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April 17, 2019

Via E-Mail

Robert Burchard
U.S. Environmental Protection Agency

roomaircleaners@energystar.gov

Re: ENERGY STAR Room Air Cleaners Specification 2.0 Draft 1

Dear Mr. Burchard:

On behalf of the Association of Home Appliance Manufacturers (AHAM), I would like to provide our comments on the ENERGY STAR Room Air Cleaners Specification 2.0 Draft 1

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 products maintain their performance for the consumer. AHAM commends EPA for changing CADR requirements based on smoke instead of dust. Tobacco smoke, particularly the type engineered for testing under AHAM AC-1, is the smallest among measured particles and therefore a better performance measure for room air cleaners. Additionally, tobacco smoke determines room size because of its extremely small size and because it is a common global indoor pollutant.

As a general comment, EPA must not stray from its strategic vision for the ENERGY STAR program; to facilitate consumers and others to purchase the most energy-efficient product model that otherwise meets their needs. The ENERGY STAR program must remain focused on energy efficiency and not create and impose design, performance, or other requirements. There is no authority for that activity. Manufacturers and the marketplace dictate that consumers receive

superior performance and are satisfied with the product, regardless of the energy efficiency of the product. AHAM would like to provide comments on specific sections of the draft 1 specification 2.0.

Product Definitions

EPA provides the following definition of a Room Air Cleaner, “An electric appliance with the function of removing particulate matter from the air and which can be moved from room to room.”

AHAM strongly urges EPA to amend the definition to change the wording from “particulate matter” to “pollutants.” Stating a room air cleaner’s function is to remove particulate matter excludes identified pollutants and reduces the performance of the product from a descriptive standpoint. Today’s products have greater ability to provide a higher indoor air quality and filter more pollutants, particularly volatile organic compounds (VOCs). Indicating a room air cleaner removes pollutants provides flexibility and expands its function to match today’s demands.

Partial-On Mode Requirements Testing Clarification

AHAM recommends EPA clarify the partial-on mode (standby power) definition for connected (Wi-Fi) room air cleaners as the current definition can inadvertently exclude certain types of products. As it stands, the definition appears to include only room air cleaners that have Wi-Fi network connections enabled *by default*. There are room air cleaners on the market today with Wi-Fi connected capabilities; however, the user must enable that capability via product registration and / or downloading the product’s application on their phone. The Wi-Fi feature remains dormant otherwise. AHAM recommends EPA change the definition under section 3.4.1.i. by changing the language “by default” to “capabilities” instead. The definition should state, “For a model that has Wi-Fi network connection *capabilities*, when shipped, the model shall have Wi-Fi network connection enabled during testing and a Partial-On Mode Network Connected power allowance ($P_{\text{Network_Connected}}$) defined in Table 2 shall be applied in Equation 1”. AHAM members indicate when testing room air cleaners, the Wi-Fi connection is enabled. This will ensure all connected room air cleaners, regardless of what state the network connection is in when shipped; qualify for the 2-Watts maximum partial-on mode.

AHAM would like to reiterate that restricting the standby power for non-network connection room air cleaners may impede functionality in the form of the following:

1. Negatively affecting any automatic function. This includes inhibiting manufacturers’ ability to provide automatic functions that require sensors to operate.
2. Diminishing the impact a room air cleaners has on particulate VOC sensors which primarily serve to increase efficiency overall.

Lastly, AHAM would like to re-emphasize the need to use the IEC 62301 method to measure stand-by. Various working groups continue to refine how stand-by power is measured. Linking to the latest version of that standard ensures that the testing is keeping up with the test method advancements.

CADR/W Requirement Bins (tiered minimum requirement levels)

As mentioned earlier AHAM fully supports the measurement switch from dust CADR to smoke CADR. Tobacco smoke was chosen for ANSI/AHAM AC-1 because of its extremely small size as well as for being a common global indoor pollutant. Method AC-1 uses a specific engineering tobacco smoke to generate the smoke CADR. The size of the smoke particles are 100 to 1000 times smaller than the width of a human hair. Therefore, even if a consumer does not smoke, tobacco smoke is a surrogate for much smaller fine particles that may be found in a home. However, this switch in CADR measurement along with the proposed higher CADR/W requirements will affect designs twice by raising the target and specifying a harder pollutant to capture.

EPA needs to be aware of some potentially erroneous implications in their crosswalk. In most cases, smoke CADR is a lower value than dust CADR. ENERGY STAR data indicates 74% of the models have a lower reported smoke CADR than dust CADR. This poses a problem when calculating smoke CADR/W, which is the ratio of smoke CADR over the room air cleaner's operating power. Since the smoke CADR measurement is lower, the resulting CADR/W ratio is lower as well.

EPA's stakeholder webinar on the draft specification 2.0 (April 4, 2019), indicated shipment weighted data was not suitable to determine the requirement levels because shipment data runs the risk of failing to support the top 25 percent of higher efficiency models. While AHAM understands EPA's objective of trying to target the top 25 percent tier of models, achieving this objective in one unilateral move may not be practical. AHAM believes shipment weighted data provides a genuine depiction of the product market showing actual consumer preferences. This may be particularly true for the lowest CADR bin identified by EPA bin (30 \geq CADR > 100). While EPA's analysis shows there are some models above the current ENERGY STAR efficiency level, these models may only represent a small portion of total shipments, which may well be a niche market.¹ The majority models shipped may, in fact, hover around the ENERGY STAR eligibility criteria level. Previous AHAM comments indicate consumers value functionality, price, and other traits more than they value efficiency for room air cleaners.² The ENERGY STAR shipments report also indicates a flat trend of approximately 39 percent market penetration. EPA's focus should be on the market penetration, not on the number of available models. Market penetration combined with consumer feedback illustrate that consumers place more importance on factors other than ENERGY STAR when purchasing a room air cleaner.

As such, AHAM recommends EPA review the CADR/W requirement level for the bottom bin (30 \geq CADR > 100). This will allow manufacturers to continue to provide high efficient products to all consumers (regardless of income level) and transition products in a cost efficient manner while minimizing the double negative impact of the change.

¹ ENERGY STAR Room Air Cleaners Version 2.0 Specification Discussion Guide, October 2018, Section IV.1

² Product features, product safety features, product volume, capacity, or output of the remaining top 5 reasons consumers select a room air cleaner.

Test Requirements: AHAM AC-1 Test Method

AHAM supports EPA's updating of test methods for ENERGY STAR certification that continues to use ANSI / AHAM AC-1-2015 without deviation. AHAM will soon publish AC-1-2019 and EPA and DOE should consider adopting that version instead. When published, AHAM will be glad to provide it to EPA and DOE.

Effective Date

According to the stakeholder webinar (April 4, 2019), EPA anticipates an effective date of spring 2020 for this specification. AHAM requests EPA allow for a longer time before making specification 2.0 effective. This specification introduces numerous changes from ENERGY STAR Specification Version 1.2. The reclassification of partial-on mode (standby power), new CADR/W requirements dependent on CADR size, and the switch to smoke CADR will warrant adjustments and modifications across the board for manufacturers. In some cases, manufacturers will have to revisit testing and certification to reclassify their models' standby power capabilities. Smoke CADR will require manufacturers to reissue marketing materials, product-packaging labels and other advertising. Manufacturers that are part of the AHAM Verifide Program submit certified volume or size, energy, and for some products, performance criteria, including smoke, pollen and dust CADR values. As such, EPA should acknowledge and indicate that AHAM Verifide products do not need to be re-tested unless necessary. There is a need for clarification for under what circumstances products should be re-tested.

AHAM appreciates the opportunity to submit comments on the ENERGY STAR Room Air Cleaners Specification 2.0 Draft 1 and would be glad to further discuss these matters.

Best Regards,



Kevin Messner
Senior Vice President, Policy & Government Relations