



June 30, 2023

Ms. Tanja Crk
Product Manager
Environmental Protection Agency
ENERGY STAR Products Program
1200 Pennsylvania Avenue, NW
Washington, DC 20460
appliances@energystar.gov

Re: Whirlpool Supplemental Comments to AHAM - ENERGY STAR Electric Cooking Products Version 1.0 Draft 2 Specification

Dear Ms. Crk:

Thank you for the opportunity to comment on the Environmental Protection Agency's (EPA) Draft 2 Version 1.0 ENERGY STAR Electric Cooking Products Specification, published on May 31, 2022.

Whirlpool Corporation (NYSE: WHR) is committed to being the best global kitchen and laundry company, in constant pursuit of improving life at home. In an increasingly digital world, the company is driving purposeful innovation to meet the evolving needs of consumers through its iconic brand portfolio, including *Whirlpool*, *KitchenAid*, *Maytag*, *Consul*, *Brastemp*, *Amana*, *Bauknecht*, *JennAir*, *Indesit*, *Yummly* and *InSinkErator*. In 2022, the company reported approximately \$20 billion in annual sales, 61,000 employees and 56 manufacturing and technology research centers. Additional information about the company can be found at WhirlpoolCorp.com.

Whirlpool Corporation (Whirlpool) has recently announced a global commitment to reaching net-zero emissions in our plants and operations by 2030. Additionally, Whirlpool has already committed to achieving a 20% reduction in emissions linked to the use of its products across the globe by 2030, compared to 2016 levels. Whirlpool is also a long-standing EPA SmartWay Transport Partner, with multiple awards granted by EPA to the company for improved freight efficiency and reduced environmental impacts. This is to say that Whirlpool continues to strongly believe in the mission and goals of EPA and the ENERGY STAR program. We look forward to many

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more years of continued partnership and collaboration between EPA and Whirlpool in improving appliance efficiency and reducing the emissions associated with shipment and use of appliances.

As a very active member of the Association of Home Appliance Manufacturers (AHAM), Whirlpool has worked closely with them in the development of the industry comments they submitted (under separate cover) on this draft specification. **Please be advised that we support and echo the AHAM positions, particularly that EPA should not rush the finalization of this specification in advance of the final publication of the U.S. Department of Energy's energy conservation standards for conventional cooking products. We also agree with AHAM that EPA's data does not yet adequately demonstrate the cost-effectiveness of this new specification. Finally, we continue to agree with AHAM's concerns that this specification development needs to account for broader goals within EPA and this Administration for environmental justice, equity, and indoor air quality.** Our below comments expand on AHAM's comments and provide additional detail or data to reinforce our industry positions; as well as to comment on areas where AHAM cannot comment.

Thank you again for your consideration and we look forward to continued discussion on this topic.

Best regards,

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Energy Use Requirement

We again question why EPA is proposing a measure of low-power mode energy for ovens in the Draft 2 specification. While we understand that EPA believes this is necessary to ensure that the low-power energy consumption from the oven has a “backstop”, there is no data available in the Draft 2 Data & Analysis package to indicate that high low-power energy consumption is a problem for any models that could otherwise meet the specification requirements. In fact, because the cooktop efficiency metric does include a low-power mode energy measurement that includes oven standby energy in range models, we would argue that there is already a built-in “backstop” ensuring that low-power energy consumption of any ENERGY STAR-certified range is not too high. Until EPA can demonstrate that this actually differentiates the energy efficiency of qualifying models, or is otherwise necessary, this requirement is superfluous and should be removed from the Version 1.0 specification.

Additionally, for range models, the low-power mode energy consumption of the oven could be overstated or understated, as it is calculated under the U.S. Department of Energy (DOE) test procedure, under 10 CFR Part 430 Subpart B, Appendix I1. In particular, a range is tested for low-power mode energy consumption at the product-level, and not with the individual cooktop and oven components tested (there is only a single power cord for ranges). DOE requires that 40% of the total annual combined low-power mode energy consumption of the unit is allocated to the oven portion of a range. In some cases, such as models with infinite switches on cooktops, negligible low-power mode energy consumption on a range is from the cooktop. In other cases, such as technologically-advanced induction range models, significantly less low-power mode energy consumption may be produced from the oven portion of the range. Consequently, this low-power mode energy consumption may not accurately reflect the true contribution of the oven to this combined measurement. Consumers may be misled by this separately reported low-power mode energy consumption.

Additionally, as our industry continues to perform cooking product testing and collect data, we find that the variability of products as tested remains very high under the Integrated Annual Energy Consumption (IAEC) metric. The Draft 2 criteria does not acknowledge and account for this statistically-significant test variation with the proposed IAEC requirement. Until DOE can improve this variation in the test procedure, we recommend that EPA incorporate this variation when establishing appropriate IAEC limits. Even though EPA targets that roughly one-quarter of models meet the proposed IAEC limit at 190 kWh/yr, the reality is that fewer models could meet if they were certified to an IAEC value that incorporates this high variation. EPA is effectively making the specification limits for IAEC *at least* 5% more stringent (180.5 kWh/yr). We recommend that EPA consider an IAEC specification limit that incorporates this high variation (e.g., 200 kWh/yr), or else risks recognizing fewer qualifying models upon this specification’s compliance date than intended.

Additional Reporting Requirements

We oppose the inclusion of the proposed t_{90} reporting requirement for each cooking zone. The DOE test procedure includes an overshoot evaluation to determine the temperature at which the operator adjusts the control, $t_{c(\text{target})} = 93^{\circ}\text{C} - (t_{\text{max}} - T70)$. As a result, t_c for electric coil cooktops are as low as 80°C , while induction cooktops are closer to 90°C . When power to the element is changed, the rate at which the water is heated also changes. Therefore, a product with a t_c of 80°C will have a longer t_{90} time as a result of the change in the input power rate. This characteristic is illustrated in the expected performance curve in section 7.5.3 of IEC 60350-2 that is referenced in Figure 1 below.

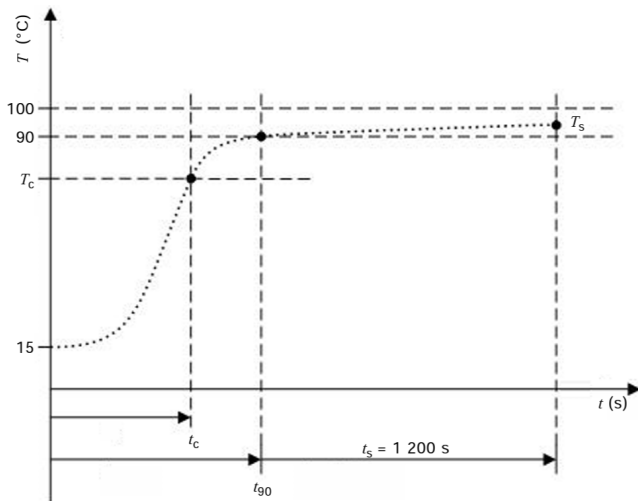


Figure 1. Performance Curve of Electric Cooktops in Section 7.5.3 of IEC 60350-2

While EPA may believe that this reporting requirement would give useful information for a consumer to compare products on the “time to boil” a pot of water, the data collected with this t_{90} metric does not represent how a consumer would typically use a cooking product within their home. Regardless of electric cooktop product type, the consumer is likely to apply full power until the water reaches the near boiling state (i.e. bubbles form), add contents to be cooked, and reduce power. In a coil cooktop, for example, a consumer would not turn down the temperature of the cooktop at 80°C to coast to a boiling temperature. Instead, a consumer would wait until a near-boil state is reached, such as seeing bubbles in the water. Accordingly, the EPA should not utilize a test procedure data point as a reporting requirement, if that data point does not accurately convey to consumers the purpose for which it is intended (i.e. the time to boil a standard water load).

Compliance Date

We reiterate the concerns from our comments to EPA in response to the Draft 1 specification that EPA should not rush to finalize and make the Version 1.0 specification immediately effective. There are a number of factors that EPA should evaluate further, and address, before an effective launch of this new ENERGY STAR program for electric cooking products.

First, the impetus behind this specification development appears to be largely due to the electrification goals of this administration, and the coming appliance incentives through the Inflation Reduction Act (IRA). Our current understanding continues to be that these incentives will likely not become available to consumers until early 2024. While we understand EPA’s desire to have this specification take effect well in advance of these incentive programs becoming available to consumers, we urge EPA to balance this desire against the need for additional time to develop a better informed specification, and to prepare a fully-coordinated launch of this new program. In relation to these IRA incentives, it will make little difference to have a finalized specification before the incentives become available to consumers.

Second, there is an incredible test burden associated with the DOE test procedure referenced in this draft specification. We estimate that a single model can take up to a month of testing in our labs with continuous technician interaction, just for initial ENERGY STAR certification. This specification references a new DOE test procedure (finalized less than one year ago), and this specification would create the first measured energy performance requirement for electric cooktop and range models sold in the U.S. Manufacturers may not yet have the lab capabilities that are necessary to handle the burden involved with testing and certifying models for this new program launch. DOE allows at least four years from the finalization of this new test procedure, until when manufacturers are required to use it to test and certify towards possible amended federal energy conservation standards. Manufacturers use that needed time

to build lab capacity, hire and train new test technicians, and develop and implement a test plan. Unlike other recent new ENERGY STAR product categories (e.g., residential clothes dryers and coolers) that have years, or decades, of manufacturer experience with a test procedure and testing/certification requirements, manufacturers do not have this foundational expertise and capabilities already established for electric cooking products sold in the U.S.

EPA is providing no lead time to manufacturers, which will inadvertently create winners and losers from this program launch. Competitive advantages and disadvantages may be created based on a manufacturer's existing lab space, technician availability, and in the ability to find external lab support. EPA should allow for manufacturers to have adequate lead time to do testing and certification of models without creating exorbitant burden or creating competitive imbalance.

Third, there is an open petition for rulemaking under evaluation by DOE for the conventional cooking products test procedure (88 FR 24133, Docket Number EERE-2023-BT-TP-0006-0003, published April 19, 2023). Comments were due on May 19, and DOE is evaluating next steps in this rulemaking. Manufacturers are supportive of this petition, as it would greatly reduce the testing burden to complete a single test. Due to this uncertainty, manufacturers may be reluctant to begin initial testing for ENERGY STAR certification purposes, until this rulemaking concludes. EPA should wait for DOE to finish this rulemaking before finalizing a specification.

Fourth, Whirlpool strongly urges the EPA to coordinate the launch of this program with Canadian regulators in order to avoid disrupting exports of U.S. manufactured cooking products. Typically, ENERGY STAR programs do not conflict with Canadian federal energy standards and test procedures administered by Natural Resources Canada (NRCan). However, the proposed ENERGY STAR specification will create misalignment and conflicts with Canadian federal requirements. In particular, electric radiant and coil cooktops and ranges in Canada must be tested and certified under CSA C358-03 (2022), Energy Consumption Test Methods for Household Electric Ranges. This is not the same test procedure that the DOE recently finalized ("Appendix I1 test procedure"), and comparisons between the measured energy consumption results of these two test procedures would be impossible.

Manufacturers would be forced to double-test common electric radiant and coil cooktop and range models that are sold in both the U.S. and Canada. This is an additional testing, resource, and cost burden for manufacturers. It will also create significant consumer and retailer confusion from the variation in the declaration of energy of a single model sold in both countries, using these two different test procedures. For a popular range model, we estimated the variation of the declaration of energy between the U.S. kWh/year rating and the Canadian kWh/year rating would be estimated at 39kWh/year. That represents almost 18% of the total kWh/year declaration according to the DOE procedure. Therefore, we strongly encourage the EPA to take the time necessary to coordinate the program launch with NRCan in order to minimize manufacturer testing, resource and cost burden, and minimize the confusion for consumers and retailers. We recommend that the EPA should not launch this product specification until they can have a coordinated U.S.-Canada plan available.

Fifth, EPA should take the necessary steps to implement a verification program for electric cooking products *before* the new program launches. We encourage EPA to work with AHAM on possible implementation of a new verification program, and development of program guidelines.

Sixth, EPA normally gives manufacturers nine months lead time from the finalization of a new specification to the compliance date. While we understand that time is really intended for the transition of marketing materials and to allow for Certification Bodies to update model certifications, we urge EPA to consider this for a new specification as well. Manufacturers would not use this additional time to redesign products to meet a new specification, but instead would use it to test and certify models with a Certification Body, update marketing materials, and train sales associates on the availability of a new

ENERGY STAR program for this category. That last point is especially important where there is no historical experience of ENERGY STAR programs in the cooking category. EPA would benefit from manufacturers using this time to coordinate a comprehensive marketing launch of a new ENERGY STAR program.

Given all these factors, we recommend that EPA set a compliance date for a Version 1.0 specification no earlier than January 1, 2024. Again, while we recognize EPA's intent and past precedent to have new program specifications become effective immediately upon finalization, we strongly encourage EPA to not do that for electric cooking products. Importantly, this will ensure that EPA has time to coordinate with NRCAN and AHAM, and give necessary time for DOE's open test procedure rulemaking to conclude. Making this specification effective immediately upon finalization could create significant competitive advantages or disadvantages for manufacturers, in a chaotic race to test and certify models. Consumers will also still have access to ENERGY STAR-certified electric cooking products when the Inflation Reduction Act incentives become available to them in early 2024.

Conclusion

We again appreciate the opportunity to provide comments on this notice. We continue to have concerns related to the requirement for oven low-power mode energy, and that the variation found under the referenced test procedure is not reflected in the proposed IAEC levels. We also recommend that EPA drop the t_{90} reporting requirement, as it would not convey meaningful information to consumers. Finally, we recommend that EPA consider delaying the new specification compliance date until at least January 1, 2024.

We look forward to continuing to partner with EPA on this specification development and new program launch.