



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

OFFICE OF
AIR AND RADIATION

April 14, 2017

Dear ENERGY STAR® Residential Ceiling Fans Brand Owner or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) welcomes your input on the attached Draft 1 Version 4.0 ENERGY STAR Residential Ceiling Fans specification. EPA will hold a stakeholder webinar on April 28, 2017 to discuss the Draft 1 specification in greater detail. Stakeholders are encouraged to submit comments on this draft proposal to EPA no later than May 12, 2017.

Background

The ENERGY STAR program helps businesses and individuals save money and protect the environment by identifying products with superior energy efficiency. Consistent with maintaining the consumer value associated with the ENERGY STAR label, this revision is prompted by a number of developments. The U.S. Department of Energy (DOE) established a new Federal test method for ceiling fan airflow efficiency that also specifies a metric for use in making claims about ceiling fan airflow efficiency. Furthermore, DOE has finalized new standards for ceiling fan efficiency, with a compliance date of January 21, 2020. While the metrics are not equivalent, it is clear that these levels are more stringent than current ENERGY STAR Version 3.1 specification levels. Further, a review of available data suggests a broad range of high-efficiency products that offer significant energy savings over both standard-efficiency and ENERGY STAR products. Lastly, DOE completed new test methods and standards for ceiling fan light kits (CFLKs) at the beginning of 2016. The compliance date for the CFLK standards is January 7, 2019.

Draft 1 Proposal

Draft 1 of Version 4.0 looks significantly different from Version 3.1 because EPA has included CFLK requirements into the Residential Ceiling Fans specification itself, rather than referencing the ENERGY STAR Luminaires specification. The change is intended to streamline the certification process for CFLK manufacturers dealing with a separate set of DOE requirements than those faced by manufacturers of other luminaires. While the formatting changes are significant, the lighting efficacy requirements are substantively unchanged from the Version 3.1 specification. In addition, EPA has maintained a simple option for ceiling fan manufacturers to meet most lighting requirements by shipping their products with ENERGY STAR certified bulbs. EPA has included a new industry standard for solid-state lighting product dimming compatibility.

The airflow requirements were chosen to deliver savings to consumers now and also in 2020 when products must comply with the forthcoming DOE requirements. Based on the technical support document (TSD) released by DOE in conjunction with the ceiling fan airflow standard rulemaking process, the levels reflected in "TSL 5" ensure good availability for ENERGY STAR, with efficiencies achievable by fans using brushless DC motors. EPA used data from its Qualified Product List (QPL) to ensure fans at all sizes, and from a variety of manufacturers, could meet the efficiency levels proposed in the Draft 1 Version 4.0 specification. Additionally, EPA used data from the California Energy Commission Appliance Efficiency Database for

residential ceiling fans to understand the performance of non-ENERGY STAR fans in relation to the Draft 1 levels. In addition, EPA proposes optional criteria for fans that would be identified as “connected” on the ENERGY STAR Product Finder. Products can earn the ENERGY STAR without meeting these requirements, which are based on the connected requirements in the Luminaires specification. The designation is intended to identify products capable of integration into home automation systems.

Key elements of the Draft 1 Version 4.0 specification include:

- **Energy efficiency metric and test method:** Version 4.0 will use DOE’s new integrated efficiency metric, derived from high, low, and standby power use weighted by expected time in each mode. EPA asks for standby power to be separately reported to understand the standby power implications of various product capabilities, such as occupancy detection.
- **Product types:** The use of the new Federal test method allows EPA to recognize ceiling fans with blade span up to 84 inches, and to also include hugger fans; standard and hugger fans are in scope. Most high-speed small-diameter (HSSD) fans are intended for industrial and commercial use and are out of scope. However, a few fans intended for residential use (i.e., can be safely mounted between 7 and 10 feet off the ground) are classified as HSSD fans by DOE. Some of these ceiling fans are currently ENERGY STAR certified. EPA has included these fans in scope as “Low-Mount HSSD”; they must meet the same airflow efficiency requirements as standard fans.
- **Efficiency requirements:** EPA is proposing to adopt the levels identified in the DOE TSD as corresponding to DC motor fans.

More details regarding EPA’s rationale for proposing these requirements are included in note boxes throughout the draft specification document.

Stakeholder Meeting

EPA plans to host a stakeholder webinar meeting on **April 28, 2017 at 2 pm EDT** to discuss the Draft 1 document and address initial stakeholder comments and questions. If you’d like to participate, please register prior to the webinar [here](#). Stakeholders are encouraged to inform EPA of any industry events that may conflict with this proposed date.

Comment Submittal Process

Stakeholders are encouraged to provide written comments for EPA consideration to CeilingFans@energystar.gov by **May 12, 2017**. All comments will be posted to the ENERGY STAR Product Development website unless the submitter requests otherwise.

To track EPA’s progress in revising the ENERGY STAR Residential Ceiling Fans specification, visit the Product Development website at www.energystar.gov/revisedspecs and click on the Ceiling Fans “Version 4.0 is in development” link.

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. Please direct any questions about the test procedure to Lucy Debutts at DOE, Lucy.Debutts@ee.doe.gov or 202-287-1604. Thank you for taking the time to review this draft specification. I look forward to working with you over the next few months.

Sincerely,

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

Abigail Daken
U.S. Environmental Protection Agency
ENERGY STAR HVAC Program