



October 27, 2014

Abigail Daken
Product Manager
ENERGY STAR for HVAC

Ms. Daken,

Thank you for the opportunity to provide stakeholder input regarding Version 4.0 of the ENERGY STAR® Ventilating Fan specification.

As the world's largest manufacturer of DC brushless motor fans and only provider of all-DC brushless motor ENERGY STAR® qualified ventilation fans in North America, Delta Products Corporation unequivocally supports all key changes noted in Draft 1 Version 4.0 of the ENERGY STAR® Ventilating Fan specification. Additionally, there is cause for steepening the requirements.

Today, bathroom exhaust fans that earn ENERGY STAR are no longer considered the top performers with regards to energy efficiency. The following are examples of HVI-certified performance ratings of current ENERGY STAR® qualified bathroom exhaust fans.

Rated Airflow	Power Consumption	Efficacy	ENERGY STAR
50 CFM	31.7 Watts	1.5 CFM/W	Yes
80 CFM	35.2 Watts	2.2 CFM/W	Yes
110 CFM	39.5 Watts	2.7 CFM/W	Yes
150 CFM	51.3 Watts	2.9 CFM/W	Yes

Within the last five years, DC motor fan technology has been adopted by the majority of leading brands in the bathroom exhaust fan category including Broan, Panasonic, Delta, S&P, Orbit and AirZone. DC motor fan technology has allowed efficacy levels to far exceed current ENERGY STAR requirements. The following are examples of HVI-certified performance ratings of current ENERGY STAR® qualified bathroom exhaust fans with DC motor fan technology.

Rated Airflow	Power Consumption	Efficacy	ENERGY STAR
50 CFM	3.8 Watts	13.1 CFM/W	Yes
80 CFM	5.8 Watts	13.7 CFM/W	Yes
110 CFM	7.7 Watts	14.2 CFM/W	Yes
150 CFM	16.9 Watts	8.8 CFM/W	Yes

The above confirms the EPA's initial market research of the availability of a broad range of higher efficiency products which offer significant energy savings over standard efficiency products with reasonable payback for consumers.

Based on the above performance ratings with DC fan motor technology, quadrupling the v3.2 efficacy level requirement of bathroom fans 50 to 89 CFM to 5.6 CFM/W is not a stretch of technical capability for leading bathroom exhaust fan manufacturers.

ENERGY STAR is no longer a market differentiator in the bathroom exhaust fan category. Of the 3,349 bathroom exhaust fans listed today on HVI's published certified products directory, 2,568 (more than 76%) have achieved ENERGY STAR® qualification. It should also be noted that of the 2,568 ENERGY STAR® qualified bathroom exhaust fans listed today in HVI's published certified products directory; 1,535 (59%) already perform at 2.0 sones or less, 1,470 (57%) perform at 1.5 sones or less, 1,244 (48%) perform at 1.0 sone or less, and 784 (30%) perform at 0.3 sones or less.

To ensure ENERGY STAR® qualified bathroom exhaust fans are considered the top performers with regards to energy efficiency, and to ensure ENERGY STAR® qualified bathroom exhaust fans are market differentiators in the category, furthering the requirement levels as proposed in Draft 1 Version 4.0 of the ENERGY STAR® Ventilating Fan specification dated June 11, 2014 is suggested as follows:

- **Efficacy:** For bathroom fans, raise efficacy levels as follows: 50 to 89 CFM, to 5.6 CFM/W; 90 to 200 CFM, to 5.6 CFM/W; and 201 to 500 CFM, to 5.6 CFM/W. For inline fans, raise the efficacy level to 5.6 CFM/W.
- **Sound:** For bathroom fans, limit the maximum allowable sound levels as follows: 50 to 89 CFM, to 1.0 sone; 90 to 200 CFM, to 1.5 sones; and 201 to 500 CFM, to 2.0 sones. For inline fans, limit maximum allowable sound level to 2.0 sones.

Thank you for the opportunity to provide stakeholder input.

Best regards,

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