

# ENERGY STAR® Version 5.0 Room Air Conditioner Final Draft Specification Stakeholder Comment Response Matrix

Topic	Comment	EPA Response
<b>Efficiency Requirements</b>	<p>Five stakeholders support EPA’s Draft 2 proposal.</p> <p>One stakeholder is concerned about EPA relaxing the proposed levels in Draft 2. The stakeholder cited strong support both analytically and from advocates for low-income communities and urges EPA to move forward with the Draft 1 proposed levels for the Version 5 specification. A second stakeholder expressed concern regarding availability of ENERGY STAR models even at the eased levels.</p>	<p>EPA appreciates the stakeholder comments regarding the proposed Version 5.0 efficiency criteria. With DOE proposing to raise the federal minimum efficiency standards for all room air conditioner (RAC) product classes to be more efficient than current ENERGY STAR Version 4 levels, ENERGY STAR can help pave the path for the near-term RAC market by setting higher efficiency levels, certifying and labeling products that are more efficient, and recognizing leaders that are achieving higher levels of efficiency ahead of when the new DOE standards take effect.</p> <p>EPA recognizes that few models currently available on the market today would meet the efficiency requirements proposed in Draft 1. EPA relaxed most of the levels in Draft 2, which allows all the current Most Efficient models to meet Version 5. Further, through conversations with manufacturers throughout this specification revision process, EPA understands the Draft 2 levels are achievable and ample selection will be available when Version 5 goes into effect.</p>
<b>Scope</b>	<p>One stakeholder recommended EPA eliminate the non-louvered product classes from scope for ENERGY STAR certification out of a concern that lower efficiency non-louvered window AC units would be sold next to and be selected instead of the higher efficiency louvered window AC units.</p>	<p>EPA appreciates the stakeholder comments regarding non-louvered models being in scope for ENERGY STAR certification. It is EPA’s understanding that non-louvered products are a very small percentage of total shipments and therefore occurrences should be rare where consumers would see a lower-CEER non-louvered product next to a higher-CEER louvered product and choose the lower-CEER non-louvered product because of the ENERGY STAR label.</p>
<b>Timing of Specification Revision Process</b>	<p>One stakeholder stated EPA should wait until the new DOE standards are known before finalizing Version 5.0.</p>	<p>EPA appreciates the concern and the stakeholder recommendation that EPA wait until DOE has published its final standards to set new ENERGY STAR criteria. EPA believes that the program can have greater impact and help the RAC market work towards the levels set by DOE by finalizing V5.0 sooner and giving manufacturers ample time for their 2024 cooling season design. Given the ENERGY STAR specification transition time as well as the RAC product cycle, Version 5 would need to become effective during Fall 2023 to impact the 2024 cooling season. Waiting until DOE’s final standards are published would push the Version 5 effective date to beyond what is feasible to influence the 2024 cooling season.</p>

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<b>Effective Date</b>	Two stakeholders support EPA’s timeline that has the Version 5 taking effect in October 2023 and influencing the 2024 market.	EPA thanks the stakeholders for these comments. EPA is intending for the Version 5 specification to become effective for the 2024 cooling season, which based on EPA’s understanding of RAC design and production cycles can be met. EPA is setting the effective date for the Version 5 specification to be October of 2024. The exact effective date in October will depend on when the Final Version 5 specification is published in February.
<b>Reporting Requirements</b>	<p>One stakeholder supports the inclusion of refrigerant reporting.</p> <p>One stakeholder supports the removal of sound reporting.</p>	<p>EPA thanks stakeholders for these comments.</p> <p>EPA agrees providing refrigerant reporting will help consumers and utilities understand which products use lower-GWP refrigerant.</p> <p>EPA understands the concerns around sound pressure testing. EPA encourages development of a consensus industry standard for testing sound for these products.</p>
<b>Connected Credit</b>	<p>Five stakeholders support EPA’s proposal to simplify the connected criteria and remove the five percent credit for room air conditioners. One stakeholder encourages EPA to strongly urge manufactures to report connected functionality such that it is shown in ENERGY STAR Product Finder as it will be incredibly important for consumers and programs alike.</p> <p>A stakeholder asked that EPA mandate the inclusion of a CTA 2045 port for all ENERGY STAR connected room air conditioners.</p> <p>One stakeholder is not in favor of EPA removing the five percent credit. They state, connected technologies are on the cusp of reaching maturation and the time is ripe for demand response and flexible load capabilities to take hold. They continue, one goal of the ENERGY STAR program is to drive innovation and energy savings from connected appliances</p>	<p>EPA appreciates the stakeholders comments. ENERGY STAR is committed to furthering connected criteria for RACs to make it more useful to partners interested in RAC grid response.</p> <p>EPA allows connected recognition of products using a CTA-2045 port, OpenADR, or both. Through discussion with stakeholders, the Agency understood that programs would look to aggregators to address demand response in room air conditioners and OpenADR would suffice. As far as we are aware, there are currently no products on the market offering a CTA-2045 port. EPA received comment on Draft 2 that some programs using CTA for other devices would add RACs if there were some with a CTA port. That would be a good outcome, but EPA continues to believe that a strong demand from programs is the market signal that will encourage manufacturers to include a CTA 2045 port. EPA does not believe a specification requirement would have the desired effect, and it would meanwhile make the specification useless for anyone looking for a RAC with OpenADR.</p>

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	<p>could be greater than the savings gained through appliances meeting ENERGY STAR criteria alone.</p>	<p>EPA continues to plan to remove the 5% energy use allowance for Version 5. The predominant reason for this is because the models that are mainly getting certified as ENERGY STAR connected are those that need the 5% credit to meet the ENERGY STAR efficiency requirements, whereas the highly efficient models that are Smart or Wi-Fi capable are not being certified connected. This works against not only the program’s intent to deliver efficiency but also against the market’s interest in increasing the number of connected products and furthering innovation in grid responsive technologies.</p>
<b>Safety</b>	<p>One stakeholder states language in Draft 2 contradicts the latest safety standards. To address this, the stakeholder recommends that a new item “d” be added at line 136 of the Draft 2 Version 5.0 and 6.0 that reads: “The fan may continue to run when necessary for compliance with the applicable safety standards.” This recommended language will allow products using flammable refrigerants to meet their respective safety standards, by safely dispersing any refrigerant leaks, and still qualify for ENERGY STAR certification.</p> <p>The stakeholder also states the Energy Saver Mode provisions need clarification with respect to connected room air conditioners (e.g., products with a scheduling function). As written, if a unit turns off, it must come back on in Energy Saver Mode. However, consumers with connected devices may schedule the unit’s operation. The stakeholder states, in these instances, turning the product on will not cool the space sufficiently, leading to the unintended consequence that users may instead leave the units on or run them longer in order to achieve adequate cooling. This undercuts the added efficiency that Energy Saver Mode brings.</p>	<p>EPA appreciates the stakeholder’s comment and understands the importance to avoid any potential conflict between the Energy Saver Mode and safety standards. For the Final Draft, EPA has added the suggested text to allow the fan in TTW RACs to run when necessary for compliance with applicable safety standards.</p> <p>EPA appreciates the stakeholder’s comment on Energy Saver Mode related to connected devices. EPA encourages stakeholders to share any information regarding consumers being concerned about Energy Saver Mode or consumers disabling Energy Saver Mode because they are disappointed by the Energy Saver Mode performance.</p>
<b>Version 6.0</b>	<p>Four stakeholders appreciate EPA publishing its intent for Version 6.</p> <p>One stakeholder states, while EPA publishing its intent for Version 6 is a better approach, EPA should wait to know the</p>	<p>EPA had support for providing a target for Version 6 from brand owners, some efficiency community stakeholders, and DOE. EPA will continue the development of the Version 6 levels in consideration of DOE’s process and will engage stakeholders in this process.</p>

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	DOE standards in order to assess whether or how much EPA should amend ENERGY STAR criteria. Another stakeholder agrees that it is premature to establish Version 6 levels.	
<b>Other</b>	One stakeholder anticipates that the market demand for RACs that also provide heating will grow into the future. The stakeholder encourages EPA to invest in developing a heating mode test that can be incorporated into the forthcoming Version 6 or an amendment to Version 5. The stakeholder states this will allow the market to better understand the energy consumed by RACs in both heating and cooling modes. The stakeholder encourages EPA to collaborate with manufacturers and decarbonization stakeholders to learn more about future market adoption of RACs with heating capabilities.	EPA is aware of new room air conditioner models with innovative and efficient heating modes. DOE and EPA plan to develop a test to measure this heating energy consumption. EPA encourages any interested stakeholder to work with EPA and DOE on this effort.