

# ENERGY STAR® Most Efficient 2017 Stakeholder Comments

Topic	Comment Summary	EPA Responses
<b>General</b>		
ENERGY STAR Most Efficient Program	Three stakeholders expressed general support for the ENERGY STAR Most Efficient 2017 proposed criteria with slight revisions to individual product categories.	EPA appreciates the comments.
ENERGY STAR Most Efficient Program	One stakeholder is concerned that EPA continues to establish Most Efficient criteria in a manner inconsistent with EPA's Guiding Principles for the ENERGY STAR program and inconsistent with actions it has taken with regard to its baseline specifications.	ENERGY STAR Most Efficient is designed to identify and advance highly efficient products in the marketplace. ENERGY STAR Most Efficient complements the base ENERGY STAR program, identifying for a set of early adopter consumers and energy efficiency program sponsors, the most energy efficient of the ENERGY STAR certified products. Designed for this audience, EPA sets criteria with efficiency prioritized above all else and understands from a range of stakeholders that this objective is being met.
<b>Central Air Conditioners &amp; Heat Pumps</b>		
Criteria	One stakeholder wanted to know if EPA could provide an example of what a partner should provide to show the requirement to <i>cooling (and heating if applicable) at two or more capacity levels</i> .	The manufacturer would provide documentation to EPA of the type of compressor assembly used and its capacity range capabilities. The unit must provide at least two different stages of capacity to qualify.
Performance	One stakeholder highlights the performance difference between products installed in colder climates versus warmer climates. The same unit that might work extremely well for heating at low temperatures may not be able to cool at quite the same level of efficiency. The stakeholder wonders if there can be a trade-off for high efficiency equipment that is designed for cold climates to still be eligible for ENERGY STAR Most Efficient recognition, even if the cooling performance is slightly diminished from the criteria.	EPA has examined this question in the past; at that time, a highly efficient heat pump for heating was also highly efficient for cooling. The situation may be changing, and EPA looks forward to working with stakeholders to stay abreast of these developments for future ESME criteria.
<b>Clothes Dryers</b>		

Annual Energy Use	One stakeholder commented on the need for annual energy be based on annual pounds of clothing that is dried.	EPA appreciates the testing and evaluation of dryers using real clothing that the commenter has conducted. However, dryers qualifying for ENERGY STAR Most Efficient recognition must be tested and rated to the DOE Appendix D2 test method using the DOE test cloth.
Category Addition	Three stakeholders support the addition of clothes dryers to the ENERGY STAR Most Efficient program and are excited about the opportunity for further product differentiation.	EPA is glad to offer the new category for ENERGY STAR Most Efficient clothes dryers, appreciates the involvement of partners and stakeholders in advancing clothes dryer efficiency, and looks forward to its incorporation into utility incentive programs.
Consumer Experience	One stakeholder is concerned with the consumer experience for gas powered clothes dryers. This trend of high RMCs in each dryer's "Eco" setting was not seen in NEEA's testing of electric dryers.	EPA is grateful to NEEA for sharing its research on gas dryer RMCs using real clothing, and welcomes continued dialogue on this topic. Both ENERGY STAR and ENERGY STAR Most Efficient continue to utilize the Appendix D2 test method with the DOE test cloth.
Criteria	Two stakeholders believe the ENERGY STAR Most Efficient 2017 criteria for gas clothes dryers are too stringent compared to products currently available on the market.	While no gas dryers currently meet the proposed level, based on stakeholder input EPA is aware that multiple feasible technology options are currently available, such as modulating valves. EPA sees the Most Efficient gas dryer criteria as an opportunity to advance efficiency in the gas dryer market.
Criteria	One stakeholder suggests EPA reconsider proposed levels for clothes dryers since it appears that only heat pump dryers can qualify for the designation and heat pump dryers do not represent the mainstream dryer market in the U.S.	ENERGY STAR Most Efficient is designed to recognize the top performers, not the mainstream dryer market. Currently the products in our dataset that meet the proposed criteria are heat pump and hybrid heat pump models. However, there is no technology restriction on which dryers can earn the designation, provided that they meet the efficiency criteria.
Criteria	One stakeholder recommends EPA require additional data, including alternate test cycles and loads, be provided to help utilities distinguish models and the maturation of future test procedures and federal standards.	EPA is proposing to require additional reporting in the highest dryness setting of the normal cycle, including time taken to complete the test cycle. At this time EPA is not proposing to require other reporting items but welcomes continued discussion as research develops, to inform our understanding of efficiency performance and consumer usage patterns.

Criteria	One stakeholder recommended that, for gas dryers, EPA consider a higher CEF of 4.2 and maximum cycle time requirement of 55 minutes for future Most Efficient specifications.	EPA appreciates the supporting research provided to demonstrate the efficiency potential of gas dryers. Recognizing that ENERGY STAR Most Efficient is an annual designation effective in January 2017, EPA is proposing a CEF of 3.8 to encourage a more immediately achievable level of efficiency. However, EPA intends to revisit this level for the 2018 criteria as gas dryer efficiency continues to improve and adopt some of these technology advances.
Efficiency Tiers	One commenter strongly recommends not separating efficiency tiers by drum size for simplicity and for performance consistency.	EPA is proposing only one efficiency level for electric dryers in the normal cycle, and likewise one for gas dryers, regardless of drum size. Compact and standard dryers are both eligible for Most Efficient 2017 recognition, and should use their respective load sizes as prescribed by the Appendix D2 test method. EPA appreciates the additional insights on alternate test load sizes.
Most Energy Consuming Cycle	Rather than incorporating criteria for the “most energy consuming” cycle, one stakeholder proposes that EPA consider adding minimum acceptable functionality performance metrics to the Normal Cycle testing in order to ensure that consumer performance expectations are met in the Normal Cycle.	EPA appreciates this feedback. While adding minimal acceptable functionality performance metrics to the normal cycle testing could also ensure consumer performance expectations are met, EPA is more immediately interested in seeing how CEF and cycle time are affected. EPA believes requiring that Most Efficient models to meet ENERGY STAR levels as a floor when operating in the normal cycle with the highest temperature and dryness setting will similarly help guard against potential performance issues.
Most Energy Consuming Cycle	Two stakeholders do not support the incorporation of the “most energy consuming” cycle into the ENERGY STAR Most Efficient clothes dryer criteria because the ENERGY STAR clothes dryer criteria is solely based on the normal cycle as are the applicable energy conservation standards. These stakeholders note that requiring the measurement of energy for the “most energy consuming” cycle would create an immense burden for manufacturers.	In light of comments received, EPA has replaced the required testing of most energy consuming cycle with the required testing of the normal cycle with highest temperature and dryness setting. This should alleviate most of the concern regarding having to determine the most energy consuming cycle. This also addresses the concern of there potentially being a requirement level for a cycle with low consumer usage.

Most Energy Consuming Cycle	One stakeholder supports the "most energy consuming" cycle requirement of 3.48 CEF for gas dryers because this measurement may shield against lower than expected drying performance with all dryer settings by incenting manufacturers to improve the auto-termination overall, and not just to one specific cycle within a test procedure.	EPA appreciates this feedback and support.
Performance Levels	One commenter believes EPA should maintain a multi-tier specification with at least three performance levels so that manufacturers can use them as part of their product development process.	EPA remains committed to working closely with our stakeholders and partners in the development of specifications as well as our ENERGY STAR Most Efficient criteria. However, given the annual nature of our ENERGY STAR Most Efficient designation, we cannot consistently project how it will relate to future specification revisions for a given product category.
Product Class	Two stakeholders recommended ENERGY STAR Most Efficient include the same product classes as in the ENERGY STAR Version 1.0 Dryer Specification rather than the two proposed product classes (electric and gas).	The dataset does not indicate a need to set separate criteria for product classes at the higher efficiency levels proposed for Most Efficient. There are both compact and standard size models on the market that will meet the proposed 2017 ENERGY STAR Most Efficient criteria.
Test Procedure	One stakeholder proposed EPA consider adding a small load size to the test procedure to represent user behavior more closely when assessing top-performing products.	EPA has strived to limit the test burden on manufacturers and is focusing on testing in one alternate cycle setting at this time. EPA remains interested in consumer data on load sizes as well as the impact of load size on performance.

### Computer Monitors

Calculation Inquiry	Two stakeholders had questions regarding the ENERGY STAR Most Efficient Computer Monitor calculations. One stakeholder asked if products with >5.0 megapixels Total Native Resolution must have a total energy consumption of no more than 30.65 kilowatt-hours? Another asked for clarification on how to calculate the Total Energy Consumption for a product with over >5.0 megapixels.	The intention of the requirement is for the resolution to be capped at 5 megapixels, such that the resolution allowance does not exceed 30.65 kWh. Products with >5.0 megapixels Total Native Resolution can receive a maximum r of 5 megapixels, for a resolution allowance (6.13 × r) of 30.65 kilowatt-hours. This clarification has been made in the final criteria.
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### Geothermal Heat Pumps

Scope	One stakeholder suggests hydronic or water-to-water heat pumps as a class be exempted from the two-stage or modulating compressor requirement.	In discussing this comment with stakeholders, EPA became aware that that this subcategory is installed with a buffer tank, offering the same benefit of steady even heat that variable capacity does for other HVAC products. EPA agrees with this commenter and has adjusted the requirements for water to water GHP products.
<b>Televisions</b>		
Category Removal	Rather than removing Televisions from the ENERGY STAR Most Efficient 2017 criteria, one stakeholder recommends EPA keep the category and maintain the 2016 criteria into 2017.	Given that the vulnerabilities associated with disabling energy saving features is highest for the products with the most significant savings claims, EPA has also decided to pause recognition of TVs as ENERGY STAR Most Efficient. EPA expects to move quickly to structure the ENERGY STAR requirements to ensure savings. Once that is in place, EPA may reinstitute the ENERGY STAR Most Efficient program.
<b>Vent Fans</b>		
Fan Speed	Efficacy of multi-speed fans is desirable but it appears inconsistent to require they meet the 10 CFM/W limit only at the top speeds. Some fans can meet the requirement at top speed but fail the 10 CFM/W at lower speeds. Since the continuous operation feature often involves reduced speed options that specifically meet ASHRAE 62.2 requirements, the operation at reduced speeds may represent a statistically higher usage than the high speed option that is only used during bathroom events like bathing or showering. One stakeholder recommends that multi-speed fans must meet the Most Efficient cfm/W requirement at each speed, not just high speed, to be consistent with the ENERGY STAR specification.	EPA strives to keep the EMSE criteria as simple as possible, and does not feel additional requirements will add greatly to installed energy savings. Consider that for that fans with technology to meet the criteria at high speed, they are almost as efficient at lowest speed, yet since they are producing less than 1/3 the airflow, their power consumption remains considerably lower at low speed. We will maintain the simplified ESME criteria for 2017.
Sound Levels	One stakeholder recommends sound levels be reported at 0.25" while leaving the 0.1" minimum sound requirement in place and eliminating any minimum requirement for sones at 0.25."	EPA is in favor of this concept, but considering that it would complicate the recognition process through requiring submission of additional data, will not implement it for 2017. EPA will consider such a change for future years.