

Topic	Comment	Response
Cleaning Performance	<p>Two stakeholders disagree that EPA should include a cleaning performance element within the ENERGY STAR criteria, even if it is voluntary. The stakeholders encourage EPA to look at DOE and manufacturer data as part of its specification development process to see the impact of performance on its proposed levels.</p> <p>Two additional stakeholders support the proposal to add voluntary reporting requirements for cleaning performance. One stakeholder adds that all products should be required to use the cleaning performance test once it is available, regardless of the certification date.</p> <p>Two stakeholders comment that the proposed levels will have a negative impact on performance. In addition, this poor performance will affect consumer perception of ENERGY STAR clothes washers. They encourage EPA to evaluate increased complaints, for example around low water levels.</p>	<p>As noted in Draft 1, EPA is aware that as we recognize greater and greater levels of leadership in energy and water efficiency, efforts need to be taken in order to ensure that performance is not traded off for efficiency. EPA's interest is to advance a mechanism by which cleaning performance can be demonstrated in a repeatable and reproducible manner. EPA and DOE are releasing, alongside this Draft 2 specification, a draft test method. With an established test procedure, manufacturers will be able to submit test data at the time of certification. Upon finalization of the test method, this practice will be optional but encouraged for Version 8.0.</p> <p>In addition to providing manufactures a consistent mechanism by which to ensure their high efficiency products continue to meet consumer expectations, establishing this kind of test procedure and generating data offers the following additional benefits:</p> <ul style="list-style-type: none"> * Ongoing insight on cleaning performance as it relates to energy and water use would allow the ENERGY STAR program to better understand the current market and effectively plan for future specification development efforts. * Data at an individual model rather than an aggregate level is critical to effectively assessing the relationship between performance and energy and water use. * Access to comparable data across brands and models provides the most equitable and comprehensive picture of how ENERGY STAR products are performing <p>EPA and DOE welcome partner and stakeholder participation in the development process.</p>
Cleaning Performance	<p>One stakeholder comments that it is unclear why EPA has chosen cleaning and rinse performance as the two washer performance metrics that are of most concern to consumers at increased efficiency levels.</p> <p>Another stakeholder notes that EPA should consider a minimum acceptability factor to deter product configurations from achieving energy efficiency at the expense of performance.</p>	<p>EPA understands that there are multiple areas of performance that could be considered. It has been EPA's understanding from the previous discussions with stakeholders that cleaning and rinse performance are two key items of concern for consumers. Accompanying this Draft 2 specification, DOE and EPA are releasing a draft test method for measuring cleaning performance. EPA is willing to consider other performance elements for incorporation at a future date to further protect the consumer experience.</p>
Combination All-in-One Washer-Dryers	<p>One stakeholder does not believe it would be appropriate for combination washer-dryers to be eligible for ENERGY STAR certification at this time because of the continued lack of a test method for measuring the dryer's water consumption.</p> <p>Two additional stakeholders believe that EPA should not measure the water consumption of the dryer, as the amount of water used is negligible, thereby allowing combination all-in-one washer-dryers to be covered by the ENERGY STAR scope. The stakeholders also believe that EPA needs to provide additional information on how the test data would be used and shared.</p>	<p>Any water consumed during the dry cycle in a combination washer/dryer is not currently measured as part of DOE's clothes washer or clothes dryer test procedures. EPA thanks partners for providing additional data on the water usage of the dryer. In reviewing data from multiple manufacturers, EPA found that at least 20% of the total water consumption of the product, i.e. the water consumption from the clothes washer and clothes dryer, was from the dryer. This percentage is significant enough that the water consumption of the product should be tested and reported in order for combination all-in-one washer-dryers to be included in the ENERGY STAR program. In consultation with the Department of Energy, EPA believes there are pathways forward to test this water consumption. However, as there is a test method element to consider, EPA will, if there is interest from multiple partners, convene a working group to discuss pathways forward. Stakeholders interested in participating in this working group are encouraged to contact appliances@energystar.gov. The goal of this working group, should it be formed, will be to identify a pathway forward for testing the water consumption of the dryer element of combination all-in-one washer-dryers and ensuring the efficiency of these products. The goal of this effort would be to clarify the status and requirements of these products as a part of a 8.1 revision.</p>

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Definitions and Scope	<p>One stakeholder comments that the laundry center definition should be amended to remove the specificity of a single electric power source. EPA should be technology agnostic with regard to the number of power sources.</p> <p>In addition, the stakeholder disagrees with the continued exclusion of commercial clothes washers with a capacity larger than 6.0 cubic feet and requests that EPA consider larger products that can be tested consistently with Appendix J2.</p>	<p>EPA has amended the laundry center definition to remove the specificity of a single electric power source.</p> <p>EPA has amended the commercial clothes washer scope to allow those products up to 8.0 cu-ft. to be eligible for ENERGY STAR certification. EPA notes that the definition of Commercial Clothes Washer maintains the exclusion of products designed for use in "other commercial applications;" i.e. applications other than those in which the occupants of more than one household will be using the clothes washer, such as multi-family housing common areas and coin laundries. EPA further notes that models wishing to qualify under this new extension would need a valid test procedure waiver from DOE in order to be eligible.</p>
Energy and Water Criteria	<p>Three stakeholders have concerns about the data EPA used to conduct its consumer payback analysis. Instead of evaluating the number of models that would meet the proposed levels, EPA should look at the shipments those models represent. Otherwise, EPA may be basing estimates on models with low sales that are not representative of the market. In addition, EPA should consider additional data points as part of its analysis of the price premium, rather than comparing two products per product configuration.</p> <p>Stakeholders comment that EPA is underestimating manufacturer costs under the current method. In addition, one stakeholder is concerned about EPA's reliance on data from LG's and Samsung's pricing of washing machines, because the U.S. government found both companies to be pricing below normal value and has decided to impose offsetting antidumping duties.</p> <p>Finally, one stakeholder notes that EPA should compare the savings of the proposal to the current ENERGY STAR specification and not the upcoming federal standard.</p>	<p>When developing proposed ENERGY STAR levels, EPA assembles efficiency data that is reflective of models currently on the market. The aim in doing so is to establish performance levels that consider the efficiency that has been achieved by today's models and establish a level that recognizes best performance. Using shipment-weighted data runs the risk of failing to support the Agency's intent of defining and recognizing leadership in energy efficiency performance, as it typically would produce a result that continues the status quo.</p> <p>After further consideration of stakeholder comments and receipt and review of new market share data, EPA has reevaluated the top-load proposal and has determined that a specification revision is not required at this time. However, EPA will review the top-load criteria as part of the V9.0 specification revision process with the intention of setting more rigorous efficiency criteria at that time.</p> <p>When developing savings, EPA compares the performance of conventional products to that of the proposed ENERGY STAR level. For products with federal standards, EPA consistently uses the federal standard as the point of comparison for savings. In this case, as the federal standard will change at the same time as the ENERGY STAR specification, EPA is using this forthcoming federal standard to define a conventional product.</p>
Energy and Water Criteria	<p>One stakeholder comments that EPA should clarify the reason for the small difference between the Draft 1 proposal and the CEE Tier 2 IMEF requirement for residential clothes washers.</p>	<p>The front-load IMEF level that was proposed as part of Draft 1 harmonized with the 2016/2017 ENERGY STAR Most Efficient criteria. EPA understands that there is a small difference in the IMEF values between the Draft 1 proposal and the CEE Tier 2 level, but does not believe that there is rationale for amending the efficiency levels below the Draft 1 proposal.</p>

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Connected Criteria	<p>One stakeholder proposes changes to the note language in Section 4B2 and proposed language that could be added to Note 2 in Section 4B1. The stakeholder also requests clarification on EPA's proposal to include an additional type of energy use feedback with the additional option of "energy use associated with the previous cycle." In addition, the stakeholder is also concerned that EPA's proposition to limit a consumer's ability to override one cycle will diminish consumers' experience with the product.</p> <p>Another stakeholder is concerned that until a test method is complete, manufacturers have limited incentive to invest in developing new products and increasing their market penetration. The stakeholder suggests that EPA gather additional data on how connected products are used by the consumer.</p>	<p>The 5% allowance is intended to jumpstart the market and as noted, connected products currently represent less than 2% of the market. However, it is important for EPA to monitor the market and re-assess the relevancy and magnitude of the allowance during each specification revision. Continuation of this approach will provide manufacturers assurance that the 5% allowance will be maintained at least until the release of the V9.0 specification. EPA would also note that manufacturers are unable to utilize the 5% allowance until the test method to validate Demand Response ("DR") is completed. Manufacturers of connected clothes washers are encouraged to provide test samples to support DOE development of the test method to validate DR and to provide EPA with information that documents how their connected appliances are saving energy. EPA also encourages all stakeholders to share data on how connected products are used by the consumer and how those features can be used to further the adoption of these products.</p> <p>EPA agrees with the stakeholder that, although intended to add clarity, the addition of the language at the end of Section 4B2 unintentionally added Open Access stringency above and beyond that required by Section 4C. In the Draft 2 V8.0 specification, EPA has revised Note 2 in Section 4B1 to read, "...the API or similar documents must ensure open access to the connected functions outlined in Section 4C." In addition, EPA has removed the added language from Section 4B2. However, EPA does believe the language helps to clarify intent and will retain it in the ENERGY STAR Connected Criteria Q&A.</p> <p>The additional language in Section 4D, which is consistent with the ENERGY STAR Connected Criteria Q&A, and indicates that for cycle-based appliances, such as clothes washers, in addition to providing interval data that is representative of the washer's energy consumption, manufacturers may elect to also provide energy use feedback related to individual cycles. This information may be useful to consumers.</p> <p>EPA agrees that the added language in Section 4E serves to diminish rather than enhance clarity. For remote management, it continues to be EPA's intent to require manufacturers to provide consumers access to remote management functionality and encourage manufacturers to allow 3rd party access to remote management capabilities that will benefit consumers, while allowing manufacturers to limit 3rd party access, for example, in cases where consumer satisfaction, product performance and/or safety may be impacted. In the Draft 2, V8.0 specification, EPA has reverted to the remote management language used in the final V7.1 specification.</p> <p>In the Draft 2, V8.0 specification, EPA has retained the DR criteria (Section 4G) proposed in Draft 1. This criteria reflects EPA's original intent with respect to the DR criteria in final V7.1 specification and is consistent with the clarifications EPA presented in the ENERGY STAR Connected Criteria Q&A. EPA notes that this criteria keeps consumers in control of their appliance at all times. In the example of multiple wash loads in a single long-duration DAL period; consumers simply need to override at the start of each wash load.</p>
Laundry Centers	<p>One stakeholder comments that ENERGY STAR laundry center certification should not require both the washer and the dryer to be certified individually. The proposal will disincentivize manufacturers from investing in the energy efficiency of either element.</p> <p>A second stakeholder agrees with the laundry center clarification and proposal for both the washer and dryer to be ENERGY STAR certified for the laundry center to be ENERGY STAR certified.</p>	<p>EPA has maintained the laundry center criteria proposal. Since both the washer and dryer are significant contributors to the energy use of the product, EPA must evaluate both of these functions to ensure the ENERGY STAR is guiding consumers to the best performers.</p>
Compact Clothes Washers	<p>One stakeholder questions the exclusion of compact clothes washers, stating that approximately 30% of apartments have in-unit laundry and that compact clothes washers have higher water factors than standard-size clothes washers.</p>	<p>As of September 9, 2016, the DOE Compliance Certification Database for residential clothes washers contains 31 entries for clothes washers with capacities less than 1.6 cubic feet. These represent only 5% of the 573 models in the database. Furthermore, there are multiple clothes washer models on the market with smaller case sizes (24-inch width instead of 30-inch or greater) that are suitable for apartment installations but have capacities greater than 1.6 cubic feet (i.e., classified as standard-size).</p>

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<p>Commercial Clothes Washers</p>	<p>One stakeholder believes that large capacity clothes washers are contributing to a lack of popularity of commercial front-load products.</p> <p>One stakeholder states that it is important to evaluate whether or not increasing the efficiency requirements within ENERGY STAR will have a negative impact on the utility of front-loading CCWs. In particular, the commenter believes that if increasing energy efficiency and or water efficiency results in machines on the market that have significantly greater cycle times, this could impede actual market transformation towards more efficient machines.</p> <p>The same stakeholder notes that the integrated water factor (IWF) is calculated in the DOE clothes washer test procedure at 10 CFR Part 430, Subpart B, Appendix J2 by using, in part, Load Usage Factors (LUFs), and that these LUFs are identical for all clothes washers tested (i.e., the same LUFs are used for both residential clothes washers and commercial clothes washers). The commenter states that using the same LUFs for both RCWs and CCWs “inaccurately deflates potential savings for commercial machines.” The commenter further suggests that the LUF for the maximum load size should be adjusted higher than the current 0.12 value for CCWs because such machines would be more likely to be run with larger load sizes.</p>	<p>ENERGY STAR does not have any information that indicates that large capacity clothes washers are contributing to a lack of popularity in commercial front-load products. EPA believes that while there is the opportunity for energy efficiency in these models, it is the responsibility of the laundry route operator to identify the most appropriate and energy efficient solution for its end-use. However, if stakeholders have additional information, EPA will take it under consideration.</p> <p>Under the Energy Policy and Conservation Act of 1975 ((EPCA), 42 U.S.C. 6291 et seq.), test procedures for CCWs must be the same as test procedures for RCWs. (42 U.S.C. 6314(a)(8)) The clothes washer test procedures are codified at Title 10 of the Code of Federal Regulations, Part 430, Subpart B, Appendix J1 and Appendix J2. Before January 1, 2018, any representation related to the energy or water consumption of CCWs must be based on results generated using Appendix J1. Any representations of energy or water consumption of CCWs made on or after January 1, 2018, must be based upon results generated using Appendix J2. In both Appendix J1 and Appendix J2, the LUF value for the maximum load size (Fmax) is 0.72 for clothes washers with manual water fill control systems and 0.12 for clothes washers with automatic water fill control systems.</p> <p>In its most recent rulemaking for CCW energy conservation standards, in which DOE estimated potential energy and water savings due to more stringent standards, DOE examined possible differences in loading between RCWs and CCWs by analyzing data from a study that monitored energy and water usage of CCWs in multiple sites. DOE found a pattern based on water usage at 6 sites that suggested an alternate set of LUFs: Fmax = 0.26, Favg = 0.54, and Fmin = 0.20. However, because of the limited geographical representation and variability of the data set, DOE did not conclude that these values were representative of all CCW load sizes in the field. Therefore, DOE retained the LUFs from the current test procedure when calculating CCW energy and water use, although it did perform a sensitivity analysis with the alternate set of LUFs. For more details, see Chapter 7 and Appendix 7A Technical Support Document accompanying the December 2014 final rule, which are available at: https://www.regulations.gov/document?D=EERE-2012-BT-STD-0020-0036.</p> <p>In the March 2014 NOPR, DOE preliminarily determined that the longer average cycle time of front-loading machines warrants consideration of separate equipment classes. DOE presented data showing that top-loading cycle times for the maximum load size ranged from 29 to 31 minutes, with an average of 30 minutes. 79 FR 12301, 12309. Front-loading cycle times, on the other hand, ranged from 30 to 37 minutes, with an average of 34 minutes. Id. DOE preliminarily determined that the longer average cycle time of front-loading CCWs results in fewer possible “turns” per day compared to top-loading CCWs. DOE stated that a longer average time is significant in a laundromat or multi-family laundry setting to end-users waiting on the machine to finish its cycle, as well as to laundromat owners and multi-family laundry route operators looking to maximize daily laundry throughput. 79 FR 12301, 12309</p> <p>In the December 2014 final rule, DOE acknowledged that the difference in cycle times between top-loading and front-loading CCWs had since diminished due to improvements in front-loading technology. DOE also noted that at least one front-loading CCW model was available on the market at the amended standard level with a cycle time of approximately 30 minutes, which matched the average cycle time of all top-loading CCWs tested by DOE. DOE stated its understanding that as technology progresses, cycle time may become a less meaningful differentiator between CCW equipment classes. 79 FR 74492, 74499</p>

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Energy and Water Criteria	<p>One stakeholder believes EPA should evaluate residential top-load washers and front-load washers separately because of the large discrepancy in the number of front- and top-load washers that are ENERGY STAR certified. The stakeholder believes that revisions to front-load criteria is warranted, but revisions for top-load criteria is not. Another stakeholder believes they should be classified together, as both front- and top-load washers perform the same basic function (washing clothes). One stakeholder is concerned that EPA is calculating the percentage of washers certified as ENERGY STAR based partially on models meeting the previous specification, which is not an accurate portrayal of the true penetration of ENERGY STAR in the market. It says EPA should use only the Version 7.0 specification in the unit shipment data calculation.</p> <p>A separate stakeholder notes that multiple interested parties argued for the removal of two separate product classes in response to DOE’s notice of proposed rulemaking for commercial clothes washer (CCW) standards published on March 4, 2014 (“March 2014 NOPR”). The commenter noted that DOE determined that certain consumer utility concerns warranted separate product classes for CCWs. The commenter believes that the issue of separate product classes warrants further research and evaluation, and that combining the two product classes would be a significant way to achieve increased efficiency in the CCW market.</p>	<p>In Draft 2, EPA is continuing to treat residential front-load and top-load products separately. EPA believes that there continues to be high consumer demand for top-load products. By separating the criteria for top-load products, EPA is able to recognize highly efficient top-load products, while also better recognizing and reflecting the efficiency of front-load products.</p> <p>EPA utilized its Unit Shipment Data (USD) reporting to determine the market penetration of clothes washers. While EPA does collect data on the number of top-load products that meet the ENERGY STAR criteria, the Agency did not have information as to how many total top-load products are in the market. Stakeholders also shared market data that broke out top-load and front-load shipments that EPA did not have previously. Analysis of this data indicates that ENERGY STAR market share for top-load washers is lagging significantly behind that for front load washers. Based on an estimated ENERGY STAR market share of approximately 30%, EPA has concluded that a revision to the top-load residential clothes washer criteria is not warranted at this time. EPA does not collect model specific data for its USD analysis.</p> <p>DOE published a final rule amending commercial clothes washer standards on December 15, 2014 (“December 2014 final rule”) in which it concluded that the axis of loading represents a distinct consumer utility-related feature that warrants retaining both top-loading and front-loading CCW equipment classes. 79 FR 74492, 74498-74499. DOE reached the same conclusion in prior rulemakings for residential clothes washers. 56 FR 22249, 22263 (May 14, 1991) and 77 FR 32307, 32319 (May 31, 2012).</p> <p>DOE stated in the December 2014 final rule that the method of loading provides specific consumer utility that defines separate equipment classes. For example, front-loading commercial clothes washers are stackable and can be useful in a concentrated laundromat or multi-family housing setting. On the other hand, top-loading washing machines provide the utility of adding clothes during the wash cycle. DOE noted that the separation of clothes washer equipment classes by location of access is similar in nature to the equipment classes for residential refrigerator-freezers, which include separate equipment classes based on the access of location of the freezer compartment (e.g. top-mounted, side-mounted, and bottom-mounted). The location of the freezer compartment on such equipment provides no additional performance-related utility other than consumer preference. In other words, the location of access itself provides distinct consumer utility. 79 FR 74492, 74499</p> <p>Furthermore, DOE noted in the December 2014 final rule that top-loading residential clothes washers are available with the same efficiency levels, control panel features, and price points as front-loading residential clothes washers. Given the equivalence in efficiency, features, and price, the purchase of such top-loaders indicates a preference among certain consumers for the top-loading configuration; i.e., the top-loading configuration itself provides unique consumer utility to those customers preferring one configuration over another, with all other product attributes being equal. Id.</p> <p>In the final rule analysis, DOE reiterated and confirmed its conclusion that the method of loading is a feature that provides distinct consumer utility. The final rule maintained separate equipment classes for top-loading and front-loading CCWs. Id.</p>
Effective Date	One stakeholder fully supports the proposed effective date. However, another stakeholder requests that EPA consider moving the Version 8.0 effective date from January 1 to a later date in 2018 after EPA provides greater clarity on cleaning and rinse performance.	EPA has maintained the effective date for the V8.0 specification in alignment with the next change in federal standards. Although it would be ideal to have a cleaning performance test completed by the January 1, 2018 effective date, EPA understands the time required to develop a test method. Therefore, EPA anticipates incorporating the test method once it has been completed as part of an 8.1 revision.
Process	One stakeholder requests that EPA allow for a 30-day minimum comment period in the future.	EPA values stakeholder input and, as such, typically offers 4 weeks for comments on drafts. EPA would note that the Draft 1 comment period, while initially less than 4 weeks, was extended twice, per stakeholder request, to allow seven weeks to comment.