technology is "emerging" in the US marketplace and that such products therefore do not meet EPA's guidelines for inclusion in the Most Efficient program.</p> <p>This same stakeholder also commented that the boilers Most Efficient 2012 proposed criteria scope appears to allow the inclusion of appliances other than boilers.</p>	<p>EPA clarifies that oil boilers are included within the scope of the 2012 Most Efficient Boiler requirements and has corrected the final requirements accordingly. Having reviewed savings and available models for oil boilers, EPA agrees that recognizing 90 AFUE oil boilers is consistent with the intent of the Most Efficient designation, and has modified the criteria accordingly.</p> <p>The scope of the Most Efficient Boiler requirements clearly states that residential boilers, that meet the definition as stated in the requirements document, are included under this category. The term appliance in the definition refers to boiler equipment.</p>

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<p>One stakeholder questioned the benefit of the proposed ENERGY STAR Most Efficient boilers, in comparison to improvements in hydronic system efficiencies enabled by non-ENERGY STAR product types. The stakeholder also noted additional maintenance requirements for the more complex ENERGY STAR Most Efficient boilers compared to other ENERGY STAR boilers. Therefore, the stakeholder asserted that inclusion of boilers in the Most Efficient pilot poses a clear threat to the integrity of the ENERGY STAR brand.</p>	<p>ENERGY STAR Most Efficient designation is an opportunity to recognize boilers that will deliver excellent efficiencies within a given system. For boilers as for all HVAC products, changing the system design can yield impressive real-world efficiencies that cannot be entirely reflected in product efficiency ratings. EPA supports encouraging homeowners to consider such system efficiencies whenever they are updating their heating, cooling and water heating systems.</p>
<p>One stakeholder expressed interest in ceiling fans as a potential Most Efficient product category and asked if EPA has considered it. The stakeholder expressed support for promoting any such initiative.</p>	<p>Should EPA carry the ENERGY STAR Most Efficient beyond a pilot phase, the Agency will keep this input in mind.</p>