

Comment Summary and Response for the Proposed ENERGY STAR Most Efficient 2014 Recognition Criteria - November 2013

Topic	Comment Summary	U.S. Environmental Protection Agency (EPA) Response
General	Three stakeholders expressed general support for the ENERGY STAR® Most Efficient program citing that the program is a forum for stakeholders to promote increased energy efficiency, provides valuable information to early adopters of highly efficient products, and plays an important role in the commercialization process of energy-efficient technologies. One of these stakeholders also encouraged EPA to further incorporate ENERGY STAR Most Efficient into EPA's broader Vision and Guiding Principles for the ENERGY STAR program.	EPA agrees that the ENERGY STAR Most Efficient designation can be a useful tool to stakeholders interested in promoting the most efficient of the ENERGY STAR portfolio as well as to early adopter consumers who prioritize super efficiency. EPA believes that the mission and approach of ENERGY STAR Most Efficient are captured in EPA's Strategic Vision and Guiding Principles for the ENERGY STAR program. The Strategic Vision is a broad program description that underpins the program and thus appropriately maintains a higher level focus.
Criteria Revisions	Two stakeholders expressed support for EPA's annual updating of the ENERGY STAR Most Efficient criteria as appropriate. Having up-to-date criteria that continue to reflect the top of the market is important to develop and maintain the strength of the ENERGY STAR Most Efficient brand.	EPA is committed to annual review of the ENERGY STAR Most Efficient criteria. As with the ENERGY STAR program, EPA completes an assessment of performance data and market conditions when determining the next year's efficiency criteria. For 2014, data and market conditions confirmed that the 2013 criteria continue to reflect top performers in the market in most cases.
Planning Process	Two stakeholders encouraged EPA to further integrate ENERGY STAR Most Efficient into their market transformation strategy by developing a more defined relationship between ENERGY STAR and Most Efficient. The stakeholder noted that efficiency programs typically require at least one year of lead time to plan and roll out, and a roadmap of specification revisions or new product categories would be extremely helpful for planning purposes.	<p>EPA has integrated ENERGY STAR Most Efficient into our market transformation strategy by adding it as a permanent program element within the ENERGY STAR program. It is acknowledged to serve the purpose of identifying for consumers those products which offer truly exceptional, inspirational, or cutting edge efficiency performance that aligns with the interests of environmentally-motivated consumers and early adopters. To this end, EPA is developing consumer messaging dedicated to highlighting the ENERGY STAR certified products that have earned the ENERGY STAR Most Efficient recognition and welcomes the opportunity to work with partners on their efforts to do the same.</p> <p>EPA has developed a collection of tools aimed at updating our stakeholders regarding EPA's plans and progress and facilitating their near term planning. These include: the ENERGY STAR product program's annual plan, a three year review schedule for longer lived ENERGY STAR products, and quarterly specification development progress updates. Each of these (2014 annual plan is under development now and will be posted before the end of the year) is posted at: http://www.energystar.gov/index.cfm?c=prod_development.prod_development_index. EPA also circulates the refreshed update document to utility partners via their program account managers quarterly.</p>

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Signage	One stakeholder expressed support for the existing guidance on displaying the ENERGY STAR Most Efficient designation and encouraged EPA to continue working with stakeholders as the program grows. As the ENERGY STAR Most Efficient program becomes increasingly integrated in utility program offerings, it will be critically important that retail sales staff and utility field service teams properly identify and place signage on recognized models only to reduce the potential for consumer confusion and strengthen the designation.	EPA agrees that it will be important to properly identify ENERGY STAR Most Efficient models in retail and will plan to include both signage and sales staff training in our ongoing discussions with retailers.
Web Presence	One stakeholder encouraged EPA to update the information on the ENERGY STAR Most Efficient page and should consider making information on the designation more prominent on its homepage as it will enhance its visibility and uptake. For instance, EPA could include a description of the ENERGY STAR Most Efficient designation under the “Buying Guidance” tab for an individual product category. Additionally, information on recognized products is difficult to find via the website’s search function. For example, if you search “Most Efficient refrigerator” none of the links on the first page of results relate to the ENERGY STAR Most Efficient program.	EPA appreciates these suggestions and is working on improving the utility of the ENERGY STAR Most Efficient website and will take this feedback into consideration.
Program Expansion	Several stakeholders commented that while they understand that EPA did not consider the addition of new product categories for the 2014 criteria due to bandwidth, EPA should investigate expanding the ENERGY STAR Most Efficient 2015 recognition criteria for additional product categories that are well-suited for integration into existing and future incentive programs. The stakeholders recommended that EPA coordinate with utilities and energy efficiency program sponsors to help EPA prioritize the additional products considered. In comments on the 2013 ENERGY STAR Most Efficient criteria, one of these stakeholders suggested that screw-based bulbs, computers, and room air conditioners be included in the future.	In 2014, the Agency will focus on raising awareness of and support for ENERGY STAR Most Efficient. EPA will consider additional product categories as resources allow in future years.
Computer Monitors	Two stakeholders expressed support for EPA’s decision to maintain the ENERGY STAR Most Efficient criteria for computer monitors in 2014 at the levels set in 2013.	EPA thanks stakeholders for their comments.

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Televisions	<p>Several stakeholder expressed support for the proposed ENERGY STAR Most Efficient 2014 television recognition criteria because the levels are sufficiently stringent, the savings are compelling, various screen sizes from 9 different manufacturers on the market meet the levels, and the market appears ready to respond as there are already 30 models on the market today that meet the proposed 2014 levels with the expectation that more models meeting these levels will enter the market in 2014.</p> <p>Two stakeholders also urged EPA to closely monitor manufacturers' implementation of new features such as Ultra HD and Internet-connected TVs to ensure they do not result in high levels of standby power that may not be accounted for in current test methods. Pending the findings of their investigation, EPA should address these new sources of energy use in their 2015 ENERGY STAR Most Efficient update and future revisions to the ENERGY STAR specification.</p> <p>Another stakeholder recommended that the ENERGY STAR Most Efficient 2014 criteria be designed to recognized 69 models across various sizes as opposed to only 30 noting that a target Most Efficient recognition of 5% of the market is appropriate. At the time of the July 26th EPA distribution, 151 models represented 11% of the market. Therefore 5% of the market would correspond to 69 models, not 30.</p>	<p>EPA thanks stakeholders for their comments.</p> <p>EPA is currently monitoring the implementation of Ultra HD and network connectivity in TVs. EPA recognizes that certain models currently certified to the ENERGY STAR Version 6.0 specification have significantly higher power consumption in Standby Active-Low mode and is seeking to better understand why. Any new insight will inform future specification revisions and proposed criteria for ENERGY STAR Most Efficient 2015.</p> <p>EPA has received information from other stakeholders that indicates an increasing market share for ENERGY STAR Most Efficient 2013 products, where in some TV size categories, ENERGY STAR Most Efficient 2013 represents 20 percent of models. EPA's aim with ENERGY STAR Most Efficient is to differentiate the top performing products throughout the calendar year recognizing that, historically, the market share for products meeting ENERGY STAR Most Efficient criteria rises significantly as new models are released. Therefore, EPA has selected criteria that capture the absolute top of the market for TVs with the understanding that the market share will rise again substantially throughout 2014 after new models are released.</p>

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<p>HVAC Qualitative Criteria</p>	<p>One stakeholder requested a more detailed description of what the “automatic setup, monitoring, and service messaging capabilities” are and how it is ensured the products are operating as intended. A second stakeholder expressed support for the update of qualitative criteria for ducted central air conditioners and heat pumps, and ductless air conditioners and heat pumps as the more specific proposed criteria will provide valuable information to technicians and product users. Conversely, a third stakeholder commented that the “qualitative requirements” should not be part of the ENERGY STAR Most Efficient criteria and that EPA should let the industry further develop technologies that best meet the market needs for the following reasons:</p> <ul style="list-style-type: none"> - Scope of new requirements regarding signals that can be used to estimate static pressure is a particular concern; - Communication capability adds costs to a product, which discourages consumers from making certain ENERGY STAR purchases, and it should be up to manufacturers whether to add diagnostics to equipment; - Potentially conflicting and prescriptive CEE and ENERGY STAR requirements would add costs to products and burden manufacturers; and - Prescriptive communication requirements delay development of innovative communication capability with greatly enhanced benefits within the industry to meet short-term program requirements. <p>A fourth stakeholder similarly encouraged EPA to remain mindful that the proliferation of highly efficient ductless split air conditioners and heat pumps is not always in sync with the advancement of controller functionality that must be able to practically integrate with existing system platforms. As such, the stakeholder commented that the proposed HVAC qualitative criteria should not serve as a barrier to the recognition of an already highly efficient product.</p>	<p>Based on these responses and on continuing discussions with stakeholders, EPA will retain the current qualitative criteria for 2014. However, the vagueness of the current criteria remains a problem, causing delays in evaluating products for recognition. In addition, more specific criteria would provide manufacturers with more certainty. Criteria more clearly related to energy savings are in the interest of EPA, consumers, and the environment.</p> <p>For these reasons, EPA intends to propose specific criteria for ENERGY STAR Most Efficient 2015. EPA will use the intervening time for a thorough and open stakeholder process to identify the specific criteria.</p>

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<p>Central Air Conditioner and Air Source Heat Pump Efficiency Criteria</p>	<p>One manufacturer agreed with the proposed quantitative performance levels outlined for CACs and ASHPs, which represent no change to the current performance levels.</p> <p>A second stakeholder recommended that EPA increase the Energy Efficiency Rating (EER) requirement to EER 13 or greater, which would align with the highest CEE tier, as last updated in 2009. EER is important for reducing peak load and therefore valuable for utility programs. Furthermore, many of the products currently recognized as ENERGY STAR Most Efficient 2013 have EERs that exceed 13, some by substantial amounts.</p> <p>While a third stakeholder supported the proposed criteria for 2 ton and larger systems, they commented that that the 18 SEER criteria will be very challenging for a 1.5 ton [18K BTU] AC unit. In situations where a 1.5 ton AC unit is sufficient (regions with relatively cool summers), it is better to use less total energy, even if the system itself is less efficient. By excluding 1.5 ton AC units from being recognized as ENERGY STAR Most Efficient, there is the potential to further encourage AC system oversizing which can result in insufficient dehumidification and general efficiency loss due to short-cycling. As such, the stakeholder suggested that EPA consider introducing less stringent SEER/EER ratings for split 1.5 ton AC systems.</p>	<p>EPA will raise the EER requirement to 13 for Central Air Conditioners to align with CEE Tier 3. None of the currently recognized products would be affected by this change, and discussions with stakeholders indicate broad support for it.</p> <p>As to smaller units, EPA notes that there are 1.5 ton inverter driven units recognized as ENERGY STAR Most Efficient which meet the 20 SEER criteria for ductless units. For 2015, EPA is interested in learning more about this issue and understanding the application limitations of such units.</p>

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<p>Air-Source Heat Pumps and Ductless AC and Heat Pumps - Regional Considerations</p>	<p>One stakeholder commented that EPA should expand its consideration of regionally specific criteria to ENERGY STAR Most Efficient as is currently being done for the ENERGY STAR specifications, especially for products that provide heating and/or cooling. This separation would enable consumers to identify products that have been engineered/optimized for either the heating functionality OR cooling functionality. It is often the case that capacity and efficiency can be improved for one function but more difficult to do both simultaneously.</p> <p>Capacity and COP measured at low temperatures will give additional information about heating efficiency when outdoor temperatures are lower. Therefore, the stakeholder recommended that EPA consider incorporating these metrics into their requirements for products predominantly used to heat (potentially Northern requirements).</p>	<p>For heating equipment, exceptional is exceptional in any climate. For central air conditioners and heat pumps, EPA and DOE analyses found that units with exceptional performance in one climate (e.g. high SEER) also had exceptional performance in other climates (high HSPF). Given this, and that none of the ENERGY STAR specifications for heat pumps or A/C will have regional requirements in 2014, EPA does not feel that regional ENERGY STAR Most Efficient criteria are appropriate at this time.</p> <p>As to requiring performance on metrics that are not currently certified, EPA believes it will take more stakeholders discussions and looks forward to engaging with stakeholders on this topic. EPA will consider this recommendation for 2015.</p>
<p>Ducted vs. Ductless</p>	<p>One stakeholder recommended that EPA consolidate the specification for ducted and ductless systems as these products do not offer an inherently different utility to consumers and should not be held to different standards.</p>	<p>EPA reiterates that while the services provided to consumers are the same, the path to energy savings are different for the different types of units.</p>

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ENERGY STAR Most Efficient and CEE Advanced Tiers	<p>One stakeholder noted that the Consortium for Energy Efficiency (CEE) has indicated it intends to update its Advance Tier in the same timeframe as EPA is updating its ENERGY STAR Most Efficient criteria and that the current combined ENERGY STAR and CEE Tier systems are unnecessarily complex with too many threshold levels adding a significant burden to HVAC manufacturers and inhibiting product innovation. Below are the current ENERGY STAR and CEE Tier status.</p> <ul style="list-style-type: none"> • CEE Tier 1 and ENERGY STAR: SEER (14.5), EER (12) • CEE Tier 2: SEER (15), EER (12.5) • CEE Tier 3 (Advanced): SEER (16), EER (13) • ENERGY STAR Most Efficient: SEER (18), EER (12.5) <p>The stakeholder commented that there is a large benefit to aligning the CEE Advanced Tier for central air conditioners and the ENERGY STAR Most Efficient criteria. Both the ENERGY STAR and CEE programs can, and should, be relevant to promoting improved energy efficiency, and properly-aligned performance requirements are necessary to achieve this goal.</p>	<p>EPA recognizes the value of aligning CEE Tier 3 and ENERGY STAR Most Efficient criteria and understands that CEE does as well. We seek alignment wherever possible given EPA's guiding principles and the needs of CEE members. CEE has discussed in recent meetings a proposal to adjust its Tier 3 requirement for SEER consistent with that for ENERGY STAR Most Efficient, and EPA is raising the EER requirement for Most Efficient Central Air Conditioners to 13 (aligning with CEE).</p>
Boilers	<p>One stakeholder expressed support for continuing to maintain the existing boilers recognition criteria for ENERGY STAR Most Efficient 2014. While 90 AFUE or higher may be a challenge for oil boilers to meet, that is an appropriate level such that if a boiler cannot meet it, it should not be considered most efficient.</p>	<p>EPA appreciates the support of stakeholders.</p>
Furnaces	<p>Two stakeholders expressed support for the proposal to maintain the existing ENERGY STAR Most Efficient furnaces efficiency criteria for 2014.</p>	<p>EPA appreciates the support of stakeholders.</p>
Geothermal Heat Pumps	<p>One stakeholder expressed support for the proposed ENERGY STAR Most Efficient 2014 recognition criteria for geothermal heat pumps.</p>	<p>EPA appreciates the support of stakeholders.</p>

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Ventilating Fans	One stakeholder expressed support for the ENERGY STAR Most Efficient 2014 recognition criteria for ventilating fans, as this seems to be a product category that has not made significant efficiency gains in the past few years but still offers great savings over baseline or standard ENERGY STAR products.	EPA appreciates the support of stakeholders.
Windows - General	One stakeholder expressed support for maintaining the ENERGY STAR Most Efficient criteria for windows at the 2013 levels for 2014 as it expects there would currently be a steep function cost increase for any significant tightening of these criteria due to the current costs of high performance dynamic glazing (e.g., electro- or thermo-chromic). The stakeholder encouraged EPA to work with DOE to develop the next generation of reach specifications for windows, which could be the basis for future Most Efficient designations.	EPA thanks the stakeholder for their comments expressing support for maintaining the current ENERGY STAR Most Efficient levels in 2014. EPA will continue to work with DOE to consider both high performance dynamic glazing products and the next set of ENERGY STAR Most Efficient criteria levels for 2015.
Windows - Glazed Doors and Skylights Exclusion	One stakeholder commented that the continued exclusion of ENERGY STAR qualified glazed doors and skylights sends a distinct message to consumers that there is no segment of these products that meet the Most Efficient criteria. While it is crucial that the currently proposed ENERGY STAR Version 6 U-factors and SHGC values be properly adjusted prior to any determinations made on the anticipated Most Efficient criteria, it is equally imperative that steps be taken immediately following the release of the revised ENERGY STAR Version 6 specification to begin any necessary actions to incorporate skylights and glazed doors into the ENERGY STAR Most Efficient Program.	In 2014, EPA will focus on raising awareness of and support for ENERGY STAR Most Efficient. EPA will consider additional product categories as resources allow in future years.

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<p>Windows Criteria Development Process</p>	<p>One windows industry group commented that the ENERGY STAR Most Efficient Program must provide, at minimum, a two-year timeline of planned events. Significant lead time is needed in order for manufacturers, who wish to participate in the Program to retool machines if necessary, alter production schedules, and properly market and ship products. As the ENERGY STAR Program specifications will be completed by the 2013 year-end, the stakeholder commented that it is appropriate to begin the development of the phase of the ENERGY STAR Most Efficient criteria for windows in early, 2014 establishing of a comprehensive timeline detailing at a minimum:</p> <ul style="list-style-type: none"> - the release date of EPA proposed program specifications (glazed doors and skylights inclusive); - the release date of EPA proposed program specifications (glazed doors and skylights inclusive); - an appropriate stakeholder feedback comment period; - the release date of EPA response to comments; - a second stakeholder comment period; and - the release of the finalized ENERGY STAR Most Efficient 2015 recognition criteria. 	<p>The ENERGY STAR Most Efficient program seeks to identify products that currently exist in the market as top performers, not set criteria levels and wait for manufacturers to respond. To keep the ENERGY STAR Most Efficient program relevant to their target audience, EPA must revise criteria on a much more timely basis than the traditional ENERGY STAR program. EPA will continue do an annual evaluation of program criteria and propose new criteria as needed to maintain the relevance of the designation in identifying the most efficient products in the category. EPA will consider additional comment/response cycles, as it has in the past, on an as needed basis.</p>