

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



OFFICE OF
AIR AND RADIATION

February 20, 2015

Dear ENERGY STAR[®] Room Air Conditioner Brand Owner or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) is pleased to share the final Version 4.0 ENERGY STAR Room Air Conditioner specification. EPA appreciates the constructive collaboration of stakeholders in developing this specification. These Version 4.0 requirements will take effect on October 26, 2015. This letter provides highlights of the new requirements and outlines the transition process.

This final specification will highlight the top performing room air conditioners across capacity classes. It also defines optional criteria for connected functionality, promoting immediate consumer convenience and longer-term grid benefit. Further, Version 4.0 certified products will include enhanced installation materials enabling greater consumer comfort and energy savings. ENERGY STAR room air conditioners will deliver 10% savings over standard products. If all room air conditioners sold in the United States met the new Version 4.0 requirements, the utility cost savings would grow to more than \$350 million each year and about 6 billion pounds of annual greenhouse gas emissions would be prevented, equivalent to the emissions from more than 570,000 vehicles.

EPA received no new substantive comments on the eligibility criteria proposed in the Final Draft. As such, the criteria remain unchanged. EPA did, however, receive conflicting comments specific to the proposed effective date. Two commenters requested a delay of the effective date until the 2017 cooling season. In contrast, the Agency heard from manufacturers and brand owners responsible for more than half of U.S. room air conditioner market share, that they are able to provide consumers with a selection of ENERGY STAR Version 4.0 room air conditioners for the 2016 cooling season. Based on these comments, EPA believes that a delay would disadvantage partners who have invested in efficiency and deny consumers more near term savings. Further, a delay would undermine EPA's objective to recognize those products that deliver the greatest efficiency, and offer consumers the meaningful savings they expect from ENERGY STAR products. As such, the Version 4.0 requirements will take effect on October 26, 2015.

Final Version 4.0 Specification Highlights

This specification establishes new energy efficiency requirements for room air conditioners of all sizes and provides consumers with additional benefit through new installation requirements and optional connected criteria.

Installation Criteria

In an effort to provide greater energy savings and performance/comfort for consumers, EPA has included criteria to deliver improved installation for ENERGY STAR room air conditioners. Window units will be required to ship with weather stripping and/or gasket materials that resist air and water infiltration as well as degradation due to ultraviolet radiation exposure, to minimize air leaks. Side curtains must be tight-fitting and contain insulation with a minimum R1 insulation value. All ENERGY STAR room air conditioners will include installation instructions denoting the proper locations to install the provided materials. To provide additional insulation and air sealing when through-the-wall units are not in use during the off-season, EPA is requiring that instructions recommend the use of appropriately sized covers and will work to encourage their proper use.

Optional Connected Criteria

This specification also establishes optional connected criteria for room air conditioners. ENERGY STAR room air conditioners with connected functionality offer a significant opportunity for demand response programs, since they are operational during peak energy demand times. The Delay Appliance Load and Temporary Appliance Load Reduction criteria protect consumers from extreme temperatures by including an 85 degree Fahrenheit maximum adjusted set temperature limit, and including consumer override provisions. ENERGY STAR room air conditioners with connected functionality will offer consumers new convenience and energy-saving features, such as the ability to turn off the unit remotely when not at home, and feedback on the energy use of the product. These products will also be smart-grid ready, meaning they will give consumers the option to connect their room air conditioner with their local utility to potentially save money on their energy bills, where those services are offered, and also facilitate broader electric power system efficiency.

DOE is planning to develop a test method to validate the demand response capabilities of room air conditioners. The 5% allowance for connected functionality will not be available until after publication of the final test method. After publication, products must be certified using this final and validated ENERGY STAR test method for demand response in order to be identified on the Qualified Products List as offering connected functionality and to make use of the 5% allowance.

Sound Performance

During development of this specification, EPA heard from many manufacturers that increasing fan speeds continues to be a low-cost option for improving room air conditioner efficiency, suggesting a relationship between efficiency and noise. The Agency is not including sound performance criteria in this specification, in consideration of the associated testing and cost burdens and challenges. However, in the interest of maintaining a positive consumer experience, EPA strongly encourages manufacturers to consider potential impacts to sound performance as they make design decisions to meet the ENERGY STAR efficiency levels. EPA will continue to engage manufacturers to understand their evolving capabilities for sound performance testing, watch for concerns around noise associated with ENERGY STAR RAC, and will reconsider a requirement in a future specification, as needed.

EPA understands, based on conversations with multiple manufacturers and brand owners, that they will leverage a suite of options to achieve ENERGY STAR efficiency levels. Among the technology advances available to manufacturers, EPA encourages the adoption of alternative refrigerants in accordance with EPA's Significant New Alternatives Policy (SNAP) program.

Version 4.0 Transition Timeline and Next Steps:

EPA shares partners' desire for a smooth transition from one ENERGY STAR specification version to the next so that consumer expectations are met, and ENERGY STAR labeled products fully meet the new requirements upon their effective date. With this in mind, EPA has established the following timeline:

- Effective immediately, manufacturers may elect to have their Certification Body (CB) certify eligible products to the Version 4.0 requirements.
- After June 30, 2015, CBs will be instructed to stop certifying new product submittals to Version 3.1. Note, however, that existing certifications to Version 3.1 will remain valid for the purposes of ENERGY STAR certification until October 26, 2015.
- Any room air conditioner manufactured as of October 26, 2015, must meet the Version 4.0 requirements to bear the ENERGY STAR mark. All certifications of products to the Version 3.1 specification will be invalid for purposes of ENERGY STAR and CBs will only submit product models certified to Version 4.0 to EPA.

EPA thanks all stakeholders who provided feedback during this specification revision process and looks forward to working with you as you qualify and market your ENERGY STAR room air conditioners. Please direct any specific questions to Melissa Fiffer, EPA, at fiffer.melissa@epa.gov, 202-343-9494. Room air conditioner test method questions should be directed to Bryan Berringer, DOE, at Bryan.Berringer@ee.doe.gov or 202-586-0371. Thank you for your continued support of the ENERGY STAR program.

Sincerely,

A handwritten signature in black ink, appearing to read "Melissa Fiffer". The signature is fluid and cursive, with the first name "Melissa" being more prominent than the last name "Fiffer".

Melissa Fiffer, Product Manager
ENERGY STAR Appliances