ASSOCIATION OF HOME APPLIANCE MANUFACTURERS

1111 19th Street NW ➢ Suite 402 ➢ Washington, DC 20036
t 202.872.5955 f 202.872.9354 www.aham.org

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Via E-Mail

Melissa Fiffer
Product Manager
U.S. Environmental Protection Agency
ENERGY STAR Appliance Program

appliances@energystar.gov

Re: ENERGY STAR Program Requirements
Product Specification for Clothes Washers, Eligibility Criteria, Draft 1, Version 8.0

Dear Ms. Fiffer:

On behalf of the Association of Home Appliance Manufacturers (AHAM), I would like to provide our comments on the ENERGY STAR Product Specification for Clothes Washers, Eligibility Criteria, Draft 1, Version 8.0.

AHAM represents manufacturers of major, portable and floor care home appliances, and suppliers to the industry. AHAM's membership includes over 150 companies throughout the world. In the U.S., AHAM members employ tens of thousands of people and produce more than 95% of the household appliances shipped for sale. The factory shipment value of these products is more than $30 billion annually. The home appliance industry, through its products and innovation, is essential to U.S. consumer lifestyle, health, safety and convenience. Through its technology, employees and productivity, the industry contributes significantly to U.S. jobs and economic security. Home appliances also are a success story in terms of energy efficiency and environmental protection. New appliances often represent the most effective choice a consumer can make to reduce home energy use and costs.

AHAM supports EPA and the Department of Energy (DOE) in their efforts to provide incentives to manufacturers, retailers, and consumers for energy efficiency improvement, as long as product performance can be maintained for the consumer. AHAM is concerned, however, that the data and analysis underlying the proposed Version 8.0 specification are flawed as described more fully below. Importantly, EPA should evaluate the balance between consumer savings and environmental benefits and manufacturer impacts and technological feasibility.

Moreover, though AHAM agrees that performance should be maintained at higher levels of energy efficiency, AHAM continues to oppose ENERGY STAR performance metrics and test procedures. Instead, as discussed below, AHAM proposes that EPA evaluate, during

specification development, the potential impact its proposed criteria would have on performance. Manufacturers have a vested interest in maintaining the credibility of the ENERGY STAR brand as well as their own brands and are well-positioned to assist EPA in making such a determination by providing the necessary data and information if they believe performance will be negatively impacted.

I. Process

EPA notified stakeholders of its Draft 1, Version 8.0 specification on July 22, 2016 and requested comments by August 12, 2016, thus providing stakeholders with only three weeks to comment. AHAM requested that EPA extend the deadline by one week to allow all stakeholders 30 days to comment on the draft criteria. We thank EPA for granting that request and changing the comment deadline to August 22. We were, however, disappointed that EPA did not initially provide that period of time for comment which we would expect would be the minimum comment period as a matter of course. In fact, we recently met with EPA to express the need for a more formalized process, including a known and consistent comment period. During that meeting, AHAM specifically mentioned that EPA had addressed our concerns a few years ago regarding a consistent 30 day minimum comment period. We were, therefore, surprised to see EPA issue a proposal with a shorter comment period. This reinforces the need for EPA to formalize its process and we would like to further discuss that process with EPA through the roadmapping process.

Despite the initially short comment period, we sincerely appreciate that EPA willingly provided the 30 day comment period and also further extended the comment period to September 7 to allow stakeholders more time to provide feedback.

II. Scope

EPA indicated that it is considering the inclusion of combination all-in-one washer-dryers in the ENERGY STAR scope. EPA indicated that it believes the water consumption of the dryer should be measured and reported and sought feedback as to how the water consumption could be appropriately tested and reported.

AHAM does not have a comment regarding whether or not EPA should add combination all-in-one washer-dryers to the ENERGY STAR scope. But AHAM is concerned about EPA's intention to measure the water consumption of the dryer portion of such products for several reasons:

1. EPA has not provided details on how it would measure the water use, how data would be reported, what data would be reported, and how that data would be used and analyzed. For example, will it be made available to consumers?

   It is unprecedented for manufacturers to provide data to a government agency without a clear understanding of the purpose for doing so and the way in which it will be used and analyzed and without knowing whether the agency will treat it as confidential.

2. Requiring measurement and reporting of the water use for clothes dryers is inconsistent with DOE's approach to regulating combination all-in-one washer-dryers as evidenced by the lack of a test procedure to measure the dryer portion's water use. As we have commented several times, EPA should not stray from the approach its sister agency, DOE, takes with regard to energy conservation standards particularly given that the two agencies are supposed to work together to administer the ENERGY STAR program.

   DOE, through its lengthy, thorough, and long-existing rulemaking process for appliance efficiency standards, has established test procedures for good reasons. And DOE's regulations implement Congressional intent. DOE's standards are, and should be, the foundation for the ENERGY STAR program. EPA cannot use an approach that would vary from the approach DOE takes to regulating covered products. To do so ignores the extensive analysis DOE has done to formulate standards for those products which includes a careful balancing of energy savings, consumer choice, product functionality, and manufacturer burden per the National Appliance Energy Conservation Act of 1987 (NAECA).

   It is DOE's province to determine the test procedure for clothes dryers and nothing in Appendix D2 requires the measurement of water use. This indicates that DOE has not found a justifiable reason for such a measurement. Thus, it is not appropriate for EPA to require clothes dryer water use measurement/reporting in the context of the ENERGY STAR program.

III. Qualification Criteria

A. Product Classes

EPA proposed separate product classes for residential front loading and top loading clothes washers. AHAM strongly supports those product classes because they are consistent with DOE's product classes for top- and front loading clothes washers (though the compact size threshold is different). As discussed above, EPA should ensure the ENERGY STAR program is based upon the foundation DOE lays in the appliance standards program including the delineation of product classes. AHAM thanks EPA for having done so here and would oppose any combination of the product classes that would not recognize the differences between top- and front loading clothes washers.

B. Data and Analysis

AHAM has concerns with several elements of EPA's analysis underlying the proposed qualification criteria:

First, EPA estimated consumers will save, on average, approximately $42.79 (top loading) and $31.39 (front loading) on their utility bills annually, or about $470 (top loading) and $345 (front loading) over a residential clothes washer's typical 11-year lifetime.[1] EPA used the 2018 Federal standards as the baseline for this estimation. Because EPA is evaluating whether to

[1] These savings are significantly less than the savings EPA predicted for the Version 7.0 specification.

propose levels more stringent than its existing ENERGY STAR qualification criteria, EPA should be comparing the proposed levels to the existing ENERGY STAR levels to show additional savings to consumers due to revised ENERGY STAR levels as opposed to a scenario under which EPA did not institute new levels. Table I details the revised analysis based on AHAM's proposed methodology. Using this revised methodology, total annual savings for top load clothes washers decrease to $9.17 and total annual savings for front load clothes washers decrease to $10.19. EPA should evaluate whether these savings justify revised levels, particularly when compared to manufacturer cost and burden.

Table I. Comparison of Consumer Annual Savings

	E-STAR 8.0 vs. DOE 2018 Std.	E-STAR 8.0 vs. E-STAR 7.1	E-STAR 8.0 vs. DOE 2018 Std.	E-STAR 8.0 vs. E-STAR 7.1
	Electricity Savings (kWh)	**Electricity Savings (kWh)**	**Electricity Savings ($)**	**Electricity Savings ($)**
Top Loading > 2.5 cu-ft.	132	33.0	$15.94	$3.99
Front Loading > 2.5 cu-ft.	134	42.7	$16.16	$5.16
Assumptions:	**Capacity = 3.5 cu. ft.**	**Capacity = 3.5 cu. ft.**		
	RECS 2009 weighted	REC 2009 weighted		
	DOE 2018 IMEF used	**E-Star 7.1 IMEF used**		
	E-Star 8.0 IMEF used	E-Star 8.0 IMEF used		
	Water Savings (gallons)	**Water Savings (gallons)**	**Water Savings ($)**	**Water Savings ($)**
Top Loading > 2.5 cu-ft.	2788	516	$23.33	$4.34
Front Loading > 2.5 cu-ft.	1549	516	$12.96	$4.34
Assumptions:	**Capacity = 3.5 cu. ft.**	**Capacity = 3.5 cu. ft.**		
	RECS 2009 weighted	REC 2009 weighted		
	DOE 2018 IWF used	**E-Star 7.1 IWF used**		
	E-Star 8.0 IWF used	E-Star 8.0 IWF used		
	Gas Savings (Therms/yr)	**Gas Savings (Therms/yr)**	**Gas Savings ($)**	**Gas Savings ($)**
Top Loading > 2.5 cu-ft.	3.2	0.8	$3.52	$0.84
Front Loading > 2.5 cu-ft.	2.0	0.6	$2.26	$0.69
Assumptions:	**Capacity = 3.5 cu. ft.**	**Capacity = 3.5 cu. ft.**		
	RECS 2009 weighted	REC 2009 weighted		
	DOE 2018 IMEF used	**E-Star 7.1 IMEF used**		
	E-Star 8.0 IMEF used	E-Star 8.0 IMEF used		
			Total Annual Savings (in dollars)	
		Top Loading > 2.5 cu-ft.	$42.79	$9.17
		Front Loading > 2.5 cu-ft.	$31.39	$10.19

Unfortunately, EPA has not evaluated the incremental costs manufacturers would incur in reaching the proposed criteria. It also does not appear that EPA has considered which technology options manufacturers could avail themselves of to meet the criteria. AHAM expects individual manufacturers to share information with EPA on these key analytical points and strongly urges EPA to consider that data and information in selecting proposed criteria for Draft 2 of Version 8.0. It is important that EPA consider not only the environmental and consumer benefits associated with a specification change, but also the impact on manufacturers. Although the ENERGY STAR program is technically voluntary, its success essentially mandates it in the market. Moreover, manufacturers are EPA's partners in the program—without manufacturer innovation, the program could not succeed. Thus, the impact on manufacturers should be of utmost importance to EPA.

Second, the methodology EPA used to evaluate consumer payback is seriously flawed. EPA calculated the retail price differential between a single model meeting the 2018 standard and a model meeting the proposed Version 8.0 criteria for each product class. EPA attempted to select

models that have similar features in order to isolate the cost of improved efficiency. But this approach is flawed in general and in this particular application for several reasons:

- The approach does not take into account that different manufacturers have different cost structures. Thus, it is possible that EPA is comparing apples to oranges.

- EPA relies on a single data point which may or may not be representative. In this case, it does not appear that the models selected are representative of the market—the capacities are small compared to the majority of capacities in EPA's data set. It would be helpful if EPA knew the shipments associated with the model pairing it selected so that it could identify whether the models were representative of the market. As discussed below, it can be the case that models compared represent a small fraction of the units sold.

- In this analysis, the top loading model pairing EPA selected produces an absurd result in which there is no cost to the consumer for a more efficient product. This is another danger in selecting a single model pairing. Even if EPA continues with this ill-advised approach, AHAM recommends that EPA examine other model pairings as it is unlikely that the same phenomenon will prove true.

Third, EPA evaluated the number of models that would meet the proposed levels rather than looking at the shipments those models represent. AHAM recognizes that this approach is outlined in the ENERGY STAR Products Program Strategic Vision and Guiding Principles. But the approach is flawed because simply counting models can miss the penetration of those models in the market. It could be that the models meeting the levels are low volume models and thus, those models may not be representative of the market. And, if the models meeting the proposed criteria are relatively unavailable, that could mean that the proposed levels will not actually achieve the consumer and environmental benefits EPA estimates in its analysis.

Accordingly, AHAM proposes that EPA change this approach broadly. AHAM also proposes that EPA use a shipments approach in developing the clothes washer revised specification. To aid in that effort, AHAM will attempt to gather this data from our members and, if we can do so, will try to provide it to EPA so that EPA can do a shipment-based analysis of its proposed qualification criteria.

Fourth, in determining whether or not to revise the specification, EPA evaluated top- and front-loading shipments combined. EPA found that the ENERGY STAR residential clothes washer market share was 50% in 2015. But EPA did not evaluate the market penetration of ENERGY STAR top loading washers and front loading clothes washers separately. EPA may reach a different conclusion regarding the need to revise the qualification criteria if it evaluates each product class separately. We note that evaluating each class separately in deciding whether to amend the qualification criteria is consistent with EPA's approach of evaluating the percentage of models that would meet the proposed criteria for each class separately.

Finally, in determining whether or not to revise the specification, EPA relied on its unit shipment data. AHAM agrees that EPA should evaluate shipments. But we note that Version 7.0 of the clothes washer specification went into effect in March 2015. It does not appear that EPA's data

collection form provided instructions regarding whether or not to include shipments of products qualified to the previous specification. Thus, it is likely that the data does include such models and those could be skewing EPA's analysis.

C. Laundry Centers

EPA clarified that laundry centers are eligible for ENERGY STAR certification. AHAM thanks EPA for clarifying the existing confusion on that point. Individual AHAM members may comment on whether such products should be included and whether they should be required to meet both the clothes dryer and clothes washer criteria.

D. Optional Cleaning and Rinse Performance Reporting and

EPA proposed a voluntary reporting requirement for residential clothes washer cleaning and rinse performance. This optional reporting requirement would not go into place until a test method for determining cleaning and rinse performance is developed and finalized.

AHAM opposes the proposed voluntary reporting requirement (and would even more strongly oppose a mandatory reporting requirement) and the development of an ENERGY STAR cleaning and rinse performance test method for a number of reasons:

1. AHAM opposes the adoption of performance metrics in the ENERGY STAR program. As we have commented many times in the past, instead EPA should seek data and information on whether its proposed qualification criteria (either now or in future specification revisions) would have a negative impact on performance.

   AHAM agrees with EPA that it is important for performance to be maintained as efficiency requirements become more stringent and that EPA should evaluate whether performance will be negatively impacted by any specification levels it proposes. But neither a new test method and/or a reporting requirement is needed to accomplish that goal. Instead, EPA should rely on 1) DOE analysis as part of the energy conservation standard rulemaking process in which DOE evaluates the impact its proposed standards would have on performance; and 2) manufacturer partners to provide EPA with data and information demonstrating the likely impact of its proposed qualification criteria on performance.

   Manufacturers themselves have the most interest in ensuring that consumers receive superior performance, regardless of the energy and water efficiency of the product. It should not be the role of government—especially in a voluntary program operating outside the Administrative Procedure Act protections and authorized for the limited purpose of setting energy efficiency criteria—to set performance requirements.

2. EPA has not demonstrated that there is a performance concern at the levels it proposed for Version 8.0. AHAM is not commenting with regard to the proposed criteria's impact on cleaning and rinse performance—individual manufacturers may have views on that.

But for EPA to justify the development of a test method and a reporting requirement, EPA must first demonstrate that the proposed levels would impact product performance.

3. No test method is yet developed and AHAM has little confidence that such a method can be completed during the time in which Version 8.0 will be in effect.

   Harmonizing a cleaning/rinse performance test with the energy test procedure will take years to accomplish as it will require, among other things, choosing a test load, addressing detergent, and addressing the need to soil the test load. This will require significant test procedure development, round robin testing, and analysis of results. AHAM opposes undertaking such a significant effort when EPA has not demonstrated that a performance reporting requirement and/or metric is needed.

4. In any event, a wash-and-rinse-only performance test is inadequate to measure consumer-relevant product performance. Achieving these two measures can be done at the expense of clothes ware and cycle time length, the former a critical cost utility and the latter a critical convenience utility.

5. EPA indicated that the reported cleaning and rinse data would be used to set a cleaning and rinse metric for a future specification. Because AHAM opposes the development of such a metric, AHAM also objects to providing data to EPA to assist in that development. Moreover, though EPA indicated the data would not be posted publically, EPA has not provided information on exactly how it will analyze the data. AHAM continues to believe that it is important that experts, i.e., manufacturers, review and analyze the data in order to determine whether it is relevant to determining a connection between energy/water use and performance. Accordingly, AHAM suggests that, should EPA move forward with a voluntary reporting requirement, EPA allow manufacturers to provide the data to AHAM. Then, after being aggregated and de-identified, AHAM could submit that data to EPA if AHAM determines that a particular specification proposal could impact performance.

Despite AHAM's vigorous opposition to the development of an ENERGY STAR cleaning and rinse performance test and the voluntary reporting requirement, should EPA and DOE nevertheless proceed with developing a test method, AHAM would like to participate in that development.

IV. Connected Criteria

EPA indicated its intent to update the optional connected criteria section in the specification and to provide clarity in response to stakeholder inquiries reflected in the ENERGY STAR Connected Criteria Q&A document as brand owners work to design and implement products with connected capabilities. However, several changes EPA proposed would impose additional requirements in the connected section rather than clarification which would hinder manufacturers as they innovate regarding smart appliances.

A. Section 3B Note: Connected Allowance

EPA plans to continue to monitor the market and help promote the adoption of ENERGY STAR connected criteria, and will reconsider the associated credit during the next Residential Clothes Washer specification revision. AHAM supports ENERGY STAR's position to promote the adoption of smart appliances in the marketplace, however, it is premature to reconsider the 5% allowance as early as the next clothes washer specification. The 5% allowance is necessary for the stimulation of the market as well as to provide certainty to manufacturers for the development and incentive for this technology.

B. Section 4B Connected Criteria Note 2

EPA proposed as a clarifying note "In cases where proprietary messaging is necessary, the API or similar documents must ensure open access to all connected functions." ENERGY STAR has indicated the additional language in this specification was for clarifying their Q&A document on connected appliances, however, this "clarifying language" seems to add additional requirements to Section C. Therefore, AHAM supports that this sentence be replaced with "In cases where proprietary messaging is necessary, the API or similar documents must ensure open access to requirements in Section C". This avoids confusion that the requirements in Section C have been changed with the clarifying note.

C. Section 4B2 Communications

EPA proposed to include in this section "Where modules are not provided at the time of sale, consumers shall be provided with a clear and simple process that allows them to obtain a module at no separate cost and with minimal wait time." However, this sentence does not clarify this section through its highly subjective language regarding "clear and simple" and appears to repeat requirements already outlined in the previous paragraph. AHAM recommends this sentence be omitted in the specification.

D. Section 4D Energy Consumption Reporting

EPA proposed to include an additional type of energy use feedback in this section with the additional option of "energy use associated with the previous cycle." AHAM requests clarification on this addition to the specification.

E. Section 4E Remote Management

EPA proposed to add the sentence "Consumers (or consumer authorized 3rd parties) shall be able to remotely manage the product in a manner similar to the consumer controllable functions on the product itself." This sentence contradicts the following sentence where specifically third party remote management requests are at the discretion of manufacturer to ensure performance and safety. In addition, there may be technical limitations to include all the same functions and this would provide a restriction on potential design options for the manufacturer. AHAM requests a clarification on this addition to the specification.

F. Section 4G Demand Response

EPA proposed to add additional requirements regarding the consumer override in the "Illustrative DR Examples" and within the text of the specification. In order to maintain the consumer's control of the appliance and to ensure the consumer has a positive experience with the demand response capabilities, the specification must include different options for the consumer. For example, a consumer may decide to wash several loads over several hours that could include several signals for delay load or temporary appliance load reduction. The consumer should have the capability to override the signal for an extended period without having to respond to a request prior to each load. The changes in the specification under G1b limit the consumer capability to override to one cycle—the current cycle, not allowing for overriding subsequent cycles automatically. This language limits the overall consumer experience with smart appliances and demand response and AHAM requests the original language in the Version 7.1 not be altered and remain as follows:

4G1b
"Consumer override – The consumer shall be able to override the product's Delay Appliance Load response before or during a delay period."

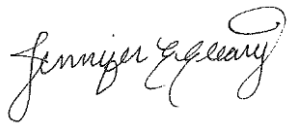
4G2c
"Consumer override – The consumer shall be able to override the product's Temporary Appliance Load Reduction response before or during a load reduction period."

V. Effective Date

EPA proposed an effective date aligned with the January 1, 2018 effective date for amended Federal energy conservation standards for residential and commercial clothes washers. AHAM fully supports effective dates that are aligned with Federal standards and thanks EPA for proposing to align with the standards.

AHAM appreciates the opportunity to submit comments on the ENERGY STAR Product Specification for Clothes Washers, Eligibility Criteria, Draft 1, Version 8.0 and would be glad to further discuss these matters should you so request.

Best Regards,



Jennifer Cleary
Director, Regulatory Affairs