



Abigail Daken
U.S. Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

May 12, 2017

Subject: ENERGY STAR® Draft 1 Version 4.0 Specification for Ceiling Fans

Dear Ms. Daken:

This letter comprises the comments of the Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SoCalGas), San Diego Gas and Electric (SDG&E), and Southern California Edison (SCE) in response to the proposed revisions in the Draft 1 Version 4.0 ENERGY STAR Ceiling Fan Specification launched on April 14, 2017.

The signatories of this letter, collectively referred to herein as the California Investor-Owned Utilities (CA IOUs), represent some of the largest utility companies in the Western United States, serving over 35 million customers. As energy companies, we understand the potential of the ENERGY STAR program to cut costs and reduce energy consumption while maintaining or increasing consumer utility of the products. We have a responsibility to our customers to advocate for sensible test procedures, specifications, and standards that accurately reflect the climate and conditions of our respective service areas to maximize the positive effects of these efforts.

We believe that a voluntary ENERGY STAR ceiling fan specification is integral for facilitating widespread energy efficiency. We encourage the U.S. Environmental Protection Agency (EPA) to continue developing an ENERGY STAR specification that differentiates the most efficient products that also deliver reliable performance. In support of these efforts, we offer the following comments for consideration.

1) We strongly support the EPA updating the ENERGY STAR ceiling fan specification in accordance with U.S. Department of Energy's (DOE) recently finalized test procedure and standards for this product.

We commend the EPA for proposing to align the ENERGY STAR ceiling fan specification scope and definitions with the Department of Energy (DOE) Final Rule where applicable.¹ We also support EPA determining Version 4.0 airflow efficiency requirements in accordance with the DOE Final Rule Technical Support Document (TSD), because DOE facilitated and conducted extensive research and outreach to stakeholders when determining these values.² We believe that aligning eligibility criteria and definitions with the DOE Final Rule, regardless of its effective date, will reduce manufacturer confusion about product definitions and efficiency representations, thereby leading to clarity across all ceiling fan market actors.

¹ F.R.12, 6826 (January 19, 2017).

² U.S. DOE, "Technical Support Document: Energy Efficiency for Consumer Products and Commercial Equipment: Ceiling Fans" November, 21 2016.

2) We encourage the EPA to further increase qualification requirements for airflow efficiency; such that, the levels of stringency meet or exceed DOE requirements across the range of blade spans.

We agree with and support the EPA’s proposal for increasing airflow efficiency requirements based on “Trial Standard Level 5” of the DOE Final Rule TSD, which can be achieved by fans using brushless direct-current (BLDC) motors. EPA estimated that 18% of models already qualify for the proposed levels outlined in the Draft 1 specification. We also support EPA’s inclusion of low-mount, high-speed, small-diameter (LM-HSSD) ceiling fans, which are HSSD ceiling fans that may be mounted low enough to be safely used in residential households. However, we believe that ENERGY STAR airflow efficiency requirements for all fan sizes should meet or exceed the minimum efficiency standard levels presented in the DOE final rule that is scheduled to take effect on January 21, 2020.

In comparing ENERGY STAR’s proposed levels to DOE’s updated standard levels (Figure 1), we found that in the following cases the ENERGY STAR requirement would be less stringent than the federal standard:

1. All standard ceiling fans with blade span smaller than 32.8 inches;
2. All hugger ceiling fans with blade span smaller than 33.9 inches; and
3. All LM-HSSD ceiling fans (all sizes).

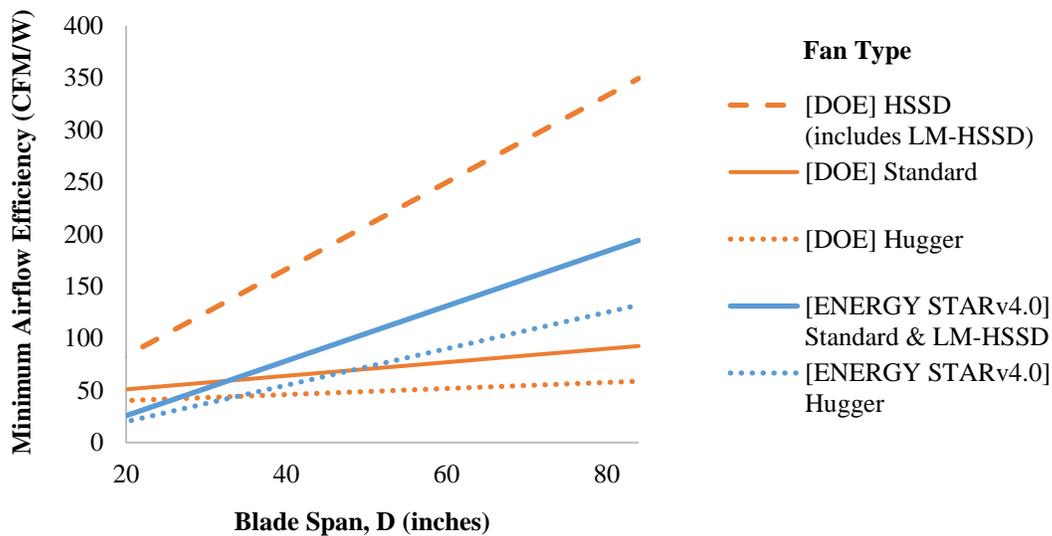


Figure 1. ENERGY STAR Airflow Efficiency Requirements Compared to 2020 Federal Standards

While we agree with EPA that LM-HSSD ceiling fans may be used in residential applications, and thus should be within the scope of Version 4.0 specification, we do not agree that they should have the same minimum airflow efficiency requirements as standard ceiling fans. LM-HSSD products will be required to meet DOE federal standards for HSSD fans, which are more stringent than the proposed ENERGY STAR levels for standard ceiling fans, as shown in Figure 1. This creates the potential for an ENERGY STAR product that is not compliant with the future federal standard, which we do not believe is the intention of the ENERGY STAR program. In addition, by reviewing online ceiling fan retailer websites, we have also found that standard and hugger ceiling fans with blade spans of 24 to 36 inches are readily available. These products would also be subject to the same concerns.

EPA should revise its proposed airflow efficiency requirements by reviewing Section 5.9 of the DOE Final Rule TSD, which calculates power consumption for standard, hugger, and HSSD ceiling fans at

low, medium, and high speeds, and for several fan sizes. The tables in this section show that BLDC motor fans corresponding to the EPA proposed levels are approximately twice as efficient as their alternating-current (AC) motor counterparts, which correspond to the DOE levels, across the range of fan speeds and sizes. The proposed airflow requirements for ceilings fans in the ENERGY STAR specification should reflect these approximations.

3) We support the proposed measures that assure product reliability, such as the minimum airflow and warranty requirements.

In addition to establishing stringent energy efficiency requirements, we agree that EPA should propose additional requirements that assure consumer satisfaction when using efficient products. This will ensure that ENERGY STAR remains a consumer-trusted brand for energy-efficient and reliable products. Specifically, we support the following requirements:

- A minimum airflow (CFM) requirement: Since ceiling fans are more efficient at lower airflows, and thus lower fan speeds, this requirement will prevent a bias towards products that are low-performing, or able to qualify by only operating at low speeds, thus curtailing a potential perception that ENERGY STAR products have inferior performance attributes.
- A minimum warranty that includes the driver components in the case of BLDC motors: In our previous comments to DOE, we had identified several manufacturers/retailers that have claimed that BLDC motor fans have longer lifetimes than their AC motor counterparts.³ These products are likely to qualify for ENERGY STAR, and consumers who purchase these products would associate the ENERGY STAR brand with the operating life of the product. Since the fan cannot operate without its driver components, the lack of a warranty on these parts would damage the consumer's perception of ENERGY STAR should additional and unexpected costs be incurred for repair or replacement.

In conclusion, we wish to reiterate our support to the EPA for revising the ENERGY STAR specification for ceiling fans and we encourage the EPA to carefully consider our comments.

Sincerely,



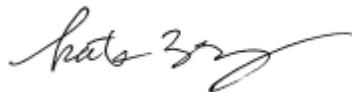
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³ DOE Docket Number: EERE-2012-BT-STD-0045-0144, "Ceiling Fans Comments on Notice of Proposed Rulemaking," April 15, 2016, <https://www.regulations.gov/document?D=EERE-2012-BT-STD-0045-0144>.