

ENERGY STAR Ventilating Fans Draft Version 4.1 Comment Matrix

Topic	Subtopic	Stakeholder Comment Summary	EPA Response
General			
General	Second draft	One commenter states that the proposed revision is quite significant due to the proposed reporting requirements, and requests that EPA release a second draft before finalizing to allow for further stakeholder review and feedback.	Based on stakeholder comments and internal discussions, EPA is pursuing updates to the Draft 1 specification that warrant a limited topic proposal prior to finalizing the Version 4.1 specification. EPA is releasing this limited topic proposal with a two week comment period for stakeholders to submit any final thoughts prior to finalization.
Definitions and Scope			
Definitions	Support for updates	One commenter supports the proposed updates to definitions.	Thank you for your comment.
Scope	Support for supply fans	One commenter supports the inclusion of supply fans in scope for ENERGY STAR Ventilating Fans Version 4.1.	Thank you for your comment.
Certification Criteria			
Efficacy Criteria for Supply Fans without Filters	Support	One commenter states that a supply fan without a filter should be held to the same efficacy criteria as all in-line fans, as proposed by EPA in the Draft Version 4.1 specification.	Thank you for your comment.
Efficacy Criteria for In-line Fans tested with Filter is Too Stringent	Static pressure and velocity effects	<p>One commenter states that an efficacy requirement of 3.7 cfm/W for in-line fans tested with a filter in place may be too stringent due to the static pressure associated with filters.</p> <p>The commenter points out that if the velocity of the air through the filter is too high, filtration cannot be guaranteed. In order to meet the 3.7 cfm/W requirement, manufacturers may use filters that are not designed well to capture particulates, but may allow for higher efficacy ratings.</p>	EPA appreciates the commenter's assessment of air velocity and filtration and the potential impact on efficacy ratings. EPA has decided to alter its original proposal for fans tested with a filter in place.

<p>Commenter-Proposed Efficacy Criteria for In-line Fans Tested with Filter</p>	<p>3.6 cfm/W</p>	<p>One commenter recommends that the efficacy requirement for in-line fans tested with a filter in place be 3.6 cfm/W. The commenter states that for a typical in-line fan, a filter will likely create static pressure that warrants an efficacy requirement slightly less than that proposed by EPA in the Draft Version 4.1 specification.</p>	<p>In order to accommodate supply fans with filters that have MERV ratings at or higher than MERV 6, but less than MERV 13, EPA has decided to relax the requirement from 3.7 cfm/W to 3.6 cfm/W.</p>
	<p>75% of requirement for in-line fans without filter</p>	<p>One commenter suggests adding supply fans to the list of product types and efficacy requirements, separate from the in-line fan product type. This would ensure that EPA is not precluding supply fans other than the in-line type.</p> <p>The commenter also proposes an efficacy level for fans tested with a filter in place that is 75% of that required for corresponding ventilating fans without filter (i.e., 3.8 cfm/W * 0.75), or 2.9 cfm/W for in line fans. This is based on a small sample of supply fans tested both with and without filters (ranging up to MERV 13).</p>	<p>EPA appreciates that future supply fan products that are not in-line fans may be released, and would be open to including them in a later revision. For Version 4.1, EPA has decided to maintain the scope for supply fans within the umbrella of in-line ventilation. This aligns with the intent of the revision, which is to correct a distortion in the in-line fan market due to supply fan exclusion. In addition, EPA is confident that supply in-line ventilating fans are and will be the majority of the supply fan market.</p> <p>EPA has updated its efficacy criteria for supply fans tested with a filter rated at MERV 13 or greater to 2.9 cfm/W. This is based on commenter-supplied data and further discussions with stakeholders. EPA does not intend to require all fans tested with a filter (no matter the MERV rating) to meet a minimum 2.9 cfm/W for fear of inefficient fans with MERV 6 filters certifying as ENERGY STAR. This would undermine the intent of the specification.</p>
	<p>Based on MERV ratings</p>	<p>Based on filter testing completed by the commenter, the following recommendations are made for specifying efficacy requirements for in-line fans tested with a filter in place:</p> <p>$6 \leq \text{MERV} < 8 = 3.6 \text{ cfm/W}$ $8 \leq \text{MERV} < 13 = 3.4 \text{ cfm/W}$ $13 \leq \text{MERV} = 3.1 \text{ cfm/W}$</p>	<p>EPA appreciates the suggested efficacy requirements based on MERV. After assessing manufacturer submitted data and participating in further discussion with stakeholders, EPA has decided to set the following efficacy requirements for in-line fans tested with a filter:</p> <p>Fans with a filter ranging from MERV 6 to MERV 12 must meet an efficacy requirement of 3.6 cfm/W. Fans with a filter at a MERV rating of 13 or greater must meet an efficacy requirement of 2.9 cfm/W. Fans tested with a filter below MERV 6 may certify by meeting the same requirements as fans tested without a filter, i.e., 3.8 cfm/W.</p>
<p>Installed Performance Requirement</p>	<p>Supply fans excluded</p>	<p>One commenter suggests that EPA specify that supply fans are excluded from the installed fan performance requirements to be consistent with in-lines fans, which are already excluded from this requirement.</p>	<p>EPA's intent is to include in-line supply fans in scope for ENERGY STAR. As such, they would be excluded from the installed performance requirements like all other in-line fans.</p>

Lighting	New requirements for lighting	One commenter notes that updating the lighting section to reference the Luminaires specification may inadvertently change the requirements for Ventilating Fans lighting. Specifically, the Luminaires specification requires testing with the lamp in the unit, while the current Ventilating Fan specification does not require the lamp to be tested in the unit - a change that would increase the testing burden. The stakeholder requests that EPA explicitly state that ventilating fans (at least range hoods) need not be tested with the lamp in the unit.	EPA did not intend to alter the current requirements for ventilating fans with lighting. The intention of the update was to streamline the specification and requirements by directly referencing the ENERGY STAR Luminaires specification. The limited topic proposal includes updated language that excludes vent fans from this testing requirement. However, please note that EPA does consider the installed lighting performance relevant to bathroom fans with lighting, and currently intends to remove the exclusion in the next major revision.
Reporting Requirements			
Do Not Support Reporting Requirements	Bathroom and utility room sound at 0.25 in w.g.	One commenter states that a sound reporting requirement for bathroom and utility room fans at 0.25 in w.g. would be cumbersome for testing and suggests that the reporting requirements and static pressure reference measurements be removed for the final specification. Another commenter recommends that the reporting requirements in Section 3E be removed.	EPA has decided to make the reporting requirement for bathroom and utility room sound level at 0.25 in w.g. optional. EPA understands that this measurement point may not be common to all ENERGY STAR certified products, but intends to showcase products that operate quietly under higher static pressure in the ENERGY STAR qualified products list. Partners are not required to report this data to EPA in order to certify as ENERGY STAR, and products do not have to achieve any particular performance on the metric.
	Range hood efficacy and sound at 0.1 in w.g.	Two commenters oppose the reporting requirements and static pressure reference measurements for efficacy and sound at 0.1 inches w.g. for range hoods. The commenters cite that these are not typical measurements and would add additional testing burden which could be a disincentive to manufacturers seeking or continuing ENERGY STAR certification for some range hoods. Additionally, the proposed reporting requirements will complicate the issue of inconsistencies between industry standards, which industry is working to resolve.	EPA agrees that, at this time, additional reporting requirements for range hoods may lead to some confusion given the current dynamic in the industry. As such, EPA has removed the efficacy and sound reporting requirements that were proposed for range hoods in Draft Version 4.1 to allow time for industry to resolve inconsistencies between current standards.
	Promote good installations through other means	One commenter offers to work with EPA on addressing poor installations of ventilating fans in another manner, in lieu of reporting requirements at higher static pressure.	EPA appreciates this offer and hopes to pursue such activities in cooperation with its stakeholders.

Clarification of Reporting Requirements	No minimum/maximum criteria to meet	One commenter would like EPA to clarify that Table 3 does not specify minimum efficacy nor maximum sound requirements. This suggestion is applicable if EPA pursues reporting requirements for the final Version 4.1 specification.	EPA did not intend there to be a maximum or minimum for any reporting requirements, and there is no maximum sound level associated with the optional sound level reporting requirement for bathroom and utility room fans in the final Version 4.1 specification.
Other / Miscellaneous			
Installation Instructions	Ducting	One commenter states that the proposed update to the ducting statement found in Section 5 is unnecessary, and suggests that if EPA maintains the update that it should clarify that derived models of currently certified products may continue to use the statement language found in the Version 4.0 specification.	EPA plans to maintain the wording proposed in the Draft Version 4.1, but will clarify here that all models in a product family certified to Version 4.0 may continue to use the language found in Version 4.0.
Future Specification Revisions	Static Pressure	One commenter is concerned that Section 7A indicates a guaranteed change in a future specification revision and warns EPA against moving too quickly in updating static pressure requirements. The commenter also warns that higher static pressure requirements in the specification may limit the technologies capable of meeting ENERGY STAR.	EPA wishes to clarify that the topics outlined in sections 7 A, B, and C are those which EPA plans to further investigate in the future. EPA is not stating that these are topics that will definitely be folded into future ENERGY STAR specifications, but are topics that EPA is interested to learn more about, especially if they could lead to better performing products, consistency with industry, and better representation of efficiency and performance in the field.
Remote Exterior Mounted Ventilators	Include in scope	One commenter states their support for including remote exterior-mounted ventilators (REMV) in the ENERGY STAR Ventilating Fans Version 4.1 specification. Specifically, the commenter states that there are 92 REMV models in the HVI directory from 3 manufacturers and many more efficient models not listed in the HVI directory. The commenter also provides suggestions on how to update the specification to include REMVs in scope.	EPA appreciates knowing that additional models exist, and suggests that for a future revision that information could be provided to EPA. At the moment, EPA does not have enough product information to include remote exterior-mounted ventilators in scope of the ENERGY STAR Ventilating Fans specification. In addition, EPA continues to understand these products as useful in particularly rare situations only. As always, EPA remains open to considering their inclusion in a future revision.

Heat and Energy Recovery Ventilators	Include in scope	<p>One commenter states their support for including heat/energy recovery ventilators (HRVs and ERVs) in the ENERGY STAR Ventilating Fans Version 4.1 specification. The commenter suggests that including H/ERVs in scope in the specification supports a well-accepted ventilation system that serves the same function as fans, but provides superior energy efficiency. The commenter also provides specific suggestions on how to update the specification to include H/ERVs in scope.</p>	<p>EPA appreciates the commenter's proposal for including heat and energy recovery ventilators (H/ERV) in the ENERGY STAR Version 4.1 specification. However, EPA does not necessarily agree that the inclusion of H/ERVs in the Ventilating Fans specification is the correct solution for working towards certification of these products in the United States. Adding H/ERVs to the scope of the ENERGY STAR Ventilating Fans Version 4.1 specification would slow down the ability to certify supply fans as ENERGY STAR, which is the primary goal of this revision, without accelerating the inclusion of H/ERVs. Also, EPA is not convinced that H/ERVs offer the same function as, nor are they installed in a similar manner to other ventilating products such as bathroom and in-line fans. EPA's intention is to conduct further research into H/ERVs and, if appropriate, expand the current NRCan ENERGY STAR Heat and Energy Recovery Ventilators specification to the United States.</p>
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