

ENERGY STAR® Most Efficient 2024 Stakeholder Comments & Responses

Topic	Comment Summary	EPA Responses
General		
General	<p>One stakeholder is generally supportive of the ENERGY STAR Most Efficient 2024 proposed criteria.</p> <p>A second stakeholder questioned whether the criteria were established considering the ENERGY STAR SOP and guiding principles.</p>	<p>ENERGY STAR Most Efficient is designed to identify and advance highly efficient products in the marketplace. ENERGY STAR Most Efficient compliments the base ENERGY STAR program, identifying for a set of early adopter consumers and energy efficiency program sponsors, the most energy efficient of the ENERGY STAR certified products.</p> <p>Recognizing the nature of highlighting the most efficient, cutting edge products, EPA completes annual reviews/revisions to ensure the Most Efficient program recognizes the best of ENERGY STAR for the segment of the market that prioritizes efficiency foremost. EPA posts supporting data for the proposed criteria for new proposals on the recognition criteria development webpage and also shares the rationale for proposals in the stakeholder webinar.</p>
Criteria	Two stakeholders encourage EPA to consider requiring refrigerant type reporting for all Most Efficient 2024 product categories.	EPA agrees with the importance of refrigerant reporting and has enabled refrigerant reporting across all relevant ENERGY STAR and ENERGY STAR Most Efficient categories, has added filtering by low GWP refrigerants, and included refrigerant educational information for consumers.
Air Source Heat Pumps and Central Air Conditioners		
Central Air Conditioners	<p>One stakeholder supports the removal of Central Air Conditioners from the ENERGY STAR Most Efficient program, while one stakeholder does not support the removal, noting the cost to consumers and the limiting of options for states and localities wishing to advance efficient products.</p> <p>One stakeholder supports the Most Efficient 2024 proposed criteria for Air Source Heat Pumps, but one stakeholder does not support the Most Efficient 2024 proposed criteria for Ductless Heat Pumps.</p>	<p>The EPA proposal to cease recognition of CACs is based on market conditions that indicate that the cooling service of central air conditioners can be delivered via a heat pump that also saves energy and money on heating. In fact, heat pumps are as much as four times more efficient than the most efficient condensing gas furnaces. While heat pumps may provide cooling at an initially higher cost than a CAC, this upfront cost is expected to be offset by tax credits and rebates.</p> <p>Further, removing ENERGY STAR Most Efficient recognition from CACs will not remove any products from the market and does not in any way limit efficient product availability. The full range of CACs will continue to be offered for sale. Even without the ENERGY STAR Most Efficient recognition, utilities and state and local governments can continue to offer consumer rebates by identifying efficient CACs based on their SEER2 and EER2 ratings.</p>

<p>Criteria and Scope</p>	<p>Four stakeholders encourage EPA to align the ducted and ductless heat pump criteria with Consortium for Energy Efficiency (CEE) specifications.</p> <p>One stakeholder encourages EPA to consider eliminating the Most Efficient 2024 EER2 requirement for variable speed heat pumps.</p> <p>Three stakeholders encourage EPA to align the ducted and ductless heat pump criteria with federal tax credit levels.</p> <p>Three stakeholders encourage EPA to apply installation capability relief to ductless and ducted heat pumps.</p> <p>One stakeholder encourages EPA to consider dehumidification features for ducted and ductless air-source heat pumps.</p> <p>One stakeholder recommends EPA to work with the industry to develop standardized diagnostic codes to facilitate quality installations of ENERGY STAR products in the field.</p>	<p>EPA's goal for ESME 2024 air-source heat pumps was to move towards harmonization with CEE's highest non-advanced tier, in order to make it easy for consumers to identify tax-credit eligible units. In these final criteria, EPA has adjusted the levels for cold climate ducted heat pumps to align with the CEE North tier for tax credits, and also slightly lowered the HSPF2 level for non-cold climate ducted heat pumps to match. EPA continues to work with CEE towards full alignment in 2025.</p> <p>EPA understands that humidity control in shoulder cooling months is an important health and comfort issue, and that some central space conditioning units have a high sensible heat ratio (SHR), which leads to less dehumidification for the same cooling capacity. This may lead to high humidity conditions in the home, or to additional energy use for a dehumidifier. EPA is interested in communicating this impact to consumers to help them choose more efficient methods of space conditioning that avoid supplemental dehumidification. EPA understands that many manufacturers already measure and report the SHR for their products, which is done using the provisions in section 4.5 of the DOE test procedure for these products, in Appendix M1 to Subpart B of 10 CFR Part 430. EPA will explore adding this as a reporting requirement in future years.</p> <p>EPA is open to industry collaboration to ensure quality installation of ENERGY STAR products in the field.</p>
<p>Ceiling Fans</p>		
<p>General Support</p>	<p>One stakeholder expressed support for EPA's proposal.</p>	<p>EPA thanks the stakeholder for their support.</p>

Clothes Dryers

Criteria	<p>One stakeholder encourages EPA to increase the stringency of the Most Efficient 2024 CEF criteria.</p> <p>One stakeholder recommends that EPA designate a new product category for compact electric (120 V) dryers.</p> <p>One stakeholder encourages EPA to require reporting heat pump technology.</p>	<p>EPA appreciates the comments and plans to maintain the criteria for dryers, now labeled as Electric (All Other). Currently, 21 base models from 8 brands, representing both heat pump and hybrid heat pump technologies, meet the proposed criteria. EPA is finalizing the criteria with a separate product class for compact ventless 120V units as proposed. At the proposed levels energy savings will increase to 40% better than the federal standard for standard sized units, 61% for compact ventless 240V units, and 52% for compact ventless 120V units.</p> <p>EPA continues to encourage partners to complete optional fields for technology type when certifying products to make it easier for utilities to incentivize these technologies in the market. As Most Efficient is an annual designation, EPA intends to review the criteria next year.</p>
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Clothes Washers

General Support	One stakeholder expressed support for EPA's proposal.	EPA thanks the stakeholder for their support.
Criteria	<p>Two stakeholders encourage EPA to consider allowing combination washer and dryers to be listed in both product categories or create a separate category for combination units.</p> <p>One stakeholder expresses support for the Most Efficient 2024 but recommends that the efficiency levels need to be increased for the Most Efficient 2025 due to the DOE final rule effective date</p>	<p>EPA has created a separate Product Finder page and Dataset for Residential Combination All-in-One Washer-Dryers. Links for both can be found under the Appliances section of the ENERGY STAR Certified Product Data Sets and APIs page, for which the link is listed below. EPA also plans to add a note to the ENERGY STAR Clothes Dryer Specification to clarify the status of Residential Combination All-in-One Washer-Dryers.</p> <p>https://www.energystar.gov/productfinder/advanced</p>

Computer Monitors

Criteria	<p>One stakeholder recommends revising the current ESME criteria in harmonization with the state appliance standards in New York and California.</p> <p>One stakeholder strongly supports EPA continuing to include Sleep Mode power consumption in Total Energy Consumption.</p>	<p>EPA appreciates the feedback and plans to maintain the criteria this year. EPA will continue monitoring the market to identify the most efficient models on the market.</p> <p>EPA appreciates stakeholder support for including Sleep Mode Power in Total Energy Consumption calculations and agrees that inclusion is the best way to represent the net energy consumption.</p>
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Consumer Refrigeration Products

General Support	<p>Two stakeholders expressed general support for the EPA proposed changes to certain subcategories of refrigerators. One noted that market share based on their sales data is within the target range for Most Efficient.</p>	<p>EPA appreciates the comments, and the insights shared on regional sales data.</p>
Criteria	<p>One stakeholder suggests EPA develop a test procedure that captures the efficiency gains from advanced adaptive compressors and requires reporting of refrigerant type.</p> <p>One stakeholder suggests EPA plan to adjust 2025 Most Efficient in response to DOE's forthcoming final rule for consumer refrigeration products.</p>	<p>EPA appreciates the comments and suggestions. Regarding 2025 ENERGY STAR Most Efficient, in the Spring of 2024, EPA will review the state of the market and all other considerations to develop proposals for 2025 ENERGY STAR Most Efficient.</p>

Dehumidifiers

General	<p>One stakeholder expressed support for EPA's proposal. Another stakeholder expressed support for EPA's proposal except for portable dehumidifiers with a product capacity of \leq 25.00 pints/day. The stakeholder encourages EPA to raise the IEF criteria from 1.70 to 1.75 to truly recognize the most efficient models on the market.</p>	<p>EPA thanks the stakeholders for their feedback. EPA agrees that an IEF of 1.75 for portable dehumidifiers more appropriately recognizes the most efficient models on the market and has updated the criteria accordingly.</p>
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Dishwashers		
General Support	Two stakeholder expressed general support for the EPA proposed levels.	EPA thanks the stakeholders for their support.
Geothermal Heat Pumps		
General Support	One stakeholder expressed support in separating the criteria for geothermal heat pumps from air-source heat pumps.	EPA thanks the stakeholder for their support.
Room Air Cleaners		
Criteria	Two stakeholder expressed general support for EPA's proposed levels and recommends revisiting Room Air Cleaners for 2025 Most Efficient following the new DOE test procedure.	EPA thanks the stakeholder for their support and will continue to monitor for relevance.
Room Air Conditioners		
General Support	Two stakeholders support EPA's proposal to significantly increase the criteria. Two stakeholders supports EPA's proposal to develop a test procedure for room air conditioners with heating capability.	EPA thanks the stakeholders for their support.
Ventilation Fans		
General Support	One stakeholder expressed support for EPA's proposal.	EPA thanks the stakeholder for their support.

Windows and Sliding Glass Doors

<p>General</p>	<p>Several commenters indicated that EPA's proposal changes to the Most Efficient criteria in the South-Central (SC) and Southern Zones (S) were too stringent and one commenter supported the proposed criteria. One set of proposals from commenters decreased the U-factor stringency for the SC and S zones from U= 0.20 or U=0.22 (proposed) up to U=0.25. One commenter suggested increasing the U-factor to 0.23 for those zones.</p> <p>Several of the commenters suggested that the SHGC not go below 0.23 for the SC and S zones. One commenter claimed SHGCs below 0.23 may require tinted glass.</p> <p>Two commenters suggested removal of the Northern Zone minimum SHGC requirement since some triple pane windows could have trouble meeting the minimum SHGC level.</p> <p>Several commenters suggested that EPA retain the Performance Grade (PG) requirement for the Most Efficient window, patio door, and skylight products claiming that code adoption of the PG rating was not uniform across the country and the PG rating encourages some minimum level of strength, safety, and durability for the public.</p>	<p>EPA thanks the stakeholders for their comments. However, EPA does not agree with the commenters' suggestion to raise the U-factor in the South-Central (SC) and Southern (S) zones to 0.25 or even 0.23. This change would reduce the energy savings for individual homeowners and change the criteria so that it would not represent the most efficient products in the marketplace. Therefore, EPA does not accept the commenters' proposal.</p> <p>EPA appreciates the suggestion from commenters that the SHGC be raised in the SC and S zones to ≤ 0.23. EPA disagrees with this proposed change, however. First, EPA's proposed criteria already sets the SHGC level at ≤ 0.23 for the SC zone. Second, the suggested change for the S zone would save less energy for consumers. As explained in the 2024 Most Efficient memo and the associated webinar, EPA conducted analysis and reviewed data from the Version 7 criteria revision that show equivalent energy performance for the proposed levels and that products are available from several companies that can meet the criteria.</p> <p>EPA thanks the commenters for their suggestion to remove the minimum SHGC requirements for the Northern zone. However, as discussed in the Version 7 criteria revision, window products with very low SHGC levels in the Northern zone save less energy than medium or higher level SHGC products. Therefore, EPA will maintain the minimum SHGC level for the Northern zone criteria.</p> <p>EPA appreciates the commenters' concerns about removing the Performance Grade (PG) requirement from the Most Efficient (ME) criteria. However, as explained in the 2024 Most Efficient memo, inclusion of the PG requirement has not significantly helped the energy efficiency of products and has made product review slow and burdensome. Removing this requirement will reduce the burden on manufacturers to submit PG data to the program, allow a much faster review process, and may facilitate inclusion of Most Efficient products in the current ENERGY STAR window, door, and skylight product finder. Therefore, EPA will proceed with removal of the PG requirement from the ME criteria.</p>
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