

Appliance Standards Awareness Project  
American Council for an Energy-Efficient Economy  
Consumer Federation of America  
Natural Resources Defense Council

May 27, 2022

Mr. Bryan Berringer  
U.S. Department of Energy  
Office of Energy Efficiency and Renewable Energy  
Building Technologies Office, EE-2B  
1000 Independence Avenue SW  
Washington, DC 20585

**RE: Docket Number EERE-2017-BT-STD-0014: Energy Conservation Standards for Residential Clothes Washers**

Dear Mr. Berringer:

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP), American Council for an Energy-Efficient Economy (ACEEE), Consumer Federation of America (CFA), and the Natural Resources Defense Council (NRDC) on the notice of data availability (NODA) for residential clothes washer (RCW) standards. 87 Fed. Reg. 21816 (April 13, 2021). We appreciate the opportunity to provide input to the Department.

We support DOE's approach presented in the NODA to develop a more robust translation of RCW energy and water usage metrics from the current Appendix J2 to the new Appendix J test procedure. These translations are important in determining potential efficiency levels (ELs) as part of the ongoing standards rulemaking. In the September 2021 RCW standards preliminary analysis, DOE tested a sample of RCWs under both current Appendix J2 and the new Appendix J.<sup>1</sup> DOE defined preliminary ELs for evaluation based on these results. In the NODA, DOE presents additional testing data and discussion of key factors that affect accurate translation of a given model's energy and water use ratings. DOE's testing showed that inconsistent spin settings for certain RCWs and different average load sizes for portable RCWs with manual fill controls can result in large differences in remaining moisture content (RMC) between the two test procedures. RMC is used to estimate drying energy usage, which represents the majority of RCW energy use, and can thus have a significant impact on resulting efficiency ratings.

Specifically, we support the approach of developing translations and resulting ELs based on adjusted remaining moisture content (RMC). DOE's preliminary analysis for RCWs suggests that drying energy usage represents 75-83% of total energy usage.<sup>2</sup> Thus, changes in drying energy estimates, calculated from measured RMC, can have a significant impact on overall energy usage and resulting efficiency ratings. The current Appendix J2 test procedure measures RMC only on the "cold wash/cold rinse" setting at both maximum and minimum spin settings. In contrast, new Appendix J measures RMC on all

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<sup>1</sup>EERE-2017-BT-STD-0014-0030, Ch. 5.3. [www.regulations.gov/document/EERE-2017-BT-STD-0014-0030](http://www.regulations.gov/document/EERE-2017-BT-STD-0014-0030)

<sup>2</sup>EERE-2017-BT-STD-0014-0030, pp. 7-3, 4. [www.regulations.gov/document/EERE-2017-BT-STD-0014-0030](http://www.regulations.gov/document/EERE-2017-BT-STD-0014-0030)

temperature and load cycles using the default spin setting.<sup>3</sup> In the NODA, DOE discusses that while some RCW models had consistent spin speed, duration, and performance across all cycles, some units were clearly optimized for the prior Appendix J2 RMC test cycles and perform poorly under new Appendix J testing.<sup>4</sup> Thus, DOE introduced an adjusted EER based on a “consistent spin” assumption.<sup>5</sup> In other words, the adjusted EER is the rating a given RCW “should” achieve based on its old Appendix J2 RMC test results rather than its new Appendix J test results.

Comments submitted by Whirlpool suggest that manufacturers with RCWs optimized for the Appendix J2 spin settings would likely re-program these units to perform better when tested under new Appendix J.<sup>6</sup> Specifically, for RCWs optimized for “cold wash/cold rinse,” manufacturers would likely increase the spin speed and/or spin duration across all temperature settings to match the spin behavior of the “cold wash/cold rinse” setting. Concurrently, manufacturers with lower default spin speed settings would likely make the maximum spin speed the default spin setting to yield the lowest possible RMC under Appendix J. We support DOE using the adjusted EER values for setting ELs and believe it is reasonable to assume that manufacturers would modify RCW spin settings if DOE were to establish amended standards based on the new Appendix J.

Thank you for considering these comments.

Sincerely,



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<sup>3</sup>Final Rule, Pre-publication (May 13, 2022). [www.energy.gov/sites/default/files/2022-05/rcw-tp-fr.pdf](http://www.energy.gov/sites/default/files/2022-05/rcw-tp-fr.pdf)

<sup>4</sup>87 Fed. Reg. 21818.

<sup>5</sup>DOE’s testing suggested a 4% RMC increase for Appendix J vs. Appendix J2 attributable to a difference in load size.

<sup>6</sup>EERE-2016-BT-TP-0011-0026, pp. 8, 9. [www.regulations.gov/comment/EERE-2016-BT-TP-0011-0026](http://www.regulations.gov/comment/EERE-2016-BT-TP-0011-0026)