February 10, 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 Dishwashers Version 7.0 Draft 2 Specification

Dear Ms. Crk:

Thank you for the opportunity to comment on the Environmental Protection Agency's (EPA) Draft 1 Version 1.0 ENERGY STAR Electric Cooking Products Specification, published on December 16, 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. 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 more years of continued partnership and collaboration between EPA and Whirlpool in improving appliance efficiency and reducing the emissions associated with use of appliances.

Whirlpool Corporation Global Headquarters
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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 the ENERGY STAR program must be based on the foundation of the Department of Energy appliance standards program, including test procedures, product classes, incremental manufacturing costs, technology options, savings analysis, and payback periods. We agree with AHAM that EPA cannot rush through this specification development, as that does not allow the DOE standards and test procedure rulemakings to conclude, and it gives less opportunity for stakeholders to offer substantive feedback to inform the specification development. Finally, we 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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Whirlpool Corporation Supplemental Comments to AHAM
ENERGY STAR Version 1.0 Draft 1 Electric Cooking Products Specification
February 10, 2023

Energy Use Requirement

We agree with AHAM's comments that including a measure of low-power mode energy for ovens in the specification may be confusing, while not contributing to effectively differentiating the energy efficiency between models. It appears in EPA's dataset (and confirmed during the January 10 webinar), that no model failed to meet the Version 1.0 proposed energy use requirement on the basis of the low-power mode energy usage of the oven portion of an electric range. Unless criteria helps effectively differentiate the energy efficiency between models, it should not become a requirement. It would only add burden to manufacturers to measure and report this, without any associated benefit.

Given the condensed comment period for the Draft 1 specification, we do not yet have enough data gathered and analyzed for our own models to comment on the proposed Integrated Annual Energy Consumption (IAEC) level. We hope to provide this data in the future to EPA to inform future drafts of this specification. However, we are concerned that the proposed criteria does not account for the statistically-significant test variation that exists with models in the DOE test procedure referenced in the draft specification (Appendix I1). This variation has not yet been resolved in this finalized DOE test procedure, or in on-going AHAM task force work. This can mean that a model that doesn't meet the IAEC qualification criteria in one manufacturer's lab, could meet it in another manufacturer's lab. The result could be competitive advantages and disadvantages for manufacturers, as well as concerns during verification testing and enforcement actions from the EPA and/or DOE. We recommend that EPA study this variation further and consider changes to the energy use requirements and verification procedures to account for this very large and documented variation that exists.

ENERGY STAR Guiding Principles

We are concerned that EPA has not fully evaluated and vetted this proposed specification against their own ENERGY STAR Strategic Vision and Guiding Principles. There are six guiding principles that EPA considers when establishing or revising ENERGY STAR specifications[1]:

1) Significant energy savings can be realized on a national basis
2) Product performance can be maintained or enhanced with increased energy efficiency
3) Purchasers will recover their investment in increased energy efficiency within a reasonable period of time
4) Energy-efficiency can be achieved through one or more technologies such that qualifying products are broadly available and offered by more than one manufacturer
5) Product energy consumption and performance can be measured and verified with testing
6) Labeling would effectively differentiate products and be visible for purchasers

The only way to assure the success of a specification is to evaluate and determine that all principles are met, through applying consistent practices for good data collection and analysis. We believe that EPA has not yet demonstrated that the Draft 1 specification has been properly vetted against several of these guiding principles; thus casting doubt on the long-term success of this specification. In particular, we believe that EPA has not shown adequate data yet to confirm that the second, third, fifth, and sixth guiding principles have been met.

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[1] https://www.energystar.gov/sites/default/files/asset/document/ENERGY_STAR_Strategic_Vision_and_Guiding_Principles.pdf

Product performance can be maintained or enhanced with increased energy efficiency

Despite being one of the ENERGY STAR guiding principles, we did not see any consideration and evaluation of product performance with the proposed specification. As EPA knows, consumers may lose trust in the ENERGY STAR brand if performance isn't enhanced or maintained with an ENERGY STAR-certified product. Product performance is not something that many consumers will compromise on for increased energy efficiency. We expect that this would certainly be the case for any residential cooking product.

EPA must consider features and functionalities that are currently available in electric cooking products in the market, and ensure that these can continue to be offered in the models that meet the Draft 1 specification energy levels. While the timeline for the Draft 1 specification comment period does not allow stakeholders to do a thorough review of these types of features/functionalities and assess other performance metrics, we hope to work with AHAM to analyze these impacts and comment on DOE's Supplemental Notice of Proposed Rulemaking (SNOPR) for cooking products energy conservation standards.

Purchasers will recover their investment in increased energy efficiency within a reasonable period of time

While we understand that EPA has limited data with which to perform a payback period analysis, EPA cannot move forward with a specification without first ensuring that consumers purchasing an ENERGY STAR-certified electric cooking product will have a reasonable payback period on their investment. This is particularly important given the emphasis that the EPA and other US federal agencies place on addressing equity and environmental justice issues (e.g., EPA Equity Action Plan). EPA must ensure that consumers, particularly those from low-income households and other disadvantaged communities, must have a reasonable payback period if there is an increase to the purchase price for an ENERGY STAR-certified appliance compared to a non-certified appliance. Without a reasonable payback period of no more than two to five years, consumers may lose trust and confidence in the ENERGY STAR brand.

In particular, there is a disparity between the types of electric cooktops and ranges that are able to meet the proposed levels in the Draft 1 specification. We see in the January 11 stakeholder webinar that only four non-induction cooktops/ranges that were in the EPA data set and webinar presentation meet the proposed levels; while ten did not meet the proposed levels (less than 30% of smooth electric, non-induction cooktops meet the proposed criteria). By contrast, five induction cooktops/ranges met the proposed criteria, while five did not meet (50% pass rate).

EPA must carefully ensure that a representative number of non-induction cooktops and ranges can meet the proposed criteria. As DOE's data from the recent cooking products energy conservation standards SNOPR shows, induction cooktops/ranges have a significant installed cost premium compared to baseline electric smooth element cooktops/ranges, resulting in negative average savings over the lifetime of owning the appliance (not including any possible investment in ferromagnetic induction-compatible cookware). Effectively, this shows that only four out of 24 total models in the EPA data set (17%) may meet the proposed specification levels with a possibly reasonable payback period for consumers. However, EPA needs to do a more thorough analysis to actually confirm that models meeting the proposed criteria have a reasonable payback period for consumers.

Further, EPA should consider whether the models from this dataset are currently being offered for sale to consumers. As we understand, DOE selected and tested these models over a period of time stretching at least years. The product development timelines by manufacturers typically move quicker than that. As a result, many of the models from the dataset may no longer be available on the market. Older models

may also not offer key safety improvements found in more recent models. As such, EPA should disregard models from their analysis that are no longer available for sale on the market.

We recommend that EPA perform a payback analysis with currently-available models, ensuring that consumers have a payback period of no more than two to five years from their investment towards an ENERGY STAR-certified appliance.

Product energy consumption and performance can be measured and verified with testing**, and **Labeling would effectively differentiate products and be visible for purchasers

A key consideration for this guiding principle is whether the test procedure used for ENERGY STAR certification purposes has controlled variation, which would give confidence in the ability of the test procedure to effectively differentiate products. We are concerned that the DOE Appendix I1 test procedure, which is referenced in the Draft 1 specification, has too much variation, both from test-to-test within a lab and from lab-to-lab. While we have been working with AHAM, DOE, and other stakeholders for several years to improve this variation, we have not yet come to a point where this has been resolved (despite the DOE Appendix I1 test procedure becoming finalized in 2022).

We are concerned that a test procedure with unacceptably high variation will not be able to effectively differentiate products on the market or be able to be used in verification testing. For example, most non-induction cooktops and ranges in the EPA dataset fall within a range of about 185 to 200 kWh/yr, using the Integrated Annual Energy Consumption (IAEC) metric. This puts most models in a range of about 7.5% measured energy efficiency. A test procedure with low variation may be able to effectively differentiate products on the market. However, a test procedure with high variation will not be able to do so when there's such a tight range of the energy consumption for most models.

Consumers will have little confidence that the electric cooktop they see with an ENERGY STAR label is meaningfully more energy efficient than a competing non-ENERGY STAR model. In some cases, there could be models that are not certified to ENERGY STAR that are more efficient than ENERGY STAR-certified models. This problem could be pronounced in a situation like cooktops, where many models are found in a very close band of measured energy efficiency. For this reason, we always recommend that ENERGY STAR use test procedures with normal and acceptable levels of variation, to give consumers the confidence that they need, and know that models sold with the ENERGY STAR label are meaningfully more energy efficient than other models.

There is additional risk that a model meeting the proposed Draft 1 specification levels in one lab and set of tests does not meet the proposed levels in a different set of tests from another lab. This is a very large concern for manufacturers from an enforcement perspective, as this type of variation alone could mean that a model fails verification testing, and is disqualified from ENERGY STAR. This could ultimately deter manufacturer participation in this new specification.

Compliance Date

We are concerned that EPA is rushing this process to develop and finalize a Version 1.0 specification. As we understand, the appliance rebate programs developed through the Inflation Reduction Act will likely not become available to consumers until 2024. It is unclear why EPA has stated their goal to complete this Version 1.0 specification in "early 2023", well in advance of these rebate programs becoming effective. [2]

A compressed timeline limits the amount of testing, analysis, and feedback that stakeholders can provide to EPA, to inform this specification development process. We hope that EPA values this stakeholder feedback during the specification development process, particularly for a new category with little existing

[2] https://www.energystar.gov/products/spec/clothes_dryers_specification_version_1_0_pd

data (e.g., testing and performance data). For a recent example of a new residential appliance category that was added to ENERGY STAR, the development of the clothes dryers specification stretched from a July 17, 2012, Program Launch Letter, until the Version 1.0 was finalized on May 19, 2014. This nearly two-year process enabled a broad set of stakeholders, including ENERGY STAR partners, to engage and share data and information to develop a successful Version 1.0 specification.

While we are not necessarily recommending that EPA extend the Version 1.0 electric cooking products specification development process for two years, we believe that it would not be in the best interest of ENERGY STAR partners and other stakeholders to develop a specification within just a few short months. Manufacturing partners have little opportunity to perform testing and collect data to inform our comments back to EPA about draft specifications. As EPA is aware, this DOE test procedure was recently finalized in 2022 and manufacturers, EPA, and DOE all have extremely limited data available, especially for models that are currently being sold in the market. In no small part, the burden of this test procedure still remains very high, which limits the amount of testing that our labs can complete.

We recommend that EPA allow adequate time for the DOE standards rulemaking to conclude, and for DOE to consider any amendments to the test procedure that reduce testing burden and/or improve variation. This would offer manufacturing partners a potentially improved test procedure and would allow us time to give additional data and information to EPA for this specification development.

Manufacturers are likely also not in a position to take immediate advantage of this specification by “early 2023”, to test and certify models on such a condensed timeline. As we have just shared, this testing burden is extremely high with this referenced test procedure, and manufacturers have competing testing priorities related to informing the development of possible DOE energy conservation standards. At a minimum, EPA should finalize and make this specification effective no earlier than 2024.

Conclusion

We appreciate the opportunity to provide comments on this notice. We agree with the comments submitted by AHAM on this draft specification, as highlighted above. We also reiterate our concerns related to including a requirement for oven low-power mode energy, and about the unresolved variation and testing burden that exist in the test procedure referenced in the Draft 1 specification. EPA must also carefully evaluate their own ENERGY STAR Guiding Principles as it relates to giving the confidence needed to develop a successful new specification. Finally, we are concerned that EPA’s aggressive specification development timeline will not ultimately result in a final specification that is confirmed by the best and most comprehensive data possible.

We look forward to continuing to partner with EPA on this specification development.