

Appliance Standards Awareness Project
American Council for an Energy-Efficient Economy
National Consumer Law Center, on behalf of its low-income clients
Northwest Energy Efficiency Alliance
Southwest Energy Efficiency Project

May 19, 2023

Dr. Carl Shapiro
U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
Building Technologies Office, EE-5B
1000 Independence Avenue SW
Washington, DC 20585

**RE: Docket Number EERE–2023–BT–TP–0006: Test Procedures for Cooking Products,
Notification of Petition for Rulemaking**

Dear Dr. Shapiro:

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP), American Council for an Energy-Efficient Economy (ACEEE), National Consumer Law Center, on behalf of its low-income clients (NCLC), Northwest Energy Efficiency Alliance (NEEA), and Southwest Energy Efficiency Project (SWEET) on the notification of petition for rulemaking for cooking products. 88 Fed. Reg. 24133 (April 19, 2023). We appreciate the opportunity to provide input to the Department.

The Association for Home Appliance Manufacturers (AHAM) submitted a petition to DOE requesting that the Department consider amendments to the test procedure for conventional cooking tops. In particular, AHAM requested that DOE amend the test procedure for cooking tops to allow for a calculation to be used as an alternative to the simmer portion of the test. However, DOE provided data that demonstrated significant variation between the energy consumption of each cooking zone calculated using the current DOE test procedure and that using the AHAM-recommended calculation. DOE should therefore reject the calculation approach. Additionally, AHAM proposed that DOE expand the definition of the term “specialty cooking zone” to include cooking zones designed for use with non-flat-bottom cookware and cooking tops or ranges with a downdraft fan that cannot be de-energized. We believe that these additions are unnecessary, and these circumstances can be addressed with a test procedure waiver.

The recommended calculation approach for the simmer test does not maintain the accuracy of the full DOE test. The current DOE test procedure for electric and gas cooking tops requires

an overshoot test and a physical simmer test to be conducted to determine the energy consumption of each cooking zone. In the petition, AHAM requested that DOE allow a calculation to be used as an alternative approach to the physical simmer portion of the test.¹ Using its test data, AHAM developed a simmer equation for each type of cooking top technology (electric coil, electric radiant, induction, and gas) to calculate the total energy consumption of each cooking zone based on how much energy is consumed for the water to reach 90°C. AHAM’s petition states that there is a high correlation between the energy consumption results of the simmer calculation and the full DOE test.² To help evaluate these claims, DOE presented test data comparing the difference between the active-mode energy consumption of each cooking zone using 1) the AHAM-recommended calculation and 2) the DOE test procedure.³ The data show that the maximum absolute percent deviation between the results of the AHAM equation and the measured energy consumption using the full DOE test procedure ranges from 5.0% for electric open (coil) to 31.5% for gas (see Table 1). Additionally, Figure 1 below shows the percent difference between the measured and calculated energy consumption for gas cooking tops in the AHAM and DOE test samples, illustrating a high degree of variation present across cooking zones. These data demonstrate that AHAM’s proposed calculation approach does not maintain the accuracy of the full testing approach. Therefore, we urge DOE to reject the recommended calculation approach.

Table 1. Maximum absolute percent deviation for cooking zones, by technology type

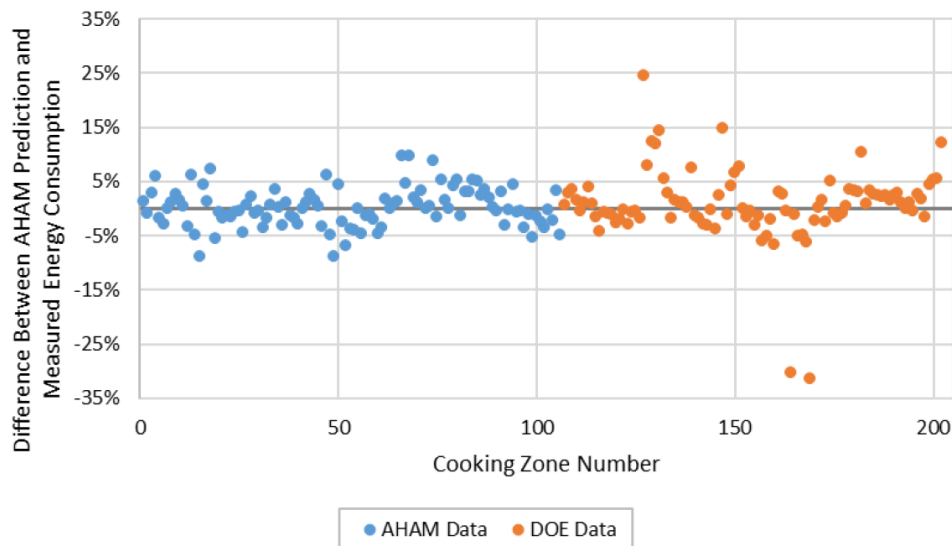
Cooking top technology type	Maximum absolute % deviation
Electric open (coil)	5.0%
Electric smooth - radiant	11.7%
Electric smooth - induction	10.1%
Gas	31.5%

¹ 88 Fed. Reg. 24137.

² 88 Fed. Reg. 24138.

³ <https://www.regulations.gov/document/EERE-2023-BT-TP-0006-0002>.

Figure 1. Difference between AHAM proposed calculation and measured energy consumption of cooking zones for gas cooking tops



DOE should not expand the definition of “specialty cooking zone.” The current DOE test procedure exempts certain “specialty cooking zones” that cannot be tested within the bounds of the test procedure and are not expected to be regularly used by consumers. In the petition, AHAM requested that the definition be expanded to include cooking zones designed for use with non-flat-bottom cookware such as wok burners.⁴ We believe that this provision is unnecessary, because cooking zones that are designed for use with non-flat-bottom cookware typically can be used with flat-bottom cookware as well. For example, some gas cooking zones have a “wok ring” which helps keep a wok stable on the grates; however, the wok ring can typically be removed to allow the cooking zone to be used with flat-bottom cookware.⁵ For cooking tops with built-in wok burners, grates across the burner allow the cooking zone to be used with flat-bottom cookware as well.⁶ Thus, we believe cooking zones designed for use with non-flat-bottom cookware should not be excluded from the test procedure. If a wok burner is unable to be tested under the current test procedure, the manufacturer could petition for a test procedure waiver.

In the petition for rulemaking, AHAM also proposed to exclude from testing cooking tops or ranges with a downdraft fan that cannot be de-energized by the appliance control according to manufacturer instructions.⁷ We are concerned that AHAM’s proposal could create a loophole for manufacturers to get around testing a cooktop or range with a downdraft venting system.

⁴ 88 Fed. Reg. 24142.

⁵ See for example, <https://www.homedepot.com/p/Empava-30-in-5-0-cu-ft-Slide-In-Single-Oven-Gas-Range-with-5-Sealed-Burner-Cooktop-and-Drawer-in-Stainless-Steel-EMPV-30GR06/320817291>.

⁶ See for example, <https://www.subzero-wolf.com/wolf/cooktops-and-rangetops/range-top/48-inch-sealed-burner-rangetop-4-burners-wok>.

⁷ 88 Fed. Reg. 24142.

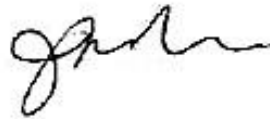
DOE notes that downdraft fans are typically activated automatically through a control algorithm or by means of consumer selection. For a cooking top with a downdraft fan that cannot be de-energized, we believe the best approach would be for the manufacturer to petition for a test procedure waiver.

Thank you for considering these comments.

Sincerely,



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