UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

January 14, 2025

Dear ENERGY STAR® Room Air Conditioners Brand Owner Partners and Other Interested Stakeholders:

In response to several requests for additional time to provide feedback on the proposed revisions to the ENERGY STAR Room Air Conditioner (RAC) specification, the U.S. Environmental Protection Agency (EPA) is extending the comment submittal period for the Draft 1 Version 6.0 and 7.0 proposals for an additional three weeks. The Draft 1 proposals were released November 26, 2024, with an original comment deadline of December 30, 2024. **With the extension, the EPA welcomes additional feedback on these proposals by February 4, 2025.**

As a reminder, Version 6.0 of the specification is intended to address heating mode efficiency for room heat pumps (RHPs) while leaving other requirements unchanged, while Version 7.0 proposes to update all requirements in response to new minimum standards going into effect in 2026.

Preliminary Comment Overview
During the initial comment period, the EPA primarily received feedback on the proposed criteria for the Version 6.0 Draft 1 proposal. One stakeholder provided an informative mechanism to calculate the maximum heating energy efficiency ratio (HEER) value for Type 1 RHPs based on temperature bin hours and assuming an infinitely large COP during heat pump operation. Several recommended that the EPA align the ENERGY STAR criteria with the Consortium for Energy Efficiency's (CEE) Tier 2 requirements, establishing 25C tax credit eligibility under the Inflation Reduction Act (IRA). Others expressed concerns about establishing the same HEER requirement for Type 1 and Type 2 RHPs and for Types 3 and 4, recommending differentiation across all types. Several stakeholders also requested lowering the heating capacity ratio requirements for Type 3 and 4 RHPs. A few comments criticized the unusually high payback calculated by the EPA, especially for the Type 4 RHPs, and recommended reevaluating the installation costs and baseline comparison used for RHPs in the data package.

For Version 7.0, most stakeholders agreed that consumer guidance on RHPs is important and expressed support for introducing a labeling requirement to graphically depict the RHP Types to inform consumers in selecting the right model for their climate. All comments received on the Draft 1 proposals thus far can be found here.

Key Areas of Interest
During this extended comment period, the Agency has identified a few key areas of interest for feedback in consideration of the comments received thus far.

Version 6.0 HEER requirements:

- Given the highly informative comments provided on calculating feasible HEER values for Type 1 RHPs, the EPA is considering lowering the Type 1 HEER requirement from 5.1 to 4.2. A 4.2 HEER

translates to a 3.5 COP during heat pump operation for Type 1 models, using the appropriate temperature bin hours.
- Using the same calculations for Type 2 RHPs, the EPA considers larger HEER values to be feasible based on their lower heat pump operational temperature, covering more bin hours during the heating season. The EPA is considering increasing the Type 2 HEER requirement from 5.1 to 6.0.
- Based on HEER data provided for Type 3 and 4 RHPs, the Agency still considers 6.8 an appropriate level for establishing heating mode efficiency in Version 6.0.

Version 6.0 heating capacity ratio requirements:
- The EPA is considering lowering the Type 3 heating capacity ratio at 17F/47F requirement from 70% to 55% based on comments received. Although able to provide impressive heating performance at lower temperatures, the EPA does not expect Type 3 models to provide "cold climate" performance. The Agency expects Type 3 models with heat pump capabilities will be appropriate for climate zones 1-3 and provide reasonable heating capacity and efficiency at typical temperatures in these zones.
- Type 4 models are expected to be of interest to incentive programs focused on providing efficient heating options at cold temperatures. To ensure adequate cold climate performance, the EPA still considers the proposed 70% heating capacity ratio appropriate for qualifying Type 4 models.

Savings and payback analysis:
- As indicated in the release of the Draft 1 proposals, the EPA recognizes the wide range of performance across the different RHP Types and based the payback on the incremental cost of a DOE minimum efficiency reverse-cycle RAC, compared to electricity savings based on the climate zone-specific consumption of a minimum efficiency RAC combined with electric resistance heating equipment.
- The EPA notes that for Type 4 RHPs in particular, these baseline technologies would not be an appropriate point of comparison for consumers considering a RHP in place of more expensive centralized heating equipment. The EPA is therefore taking comment on what a more appropriate baseline technology comparison would be for Type 4 RHPs, in consideration of the large variety of technologies these products are capable of replacing.

Additional labeling requirement:
- Many commenters indicated their desire to work closely with the EPA to establish an appropriate label with an easily understood graphic (likely including a thermometer) to communicate critical heat pump operation information to consumers. The EPA is currently developing a label concept and plans to share this with stakeholders to inform the final label.

Version 7.0 criteria:
- Very few comments addressed the proposed criteria for Version 7.0. The EPA is requesting feedback on the proposed CEER, HEER, COP, and heating capacity ratio requirements proposed in the Draft 1 release. This includes non-reverse cycle RACs and their proposed cooling efficiency requirements.

Comment Submittal

The public is welcome to provide written comments for the EPA's consideration on the proposed Version 6.0 and 7.0 Draft 1 revisions to the ENERGY STAR Room Air Conditioner RAC specification to

HVAC@energystar.gov by **February 4, 2025**. All comments will be posted to the Room Air Conditioners Version 6.0 and Version 7.0 Specification Development webpages, along with comments already posted, unless the submitter requests otherwise.

Thank you for your continued support of the ENERGY STAR Program. If you have any questions or feedback, please direct them to Holly Tapani at the EPA, Tapani.Holly@epa.gov or 202-751-5089, or Megan McNelly at ICF, Megan.McNelly@icf.com. For test method questions, please contact Lucas Adin at the DOE, lucas.adin@ee.doe.gov.

Sincerely,

Holly Tapani
U.S. Environmental Protection Agency
ENERGY STAR HVAC Program

Enclosures:
ENERGY STAR Version 6.0 Room Air Conditioner Draft 1 Specification
ENERGY STAR Version 7.0 Room Air Conditioner Draft 1 Specification
ENERGY STAR Version 6.0 Room Air Conditioner Draft 1 Specification Data Package
ENERGY STAR Version 7.0 Room Air Conditioner Draft 1 Specification Data Package