Consortium for Energy Efficiency

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March 18, 2025

Ms. Holly Tapani
US Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Ms. Tapani:

The Consortium for Energy Efficiency (CEE[SM]) respectfully submits the following comments in response to the ENERGY STAR Versions 6.0 and 7.0 Room Air Conditioner (RAC) Draft 1 Specifications proposed recognition criteria, released by the Environmental Protection Agency (EPA) on November 26, 2024.

CEE is the binational organization of energy efficiency program administrators and a staunch supporter of the ENERGY STAR Program. CEE members are responsible for ratepayer-funded efficiency programs in 38 US states, the District of Columbia, and four Canadian provinces. In 2021, CEE members directed over 60 percent of the $9.0 billion in energy efficiency and demand response program expenditures in the two countries. These comments are offered in support of the local activities CEE members carry out to actively leverage the ENERGY STAR brand. CEE consensus comments are offered in the spirit of strengthening ENERGY STAR so it may continue to serve as the national marketing platform for energy efficiency.

CEE highly values the role ENERGY STAR plays in differentiating energy efficient products and services that the CEE membership supports locally throughout the US and Canada. We appreciate the opportunity to provide these comments.

This New Market Will Benefit if ENERGY STAR Criteria Align with the CEE Room Heat Pump Specification

Consistency between CEE tiers and ENERGY STAR criteria is desirable, when possible, as alignment helps ensure a common market definition of high performance for manufacturers to build towards, provides consistency across customer facing incentives, and establishes a shared message to consumers. This is especially true in new to market categories where minimizing barriers to adoption is critical for driving early

investment. In this case, ENERGY STAR's proposed specifications for room air conditioners (RACs) encompass both models with reverse cycle (i.e., Room Heat Pumps) and those without. For the purposes of this comment letter, CEE's comments are focused exclusively on RACs with reverse cycle (product types 11-14) and the proposed requirements for those products.

Overall, we suggest EPA align ENERGY STAR Version 6.0 with CEE's Room Heat Pump specification, and refrain from establishing any Version 7.0. criteria at this time. Given the nascent state of this market, CEE feels that it would be prudent to monitor product developments prior to establishing a Version 7.0 and seek to do so in alignment with CEE in order to reduce market confusion and support innovation. Specific recommended changes to the draft ENERGY STAR criteria are detailed in Table 1 and described in more detail throughout this letter.

CEE Specification Provides Meaningful Definitions for Nascent Room Heat Pump Market Supported by Utilities, Efficiency Advocates, and Manufacturers

In December 2024, CEE's Board approved the revision of the *CEE℠ Residential Room Heat Pump Initiative* and associated CEE Residential Room Heat Pump Specification. This specification seeks to ensure that, regardless of where a room heat pump (RHP) is installed in the United States and Canada, it is capable of reliably providing adequate heating and cooling. CEE's specification consists of three tiers with increasingly stringent levels of performance that deliver efficiency coupled with adequate capacity relative to lower ambient conditions. CEE's three tiers (Tier 1, Tier 2, and the Advanced Tier) can be applied to ENERGY STAR's Type 1, Type 3, and Type 4 Room Heat Pump Types. The tier levels were set to reduce market churn ahead of the DOE 2026 CEER minimums.

CEE Room Heat Pump Specification – effective January 1, 2025						
Tier	CEER	HEER	COP at 17℉	COP at 5℉	Defrost	Capacity Ratio
CEE Tier 1	≥ 13.2	≥ 5.8	N/A	N/A	Passive	N/A
CEE Tier 2	≥ 14.4	≥ 7.0	≥ 1.75	N/A	Active	≥ 70% at 17°F/47°F
CEE Advanced Tier	≥ 15.1	≥ 8.5	N/A	≥ 1.75	Active	≥ 70% at 5°F/47°F

While CEE understands ENERGY STAR's intended use of Version 6.0 as an intermediate step ahead of the impending 2026 DOE minimum CEER levels and the rationale of Version 7.0 as an adjustment to the DOE minimums and a market signal to manufacturers, **CEE encourages EPA to only set one version at this time, in**

alignment with CEE's specification, and revisit future version updates as the market evolves over time (see Table 1 for specific recommended changes)**.** This approach will reduce market confusion and enable EPA messaging to assert that if customers buy an ENERGY STAR Type 3 or 4 room heat pump, it will qualify for a federal tax credit under the Inflation Reduction Act. It will also help ensure appropriate performance and energy savings in the near term and allow flexibility to evolve the criteria as needed relative to forthcoming developments.

Recommended Specific Revisions to ENERGY STAR Room Heat Pump Criteria

Specifically, CEE encourages EPA to align its Type 3 and 4 Room Heat Pump criteria with CEE's Tier 2 ("IRA Tax Credit Tier") and Advanced Tier, respectively. Alignment for Version 6.0 Type 3 and 4 levels will minimize market confusion regarding this brand-new category. Consistency in definitions and differentiation are especially imperative for a product that customers are unfamiliar with. As RHPs are initially adopted in upcoming months, having a coordinated delineation of performance will simplify the process for consumers seeking to claim federal tax credits for RHPs. The tables below summarize CEE's recommended modifications to EPA's proposed Draft 1 Room Air Conditioners criteria, consolidating the changes into a single version. Cooling requirements are specifically relevant for Product Class 11.

Table 1. Proposed Version 6.0 Heating Mode Requirements (Product Class 11)

	CEER	HEER (Btu/Wh)	COP at 5°F	COP at 17°F	Percent of Heating Capacity at 5°F of that at 47°F	Percent of Heating Capacity at 17°F of that at 47°F
Type 1	13.2	5.8	-	-	-	-
~~Type 2~~	~~13.2~~	~~5.1~~	~~-~~	~~-~~	~~-~~	~~-~~
Type 3	14.4	7.0	-	1.75	-	70%
Type 4	15.1	8.5	1.75	-	70%	-

EPA Should Eliminate Requirements for Type 2 Room Heat Pumps

The ENERGY STAR Test Method to Determine Room Air Conditioner Heating Mode Performance defines four types of Room Heat Pumps (Types 1-4) based on defrost capabilities and specified compressor cut-in and cut-out temperatures. CEE members are specifically concerned with distinguishing Type 2 and the implication of establishing two separate types of "mild" climate room heat pumps, one without active defrost (Type 1) and one with active defrost (Type 2). Specifically, members questioned the unique value of Type 2 units and highlighted the unlikely nature that, at this time, utility programs would want to provide incentives for units

with relatively minimal heating capabilities. While Type 1 units also have minimal heating capabilities, these units provide an opportunity to convert to heat pump technology without stringent efficiency requirements that would require a larger chassis or significantly higher price point, allowing for in-kind replacement of existing units primarily used for cooling in milder climates. On the other hand, members expressed concern that Type 2 units may have relatively inadequate defrost capabilities and, additionally, may provide inadequate heating in colder climate heating applications, despite likely being advertised for both heating and cooling purposes. As a result of these concerns, CEE's Room Heat Pump Committee ultimately decided to specify CEE tiers that correlate to ENERGY STAR Type 1, 3, and 4 definitions, excluding Type 2 units from the CEE specification. While we recognize that this type of room heat pump is codified in the test method, we encourage ENERGY STAR to remove Type 2 requirements from the specification at this time.

CEER Requirements Should be Differentiated for Room Heat Pump Types 3 and 4

The proposed specifications establish cooling requirements (CEER) that are identical for each RAC product type. For product types 11-14 (RHPs), this means that all types of RHPs (1-4) have identical cooling requirements. This choice ignores some of the inherent improvements in overall efficiency that occur as RHP types move from 1 through 4. Generally, manufacturers have indicated that HEER and CEER, while not perfectly correlated, do have a relationship wherein units with a higher HEER will also be able to achieve a higher CEER. The existing performance data for RHPs also indicates this relationship with existing Type 4 units achieving CEERs well above the DOE 2026 minimum (14.4) and existing Type 3 units achieving CEER's right around the DOE 2026 minimum. Given this fact, CEE encourages ENERGY STAR to differentiate CEER requirements based on RHP type, particularly between Type 3 and 4 units, to reflect technological feasibility and to ensure an accurate representation of cooling efficiency, so that an accurate level of deemed savings can be accounted for.

HEER Requirements Should be Differentiated for Room Heat Pump Types 3 and 4

Similar to the CEER requirements, EPA's proposed Version 6.0 and 7.0 criteria group the HEER requirements for Type 1 and Type 2 RHPs and group the HEER requirements for Type 3 and Type 4 RHPs. Notably, for Type 3 and 4, the heating requirements do differ in terms of the COP and Capacity Ratio requirements. This differentiation of COP and Capacity ratio requirements is also present in CEE's specification and, importantly, is identical to EPA's proposed Version 7.0 COP and Capacity Ratio. However, these COP levels have specific HEER implications that are not recognized when grouping Type 3 and Type 4 requirements. A derived relationship between COP and HEER indicates that a model capable of achieving the Type 3 COP requirements (1.75 @ 17℉) would have a HEER of ≥7.3 and ≥8.5 for the Type 4 COP requirements (1.75 @ 5℉). CEE's Tier 2 and Advanced Tier reflect these relationships (although providing some flexibility for Tier 2 with a 7.0 HEER requirement) and EPA should

seek to similarly differentiate between HEER requirements for Type 3 and 4. By establishing a HEER of 8.3 for both Type 3 and Type 4 in Version 7.0, ENERGY STAR's requirements may also effectively exclude a number of high performance Type 3 units from qualifying that have HEERs in the range of 7.0-8.3. The current proposal reduces the functional distinction between Type 3 and Type 4 RHPs and makes it likely that any unit able to achieve the required HEER would be able to meet the Type 4 COP requirements. Through differentiated HEER requirements, the ENERGY STAR criteria can also encourage the development of RHPs that may be uniquely suited to specific climate zones and applications. This differentiation will also allow for alignment across CEE and ENERGY STAR's specifications, benefiting both manufacturers and program administrators.

Importance of Clear and Consistent Messaging Regarding Intended Applications for Room Heat Pumps

CEE appreciates the consideration that EPA has given to the product labeling and messaging surrounding room heat pumps, and the intent of graphically reflecting appropriate operating temperature ranges. Given the relatively nascent state of the room heat pump market, reducing confusion and ensuring that customer expectations are met for these products is crucial to ensuring satisfaction, safety, and performance. Ensuring that consumers have a positive initial experience with room heat pumps will be essential for maximizing the market adoption and eventual impact of this new to market product category.

CEE strongly encourages EPA to work closely with stakeholders, particularly manufacturers and retailers, on specific details for consumer messaging. Industry partners have significant investment and expertise regarding how to sell their products and communicate with customers. We recommend EPA engage closely with partners to develop labeling approaches that will support optimal adoption of room heat pump products in the market. This process may require iterative development, with enhancements necessary over time. Beyond the label, CEE also urges EPA to consider the development of other educational materials to support the growing room heat pump market.

CEE would once again like to thank the EPA for the opportunity to comment on the ENERGY STAR Versions 6.0 and 7.0 Room Air Conditioner (RAC) Draft 1 Specifications proposed recognition criteria. We are in favor of CEE and EPA continuing to strive for aligned requirements wherever possible and welcome the opportunity to discuss these comments further. Please contact Program Manager Erik March at emarch@cee1.org with any questions about these comments.

Sincerely,

John Taylor
Executive Director