



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

OFFICE OF
AIR AND RADIATION

November 26, 2018

Dear ENERGY STAR® Dehumidifiers Brand Owner or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) is revising the ENERGY STAR Dehumidifiers specification. EPA released a Draft 1 Version 5.0 specification on August 8, 2018 for stakeholder review. In response to stakeholder comments that EPA received on the draft, as well as further discussions with stakeholders, EPA is now releasing a limited topic proposal providing stakeholders an additional opportunity to comment on proposed changes before releasing a Final Draft Version 5.0 specification.

Draft 1 Version 5.0 Stakeholder Comments

EPA received public comments from three separate stakeholders regarding the Draft 1 Version 5.0 specification. These comments, a comment matrix, and all other materials related to this specification development process can be found on the [Dehumidifiers Version 5 product development webpage](#). The major actionable topic areas of the comments, and the focus of this limited topic proposal, include:

- Scope to include, and Integrated Energy Factor (IEF) criteria for, portable dehumidifiers with product capacities ≥ 50.01 pints/day
- Integrated Energy Factor criteria for whole-home dehumidifiers with case volumes greater than 8ft^3

EPA did not include IEF criteria for portable dehumidifiers with product capacities ≥ 50.01 pints/day in the Draft 1 specification due to a lengthy payback period compared to the Department of Energy's minimum IEF standard going into effect in 2019. As for whole-home dehumidifiers with case volumes greater than 8ft^3 , EPA proposed IEF criteria of 3.52 L/kWh in the Draft 1 specification. Stakeholders argued that EPA should reconsider establishing IEF criteria for portable dehumidifiers ≥ 50.01 pints/day and reduce the IEF criteria for whole-home dehumidifiers with case volumes greater than 8ft^3 .

Proposals

After conducting further data analyses, reviewing stakeholder comments, and participating in continued dialogue with dehumidifier stakeholders, EPA has developed the following proposals. Unless noted in this memo, no other significant changes are proposed to the Draft 1 Version 5.0 specification.

Portable Dehumidifier IEF

EPA received multiple comments requesting that energy efficiency criteria be established for portable dehumidifiers ≥ 50.01 pints/day. Based on stakeholder-provided data and further deliberation, EPA is proposing integrated energy factor (IEF) criteria in this limited topic

proposal. The certification criteria for portable dehumidifiers ≥ 50.01 pints/day is outlined below and applicable to Table 1 in the Draft 1 specification (addition shown in *italics*):

Product Capacity (Pints/day)	Integrated Energy Factor Under Test Conditions (L/kWh)
≤ 25.00	≥ 1.57
25.01 to 50.00	≥ 1.80
≥ 50.01	≥ 3.30

Based on stakeholder-provided data, EPA is proposing IEF criteria at 3.30 L/kWh. This level is 18% above the 2019 Department of Energy (DOE) standards for this product category, comparable to requirements for the other ENERGY STAR portable dehumidifier categories. While EPA initially proposed excluding these products, EPA has received compelling new information that calls for including them in scope. First, according to manufacturer provided data, the payback is better than EPA's original estimate. In addition, EPA now understands that establishing a level for these products will allow products to certify that can be installed in both configurations (i.e., portable and whole-home) as there are criteria for both configurations. Also, as manufacturers are retesting using the new ambient conditions, they are finding that some products that used to have capacities under 75 pints/day (per Appendix X) are turning out to have capacities over 50 pints/day (per Appendix X1). That means that large portable dehumidifiers may be a larger slice of the market than anticipated. Lastly, EPA has learned that some manufacturers considering bringing highly efficient variable speed dehumidifiers to the U.S. market anticipate their initial offerings will have a water removal capacity greater than 50 pints/day. Without established eligibility criteria for them, these highly efficient units wouldn't be able to earn the ENERGY STAR. For all of these reasons, EPA has proposed criteria.

Whole-Home Dehumidifier IEF

EPA received comments that the IEF criteria proposed for whole-home dehumidifiers with case volumes larger than 8ft³ in the Draft 1 specification would not be met by some of the most efficient products on the market, despite the fact that they are more efficient than smaller units and the DOE minimum standards. EPA received manufacturer data to support this claim, and, after further assessment, is proposing to slightly reduce the stringency of the IEF criteria for these products. The proposal is outlined below and applicable to Table 2 in the Draft 1 specification (modification shown in *italics*):

Product Case Volume (ft ³)	Integrated Energy Factor Under Test Conditions (L/kWh)
≤ 8.0	≥ 2.09
> 8.0	≥ 3.30

EPA originally proposed IEF criteria of 3.52 L/kWh for these products. The payback for products at 3.30 IEF is only slightly longer and is reasonable. Given that the differentiation from the DOE standard level is still prominent, and that this level offers broader consumer choice, EPA feels that this slight reduction in stringency is justifiable. With the proposals outlined in this memo, the potential program unit energy savings are still estimated at 14%, the same as in Draft 1.

Comment Submittal Process

If you have any comments or concerns about these changes, please submit them by **December 10, 2018** to Dehumidifiers@energystar.gov. All comments will be posted to the ENERGY STAR Product Development [webpage](#) unless the submitter requests otherwise. Please direct any specific questions to Abigail Daken at EPA, Daken.Abigail@epa.gov or 202-343-9375, and Jacob Bayus at ICF, Jacob.Bayus@icf.com or 202-791-8871. Barring objections from stakeholders, EPA will release a Final Draft specification in December and finalize the specification in early 2019.

Thank you for your continued support of the ENERGY STAR program.

Sincerely,



Abigail Daken, Manager
ENERGY STAR HVAC Program