

ENERGY STAR® Version 7.0 Residential Dishwasher Draft 2 Specification Stakeholder Comment Matrix

Topic	Comment	EPA Response
Sunset	<p>Eight stakeholders support the new specification noting that ENERGY STAR is a top driver of consumer purchasing decisions for dishwashers. ENERGY STAR offers value to consumers by providing a way to identify highly energy efficient products and offering other useful energy saving tips on its website. Two stakeholders noted the high ENERGY STAR market saturation and encouraged EPA to move forward with the Version 7.0 proposal.</p> <p>Three stakeholders strongly supported sunsetting the ENERGY STAR dishwasher specification. Stakeholders expressed concerns including diminished returns from more efficient dishwashers, possible negative performance consequences of increasing energy and water levels, possible cleaning performance issues, cost effectiveness, and technology limitations.</p>	<p>EPA thanks stakeholders for these comments. Analysis completed by EPA for Version 7.0 revision indicates a potential for meaningful national energy savings and greenhouse gas reductions, on par with those delivered by previous revisions in the appliance and other categories. Incorporating the minimum cleaning metric will better ensure these savings are not undermined by poor performance.</p>
Payback Analysis	<p>Three stakeholders noted a discrepancy between EPA’s analysis and DOE’s preliminary Technical Support Document (TSD) published a few weeks after EPA published Draft 2. They stated EPA calculates a payback period of 3.7 years, going from the current DOE minimum standard to the proposed Version 7.0 specification level, while DOE’s payback estimate is 12.9 years when comparing the same level. They recommended that EPA base its analysis on DOE’s preliminary TSD instead of conducting its own analysis.</p> <p>Two stakeholders raised a concern about equity associated with the increased cost of dishwashers as federal standards and ENERGY STAR criteria become more stringent, resulting in the inability of low-income consumers to purchase dishwashers. In the long run, these consumers may bear the burden of higher energy and water costs resulting from handwashing dishes.</p>	<p>EPA thanks stakeholders for their comments. EPA and DOE’s approaches to performing payback analyses differ consistent with the different purposes of each program. In setting a minimum floor that will ultimately restrict product sales, DOE performs product teardowns, interviews, and develops cost projections of potential models across efficiency levels to be released several years in the future when new DOE standards are in effect. DOE considers the costs of complete redesign and development of new models to meet future standards. For purposes of ENERGY STAR, EPA is interested in the potential for product models at different price points, currently on the market, to pay back that difference through energy savings. Because ENERGY STAR levels are designed to recognize top performers currently on the market, the costs associated with redesign are not relevant.</p> <p>Additionally, EPA recognizes that the information in DOE’s Preliminary TSD for dishwashers is more recent than the</p>

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		<p>information used to support EPA’s analysis for ENERGY STAR Dishwashers V7 Draft 2 However, DOE is currently soliciting comments, feedback, and information that will be used to enhance, adjust, and adapt its analysis for a revised TSD. As such, it would be premature for EPA to base its analysis on preliminary findings that are likely to change.</p> <p>Similarly, DOE’s proposal to reduce the average annual cycles per year to 184 for the Appendix C2 test procedure may change given that 2020 RECs data, which was recently released, indicates average annual cycles per year have increased. Furthermore, the 215 cycles per year value used for purposes of the ENERGY STAR analysis is consistent with Appendix C1, which will continue to be required for use during the next several years until new federal standards are effective and/or required.</p> <p>With respect to the equity concern, EPA notes performance concerns with products that use lower cost componentry to lower the price point (e.g., plastic tubs). Efforts to address inequity are undermined if the options for low-income households fail to perform such that energy use is increased. EPA sees value in rewarding partners who are producing efficient and well-performing products, with the potential that costs will come down as more partners move to better performing componentry. Working with partners to close this cost gap (for example, through tailored incentives) remains an EPA priority.</p>

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Cleaning Performance	<p>Seven stakeholders expressed support for a minimum cleaning performance requirement. They appreciated EPA's evidence and analysis to support this requirement for Version 7.0. Four stakeholders proposed EPA add an extra heavy soil cycle to the test to demonstrate the effectiveness of the soil sensors. The extra heavy soil load requirement – in addition to the cleaning performance test – would together help ensure that dishwasher test loads are cleaned without pre-rinsing. Thus, the extra heavy soil load requirement will provide consumers further confidence not to pre-rinse because dishwasher designs would adapt to clean effectively without pre-rinsing. This would result in significant water and energy savings under real-world consumer usage. Four stakeholders support ENERGY STAR's proposed cleaning index threshold of 65 to align with the threshold proposed in DOE's test procedure NOPR. Two stakeholders encouraged EPA to include a cleaning index threshold of 70 which is in alignment with the current ENERGY STAR Most Efficient criteria and was proposed in Draft 1. One stakeholder notes concerns around repeatability and reproducibility expressed by manufacturers and encouraged EPA to work towards addressing their concerns.</p> <p>Three stakeholders did not support EPA including a cleaning performance threshold in the specification because of concerns over reproducibility and repeatability of the cleaning performance test. They cited issues they found when conducting the test and claimed other stakeholders experienced variation between tests at different labs which were significant. They also questioned if the proposed threshold of 65 for wash performance is meaningful to consumers. These stakeholders also stated EPA's cleaning performance proposal does not address many other important aspects of consumer satisfaction with a dishwasher, including cycle time, noise, and dry performance.</p>	<p>EPA thanks stakeholders for these comments. EPA may consider an extra heavy soil cycle in the future, but at this time does not have test data to develop the criteria for an extra heavy soil load and evaluate the impact. EPA encourages stakeholders to share any available test data for the Agency's future review.</p> <p>It is EPA's intent to align with DOE wherever possible and applicable, and a cleaning index threshold of 65 is in alignment with DOE's proposed cleaning index threshold per their test procedure NOPR. Additionally, EPA believes that aligning on a threshold of 65 would help manufacturers during the transition into meeting DOE's proposed test procedure update for Appendix C1. EPA notes that once DOE's proposed Appendix C1 with a cleaning performance threshold is in effect, partners will certify to ENERGY STAR only using Appendix C1. Until the proposed Appendix C1 is in effect, ENERGY STAR will continue to use the ENERGY STAR Final Test Method for Determining Residential Dishwasher Cleaning Performance.</p> <p>All questions and comments regarding test procedure repeatability and reproducibility should be directed to DOE.</p>

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Collaboration Opportunities	<p>There was general support for the idea of EPA working with dishwasher manufacturers, detergent manufacturers, and other organizations on the development of consumer education on the savings from using a dishwasher over hand washing, how pre-rinsing is wasteful, how to effectively load the dishwasher, and other ways to help conserve water and energy.</p>	<p>EPA recognizes the value of raising awareness on the environmental benefits of using dishwashers over handwashing, educating consumers on “scrape, not rinse,” and informing consumers on the best ways to load a dishwasher. EPA looks forward to collaborating with partners and stakeholders to develop messaging and educational resources towards these efforts and can work to amplify messaging and information to help further this effort.</p>
Connected	<p>Four stakeholders opposed EPA removing the 5% credit for connected functionality and disagree there is diminishing interest in demand response programs for household appliances.</p> <p>One stakeholder supported EPA removing the 5% credit for connected functionality due to the credit compromising measurable energy benefits.</p>	<p>EPA thanks stakeholders for their feedback on connected functionality. EPA continues to support the connected criteria in Section 4 of the V7.0 ENERGY STAR specification, and manufacturers may continue to self-report their products as Connected if the models meet the criteria. ENERGY STAR was a leader in developing connected criteria for products (beginning in 2011) and has recognized connected products across 17 categories to date. As is often the EPA value-add, the program developed the criteria and definitions, and in some cases, with DOE’s lead, a test method to measure Demand Response (DR) capability, all to foster national harmonization. Entities like the California Energy Commission have now adopted these for use. This big step forward for connected reduces the need for an ENERGY STAR market pull in the form of an efficiency credit. A 5% credit significantly reduces consumer energy savings. To deliver the efficiency expected of ENERGY STAR dishwashers by consumers, EPA is removing the 5% credit. Lastly, a test procedure to measure DR capability does not yet exist, thus, no models are currently relying on the 5% credit.</p>
Development Cycle	<p>Two stakeholders expressed concerns over the proposed timeline for the Version 7.0 specification and would like additional time incorporated into the Version 7.0 implementation schedule. Stakeholders cited global supply chain issues and other delays related to COVID.</p>	<p>In recognition of simultaneous testing requirements associated with forthcoming changes to 10 CFR 430, Subpart B, Appendix C1 and ENERGY STAR, EPA has extended the transition period for Version 7.0 revision to 12 months.</p>