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[6450-01-P]

**DEPARTMENT OF ENERGY**

**10 CFR Part 430**

[EERE-2024-BT-STD-0002]

**RIN 1904-AF69**

**Energy Conservation Program: Energy Conservation Standards for Dishwashers,  
Residential Clothes Washers, and Consumer Clothes Dryers**

**AGENCY:** Office of Energy Efficiency and Renewable Energy, Department of Energy.

**ACTION:** Confirmation of withdrawal.

**SUMMARY:** In light of the United States Court of Appeals for the Fifth Circuit granting a petition for review of a final rule published by the U.S. Department of Energy (“DOE”) on January 19, 2022, and remanding the matter to DOE for further proceedings, DOE has considered the factors outlined by the Fifth Circuit on whether “short-cycle” product classes for dishwashers, residential clothes washers, and consumer clothes dryers are warranted under the Energy Policy and Conservation Act and confirms the withdrawal of “short-cycle” product classes in the January 19, 2022, final rule.

**DATES:** The final rule published on January 19, 2022 (87 FR 2673) was effective on February 18, 2022.

**ADDRESSES:** The docket for this rulemaking, which includes *Federal Register* notices, comments, and other supporting documents/materials, is available for review at [www.regulations.gov](http://www.regulations.gov). All documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. However, not all documents listed in the index may be publicly available, such as information that is exempt from public disclosure.

The docket webpage can be found at [www.regulations.gov/docket/EERE-2024-BT-STD-0002](http://www.regulations.gov/docket/EERE-2024-BT-STD-0002). The docket webpage contains instructions on how to access all documents, including public comments, in the docket.

For further information on how to review the docket, contact the Appliance and Equipment Standards Program staff at (202) 287-1445 or by email: [ApplianceStandardsQuestions@ee.doe.gov](mailto:ApplianceStandardsQuestions@ee.doe.gov).

**FOR FURTHER INFORMATION CONTACT:**

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, 20585-0121. Telephone: (202) 287-5649. Email: [ApplianceStandardsQuestions@ee.doe.gov](mailto:ApplianceStandardsQuestions@ee.doe.gov).

Mr. Pete Cochran, U.S. Department of Energy, Office of the General Counsel, GC-33, 1000 Independence Avenue SW, Washington, DC, 20585-0121. Telephone: (240) 961-1189. Email: [Peter.Cochran@hq.doe.gov](mailto:Peter.Cochran@hq.doe.gov).

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### **I. Introduction**

The following sections briefly discuss the statutory authority underlying this confirmation of withdrawal, as well as some of the historical background relevant to dishwashers, residential clothes washers (“RCWs”), and consumer clothes dryers.

### *A. Authority*

The U.S. Department of Energy (“DOE”) must follow specific statutory criteria under the Energy Policy and Conservation Act, Public Law 94–163,<sup>1</sup> as amended, (“EPCA”) for prescribing new or amended standards for covered products, including dishwashers, RCWs, and consumer clothes dryers. Any new or amended standard for a covered product must be designed to achieve the maximum improvement in energy efficiency that the Secretary of Energy (“Secretary”) determines is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) Furthermore, DOE may not adopt any standard that would not result in the significant conservation of energy. (42 U.S.C. 6295(o)(3)(B))

In deciding whether a proposed standard is economically justified, DOE must determine whether the benefits of the standard exceed its burdens. (42 U.S.C. 6295(o)(2)(B)(i)) DOE must make this determination after receiving comments on the proposed standard, and by considering, to the greatest extent practicable, the following seven statutory factors:

- 1) The economic impact of the standard on manufacturers and consumers of the products subject to the standard;
- 2) The savings in operating costs throughout the estimated average life of the covered products in the type (or class) compared to any increase in the price,

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<sup>1</sup> All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116–260 (Dec. 27, 2020), which reflect the last statutory amendments that impact parts A and A–1 of EPCA.

initial charges, or maintenance expenses for the covered products that are likely to result from the standard;

3) The total projected amount of energy (or as applicable, water) savings likely to result directly from the standard;

4) Any lessening of the utility or the performance of the covered products likely to result from the standard;

5) The impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the standard;

6) The need for national energy and water conservation; and

7) Other factors the Secretary considers relevant.

(42 U.S.C. 6295(o)(2)(B)(i)(I)–(VII))

EPCA, as codified, also contains what is known as an “anti-backsliding” provision, which prevents the Secretary from prescribing any amended standard that either increases the maximum allowable energy use or decreases the minimum required energy efficiency of a covered product. (42 U.S.C. 6295(o)(1)) Also, the Secretary may not prescribe an amended or new standard if interested persons have established by a preponderance of the evidence that the standard is likely to result in the unavailability in

the United States in any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the United States. (42 U.S.C. 6295(o)(4))

Additionally, EPCA specifies requirements when promulgating an energy conservation standard for a covered product that has two or more subcategories. A rule prescribing an energy conservation standard for a type (or class) of product must specify a different standard level for a type or class of products that has the same function or intended use if DOE determines that products within such group (A) consume a different kind of energy from that consumed by other covered products within such type (or class); or (B) have a capacity or other performance-related feature which other products within such type (or class) do not have and such feature justifies a higher or lower standard. (42 U.S.C. 6295(q)(1)) In determining whether a performance-related feature justifies a different standard for a group of products, DOE considers such factors as the utility to the consumer of such a feature and other factors DOE deems appropriate. (*Id.*) Any rule prescribing such a standard must include an explanation of the basis on which such higher or lower level was established. (42 U.S.C. 6295(q)(2))

### *B. Background*

The Administrative Procedure Act (“APA”), 5 U.S.C. 551 *et seq.*, provides, among other things, that “[e]ach agency shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule.” (5 U.S.C. 553(e)) Pursuant to this provision of the APA, the Competitive Enterprise Institute (“CEI”) petitioned DOE (“March 2018 Petition”) for the issuance of a rule establishing a new product class under

42 U.S.C. 6295(q) that would cover dishwashers with a cycle time of less than 60 minutes from washing through drying, asserting that it is not technologically feasible to create dishwashers that both meet the current standards and have cycle times of 60 minutes or less.<sup>2</sup> On October 30, 2020, DOE published a final rule that established a product class for standard-size dishwashers with a cycle time for the normal cycle<sup>3</sup> of 60 minutes or less. 85 FR 68723 (“October 2020 Final Rule”). Contrary to CEI’s claim in the March 2018 Petition that it is not technologically feasible for a dishwasher with a cycle time of 60 minutes or less to meet the current standards, in the October 2020 Final Rule, DOE identified several dishwashers that had cycles that were less than 60 minutes and met the current standards but asserted that establishing a product class for dishwashers with a normal cycle of 60 minutes or less could spur manufacturer innovation to generate additional product offerings. *Id.* at 85 FR 68726. The October 2020 Final Rule additionally specified that the current standards for dishwashers no longer apply to short-cycle products and that DOE intended to conduct the necessary rulemaking to determine standards that would provide the maximum energy efficiency that is technologically feasible and economically justified, and would result in a significant conservation of energy. *Id.* at 85 FR 68733, 68741.

Following the October 2020 Final Rule, having determined that similarities exist between the consumer use of dishwashers, RCWs, and consumer clothes dryers (*i.e.*, that

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<sup>2</sup> See document IDs 0006 and 0007 at [www.regulations.gov/docket/EERE-2018-BT-STD-0005](http://www.regulations.gov/docket/EERE-2018-BT-STD-0005).

<sup>3</sup> The “normal cycle” is specifically defined in section 1 of the DOE test procedure at title 10 of the Code of Federal Regulations (“CFR”), part 430, subpart B, appendix C1 (“appendix C1”), as “the cycle type, including washing and drying temperature options, recommended in the manufacturer’s instructions for daily, regular, or typical use to completely wash a full load of normally soiled dishes including the power-dry feature,” among other criteria.



these products offer several cycles with varying times, and that consumers run these cycles multiple times per week on average), DOE published a final rule on December 16, 2020, that established product classes for top-loading standard-size RCWs and certain classes of consumer clothes dryers with a cycle time of less than 30 minutes, and front-loading standard-size RCWs with a cycle time of less than 45 minutes (“December 2020 Final Rule”). 85 FR 81359. Similar to the October 2020 Final Rule, the December 2020 Final Rule also specified that the current standards for RCWs and consumer clothes dryers no longer apply to short-cycle products. 85 FR 68723, 68742; 85 FR 81359, 81376.

On January 19, 2022, DOE published a final rule (“January 2022 Final Rule”) revoking the October 2020 Final Rule and the December 2020 Final Rule (collectively, “Short-Cycle Final Rules”). In that rule, DOE noted that the appropriate time for establishing a new product class under 42 U.S.C. 6295(q) is during a rulemaking prescribing new or amended standards. 87 FR 2673, 2682. And, as the Short-Cycle Final Rules stated that they were not applying the rulemaking analysis pursuant to the seven factors specified in 42 U.S.C. 6295(o) for the establishment of standards, DOE found that these rules were improperly promulgated. *Id.* at 87 FR 2673. The January 2022 Final Rule reinstated the prior product classes and applicable standards for these covered products. *Id.* at 87 FR 2686.

On March 17, 2022, various States filed a petition in the United States Court of Appeals for the Fifth Circuit (“Fifth Circuit”) seeking review of the January 2022 Final Rule, which eliminated the short-cycle product classes and reinstated the applicable

energy conservation standards. The petitioners argued that the January 2022 Final Rule withdrawing the Short-Cycle Final Rules violated EPCA and was arbitrary and capricious. On January 8, 2024, the Fifth Circuit granted the petition for review and remanded the matter to DOE for further proceedings consistent with the Fifth Circuit's opinion. In remanding the January 2022 Final Rule for further consideration, the Court held that even if the Short-Cycle Final Rules were invalid, DOE was obligated to consider other remedies short of withdrawal. *See Louisiana, et al. v. United States Department of Energy, et al.*, 90 F.4th 461, 477 (5th Cir. 2024). Specifically, the Court noted that instead of withdrawing the Short-Cycle Final Rules, DOE could have promulgated energy conservation standards for the short-cycle product classes. *Id.* at 476.

As a result, DOE has considered whether short-cycle product classes and standards can be established under the applicable statutory criteria. Under EPCA, DOE establishes product classes based on: (1) fuel type; or (2) performance-related features. (42 U.S.C. 6295(q)(1)) With regards to product classes based on performance-related features, the product must have a feature which other products within such type do not have and such feature must justify a different standard from that which applies to other products within such type. (*Id.*). In the Short-Cycle Final Rules, DOE found that cycle time was a performance-related feature and that some products had shorter cycle times than others. 85 FR 68723, 68726; 85 FR 81359, 81361. But the Short-Cycle Final Rules did not determine whether cycle time justified different standards. Instead, the Short-Cycle Final Rules stated DOE would determine specific standards in a separate rulemaking. *Id.* Therefore, to establish separate energy conservation standards for short-cycle product classes, DOE must first confirm the determination made in the Short-Cycle

Final Rules that cycle time is a performance-related feature for these three covered products. DOE must then determine that a different standard level is justified for short-cycle products, as there is no basis for establishing a product class under 42 U.S.C. 6295(q) that would be subject to the same standard level. Finally, assuming DOE determines that cycle time is a performance-related feature and a different standard level is justified for short-cycle products, DOE must apply the criteria in 42 U.S.C. 6295(o) to prescribe energy conservation standards that, among other things, are technologically feasible and economically justified and would result in significant conservation of energy.

As part of this process, DOE published a request for information on March 11, 2024 (“March 2024 RFI”), seeking data and other information on, among other things, the presence of any short-cycle products in the market and any relationship between cycle time and performance. 89 FR 17338.

Subsequently, on November 8, 2024, DOE published a proposed confirmation of withdrawal (“November 2024 Proposed Withdrawal”), which considered the factors outlined by the Fifth Circuit and proposed to confirm the elimination of short-cycle product classes in the January 2022 Final Rule. 89 FR 88661. DOE received comments in response to the November 2024 Proposed Withdrawal from the interested parties listed in Table I.1.<sup>4</sup>

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<sup>4</sup> Table I.1 excludes two non-substantive comments received from anonymous commenters, which were considered in the development of this confirmation but not cited individually.

**Table I.1 List of Commenters with Written Submissions in Response to the November 2024 Proposed Withdrawal**

<b>Commenter(s)</b>	<b>Reference in This Final Rule</b>	<b>Comment No. in the Docket</b>	<b>Commenter Type</b>
Alliance for Water Efficiency	AWE	20	Efficiency Organization
Association of Home Appliance Manufacturers	AHAM	23	Trade Organization
Appliance Standards Awareness Project, AWE, American Council for an Energy-Efficient Economy, Consumer Federation of America, Earthjustice, and National Consumer Law Center	<i>ASAP et al.</i>	21	Efficiency Organizations
California Energy Commission	CEC	17	State Agency
Pacific Gas and Electric, Southern California Edison, San Diego Gas and Electric (collectively, the California Investor-Owned Utilities)	CA IOUs	22	Utilities
Competitive Enterprise Institute	CEI	18	Advocacy Organization
Michael Ravnitzky	Ravnitzky	15	Individual
Northwest Energy Efficiency Alliance	NEEA	19	Efficiency Organization

A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.<sup>5</sup>

## **II. Discussion**

This discussion responds to the Fifth Circuit’s January 8, 2024, decision remanding this matter to DOE for further proceedings consistent with its opinion. In

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<sup>5</sup> The parenthetical reference provides a reference for information located in the docket for this rulemaking. (Docket No. EERE-2024-BT-STD-0002, which is maintained at: [www.regulations.gov](http://www.regulations.gov)). The references are arranged as follows: (commenter name, comment docket ID number at page of that document).

remanding the January 2022 Final Rule for further consideration, the Fifth Circuit found the January 2022 Final Rule arbitrary and capricious for two principal reasons:

(1) It failed to adequately consider appliance performance, substitution effects, and the “ample record evidence” that DOE’s conservation standards are causing Americans to use more energy and water rather than less; and

(2) It rested instead on DOE’s view that the Short-Cycle Final Rules were legally invalid—but even if true, that does not excuse DOE from considering other remedies short of repealing the Short-Cycle Final Rules *in toto*.

*Louisiana*, 90 F.4th at 477.

With regards to the second reason, the Court noted that instead of withdrawing the Short-Cycle Final Rules, DOE could have promulgated energy conservation standards for the short-cycle product classes. *Id.* at 476.

In the November 2024 Proposed Withdrawal, DOE considered whether an alternative to withdrawing the Short-Cycle Final Rules—establishing standards for the short-cycle product classes—would be justified under EPCA. 89 FR 88661, 88664. Specifically, DOE tentatively concluded that the short-cycle features of dishwashers, RCWs, and consumer clothes dryers do not justify standards different from those applicable to those products generally. *Id.* DOE also considered the effect of withdrawing the short-cycle product classes on product performance and energy and water use

savings, including cleaning and drying performance, the potential for increased substitution (*e.g.*, by hand washing or pre-washing), and the risk that standards are unintentionally increasing energy use (*e.g.*, via consumers relying on multiple cycles or unregulated cycles). *Id.*

AWE, AHAM, ASAP *et al.*, CEC, CA IOUs, NEEA, and Ravnitzky commented in support of the November 2024 Proposed Withdrawal and noted that short-cycle product classes do not warrant different energy conservation standards than those generally applicable to dishwashers, RCWs, and consumer clothes dryers. (AWE, No. 20 at p. 1; AHAM, No. 23 at p. 2; ASAP *et al.*, No. 21 at pp. 1–2; CEC, No. 17 at p. 1; CA IOUs, No. 22 at p. 1; NEEA, No. 19 at pp. 1–2; Ravnitzky, No. 15 at p. 1)

CEI asserted that terminating the short-cycle product classes for dishwashers, RCWs, and consumer clothes dryers would ignore the consumer protections in EPCA as well as recent Federal court precedent and should not be finalized. (CEI, No. 18 at p. 1) CEI also commented that the Fifth Circuit held that DOE's failure to consider any alternative other than refusing to promulgate a rulemaking was arbitrary and capricious. CEI stated that an alternative would have been to set a new standard for short-cycle product classes while taking other relevant features into account, as required by EPCA. (*Id.* at p. 5)

DOE notes that in the November 2024 Proposed Withdrawal, DOE did, in fact, consider whether an alternative to withdrawing the Short-Cycle Final Rules would be justified under EPCA, as required by the Fifth Circuit's decision remanding the January

2022 Final Rule to DOE. 89 FR 88661. As discussed in the November 2024 Proposed Withdrawal and in the following sections of this document, DOE concludes that the short-cycle features of dishwashers, RCWs, and consumer clothes dryers do not justify standards different from those applicable to these products generally.

#### *A. Dishwashers*

The following sections apply DOE’s authority under EPCA at 42 U.S.C. 6295(q) to determine whether a “short-cycle” feature for dishwashers is a performance-related feature that justifies the establishment of a separate product class. DOE considers a short-cycle feature for dishwashers to be a cycle that can completely wash a full load of normally soiled dishes in 60 minutes or less. DOE first reiterates its prior determinations that cycle time is a performance-related feature of dishwashers and details its specific consideration of the short-cycle feature (*see* section II.A.1 of this document). As discussed in section II.A.2 of this document, DOE determines in this analysis that the short-cycle feature does not justify a different standard. Data and information from the Short-Cycle Final Rules, March 2024 RFI, and dishwashers direct final rule published on April 24, 2024 (“April 2024 Dishwashers Direct Final Rule”; 89 FR 31398) show that products with a normal cycle of less than 60 minutes can meet the current energy conservation standards using the same design strategies as other dishwashers of comparable efficiency without a short-cycle feature. Finally, in section II.A.3 of this document, DOE addresses other pertinent comments received in response to the November 2024 Proposed Withdrawal that pertain to the dishwasher topics discussed in this document.

## 1. Cycle Time as a Performance-Related Feature

DOE first considered whether cycle time is a performance-related feature of dishwashers in accordance with 42 U.S.C. 6295(q)(1)(B). Consistent with DOE's assessment in the November 2024 Proposed Withdrawal and in previous rulemakings, discussed as follows, DOE reiterates that cycle time is a performance-related feature of dishwashers.

In a notice of proposed rulemaking ("NOPR") published on July 16, 2019 ("July 2019 NOPR"), DOE noted that while some individual consumers commented in response to the Notice of Petition for Rulemaking that was published on April 24, 2018 (83 FR 17768) that they were not concerned with a shorter cycle time, other individual consumers expressed dissatisfaction with the amount of time necessary to run their dishwashers. 84 FR 33869, 33873. In the July 2019 NOPR, DOE further discussed that the data and comments from dissatisfied consumers indicated that for many consumers, there is a utility in shorter cycle times to clean a normally soiled load of dishes. *Id.* Based on these considerations, DOE concluded that cycle time for dishwashers is a performance-related feature for the purposes of 42 U.S.C. 6295(q). *Id.*

DOE reiterated this conclusion in the October 2020 Final Rule. 85 FR 68723, 68726–68732. Specifically, DOE concluded in the October 2020 Final Rule that dishwashers with a normal cycle with a cycle time of 60 minutes or less have a performance-related feature that other dishwashers currently on the market lack. *Id.* at 85 FR 68726, citing 84 FR 33869, 33871. As defined in section 1 of appendix C1, the



normal cycle refers to the cycle recommended to the consumer to completely wash a full load of normally soiled dishes.

As discussed, CEI petitioned DOE in March 2018 to establish a separate product class for dishwashers for which the normal cycle is less than 60 minutes. In the October 2020 Final Rule, DOE finalized the creation of a new product class for standard-size dishwashers with a normal cycle of 60 minutes or less. 85 FR 68723, 68733. In the January 2022 Final Rule, DOE did not question the validity of those prior determinations that short cycles provide a performance-related feature. 87 FR 2673, 2682.

In response to the November 2024 Proposed Withdrawal, AHAM commented that cycle time is an important consumer feature. (AHAM, No. 23 at p. 2) The CA IOUs, however, commented that the March 2018 Petition from CEI, the Short-Cycle Final Rules, and the November 2024 Proposed Withdrawal did not include sufficient justification from DOE or CEI for why these specific short-cycle times offered a unique consumer utility. (CA IOUs, No. 22 at p. 2) The CA IOUs requested that DOE assess the merits of the selected cycle time delineations and the consumer utility they may or may not provide in future rulemakings. (*Id.*)

In response to the comment from the CA IOUs, DOE notes that the specific short-cycle time considered, 60 minutes or less, is less than the average cycle time for this product. As such, DOE believes this short-cycle time can provide utility to some consumers, *e.g.*, consumers needing to complete multiple cycles in a limited amount of time. For the reasons stated in the July 2019 NOPR and October 2020 Final Rule, and

consistent with the November 2024 Proposed Withdrawal, DOE reconfirms in this confirmation of withdrawal that cycle time is a performance-related feature of dishwashers for the purposes of 42 U.S.C. 6295(q).

The following paragraphs discuss DOE’s specific consideration of the short-cycle feature for dishwashers.

To address the concerns of the Fifth Circuit regarding DOE’s previous consideration of “quick” cycles as the basis for concluding whether separate standards are justified for short-cycle dishwashers, for the analysis conducted in support of the November 2024 Proposed Withdrawal, DOE did not consider any “quick” cycles that do not perform equivalently to a normal cycle. In the November 2024 Proposed Withdrawal, DOE considered a dishwasher to have a “short-cycle feature” only if it provides a cycle with the capability of “completely washing”<sup>6</sup> a full load of normally soiled dishes in 60 minutes or less, as would be the consumer expectation for a normal cycle. 89 FR 88661, 88665. In accordance with the Fifth Circuit’s January 8, 2024, decision, DOE did not consider any “quick” cycles intended for washing only a partial load of dishes, or a cycle unable to completely wash a full load of normally soiled dishes, to be a short-cycle feature for the purpose of this analysis—even if such cycle has a cycle time of 60 minutes

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<sup>6</sup> As discussed elsewhere in this document, DOE’s test procedure for dishwashers at 10 CFR 430, subpart B, appendix C2 (“appendix C2”), which references the latest industry test standard, defines a minimum cleaning index of 70 as the level that represents “completely washing” a full load of normally soiled dishes—as measured on each of the three soil loads that are tested in the DOE test procedure (*i.e.*, the heavy, medium, and light soil loads). *See* 88 FR 3234, 3251–3263. For the purpose of this confirmation of withdrawal, and consistent with the November 2024 Proposed Withdrawal, DOE considers “completely washing a full load of normally soiled dishes” to mean achieving a cleaning index of at least 70 on each of the three soil loads.

or less. *Id.* In this regard, the analyses performed in the November 2024 Proposed Withdrawal differed from the analyses DOE performed in support of the January 2022 Final Rule, in which DOE considered all “quick” cycles with a cycle time of 60 minutes or less, regardless of dish load size or cleaning ability. By considering only cycles that can completely wash a full load of normally soiled dishes, DOE avoided considering “quick” cycles designed for addressing niche applications (*e.g.*, light soils, delicate items, *etc.*) that are not capable of washing a full load of normally soiled dishes, as would be the consumer expectation for a normal cycle.

In response to the November 2024 Proposed Withdrawal, Ravnitzky commented that, in his experience, he occasionally uses the shorter cycles on his dishwasher when the dishes are not very dirty or when the task needs to be completed quickly. Ravnitzky further commented that these occasions are relatively infrequent and that, for the majority of the time, he relies on the standard cycles to ensure thorough cleaning and drying. (Ravnitzky, No. 15 at p. 1)

AHAM commented that consumers are satisfied with existing normal cycle times and most products also have short-cycle options for when quicker cycles are needed. (AHAM, No. 23 at p. 1)

CEI asserted that the November 2024 Proposed Withdrawal repeated the claim from the January 2022 Final Rule that the availability of quick cycles on many dishwasher models obviates the need for the short-cycle product class, which would be applicable to the normal cycle. CEI noted that the Fifth Circuit criticized and rejected this

argument and asserted that DOE did not address this concern in the November 2024 Proposed Withdrawal. (CEI, No. 18 at p. 6)

In response to the comment from CEI, DOE reiterates that it did, in fact, address the concerns of the Fifth Circuit regarding DOE’s previous consideration of “quick” cycles as the basis for concluding whether separate standards are justified for short-cycle dishwashers. Specifically, as discussed, DOE’s analysis conducted in support of the November 2024 Proposed Withdrawal did not consider any “quick” cycles that do not perform equivalently to a normal cycle. Rather, in the November 2024 Proposed Withdrawal, DOE considered in its determination of a short-cycle feature only those dishwasher cycles that could completely wash a full load of normally soiled dishes in 60 minutes or less, as would be the consumer expectation for a normal cycle.<sup>7</sup> 89 FR 88661, 88665. DOE specifically noted that this distinction to only consider cycles that met both the cleaning performance threshold and cycle time threshold was a key difference in the analyses performed in the November 2024 Proposed Withdrawal from the analyses performed in the January 2022 Final Rule. 89 FR 88661, 88665, 88667–88668.

In this document, consistent with the November 2024 Proposed Withdrawal, DOE continues to consider a dishwasher to have a short-cycle feature only if it provides any cycle with the capability of completely washing a full load of normally soiled dishes in 60 minutes or less, as would be the consumer expectation for the normal cycle. In the

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<sup>7</sup> Specifically, DOE defined “completely washing” a full load of normally soiled dishes as those cycles that were soiled with the same soil loads as is used in the DOE test procedure to test the normal cycle (*i.e.*, heavy, medium, and light soil loads as defined in the DOE test procedure at appendix C1 and appendix C2) and achieved a cleaning index of at least 70 on each of the three soil loads as specified in appendix C2. 89 FR 88661, 88665.

sections that follow, DOE evaluates whether such a short-cycle feature justifies a separate product class in accordance with 42 U.S.C. 6295(q).

## 2. Justification of Different Standards for Dishwashers with a Short-Cycle Feature

As discussed, EPCA authorizes DOE to prescribe a higher or lower standard than that which applies (or would apply) for such type (or class) for any group of covered products which have the same function or intended use if DOE determines that products within such group (A) consume a different kind of energy from that consumed by other covered products within such type (or class); or (B) have a capacity or other performance-related feature which other products within such type (or class) do not have and such feature justifies a higher or lower standard. (42 U.S.C. 6295(q)(1)) In determining whether a performance-related feature justifies a different standard for a group of products, DOE considers such factors as the utility to the consumer of such a feature and other factors DOE deems appropriate. (*Id.*)

A typical application of this provision of EPCA is for DOE to establish comparatively less stringent standards for classes of covered products that have a performance-related feature that inherently uses more energy than products without such feature, and for which DOE has determined that such feature provides a utility to the consumer that justifies the comparatively less stringent standard. For example, when establishing standards for consumer refrigerators, DOE determined through-the-door ice service to be a performance-related feature of refrigerators that provides utility to the consumer and that affects efficiency; *i.e.*, inherently uses more energy (*see* discussion of product class segregation at 52 FR 46367, 46371 (Dec. 7, 1987)). Accordingly, DOE

established comparatively less stringent standards for refrigerators with through-the-door ice service than for equivalent refrigerators without such a feature. 54 FR 47916, 47943–47944 (Nov. 17, 1989). DOE has maintained a product class distinction with comparatively less stringent standards for refrigerators with through-the-door ice service through successive amendments to the standards for consumer refrigerators.<sup>8</sup>

In the October 2020 Final Rule, DOE acknowledged that designing a dishwasher with a normal cycle time of 60 minutes or less is achievable and asserted that establishing a short-cycle product class could spur manufacturer innovation to generate additional product offerings to fill the market gap that exists for dishwashers with this feature (*i.e.*, the ability to clean a load of normally soiled dishes in under 60 minutes). DOE further stated its intent to determine the specific energy and water conservation standards of the new product class in a separate rulemaking. 85 FR 68723, 68724.

In the November 2024 Proposed Withdrawal, DOE conducted an analysis of the energy and water use of a short-cycle feature for dishwashers to evaluate whether different (*i.e.*, comparatively less stringent) standards would be warranted for dishwashers that provide a short-cycle feature. 89 FR 88661, 88666. As discussed in the previous section of this document, DOE has determined that a normal cycle of 60 minutes or less on a dishwasher is a performance-related feature that provides consumer utility for the purpose of consideration of potential product class distinction under the provisions of 42 U.S.C. 6295(q). In the November 2024 Proposed Withdrawal, DOE next

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<sup>8</sup> Separate refrigerator product class distinctions are made for additional product features as well, such as automatic defrost and transparent doors. *See* 10 CFR 430.32(a).

evaluated whether dishwashers with a short-cycle feature necessitate more energy and water use than dishwashers without such feature, which could justify a comparatively less stringent standard for dishwashers that provide such a feature. *Id.*

To evaluate the energy and water use of a short-cycle feature in comparison to the currently applicable energy and water standards, in the November 2024 Proposed Withdrawal, DOE considered all data available from recent rulemakings, including data from testing conducted in support of the October 2020 Final Rule<sup>9</sup> and the April 2024 Dishwashers Direct Final Rule and confidential data from AHAM. *Id.*

The data from testing conducted in support of the October 2020 Final Rule included energy and water use, cycle time, and cleaning performance scores. Because there was no established DOE test procedure to evaluate dishwasher cleaning performance at the time of the October 2020 Final Rule, the cleaning performance scores in the October 2020 Final Rule dataset were based on the 2014 ENERGY STAR Test Method for Determining Residential Dishwasher Cleaning Performance<sup>10</sup> (“2014 ENERGY STAR Test Method”). 85 FR 68723, 68725.

In a final rule amending the test procedure for dishwashers published on January 18, 2023 (“January 2023 TP Final Rule”), DOE established a new test procedure at 10 CFR 430, subpart B, appendix C2 (“appendix C2”), which in addition to measuring the

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<sup>9</sup> DOE test data are available at [www.regulations.gov/document/EERE-2018-BT-STD-0005-3213](http://www.regulations.gov/document/EERE-2018-BT-STD-0005-3213).

<sup>10</sup> Test Method for Determining Residential Dishwasher Cleaning Performance. Rev. Feb-2014. Available at [www.energystar.gov/sites/default/files/specs//ENERGY%20STAR%20Final%20Test%20Method%20for%20Determining%20Residential%20Dishwasher%20Cleaning%20Perfor%20%20%20\\_0.pdf](http://www.energystar.gov/sites/default/files/specs//ENERGY%20STAR%20Final%20Test%20Method%20for%20Determining%20Residential%20Dishwasher%20Cleaning%20Perfor%20%20%20_0.pdf).

energy and water use of a dishwasher, specifies a methodology to evaluate the cleaning performance of a dishwasher and establishes a minimum cleaning index threshold as criteria for a valid test cycle.<sup>11</sup> In the January 2023 TP Final Rule, DOE discussed that it was implementing this minimum cleaning index threshold as criteria for a valid test cycle to ensure that the measured energy and water results are reflective of a cycle that meets consumer expectations (*i.e.*, to ensure that the DOE test procedure produces results that are representative of an average use cycle). 88 FR 3234, 3250–3267.

In conducting the analyses for the November 2024 Proposed Withdrawal, DOE identified that the 2014 ENERGY STAR Test Method that was used at the time of the October 2020 Final Rule to evaluate cleaning performance produces test results with greater variability and less repeatability in comparison to test results produced by DOE’s appendix C2 test procedure.<sup>12</sup> For consistency with the analysis conducted for the November 2024 Proposed Withdrawal and to ensure representativeness of the cleaning performance indices resulting from the testing for the October 2020 Final Rule, DOE translated the October 2020 Final Rule test data to be equivalent to test results achieved

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<sup>11</sup> DOE notes that manufacturers will be required to use the test procedure at appendix C2 on and after April 23, 2027, which is the compliance date of the amended standards in the April 2024 Dishwashers Direct Final Rule. *See* 88 FR 3234; 89 FR 31398.

<sup>12</sup> Specifically, in addition to scoring soil particles on all items of the test load, the February 2014 ENERGY STAR Test Method also scores spots, streaks, and rack contact marks on glassware. In the January 2023 TP Final Rule, DOE explained that because the DOE test is conducted without rinse aid—which can impact the scoring of spots or streaks on glassware—DOE finalized the cleaning performance test method to exclude the scoring of spots, streaks, and rack contact marks on glassware. 88 FR 3234, 3255–3256.



under appendix C2<sup>13</sup>, which DOE has established to be representative of an average consumer use cycle. 89 FR 88661, 88666.

Further, in the October 2020 Final Rule, DOE used the cleaning performance scores produced by the 2014 ENERGY STAR Test Method for comparison purposes only, stating that DOE did not have information at the time to relate the cleaning scores produced by that test method to minimum consumer acceptance of cleaning performance. 85 FR 68723, 68726. It was not until the January 2023 TP Final Rule that DOE determined that a score of 70 as tested according to appendix C2 reflects the threshold of consumer acceptability for cleaning performance of a normal cycle. Accordingly, DOE established in appendix C2 a minimum cleaning index threshold of 70 as a condition for a valid test cycle. 88 FR 3234, 3259–3263. Appendix C2 also requires that, as a condition for a valid test, the threshold cleaning index of 70 be achieved on each of the heavy, medium, and light soil loads required for testing, which collectively represent typical consumer usage patterns of dishwashers.

Consistent with this determination of the threshold for a consumer-acceptable level of cleaning performance, in the November 2024 Proposed Withdrawal and in this document, DOE only considered a dishwasher as having a “short-cycle feature” if it had a cycle time less than 60 minutes and a per-cycle cleaning index threshold of at least 70.

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<sup>13</sup> DOE’s test data translated to be equivalent to test results achieved under appendix C2 is available in the Technical Appendix to this document, available in the docket for this rulemaking at [www.regulations.gov/docket/EERE-2024-BT-STD-0002](http://www.regulations.gov/docket/EERE-2024-BT-STD-0002).

From its test sample, DOE identified one unit that provides a “short-cycle feature”—as DOE has described that term in this document—that uses less energy and water than the maximum allowable standard level for standard-size dishwashers. 89 FR 88661, 88666. Specifically, this unit achieves a cleaning index of at least 70 on the heavy, medium, and light soil loads that are required for testing the normal cycle, with a cycle time less than 60 minutes; *i.e.*, provides a “short-cycle feature” consistent with consumer expectations of a normal cycle.<sup>14</sup> This unit’s test results demonstrate that providing a short-cycle feature consistent with consumer expectations of a normal cycle (*i.e.*, a cycle that can completely wash a full load of normally soiled dishes in 60 minutes or less) does not necessitate using more energy and water than a dishwasher without such feature that meets the current standards. DOE further evaluated the technologies and design strategies used by this dishwasher and tentatively concluded that this unit does not incorporate any proprietary technologies or design strategies and is designed no differently than other dishwashers of comparable efficiency without a short-cycle feature.

*Id.*

In the November 2024 Proposed Withdrawal, DOE tentatively concluded that the availability of this feature currently on the market—at lower energy and water levels than the current standard allows—in a unit with no identifiable proprietary design or control strategy demonstrated that a dishwasher with a short-cycle feature does not inherently use

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<sup>14</sup> In consideration of the Fifth Circuit’s opinion that in the short-cycle rulemakings DOE pointed to existing “quick” cycles that did not address the foundational concerns underlying these rules, DOE considers in this analysis that the other units in the test sample that provide a dishwasher cycle less than 60 minutes, but that do not “completely wash” a full load of normally soiled dishes, do not have what DOE is describing as a “short-cycle feature” in this document, and therefore do not factor into DOE’s consideration of whether a separate product class is justified for dishwashers with a short-cycle feature. *See Louisiana*, 90 F.4th at 474–75.

more energy and water than a dishwasher without such feature to achieve an acceptable cleaning performance, and that the current dishwasher standards do not preclude manufacturers from offering a normal cycle of 60 minutes or less. *Id.*

In the November 2024 Proposed Withdrawal, DOE discussed that further evaluation of consumer survey data and comments from dishwasher manufacturers indicates that the limited availability of short-cycle features on the current market is not indicative of energy conservation standards precluding or discouraging the availability of such feature, but rather reflects the prioritization of product offerings by manufacturers commensurate with a relatively low level of market demand for this feature in comparison to other features more important to consumers. *Id.* On average, a consumer runs 184 dishwasher cycles per year, or, said another way, consumers run their dishwasher approximately once every two days. 88 FR 3234, 3244. This usage pattern doesn't demonstrate a need for faster cycle times, further supporting the low market demand for the short-cycle feature.

In the November 2024 Proposed Withdrawal, DOE re-analyzed the provisions of a previous rulemaking (*i.e.*, the January 2022 Final Rule) that withdrew short-cycle product and tentatively determined, based on the available test data—which demonstrated that it is feasible to design a short-cycle feature while meeting current standards—as well as stakeholder comments and market survey data, that (1) a short-cycle feature that can completely wash a full load of normally soiled dishes in 60 minutes or less is technologically feasible; (2) current standards do not prevent dishwasher manufacturers from providing such a short-cycle feature; and (3) there is a dishwasher currently

available on the market that provides such a short-cycle feature and meets the currently applicable energy and water standard. 89 FR 88661, 88667. Accordingly, DOE did not propose to establish separate energy conservation standards for dishwashers with a short-cycle feature. *Id.*

In the November 2024 Proposed Withdrawal, DOE sought comment on these proposed determinations. *Id.*

The CA IOUs commented that DOE had demonstrated that the applicable standards for dishwashers do not preclude manufacturers from developing products that meet the intention of the short-cycle product class and agreed that the technological feasibility of developing such products is the appropriate factor when determining if a performance characteristic merits a different standard level. (CA IOUs, No. 22 at p. 2)

ASAP *et al.* commented in support of DOE's proposal to confirm the withdrawal of the short-cycle product class for dishwashers on the basis that there is at least one model available on the market that provides the short-cycle feature and uses less energy and water than the current standard. ASAP *et al.* noted that DOE considered a model to have the short-cycle feature only if it meets the consumer expectation of a normal cycle (*i.e.*, completely washing a full load of normally soiled dishes in 60 minutes or less). ASAP *et al.* stated that the availability of such a model demonstrates that the current standards for these products are not precluding manufacturers from offering products with short cycle times and good product performance on a normal cycle. (ASAP *et al.*, No. 21 at pp. 1–2)

CEC agreed with DOE that standards do not impact the ability of manufacturers to provide dishwashers with the short-cycle feature, as evidenced by existing product offerings. CEC further asserted that manufacturer comments on the rulemaking make it clear that a short-cycle product class is neither necessary nor warranted for dishwashers, and accordingly, a separate product class is not justified. (CEC, No. 17 at p. 1)

Ravnitzky supported DOE's tentative determination that a short-cycle feature for dishwashers does not justify a separate product class with separate standards under 42 U.S.C. 6295(q) to not impose separate requirements for short-cycle features. (Ravnitzky, No. 15 at p. 1)

NEEA supported DOE's proposal in the November 2024 Proposed Withdrawal to eliminate "short-cycle" product classes for dishwashers. NEEA stated that its comments build upon past NEEA letters submitted to DOE, which demonstrated that short-cycle product classes were unnecessary for these products because (1) consumers already have access to short cycle settings on dishwashers; (2) consumers use short cycles relatively infrequently; (3) consumers are satisfied with high-efficiency appliances; and (4) consumers are satisfied with appliances that have fast cycle options. NEEA added that leveraged sales data from the Northwest, consumer use data from regional field studies ("RBSA"), surveys of online retail catalogs, technology research, and laboratory tear-down studies support these conclusions. (NEEA, No. 4 at p. 2)

AHAM asserted that for its members, the consumer is always top of mind, and accordingly, manufacturers make appliances that last longer, perform better, and respond

to consumer needs and preferences. AHAM stated that manufacturers pay careful attention to consumer needs and desires for particular features and utilities and products currently on the market have a demonstrated capability to achieve the recommended energy and water conservation standards and retain consumer satisfaction with a range of performance considerations, utilities, and features. (AHAM, No. 23 at pp. 1–2)

CEI asserted that DOE recently “relaxed” its test procedure for dishwashers by not including spots, streaks, and rack contact marks in the calculation of the cleaning index. CEI also commented that although DOE presented data showing at least one dishwasher model that has a quick cycle that meets the cleaning index criteria established by the DOE test procedure, CEI stated that it is not aware of any manufacturer claiming that its quick cycle is equivalent to the normal cycle. CEI also questioned why such a cycle would not be designated as the normal cycle. CEI asserted that DOE suggested that a dishwasher with a normal cycle that takes 2 hours or more, accompanied by a quick cycle that can meet the criteria of the new test procedure at appendix C2, is good enough to comply with the law. CEI further asserted that EPCA does not allow for any diminished features and performance resulting from its standards and claimed that a quick cycle meeting the criteria of the appendix C2 test procedure represents a decline in performance as compared to the normal cycle. CEI commented that such a decline justifies creating a separate short-cycle product class for dishwashers. (CEI, No. 18 at p. 6)

Contrary to CEI’s claim, DOE has not “relaxed” its test procedure. As discussed previously, the new appendix C2 test procedure established by the January 2023 TP Final

Rule is the first time DOE has finalized a test procedure that evaluates dishwasher cleaning performance and specifies a minimum cleaning index threshold that ensures that test results produced by the test procedure are representative of consumer use and consumer expectations of a normal cycle.<sup>15</sup> The cleaning performance threshold discussed in the October 2020 Final Rule, which was based on using the 2014 ENERGY STAR Test Method, does not correspond to the cleaning performance threshold that DOE has since determined to be indicative of consumer-acceptable cleaning performance for a normal cycle. Translating the October 2020 Final Rule data set to reflect cleaning indices equivalent to cleaning indices obtained using the appendix C2 test method was necessary to provide a consistent data set with which to identify dishwasher cycles that meet consumer expectations of a normal cycle.

Further, DOE did not suggest that a dishwasher with a normal cycle that takes 2 hours or more, accompanied by a quick cycle that provides a short-cycle feature, is “good enough to comply with the law.” Rather, DOE concluded that the availability of a short-cycle feature that meets consumer expectations of a normal cycle (*i.e.*, completely washing a full load of normally soiled dishes in 60 minutes or less) while using no more energy and water than the current standard level indicates that it is technologically feasible to design a “normal cycle” with a cycle time of 60 minutes or less without diminishing any features or compromising dishwasher performance. In other words,

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<sup>15</sup> DOE’s dishwasher test procedure at appendix C1 and appendix C2 requires that testing be conducted without the use of rinse aid consistent with the specifications in the industry test standard, AHAM DW-1-2020, “Uniform Test Method for Measuring the Energy Consumption of Dishwashers.” In the January 2023 TP Final Rule, DOE found the use of rinse aid, or lack thereof, impacts the scoring of spots or streaks. As a result, DOE adopted a cleaning index calculation that scores only soils and does not include the scores of spots, streaks, or rack contact marks on the glassware. 88 FR 3234, 3248.

energy conservation standards are not precluding manufacturers from designing a normal cycle with a cycle time of 60 minutes or less, and therefore the short-cycle feature would not justify less stringent standards.

In response to CEI's question about why such a cycle would not be designated on the normal cycle, or why no manufacturer is claiming that its quick cycle is equivalent to the normal cycle, DOE reiterates its conclusion that the limited availability of short-cycle features on the current market is not indicative of energy conservation standards precluding or discouraging the availability of such feature, but rather reflects the prioritization of product offerings by manufacturers commensurate with a relatively low level of market demand for this feature in comparison to other features more important to consumers. 89 FR 88661, 88666.

In conclusion, based on the available test data—which demonstrate that it is feasible to design a short-cycle feature while meeting current standards—as well as stakeholder comments in response to the March 2024 RFI and November 2024 Proposed Withdrawal and market survey data, DOE has determined that (1) a short-cycle feature that can completely wash a full load of normally soiled dishes in 60 minutes or less is technologically feasible; (2) current standards do not prevent dishwasher manufacturers from providing such a short-cycle feature; and (3) there is a dishwasher currently available on the market that provides such a short-cycle feature and meets the currently applicable energy and water standard.



For these reasons, DOE has determined that a short-cycle feature for dishwashers does not justify a separate product class with different standards under 42 U.S.C. 6295(q).

### 3. Response to Other Comments

In the sections that follow, DOE addresses comments received in response to the November 2024 Proposed Withdrawal that pertain to other dishwasher topics discussed in this document.

#### a. Historical Cycle Time Trends

In its March 2018 Petition, CEI presented dishwasher cycle time data compiled from annual Consumer Reports data. These data include the range of cycle times measured by Consumer Reports as well as an approximate market-average cycle time for each year. Based on the Consumer Reports data, CEI concluded that the historical increase in the average normal cycle time demonstrates that current standards have precluded manufacturers from offering products with short cycles as the normal cycle.<sup>16</sup> In particular, CEI noted that the average cycle time had not been about 1 hour since 1983, before any standards were adopted; average cycle time in 2018 was 2 hours and 20 minutes, and, according to CEI, had more than doubled due to current energy standards. CEI further asserted that when a new energy standard is adopted by DOE, the result is an

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<sup>16</sup> The March 2018 Petition is available at [www.regulations.gov/document/EERE-2018-BT-STD-0005-0006](http://www.regulations.gov/document/EERE-2018-BT-STD-0005-0006), page 4.

increase in dishwasher cycle time. CEI also asserted that dishwasher average cycle times of less than 1 hour had been eliminated from the marketplace.

In the November 2024 Proposed Withdrawal, DOE discussed that market-average cycle time is not an appropriate indicator to demonstrate any causality with standards. Instead, the *minimum* available cycle time is a more appropriate indicator to assess any impact of standards on dishwasher cycle time, because the minimum available cycle time on the market can provide an indication of the technological feasibility of providing shorter cycle times while meeting more stringent standards. Whereas trends in market-average cycle times have largely been driven by other factors, discussed in the following paragraphs. 89 FR 88661, 88668.

Based on the data shared by CEI in the March 2018 Petition, DOE noted in the November 2024 Proposed Withdrawal that minimum cycle times (as represented by the lowest cycle time measured by Consumer Reports each year) have generally increased only during periods when standards were not amended. For example, the minimum cycle time—as apparent in the Consumer Reports data—increased from 65 minutes in 1993 to 85 minutes in 2006, a period during which there were no changes to dishwasher standards. Furthermore, the minimum cycle time as measured by Consumer Reports has decreased over the past 15 years, even while standards became more stringent during that time period. *Id.*

Additionally, in the November 2024 Proposed Withdrawal, DOE noted that the short-cycle feature currently available on the market has a cycle time (41 minutes) that is lower than the minimum cycle time measured by Consumer Reports in 1983 (55

minutes), prior to the introduction of any standards for dishwashers. DOE stated that this demonstrates that amended standards have not prevented the technological feasibility of providing a short-cycle feature even as dishwasher standards have become more stringent, and even as the market-weighted average cycle time has increased due to other factors (*see* discussion in the following paragraphs regarding the potential impact of dishwasher sound levels and detergent formulation on cycle time). In other words, the totality of data available indicate that current standards are not precluding manufacturers from offering dishwashers with a short-cycle feature. *Id.*

In response to the November 2024 Proposed Withdrawal, CEI commented that DOE should address the issue of longer cycle times that CEI asserted have been caused by previous appliance regulations by creating new standards that are achievable by short-cycle product classes. (CEI, No. 18 at p. 1) CEI also asserted that the impact of previous dishwasher standards on cycle time is an example of a DOE appliance regulation that “crossed the line,” and stated that DOE should withdraw the November 2024 Proposed Withdrawal and instead consider a rulemaking process to establish standards for the short-cycle product classes. (*Id.* at p. 7)

CEI also commented that dishwashers that can complete a normal cycle in 1 hour or less were widely available prior to the imposition of DOE standards but are not available anymore. Therefore, according to CEI, a separate standard for short-cycle product classes is required. (*Id.* at p. 7)

As stated in the November 2024 Proposed Withdrawal, DOE reiterates that based on the data shared by CEI in the March 2018 Petition, minimum cycle times have generally increased during periods when standards were not amended. In fact, minimum cycle time as measured by Consumer Reports has decreased over the past 15 years, even while standards became more stringent during that time period. 89 FR 88661, 88668. The Consumer Reports data shared by CEI in the March 2018 Petition do not support CEI's assumption that minimum cycle times have increased due to DOE standards. On the contrary, the Consumer Reports data specifically fail to show a causal linkage between technologically feasible (*i.e.*, minimum) cycle times and DOE standards, because minimum cycle time increases generally occurred without a change in standards, yet decreases in minimum cycle time took place while standards became more stringent. Thus, DOE concludes, consistent with its position in the November 2024 Proposed Withdrawal, that the technological feasibility of providing dishwasher cycles with shorter durations has not been impacted due to DOE standards.

Further, as discussed, DOE has identified at least one model currently available on the market that provides a short-cycle feature and has a cycle time of 41 minutes, demonstrating that dishwasher standards are not preventing manufacturers from designing a dishwasher that can completely wash a normally soiled load in 1 hour or less. Therefore, a short-cycle feature for dishwashers does not justify a separate product class with separate standards under 42 U.S.C. 6295(q).

Regarding CEI's assertion that dishwashers that can complete a normal cycle in 1 hour or less were widely available prior to the imposition of DOE standards, the data

provided by CEI do not support this conclusion. An analysis of the Consumer Reports data presented by CEI in the March 2018 Petition indicates that only 3 out of 16 models from 1983 had cycle times of 60 minutes or less, and only 1 out of 20 models from 1990 had a cycle time of 60 minutes or less. These data do not provide any indication that dishwashers with normal cycle times of 60 minutes or less were “widely available” in the past, particularly since the data do not include any shipments information. Instead, the Consumer Reports data provided by CEI are consistent with DOE’s tentative findings in the November 2024 Proposed Withdrawal that there is a lack of correlation solely between cycle time, energy/water use, and cleaning performance. The August 1983 Consumer Reports<sup>17</sup> and May 1990 Consumer Reports<sup>18</sup> indicate that all 4 models with cycle times of 60 minutes or less had only “average” washing performance based on a rating scale of “worse,” “bad,” “average,” “good,” and “better.” In contrast, some of the units with “good” cleaning performance (*i.e.*, better than “average”) used less energy and water than units with “average” cleaning performance—and in fact were some of the most energy and water efficient units of that time.

Specifically, DOE reiterates the discussion provided by *ASAP et al.*’s<sup>19</sup> comment in response to the March 2024 RFI that was presented in the November 2024 Proposed Withdrawal. DOE notes that *ASAP et al.* asserted that the increase in cycle time was likely driven by other factors, such as consumer preference for quieter products and

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<sup>17</sup> Consumer Reports, “Dishwashers,” Consumer Reports, Aug. 1983, at p. 406.

<sup>18</sup> Consumer Reports, “Dishwashers Plain and Fancy,” Consumer Reports, May 1990, at p. 342.

<sup>19</sup> Note that when responding to the March 2024 RFI, the comments from *ASAP et al.* included Natural Resources Defense Council and New York State Energy Research and Development Authority in addition to the commenters identified in this document.

changes to detergent formulation. ASAP *et al.* cited *Reviewed*,<sup>20</sup> which stated that older dishwashers had sound levels around 60 decibels, while modern dishwashers average between 40 and 50 decibels. ASAP *et al.* also cited *Reviewed* to explain that “there are lots of ways to reduce noise, but most of them involve reducing the machine’s cleaning power, and that in turn means lengthening cycle times to compensate.” (ASAP *et al.*, No. 8 at p. 4) ASAP *et al.* also stated that by 2010, many states had banned the sale of dishwasher detergents containing phosphates, which resulted in newer detergents that use enzymes. ASAP *et al.* cited information from *Reviewed* explaining that enzyme-based detergents require more time to work, lengthening cycle times. (*Id.*) ASAP *et al.* further commented that short cycle times would likely result in trade-offs with other aspects of dishwasher performance such as cleaning performance or noise. ASAP *et al.* asserted that quick cycles would likely be noisier, because one way of reducing cycle time is to increase mechanical action, which in turn increases noise levels. (ASAP *et al.*, No. 8 at p. 6)

In the November 2024 Proposed Withdrawal, DOE recognized that dishwasher manufacturers design dishwashers to achieve many different performance requirements (*e.g.*, cleaning performance, drying performance, noise, efficiency, cycle time). DOE reiterated that one of the units in DOE’s test sample meets the cleaning index threshold specified in appendix C2 while also having a cycle time of less than 60 minutes and meeting the current standards, demonstrating that current standards do not require manufacturers to trade off cleaning performance with cycle time. However, as noted in

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<sup>20</sup> *Reviewed* is part of the USA TODAY Network. See [reviewed.usatoday.com](https://www.reviewed.usatoday.com).

the November 2024 Proposed Withdrawal, DOE did not collect noise data in its previous testing so that it could not independently corroborate the extent to which there may be a trade-off between noise and cycle time. 89 FR 88661, 88678.

In response to this discussion in the November 2024 Proposed Withdrawal, CEI commented that DOE asserted that cycle times have not increased due to historical dishwasher standards (as conceded by DOE in the past, according to CEI) but they may be a side-effect to creating quieter dishwashers. CEI stated that consumer preference for quieter dishwashers in lieu of longer cycle times was not raised in the January 2022 Final Rule. (CEI, No. 18 at p. 4)

CEI asserted also that even if dishwasher cycle time has increased to make dishwashers quieter, EPCA would still require a 1-hour standard because EPCA does not allow for the sacrifice of one performance feature in pursuit of another. CEI further asserted that there is public dissatisfaction with longer cycle times and that noise levels would need to be factored into determining the stringency of the standard for the short-cycle product class. (*Id.* at p. 5)

CEI stated that DOE's reference to stakeholder comments that longer cycle times may have been necessitated by new dishwasher detergent requirements in some States conflicts with DOE's earlier acknowledgement in the 2016 DOE Technical Support Document that longer cycle times are the result of DOE's energy and water conservation standards. CEI further commented that even if this were true, DOE should consider the impact of new detergent formulations when establishing a standard for the dishwashers

short-cycle product class rather than foregoing the product class altogether. (CEI, No. 18 at p. 5)

Contrary to CEI's assertion, DOE did not acknowledge that longer cycle times are the result of DOE's energy and water conservation standards in a technical support document ("TSD") posted in the docket of the final determination published on December 13, 2016 ("December 2016 Final Determination") in which DOE determined that more stringent residential dishwasher standards would not be economically justified at the time. 81 FR 90072. In the December 2016 Final Determination TSD, DOE explained the "control strategies" technology option as follows:

... effective dishwashing requires water, heat, mechanical action (spraying of water), time, and detergent. Manufacturers may adjust the controls of a residential dishwasher to limit the amount of water used, or the set-point temperature of the wash or rinse water. This improves efficiency by decreasing the amount of energy associated with water heating. To help compensate for the negative impact on cleaning performance associated with decreasing water use and water temperature, manufacturers will typically increase the cycle time. This allows more time for the smaller volume of water to be circulated within the cabinet, helping to maintain wash performance.<sup>21</sup>

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<sup>21</sup> DOE discussed technology options in Chapter 3 of the TSD. Available at <https://www.regulations.gov/document/EERE-2014-BT-STD-0021-0029>.



This discussion in the December 2016 Final Determination TSD explains that manufacturers *may* (emphasis added) adjust dishwasher controls to improve the water and energy efficiency of a dishwasher; this discussion was not intended to suggest that implementing control strategies would be necessary, or would be the only design pathway to improve efficiency. Further, DOE also noted that the implementation of control strategies would *typically* (emphasis added) increase cycle time, not that it would necessarily increase cycle time. The discussion in the December 2016 Final Determination TSD describes one potential pathway to DOE evaluated to improve efficiency at the time of the December 2016 Final Determination, but it was not the only pathway to improved efficiency. Manufacturers are free to choose any design options to meet or exceed a given water and energy efficiency standard.

Finally, as discussed in section II.A.2 of this document, DOE's most recent testing and analyses of test data show that it is technologically feasible to achieve cycle times as low as 41 minutes while meeting the current DOE standard and also providing a consumer-acceptable level of cleaning performance (*i.e.*, it is technologically feasible to design a short-cycle feature while meeting current standards). It is also important to note that, in the April 2024 Dishwashers Final Rule, DOE found that the amended standards adopted in that rule do not have a negative impact on cleaning performance because technology options likely to be used to meet the amended standards for dishwashers would not have a significant adverse impact on the utility of the product to subgroups of consumers and the dishwashers test procedure at appendix C2 requires that a test cycle achieve a minimum cleaning performance threshold to determine if a dishwasher, when tested according to the DOE test procedure, completely washes a normally soiled load of

dishes, meaning that the standards cannot compromise the utility that consumers expect from dishwashers. 89 FR 31398, 31436. Therefore, even if there was a potential for a negative impact on cleaning performance associated with decreasing water use and water temperature, that potential is no longer applicable as dishwashers must meet the cleaning performance threshold.

Finally, CEI commented that dishwasher features other than cycle times do not negate DOE's obligation to set a separate standard for short-cycle dishwashers. (CEI, No. 18 at p. 4) CEI referenced comments in the April 2024 Dishwashers Direct Final Rule and data submitted in response to the March 2024 RFI to support CEI's assertion that consumers are not satisfied with current cycle times. (*Id.* at pp. 4-5) CEI concluded that the DOE should establish a standard for short-cycle dishwashers to respond to the Fifth Circuit's January 8, 2024, decision that DOE did not consider any alternatives than repealing the Short-Cycle Final Rules. (*Id.* at p. 5)

With respect to the comment from CEI regarding DOE's obligation to set standards for short-cycle dishwashers, DOE notes that its obligation is to follow its statutory authority under EPCA. As DOE stated in the November 2024 Proposed Withdrawal and confirms in this document, DOE reiterated that cycle time is a performance-related feature of dishwashers in accordance with 42 U.S.C. 6295(q)(1)(B), but that is only the first step for establishing a product class under 42 U.S.C. 6295(q). 89 FR 88661, 88665. Contrary to the assertion from CEI, the existence of a performance-related feature is not enough to *justify a separate product class*. DOE then needed to evaluate whether a different standard level is justified for short-cycle

products. *Id.* Because available test data, market survey data, and stakeholder comments in response to the March 2024 RFI and November 2024 Proposed Withdrawal, show that it is technically feasible for a short-cycle feature to completely wash a full load of normally soiled dishes in 60 minutes or less, current standards do not prevent dishwasher manufacturers from providing such a short-cycle feature. *In fact*, there is a dishwasher currently available on the market that provides such a short-cycle feature and meets the currently applicable energy and water standards. For these reasons, DOE has determined that a short-cycle feature for dishwashers does not justify a separate product class with separate standards under 42 U.S.C. 6295(q).

#### *B. Residential Clothes Washers*

The following sections apply DOE’s authority under EPCA at 42 U.S.C. 6295(q) to determine whether a “short-cycle” feature for RCWs is a performance-related feature that justifies the establishment of separate product classes. DOE considers a short-cycle feature for top-loading RCWs to be a cycle that can completely wash a full load of normally soiled cotton clothing in less than 30 minutes, and for front-loading RCWs to be a cycle that can completely wash a full load of normally soiled cotton clothing in less than 45 minutes.<sup>22</sup> DOE first reiterates its prior determinations that cycle time is a performance-related feature of RCWs and details its specific consideration of the short-cycle feature (*see* section II.B.1 of this document). As discussed in section II.B.2 of this document, DOE determines in this analysis that the short-cycle feature does not justify a

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<sup>22</sup> This consideration corresponds to DOE’s definition of “normal cycle” in section 1 of the DOE test procedure at 10 CFR 430, subpart B, appendix J2 (“appendix J2”), which is defined as “the cycle recommended by the manufacturer [...] for normal, regular, or typical use for washing up to a full load of normally soiled cotton clothing,” among other criteria.

different standard. Data and information from the Short-Cycle Final Rules, the RCW direct final rule published on March 15, 2024 (“March 2024 RCW Direct Final Rule”; 89 FR 19026), and the March 2024 RFI show that RCWs currently available with a short normal cycle (*i.e.*, with a cycle time less than 30 minutes for top-loading RCWs and less than 45 minutes for front-loading RCWs) can meet the current energy conservation standards using the same design strategies as other RCWs of comparable efficiency without a short-cycle feature.

#### 1. Cycle Time as a Performance-Related Feature

DOE first considered whether cycle time is a performance-related feature of RCWs in accordance with 42 U.S.C. 6295(q)(1)(B). Consistent with DOE’s assessment in the November 2024 Proposed Withdrawal and in previous rulemakings, discussed as follows, DOE reiterates that cycle time is a performance-related feature of RCWs.

DOE has previously considered cycle time as a consumer utility for the purposes of establishing product classes for RCWs. In a direct final rule published on May 31, 2012, (“May 2012 Direct Final Rule”) DOE determined that the longer cycle times of front-loading RCWs versus cycle times for top-loading RCWs are likely to impact consumer utility. 77 FR 32308, 32319. Because the wash cycle times for front-loaders arise from the reduced mechanical action of agitation as compared to top-loaders, DOE stated that it believes that such longer cycles may be required to achieve the necessary cleaning, and thereby constitute a performance-related utility of front-loading versus top-loading RCWs pursuant to the meaning of 42 U.S.C. 6295(q). 77 FR 32308, 32319.

In a NOPR published on August 13, 2020 (“August 2020 NOPR”), DOE discussed that consumer use of RCWs is similar to that of dishwashers, in that the products provide consumer utility over discrete cycles with programmed cycle times, and consumers run these cycles multiple times per week on average. As such, the impact of cycle time on consumer utility identified by CEI in its March 2018 Petition regarding dishwashers is also relevant to RCWs. Based on these considerations, DOE concluded that cycle time for RCWs is a performance-related feature for the purposes of 42 U.S.C. 6295(q). 85 FR 49297, 49299.

DOE reiterated this conclusion in the December 2020 Final Rule. Specifically, DOE concluded in the December 2020 Final Rule that RCWs with a short normal cycle (*i.e.*, with a cycle time less than 30 minutes for top-loading RCWs and less than 45 minutes for front-loading RCWs) provide a distinct utility to consumers that other RCWs do not provide, and that consumers receive a utility from the short normal cycle feature to support the establishment of new product classes under 42 U.S.C. 6295(q)(1)(B). 85 FR 81359, 81363–81364. The “normal cycle” refers to the cycle recommended to the consumer for normal, regular, or typical use for washing up to a full load of normally soiled cotton clothing. In the January 2022 Final Rule, DOE did not question the validity of those prior determinations made that short cycles provide a performance-related feature. 87 FR 2673, 2682.

In response to the November 2024 Proposed Withdrawal, the CA IOUs stated that they continue to disagree with DOE's determination that cycle time is a performance-related feature. (CA IOUs, No. 22 at p. 2) The CA IOUs further asserted that DOE or CEI

did not include sufficient justification in the October 2020 Final Rule for why a 30-minute or 45-minute cycle time threshold offered a unique consumer utility. The CA IOUs stated that DOE should assess the merits of the selected cycle time threshold and the consumer utility that it may or may not provide. (*Id.* at pp. 2–3)

AHAM commented that it continues to believe that cycle time is an important consumer feature. (AHAM, No. 23 at p. 2) AHAM also commented that consumers are satisfied with existing normal cycle times and most products also have short-cycle options for when quicker cycles are needed. (*Id.* at p. 1)

Ravnitzky commented that in his experience, he occasionally uses the shorter cycles on his RCW when the clothing is not heavily soiled or when the task needs to be completed quickly. Ravnitzky further commented that these occasions are relatively infrequent and that for the majority of the time, he relies on the standard cycles to ensure thorough cleaning and drying. (Ravnitzky, No. 15 at p. 1)

In response to the comment from the CA IOUs, DOE notes that the specific short-cycle times considered, less than 30 minutes for top-loading RCWs and less than 45 minutes for front-loading RCWs, are less than the average cycle time for these products.<sup>23</sup> As such, DOE believes these short-cycle times can provide utility to some consumers, *e.g.*, consumers needing to complete multiple cycles in a limited amount of time. For the reasons stated in the May 2012 Direct Final Rule, August 2020 NOPR, and

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<sup>23</sup> The average cycle times among units within DOE’s top-loading and front-loading RCW test samples were 49 and 59 minutes, respectively. *See* Method 2: Weighted Average Cycle Time column in Table II.1 and Table II.2 of the August 2020 NOPR. 85 FR 49297, 49301–49302.

December 2020 Final Rule, and consistent with the November 2024 Proposed Withdrawal, DOE reconfirms in this confirmation of withdrawal that cycle time is a performance-related feature of RCWs for the purposes of 42 U.S.C. 6295(q).

In the sections that follow, DOE evaluates whether such a short-cycle feature justifies separate product classes in accordance with 42 U.S.C. 6295(q).

## 2. Justification of Different Standards for Residential Clothes Washers with a Short-Cycle Feature

As discussed, EPCA authorizes DOE to prescribe a higher or lower standard than that which applies (or would apply) for such type (or class) for any group of covered products which have the same function or intended use if DOE determines that products within such group (A) consume a different kind of energy from that consumed by other covered products within such type (or class); or (B) have a capacity or other performance-related feature which other products within such type (or class) do not have and such feature justifies a higher or lower standard. (42 U.S.C. 6295(q)(1)) In determining whether a performance-related feature justifies a different standard for a group of products, DOE considers such factors as the utility to the consumer of such a feature and other factors DOE deems appropriate. (*Id.*)

DOE stated in the August 2020 NOPR, and reiterated in the December 2020 Final Rule, that it presumed manufacturers were implementing the shortest possible cycle times that enabled a clothes washer to achieve satisfactory cleaning performance (and other aspects of clothes washer performance) while meeting the applicable energy and water

conservation standards. 85 FR 81359, 81361. DOE stated its belief that the current energy conservation standards may have been precluding or discouraging manufacturers from introducing models to the market with substantially shorter cycle times. *Id.* DOE further stated in the December 2020 Final Rule that its actions (*i.e.*, establishing short-cycle product classes for top-loading and front-loading RCWs) were intended to incentivize manufacturers to provide consumers with new options when purchasing RCWs, asserting that creation of these new product classes would incentivize manufacturers to develop innovative products with short cycle times for those consumers that receive a value from the time saved washing and drying their clothing. *Id.* at 85 FR 81360–81361. DOE further stated its intent to determine the specific energy and water consumption limits for the new product classes in a separate rulemaking. *Id.*

In the November 2024 Proposed Withdrawal, DOE conducted an analysis of the energy and water use of a short-cycle feature for RCWs to evaluate whether different (*i.e.*, comparatively less stringent) standards would be warranted for RCWs that provide a short-cycle feature. 89 FR 88661, 88670. As discussed in the previous section of this document, DOE has determined that a normal cycle of less than 30 minutes for top-loading RCWs and less than 45 minutes for front-loading RCWs is a performance-related feature that provides consumer utility for the purpose of consideration of potential product class distinction under the provisions of 42 U.S.C. 6295(q). In the November 2024 Proposed Withdrawal, DOE next evaluated whether RCWs with a short-cycle feature necessitate more energy and water use than RCWs without such feature, which could justify a comparatively less stringent standard for RCWs that provide such a feature. *Id.*



To evaluate the energy and water use of a short-cycle feature in comparison to the currently applicable energy and water standards, in the November 2024 Proposed Withdrawal, DOE considered all data available from recent rulemakings, including DOE's data from testing conducted in support of the December 2020 Final Rule and the March 2024 RCW Direct Final Rule and confidential data received from AHAM.<sup>24</sup> *Id.* All RCW test data evaluated in this manner was based on testing of the normal cycle as defined in section 1 of appendix J2, corresponding to the cycle recommended by the manufacturer for normal, regular, or typical use for washing up to a full load of normally soiled cotton clothing.

From among DOE's test samples, DOE identified 3 top-loading RCWs and 9 front-loading RCWs that provide a short-cycle feature. Specifically, these units have a normal cycle time of less than 30 minutes for the top-loading RCWs and less than 45 minutes for the front-loading RCWs.<sup>25</sup> *Id.*

From AHAM's test sample, DOE identified 1 top-loading standard-size RCW with a normal cycle time of less than 30 minutes and 4 front-loading RCWs with a normal cycle time of less than 45 minutes. *Id.*

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<sup>24</sup> DOE test data from the December 2020 Final Rule are available at [www.regulations.gov/document/EERE-2020-BT-STD-0001-0007](http://www.regulations.gov/document/EERE-2020-BT-STD-0001-0007). Information on the March 2024 RCW Direct Final Rule models is available in the technical support document for the March 2024 RCW Direct Final Rule, which is available at [www.regulations.gov/document/EERE-2017-BT-STD-0014-0510](http://www.regulations.gov/document/EERE-2017-BT-STD-0014-0510).

<sup>25</sup> DOE's cycle time data for RCWs is available in the Technical Appendix to this document, available in the docket for this rulemaking at [www.regulations.gov/docket/EERE-2024-BT-STD-0002](http://www.regulations.gov/docket/EERE-2024-BT-STD-0002).

In the November 2024 Proposed Withdrawal, DOE then assessed the energy and water use of the short-cycle feature on these units in comparison to the currently applicable DOE standards. *Id.* For all of these units, the short-cycle feature uses no more energy and water than the maximum allowable standard levels for standard-size RCWs, demonstrating that providing a short-cycle feature consistent with consumer expectations of a normal cycle (*i.e.*, a cycle that can completely wash a full load of normally soiled cotton clothing in less than 30 or 45 minutes for top-loading and front-loading RCWs respectively) does not necessitate using more energy and water than an RCW without such feature that meets the current standards. DOE further evaluated the technologies and design strategies used by these RCW models and tentatively concluded that these units do not incorporate any proprietary technologies or design strategies and are designed no differently than other RCW models of comparable efficiency without a short-cycle feature. *Id.*

In the November 2024 Proposed Withdrawal, DOE tentatively concluded that the availability of this feature currently on the market—at energy and water levels that comply with the current standards—in units with no identifiable proprietary designs or control strategies demonstrates that an RCW with a short-cycle feature does not inherently use more energy and water than an RCW without such feature, and that the current RCW standards do not preclude manufacturers from offering a short-cycle feature (*i.e.*, a normal cycle time of less than 30 minutes for top-loading RCWs and less than 45 minutes for front-loading RCWs). *Id.* On the basis that both top-loading and front-loading RCWs with short-cycle features are currently available on the market with no identifiable proprietary designs or control strategies, DOE tentatively determined that a short-cycle

feature is technologically feasible and that current standards do not prevent manufacturers from providing a short-cycle feature. *Id.*

In the November 2024 Proposed Withdrawal, based on the available test data—which demonstrate that it is feasible to design a short-cycle feature while meeting current standards—DOE tentatively determined that (1) a short-cycle feature for normal, regular, or typical use for washing up to a full load of normally soiled cotton clothing is technologically feasible; (2) current standards do not prevent RCW manufacturers from providing such a short-cycle feature; and (3) multiple RCW models are currently available on the market that provide such a short-cycle feature that meet the currently applicable energy and water standards. *Id.*

In the November 2024 Proposed Withdrawal, DOE requested comment on these proposed determinations. *Id.*

The CA IOUs commented that DOE had demonstrated that the applicable standards for RCWs do not preclude manufacturers from developing products that meet the intention of the short-cycle product classes and agreed that the technological feasibility of developing such products is the appropriate factor when determining if a performance characteristic merits a different standard level. (CA IOUs, No. 22 at p. 2)

ASAP *et al.* commented in support of DOE's proposal to confirm the withdrawal of the short-cycle product classes for RCWs on the basis that there is at least one model available on the market that provides the short-cycle feature and uses less energy and

water than the current standard. ASAP *et al.* stated that the availability of such a model demonstrates that the current standards for these products are not precluding manufacturers from offering products with short cycle times and good product performance on a normal cycle. (ASAP *et al.*, No. 21 at pp. 1–2)

CEC agreed with DOE that standards do not impact the ability of manufacturers to provide RCWs with the short-cycle feature, as evidenced by existing product offerings. CEC further asserted that manufacturer comments on the rulemaking make it clear that short-cycle product classes are neither necessary nor warranted for RCWs, and accordingly, separate product classes are not justified. (CEC, No. 17 at p. 1)

NEEA supported DOE’s proposal in the November 2024 Proposed Withdrawal to eliminate “short-cycle” product classes for RCWs. NEEA stated that its comments build upon past NEEA letters submitted to DOE, which demonstrated that short-cycle product classes were unnecessary for these products because (1) consumers already have access to short cycle settings on RCWs; (2) consumers use short cycles relatively infrequently; (3) consumers are satisfied with high-efficiency appliances; (4) consumers are satisfied with appliances that have fast cycle options; and (5) cost-effective technologies are available to improve the efficiency of RCWs while reducing cycle times. NEEA added that leveraged sales data from the Northwest, consumer use data from regional field studies (“RBSA”), surveys of online retail catalogs, technology research, and laboratory tear-down studies support these conclusions. (NEEA, No. 4 at p. 2)

AHAM asserted that for its members, the consumer is always top of mind, and accordingly, manufacturers make appliances that last longer, perform better, and respond to consumer needs and preferences. AHAM stated that manufacturers pay careful attention to consumer needs and desires for particular features and utilities, and products currently on the market have a demonstrated capability to achieve the recommended energy and water conservation standards and retain consumer satisfaction with a range of performance considerations, utilities, and features. (AHAM, No. 23 at pp. 1–2)

Ravnitzky supported DOE's tentative determination that a short-cycle feature for RCWs does not justify a separate product class with separate standards under 42 U.S.C. 6295(q) and to not impose separate requirements for short-cycle products. (Ravnitzky, No. 15 at p. 1)

CEI commented that although its comment focuses on dishwashers (see section II.A of this document), it believes there are equally valid reasons for setting separate new standards protecting faster RCWs. (CEI, No. 18 at p. 3)

In response to the comment from CEI, DOE notes that all of the data and information that CEI submitted pertained to dishwashers, and that CEI did not provide any data or information specific to RCWs that would support its assertion regarding new standards for RCWs.

In conclusion, for the reasons discussed in the November 2024 Proposed Withdrawal and in this document, DOE has determined that a short-cycle feature for

RCWs does not justify separate product classes with separate standards under 42 U.S.C. 6295(q).

### *C. Consumer Clothes Dryers*

The following sections apply DOE’s authority under EPCA at 42 U.S.C. 6295(q) to determine whether a “short-cycle” feature for consumer clothes dryers is a performance-related feature that justifies the establishment of a separate product class. DOE considers a short-cycle feature for consumer clothes dryers to be a normal cycle that offers cycle times of less than 30 minutes. DOE first reiterates its prior determinations that cycle time is a performance-related feature of consumer clothes dryers and details its specific consideration of the short-cycle feature (*see* section II.C.1 of this document). As discussed in section II.C.2 of this document, DOE determines in this analysis that the short-cycle feature does not justify a different standard. Data and information from the Short-Cycle Final Rules, the consumer clothes dryers direct final rule published on March 12, 2024 (“March 2024 Dryers Direct Final Rule”; 89 FR 18164), and the March 2024 RFI show that products with a normal cycle of less than 30 minutes can meet the current energy conservation standards using the same design strategies as other consumer clothes dryers of comparable efficiency without a short-cycle feature.

#### 1. Cycle Time as a Performance-Related Feature

DOE first considered whether cycle time is a performance-related feature of consumer clothes dryers in accordance with 42 U.S.C. 6295(q)(1)(B). Consistent with DOE’s assessment in the November 2024 Proposed Withdrawal and in previous

rulemakings, discussed as follows, DOE reiterates that cycle time is a performance-related feature of consumer clothes dryers.

In the August 2020 NOPR, DOE discussed that consumer use of consumer clothes dryers is similar to that of dishwashers, in that the products provide consumer utility over discrete cycles with programmed cycle times, and consumers run these cycles multiple times per week on average. As such, the impact of cycle time on consumer utility identified by CEI in its March 2018 Petition regarding dishwashers is also relevant to consumer clothes dryers. Based on these considerations, DOE concluded that cycle time for consumer clothes dryers is a performance-related feature for the purposes of 42 U.S.C. 6295(q). 85 FR 49297, 49299.

DOE reiterated this conclusion in the December 2020 Final Rule. 85 FR 81359, 81363–81364. Specifically, DOE concluded in the December 2020 Final Rule that consumer clothes dryers with a short normal cycle (*i.e.*, with a cycle time of less than 30 minutes) provide a distinct utility to consumers that other consumer clothes dryers do not provide, and that consumers receive a utility from the short normal cycle feature to support the establishment of a new product class under 42 U.S.C. 6295(q)(1)(B). *Id.* at 85 FR 81363, 81364. The “normal cycle” refers to the cycle recommended by the manufacturer to the consumer for drying cotton or linen clothes, among other criteria. In the January 2022 Final Rule, DOE did not question the validity of those prior determinations made about whether that short cycles provide a performance-related feature. 87 FR 2673, 2682.

In response to the November 2024 Proposed Withdrawal, the CA IOUs stated that they continue to disagree with DOE's determination that cycle time is a performance-related feature. (CA IOUs, No. 22 at p. 2) The CA IOUs commented that the March 2018 Petition from CEI, the Short-Cycle Final Rules, and the November 2024 Proposed Withdrawal did not include sufficient justification from DOE or CEI for why these specific short-cycle times offered a unique consumer utility. (*Id.*) The CA IOUs requested that DOE assess the merits of the selected cycle time delineations and the consumer utility they may or may not provide in future rulemakings. (*Id.*)

AHAM commented that it continues to believe that cycle time is an important consumer feature. (AHAM, No. 23 at p. 2) AHAM also commented that consumers are satisfied with existing normal cycle times and most products also have short-cycle options for when quicker cycles are needed. (*Id.* at p. 1)

In response to the comment from the CA IOUs, DOE notes that the specific short-cycle time considered, less than 30 minutes for consumer clothes dryers, is less than the average cycle time for this product.<sup>26</sup> As such, DOE believes this short-cycle can provide utility to some consumers, *e.g.*, consumers needing to complete multiple cycles in a limited amount of time. For the reasons stated in the August 2020 NOPR and December 2020 Final Rule, and consistent with the November 2024 Proposed Withdrawal, DOE reconfirms in this confirmation of withdrawal its previous determinations that cycle time

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<sup>26</sup> The average cycle times among units within DOE's vented electric standard-size and vented gas clothes dryer test samples were 48 and 55 minutes, respectively. *See* Table II.3 and Table II.4 of the August 2020 NOPR. 85 FR 49297, 49303–49304.



is a performance-related feature of consumer clothes dryers for the purposes of 42 U.S.C. 6295(q).

In the sections that follow, DOE evaluates whether such a short-cycle feature justifies separate product classes in accordance with 42 U.S.C. 6295(q).

## 2. Justification of Different Standards for Consumer Clothes Dryers with a Short-Cycle Feature

As discussed, EPCA authorizes DOE to prescribe a higher or lower standard than that which applies (or would apply) for such type (or class) for any group of covered products which have the same function or intended use if DOE determines that products within such group (A) consume a different kind of energy from that consumed by other covered products within such type (or class); or (B) have a capacity or other performance-related feature which other products within such type (or class) do not have and such feature justifies a higher or lower standard. (42 U.S.C. 6295(q)(1)) In determining whether a performance-related feature justifies a different standard for a group of products, DOE considers such factors as the utility to the consumer of such a feature and other factors DOE deems appropriate. (*Id.*)

DOE stated in the August 2020 NOPR, and reiterated in the December 2020 Final Rule, that vented electric standard-size and vented gas clothes dryers that comply with the current energy conservation standards exhibit cycle times of approximately 30 minutes or longer. 85 FR 81359, 81361. Based on a presumption that manufacturers were already implementing the shortest possible cycle times that enabled a clothes dryer to

achieve satisfactory drying performance (and other aspects of clothes dryer performance) while meeting the applicable energy conservation standards, DOE asserted that the standards may have discouraged manufacturers from developing clothes dryers for consumers that provide the utility of 30-minute-or-less cycle times. *Id.* DOE further stated in the December 2020 Final Rule that its actions (*i.e.*, establishing short-cycle product classes for consumer clothes dryers) were intended to incentivize manufacturers to provide consumers with new options when purchasing clothes dryers, asserting that creation of this new product class would incentivize manufacturers to develop innovative products with short cycle times for those consumers that receive a value from the time saved washing and drying their clothing. *Id.* at 85 FR 81360–81361. DOE further stated its intent to determine the specific energy conservation standards of the new product classes in a separate rulemaking. *Id.*

In the November 2024 Proposed Withdrawal, DOE conducted an analysis of the energy use of a short-cycle feature for consumer clothes dryers to evaluate whether different (*i.e.*, comparatively less stringent) standards would be warranted for consumer clothes dryers that provide a short-cycle feature. 89 FR 88661, 88672. As discussed in the previous section of this document, DOE has determined that a short-cycle feature on a consumer clothes dryer is a performance-related feature that provides consumer utility for the purpose of consideration of potential product class distinction under the provisions of 42 U.S.C. 6295(q). In the November 2024 Proposed Withdrawal, DOE next evaluated whether consumer clothes dryers with a short-cycle feature necessitate more energy use than consumer clothes dryers without such feature, which could justify a comparatively less stringent standard for consumer clothes dryers that provide such a feature. *Id.*

To evaluate the energy use of a short-cycle feature in comparison to the currently applicable energy standards, in the November 2024 Proposed Withdrawal, DOE considered all data available from recent rulemakings, including DOE’s data from testing conducted in support of the December 2020 Final Rule, the March 2024 Dryers Direct Final Rule, and confidential data from AHAM. *Id.* at 89 FR 88673. All consumer clothes dryer test data evaluated in this manner was based on testing of the Normal cycle as defined in section 3.3.2 of 10 CFR part 430, subpart B, appendix D2 (“appendix D2”), corresponding to the program labeled “normal” or, for clothes dryers that do not have a “normal” program, the cycle recommended by the manufacturer for drying cotton or linen clothes.<sup>27</sup> In addition, all test data represent cycles that achieve a final moisture content of 2 percent or less, which DOE has determined to be representative of the consumer-acceptable dryness level after completion of a drying cycle.

None of the units in DOE’s test sample had a normal cycle time less than 30 minutes. However, from the confidential data received from AHAM, DOE identified 3 electric standard-size clothes dryers and 1 vented gas standard-size clothes dryer with normal cycle times of less than 30 minutes. *Id.*

In the November 2024 Proposed Withdrawal, DOE then assessed the energy use of the short-cycle feature on these units in comparison to the current applicable DOE standards. *Id.* For all of these units, the short-cycle feature uses no more energy than the

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<sup>27</sup> DOE notes that manufacturers will be required to use the test procedure at appendix D2 on and after March 1, 2028, which is the compliance date of the amended standards in March 2024 Dryers Direct Final Rule. *See* 86 FR 56608; 89 FR 18164.

maximum allowable standard levels for standard-size consumer clothes dryers, demonstrating that providing a short-cycle feature consistent with consumer expectations of a normal cycle (*i.e.*, cycle recommended by the manufacturer to the consumer for drying cotton or linen clothes in less than 30 minutes) does not necessitate using more energy than a consumer clothes dryer without such feature that meets the current standards. In the engineering analysis conducted for the March 2024 Dryers Direct Final Rule, DOE did not identify any proprietary technologies in use among clothes dryers currently on the market. 89 FR 18164, 18178–18179. Therefore, although AHAM’s data set did not identify specific model numbers associated with each data point, DOE noted in the November 2024 Proposed Withdrawal that it has no reason to believe that any proprietary technologies or design strategies are being used in those clothes dryer models with cycle times of less than 30 minutes. 89 FR 88661, 88673.

In the November 2024 Proposed Withdrawal, DOE tentatively concluded that the availability of a short-cycle feature currently on the market—at energy efficiency levels that comply with the current standards—in units with no identifiable proprietary designs or control strategies demonstrates that a consumer clothes dryer with a short-cycle feature does not inherently use more energy than a consumer clothes dryer without such a feature, and that the current consumer clothes dryer standards do not preclude manufacturers from offering a short-cycle feature (*i.e.*, a normal cycle time of less than 30 minutes). *Id.* On the basis that both vented electric standard-size and vented gas clothes dryers with short-cycle features (*i.e.*, normal cycles less than 30 minutes) are currently available on the market with no identifiable proprietary designs or control strategies, DOE tentatively determined that a short-cycle feature is technologically

feasible and that current standards do not prevent manufacturers from providing a short-cycle feature. *Id.*

In the November 2024 Proposed Withdrawal, DOE noted that it was not proposing to add any new regulations for consumer clothes dryers. *Id.* Instead, the November 2024 Proposed Withdrawal reanalyzed the provisions of a previous rulemaking (*i.e.*, the January 2022 Final Rule) that withdrew short-cycle product classes. *Id.*

In the November 2024 Proposed Withdrawal, based on the available test data—which demonstrate that it is feasible to design a short-cycle feature while meeting current standards—DOE tentatively determined that (1) a short-cycle feature as the normal cycle for drying cotton or linen clothes is technologically feasible; (2) current standards do not prevent consumer clothes dryer manufacturers from providing such a short-cycle feature; and (3) multiple consumer clothes dryer models are currently available on the market that provide such a short-cycle feature that meet the currently applicable energy and water standards. *Id.* at 89 FR 88673–88674.

In the November 2024 Proposed Withdrawal, DOE requested comment on these proposed determinations. *Id.* at 89 FR 88674.

The CA IOUs commented that DOE had demonstrated that the applicable standards for consumer clothes dryers do not preclude manufacturers from developing products that meet the intention of the short-cycle product classes and agreed that the

technological feasibility of developing such products is the appropriate factor when determining if a performance characteristic merits a different standard level. (CA IOUs, No. 22 at p. 2)

ASAP *et al.* commented in support of DOE's proposal to confirm the withdrawal of the short-cycle product classes for consumer clothes dryers on the basis that there is at least one model available on the market that provides the short-cycle feature and uses less energy than the current standard. ASAP *et al.* noted that DOE considered a model to have the short-cycle feature only if it meets the consumer expectation of a normal cycle in 30 minutes or less. ASAP *et al.* stated that the availability of such a model demonstrates that the current standards for these products are not precluding manufacturers from offering products with short cycle times and good product performance on a normal cycle. (ASAP *et al.*, No. 21 at pp. 1–2)

CEC agreed with DOE that standards do not impact the ability of manufacturers to provide consumer clothes dryers with the short-cycle feature, as evidenced by existing product offerings. CEC further asserted that manufacturer comments on the rulemaking make it clear that short-cycle product classes are neither necessary nor warranted for consumer clothes dryers, and accordingly, separate product classes are not justified. (CEC, No. 17 at p. 1)

NEEA supported DOE's proposal in the November 2024 Proposed Withdrawal to eliminate "short-cycle" product classes for consumer clothes dryers. NEEA stated that its comments build upon past NEEA letters submitted to DOE, which demonstrated that

short-cycle product classes were unnecessary for these products because (1) consumers already have access to short cycle settings on consumer clothes dryers; (2) consumers use short cycles relatively infrequently; (3) consumers are satisfied with high-efficiency appliances; (4) consumers are satisfied with appliances that have fast cycle options; and (5) cost-effective technologies are available to improve the efficiency of consumer clothes dryers while reducing cycle times. NEEA added that leveraged sales data from the Northwest, consumer use data from regional field studies (“RBSA”), surveys of online retail catalogs, technology research, and laboratory tear-down studies support these conclusions. (NEEA, No. 4 at p. 2)

AHAM asserted that for its members, the consumer is always top of mind, and accordingly, manufacturers make appliances that last longer, perform better, and respond to consumer needs and preferences. AHAM stated that manufacturers pay careful attention to consumer needs and desires for particular features and utilities and products currently on the market have a demonstrated capability to achieve the recommended energy and water conservation standards and retain consumer satisfaction with a range of performance considerations, utilities, and features. (AHAM, No. 23 at pp. 1–2)

Ravnitzky supported DOE's tentative determination that a short-cycle feature for consumer clothes dryers does not justify a separate product class with separate standards under 42 U.S.C. 6295(q) and to not impose separate requirements for short-cycle features. (Ravnitzky, No. 15 at p. 1)

CEI commented that although its comment focuses on dishwashers (see section II.A of this document), it believes there are equally valid reasons for setting separate new standards protecting faster consumer clothes dryers. (CEI, No. 18 at p. 3)

In response to the comment from CEI, DOE notes that all of the data and information that CEI submitted pertained to dishwashers, and that CEI did not provide any data or information specific to consumer clothes dryers that would support its assertion regarding new standards for consumer clothes dryers.

In conclusion, for the reasons discussed in the November 2024 Proposed Withdrawal and in this document, DOE has determined that a short-cycle feature for consumer clothes dryers does not justify separate product classes with separate standards under 42 U.S.C. 6295(q).

#### *D. Other Topics Addressed by the Fifth Circuit*

##### 1. Water Authority

In its opinion, the Fifth Circuit stated that “[n]o part of [EPCA] indicates Congress gave DOE power to regulate water use for energy-using appliances (like dishwashers and [RCWs]),” and stated that it is unclear that DOE has any statutory authority to regulate water use in dishwashers and RCWs. *See Louisiana*, 90 F.4th at 470–471.

In response, DOE notes, as did the Fifth Circuit, that EPCA prescribed initial energy conservation standards with both energy and water use requirements for RCWs



and dishwashers. (42 U.S.C. 6295(g)(9)(A) and (10)(A)). In establishing energy conservation standards with both energy and water use performance standards for RCWs and dishwashers, Congress also directed DOE to “determin[e] whether to amend” those standards. (42 U.S.C. 6295(g)(9)(B) and (10)(B)) Congress’s directive, in section 6295(g)(9)(B), to consider whether “to amend the standards in effect for RCWs,” and in section 6295(g)(10)(B), to consider whether “to amend the standards for dishwashers,” refers to “the standards” established in the immediately preceding paragraphs, where Congress established energy conservation standards with *both* energy and water use performance standards for RCWs and dishwashers. Indeed, the energy and water use performance standards for RCWs (both top-loading and front-loading) are each contained within a single subparagraph, as are the energy and water use performance standards for dishwashers (both standard-size and compact-size). (*See id.*) Accordingly, DOE’s authority, under 42 U.S.C. 6295(g)(9)(B) and (10)(B), includes consideration of amended energy and water use performance standards for RCWs and dishwashers, respectively.

Similarly, DOE’s authority under 42 U.S.C. 6295(m) to amend “standards” for covered products includes amending both the energy and water use performance standards for RCWs and dishwashers. Neither section 6295(g)(9)(B) or (10)(B) nor section 6295(m) limit their application to “energy use standards.” Rather, they direct DOE to consider amending “the standards,” 42 U.S.C. 6295(g)(9)(B) and (10)(B), or simply “standards,” 42 U.S.C. 6295(m)(1)(B), which may include both energy and water use performance standards.

Accordingly, DOE noted in the November 2024 Proposed Withdrawal that it had considered (where appropriate) whether the relevant short-cycle features justify both different water and energy standards. 89 FR 88661, 88676.

In response to the November 2024 Proposed Withdrawal, AWE commented supporting DOE's continued attention to dishwasher and RCW water use. AWE asserted that the existing water consumption standards for dishwashers and RCWs are well within DOE's authority, notwithstanding the Fifth Circuit's dictum. (AWE, No. 20 at p. 4) AWE asserted that the Fifth Circuit's suggestion that DOE has authority to regulate water use only for showerheads, faucets, water closets, and urinals is incorrect. (*Id.* at pp. 1–2)

AWE stated that although the Fifth Circuit's January 8, 2024, decision included dictum suggesting DOE has authority over water use only for showerheads, faucets, water closets, and urinals, the Fifth Circuit did not have the benefit of argument and full information about the basis for DOE's water regulation, as the hypothesis about DOE's authority was not raised by parties in the litigation. (AWE, No. 20 at p. 1)

AWE stated that, in the April 2024 Dishwashers Direct Final Rule and March 2024 RCW Direct Final Rule, DOE correctly explained that 42 U.S.C. 6295(g)(9) and (10) expressly authorize DOE to amend the water consumption standards initially established by those paragraphs. AWE asserted that the Fifth Circuit briefly mentioned these same provisions but ignored the actual text when it said that their “plain text” give DOE “only [the] power to amend energy-use standards for dishwashers and [RCWs].” (*Id.*)

AWE asserted that, under 42 U.S.C. 6291(6), DOE is authorized to impose requirements that do not, themselves, specify energy efficiency requirements or energy use – namely, "design requirements" for certain types of products (including dishwashers and RCW) and "any other requirements." According to AWE, similar to the qualitative design requirement on certain boilers having constant-burning pilots and quantitative design requirement that a showerhead's flow-restricting insert resist a pulling force of 8.0 pounds, a limitation on the per-cycle water consumption of a dishwasher or RCW is qualified as a design requirement because these products' water consumption is important for regulating their energy consumption. AWE asserted that reducing the per-cycle water consumption of dishwashers and RCWs is a requirement that reduces energy consumption, not just water itself, and accordingly, DOE is justified to impose a limit on water consumption as a design requirement. AWE also stated that potable water in a residential pipe embeds the energy needed for water supply, treatment, and distribution of water; and wastewater from the appliance also requires energy for treatment. (*Id.* at p. 2)

AWE stated that DOE has authority to establish both performance standards and design requirements for a given requirement given the word "or" in the definition of "energy conservation standards at 42 U.S.C. 6291(6). According to AWE, although the Fifth Circuit has declined to read "or" as establishing mutually exclusive alternatives, this would mean only that a given standard is not categorized as either a performance standard or a design standard but not as both, and would not restrict DOE to imposing only one requirement or force DOE to choose one or the other. AWE noted that Congress added "design requirements" to the definition of "energy conservation standards" in the same statute that added dishwashers, RCWs, and consumer clothes dryers as covered

products, which then specified design requirements for each of these products (*e.g.*, dishwashers must provide an option to dry without heat) and required DOE to determine whether those standards should be amended. According to AWE, it is highly unlikely that when Congress added “design requirement” to the definition of “energy conservation standard” while specifying updates to the standards for dishwashers, RCWs, and consumer clothes dryers, if it meant that DOE must choose, for dishwashers, either to retain a design requirement (*i.e.*, no-heat drying option) or to have a minimum efficiency, and could not require both. (*Id.* at pp. 2–3)

AWE additionally asserted that the 2007 amendments to EPCA in the Energy Independence and Security Act expressly authorized DOE to set maximum water consumption standards for dishwashers and RCWs, contrary to the Fifth Circuit's statement that these provisions allow DOE to set only energy conservation standards. AWE asserted that Congress established in the statute an energy and water-consumption standard for each product type, and then authorized DOE to amend those standards. AWE stated that Congress intentionally referred to standards more broadly, giving DOE the power to amend both of the standards stated in 42 U.S.C. 6295(g)(9) and (10), consistent with the structure of EPCA overall. (*Id.* at p. 3)

AWE further asserted that DOE's general authority to revise standards for consumer products, which is specified in 42 U.S.C. 6295(m), also instructs DOE to consider, within six years after “establishing or amending a standard,” whether to amend the “standards” and not “energy conservation standard.” AWE also stated that 42 U.S.C.

6295(n) allows petitions for amendments to “standards” and not “energy conservation standards.” (*Id.* at pp. 3–4)

AWE further stated that 42 U.S.C. 6295(q), which authorizes product classes, is different than the previously mentioned provisions of EPCA in that it does not allow DOE to create product classes for standards other than energy conservation standards, or to specify class-specific parameters other than energy use or efficiency. According to AWE, if the water-consumption standards for dishwashers and RCWs were authorized solely by 42 U.S.C. 6295(g)(9)-(10), and were not themselves energy conservation standards, DOE would not be allowed to set different water-consumption standards for the putative short-cycle classes. (*Id.* at p. 4)

DOE agrees that EPCA authorizes DOE to consider amended energy and water use standards for RCWs and dishwashers.

In conclusion, in conducting the analyses in both the November 2024 Proposed Withdrawal and this confirmation of withdrawal, DOE has considered (where appropriate) whether the relevant short-cycle features justify both different water and energy standards.

## 2. Test Procedure Authority

The Fifth Circuit noted that DOE tests only some of the settings on dishwashers and “laundry machines” (*i.e.*, RCWs and consumer clothes dryers) and stated that DOE concluded in the January 2022 Final Rule that “manufacturers are free to deploy *other*,

*non-tested* settings that use as much energy and water as necessary to actually clean consumers' things," indicating that this could create a loophole for manufacturers to deploy unregulated cycles. *Louisiana*, 90 F.4th at 474.

Under 42 U.S.C. 6293, EPCA sets forth the criteria and procedures DOE must follow when prescribing or amending test procedures for covered products. EPCA requires that any test procedures prescribed or amended under this section be reasonably designed to produce test results which measure energy efficiency, energy use or water use (in the case of showerheads, faucets, water closets and urinals), or estimated annual operating cost of a covered product during a representative average use cycle or period of use, as determined by the Secretary, and shall not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(3))

DOE has established test procedures for dishwashers, RCWs, and consumer clothes dryers in 10 CFR part 430, subpart B, appendices C1 and C2, J and J2, and D1 and D2, respectively. For each test procedure, DOE has determined through its rulemaking process, which included ample manufacturer input, that the tested cycle(s)—*i.e.*, the normal cycle for dishwashers, RCWs, and consumer clothes dryers—produce representative measures of energy efficiency, energy use or water use, or estimated annual operating cost, as applicable for each product, without the undue burden that would be associated with requiring every available cycle to be tested.

To ensure that the normal cycle produces measures of energy use, efficiency, and estimated annual operating cost specifically for a representative average use cycle or

period of use, DOE has developed definitions and testing instructions in each test procedure to guide the appropriate selection of cycles to be tested, which corresponds to a representative average use cycle of how such appliance are used by consumers in their households.

For dishwashers, the normal cycle is “[t]he cycle type, including washing and drying temperature options, recommended in the manufacturer’s instructions for daily, regular, or typical use to completely wash a full load of normally soiled dishes including the power-dry feature. If no cycle or more than one cycle is recommended in the manufacturer’s instructions for daily, regular, or typical use to completely wash a full load of normally soiled dishes, the most energy intensive of these cycles shall be considered the normal cycle. In the absence of a manufacturer recommendation on washing and drying temperature options, the highest energy consumption options must be selected.” Section 1 of appendices C1 and C2.

In the January 2023 TP Final Rule, DOE noted that it was maintaining the dishwasher test cycle selections and cycle options to test on the normal cycle. DOE additionally added a cleaning performance requirement to validate that the tested cycle was representative of an average use cycle. 88 FR 3234, 3243. Prior to publishing this final rule, in a NOPR published on December 22, 2021 (“December 2021 TP NOPR”), DOE summarized and addressed stakeholder comments regarding the representative test cycle for dishwashers. 86 FR 72738. Specifically, AHAM commented that consumers still most frequently select the normal cycle, and when consumers decide on a cycle selection, they typically use it for most of their cycles. Both GE Appliances and

Whirlpool Corporation (“Whirlpool”) supported AHAM’s comment that the normal cycle should remain the tested cycle. Both manufacturers submitted confidential data that supported the position that the manufacturer-designated normal cycle still represents consumer preference regarding cycle selection. These confidential data indicated, in the aggregate, that roughly 55 to 75 percent of all dishwasher cycles are conducted on the normal cycle. DOE further observed that among the other selected cycle types, some would be expected to be less energy-intensive than the normal cycle (*e.g.*, a glassware cycle type), while others would be expected to be more energy-intensive than the normal cycle (*e.g.*, a pots and pans cycle type). *Id.* at 86 FR 72757. The CA IOUs referenced PG&E’s 2016 *Home Energy Use Survey* to support their claim that the tested normal cycle including any power-dry feature, in the current test procedure, is still the cycle most representative of how consumers operate dishwashers. In this survey, PG&E found that 75 percent of households use the normal cycle. The CA IOUs further stated that consumers would be less likely to switch from using the normal cycle if DOE were to incorporate cleaning performance in the test procedure, and recommended DOE investigate incorporating a cleaning performance test. *Id.* at 86 FR 72747. In the December 2021 TP NOPR, DOE noted that absent data that reflects national use and frequency of use of other cycle types, DOE was not proposing changes to cycle selections for testing. *Id.* Further, according to the U.S. Energy Information Administration’s



(“EIA’s”) 2020 *Residential Energy Consumption Survey* (“RECS”),<sup>28</sup> over 80 percent of consumers use normal cycles most of the time.

In the December 2021 TP NOPR, DOE noted that it was proposing a minimum cleaning index threshold for a test cycle to be considered valid. That is, if the normal cycle does not meet a specified threshold at any soil-load, DOE proposed that the most energy-intensive cycle be tested and used for certification purposes at that soil load. DOE noted that this alternative approach would better represent an average use cycle by capturing those consumers that may select other cycles for washing dishes if the cleaning performance of the normal cycle does not meet their expectations, because higher energy use provides increased thermal and mechanical action for removing soils, thus correlating generally with improved cleaning performance. *Id.* DOE adopted these proposals in the January 2023 TP Final Rule. 88 FR 3234, 3243.

In response to the November 2024 Proposed Withdrawal, the CA IOUs commented supporting the recently updated test procedure for dishwashers. The CA IOUs stated that the update to the dishwasher test procedure to include a cleaning index threshold ensures that consumers continue to receive high-performing efficient products. The CA IOUs asserted that improving the representativeness in the test procedure, ensures that consumers will not need to re-run a dishwasher due to unsatisfactory performance. (CA IOUs, No. 22 at p. 2)

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<sup>28</sup> U.S. Department of Energy-Energy Information Administration, Residential Energy Consumption Survey, 2015 Public Use Microdata Files, 2020. Washington, DC. Available at [www.eia.gov/consumption/residential/data/2020/index.php?view=microdata](http://www.eia.gov/consumption/residential/data/2020/index.php?view=microdata).

ASAP *et al.* commented that the new test procedure for dishwashers at appendix C2 requiring a minimum cleaning index threshold for a test cycle to be considered valid will ensure that all new dishwashers provide good cleaning performance. (ASAP *et al.*, No. 21 at p. 4)

Based on stakeholder comments, nationally representative survey data, and DOE's analyses, DOE reaffirms its previous conclusions that the normal cycle is the representative average use cycle for dishwashers.

For RCWs, the normal cycle is “the cycle recommended by the manufacturer (considering manufacturer instructions, control panel labeling and other markings on the clothes washer) for normal, regular, or typical use for washing up to a full load of normally soiled cotton clothing. For machines where multiple cycle settings are recommended by the manufacturer for normal, regular, or typical use for washing up to a full load of normally soiled cotton clothing, then the Normal cycle is the cycle selection that results in the lowest [energy efficiency] value.” Section 1 of 10 CFR part 430, subpart B, appendix J (“appendix J”) and appendix J2.

For the final rule that established 10 CFR part 430, subpart B, appendix J1, which was a precursor to the current appendices J and J2, DOE reviewed Procter & Gamble data indicating that the normal cycle on a typical RCW is used approximately 75 percent of the time, and DOE noted that its test procedure uses the normal cycle to approximate typical use by consumers. 62 FR 45484, 45493 (Aug. 27, 1997). In a test procedure final rule published on August 5, 2015, DOE changed the draft language for the definition of

the normal cycle from referencing “the most common consumer cycle” to referencing “the cycle recommended by the manufacturer [...] for normal, regular, or typical use,” noting that the updated phrasing represented the same intent. 80 FR 46730, 46742. In the most recently published test procedure for RCWs that established the current appendices J and J2 (“June 2022 TP Final Rule”), DOE noted that its test procedure identifies the “normal cycle” as the cycle representative of consumer use and requires testing using it. 87 FR 33316, 33351 (June 1, 2022).

In response to the November 2024 Proposed Withdrawal, the CA IOUs commented supporting the recently updated test procedure for RCWs. The CA IOUs stated that the update to the RCW test procedure to include measurements of remaining moisture content for all test cycles ensures that consumers continue to receive high-performing efficient products. (CA IOUs, No. 22 at p. 2)

Based on stakeholder comments and DOE’s analyses, DOE reaffirms its previous conclusions that the normal cycle is the representative average use cycle for RCWs.

For all consumer clothes dryers in the test procedure at 10 CFR part 430, subpart B, appendix D1 (“appendix D1”) and for timer dryers in the test procedure at appendix D2, the consumer clothes dryer is operated for the test cycle at the maximum temperature setting and, if equipped with a timer, at the maximum time setting. If the consumer clothes dryer does not have a separate temperature setting selection on the control panel, the maximum time settings is used for the drying test cycle. For automatic termination control dryers in the test procedure at appendix D2, the “normal” program shall be

selected for the test cycle. Automatic termination control dryers that do not have a “normal” program are tested using the cycle recommended by the manufacturer for drying cotton or linen clothes. Section 3.3 of appendices D1 and D2.

In a NOPR published on January 2, 2013, DOE first proposed the use of the “normal” program for the drying test cycle in conjunction with test methods that would more accurately measure the energy use of automatic termination control dryers, which comprise the majority of consumer clothes dryer shipments. DOE determined this program to be most representative of consumer use based on data from NEEA’s residential laundry field use study, which showed that the average household surveyed used the “normal” or an equivalent program cycle for nearly 60 percent of all drying. 78 FR 152, 170–171. DOE received comments from Samsung stating that the proposed test procedure would be representative of consumer use because it measures the energy use of the most commonly selected cycle (Normal/Cottons and Linens) for automatic termination control dryers. DOE adopted this proposal and established appendix D2 in a final rule published on August 14, 2013. 78 FR 49608, 49624.

In response to the November 2024 Proposed Withdrawal, the CA IOUs commented supporting the recently updated test procedure for consumer clothes dryers. The CA IOUs stated that the update to the consumer clothes dryers test procedure to include a testing requirement for the automatic termination of all clothes dryers equipped with such a feature ensures that consumers continue to receive high-performing efficient products. CA IOUs asserted that improving the representativeness in the test procedure,

ensures that consumers will not need to re-run a consumer clothes dryer due to unsatisfactory performance. (CA IOUs, No. 22 at p. 2)

ASAP *et al.* commented that the new test procedure for consumer clothes dryers at appendix D2 requiring a final moisture content threshold in order to be certified as compliant will ensure that all new consumer clothes dryers provide good drying performance. (ASAP *et al.*, No. 21 at p. 4)

Based on stakeholder comments and DOE's analyses, DOE reaffirms its previous conclusions that the normal cycle is the representative average use cycle for consumer clothes dryers.

DOE has thereby promulgated new and amended test procedures in accordance with EPCA's requirements to ensure that manufacturers are certifying dishwashers, RCWs, and consumer clothes dryers that comply with the currently applicable energy conservation standards. As discussed in section II.D.3 of this document, DOE has also developed provisions within its test procedures for dishwashers, RCWs, and consumer clothes dryers that ensure that the tested cycles maintain product utility that meets consumer expectations.

### 3. Preservation of Product Utility and Potential for Increased Energy or Water Use

In its opinion, the Fifth Circuit stated that "Americans who want clean dishes or clothes may use more energy and more water to preclean, reclean, or handwash their stuff before, after, or in lieu of using DOE-regulated appliances," and that DOE did not

adequately respond to this potential for more energy and water use in the January 2022 Final Rule. *Louisiana*, 90 F.4th at 472–473. In the following sections, DOE addresses stakeholder concerns regarding preservation of product utility for each product type.

a. Dishwashers

In addition to the Fifth Circuit’s opinion on product utility, in the November 2024 Proposed Withdrawal, DOE also addressed stakeholder comments on this topic in response to the March 2024 RFI. Specifically, DOE presented comments from the AGs of MT *et al.* stating that, according to survey results presented by CEI in response to the July 2019 NOPR,<sup>29</sup> over 85 percent of consumers hand-wash dishes at least sometimes “because the dishwasher takes too long;” roughly 33 percent of consumers reported that their dishwasher does not clean their dishes well; and 34 percent reported that they run their dishwasher multiple times to get their dishes clean. (AGs of MT *et al.*, No. 9 at p. 5)

DOE also presented data and conclusions from other stakeholders that contradicted the data and conclusions presented by the AGs of MT *et al.* 89 FR 88661, 88677.

Specifically, with regard to handwashing dishes because the dishwasher takes too long, AHAM submitted data<sup>30</sup> indicating that 81 percent of respondents were satisfied with the length of the normal cycle of their dishwashers. (AHAM, No. 5 at p. 3) AHAM

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<sup>29</sup> CEI submitted results from a survey it conducted in late 2019 based on 1,062 respondents to understand consumers’ dishwasher usage patterns as well as their opinions on dishwasher cycle length. Available as attachment B at [www.regulations.gov/comment/EERE-2021-BT-STD-0002-0239](http://www.regulations.gov/comment/EERE-2021-BT-STD-0002-0239).

<sup>30</sup> Appliance Impact Research – Regulatory Findings, conducted for AHAM by DIG Insights (February 2021).

also referenced a 2020 University of Michigan study<sup>31</sup> and commented that this study showed that recommended practices for dishwasher use are not always performed, with 67 percent of dishwasher owners typically pre-rinsing dishes before loading. However, AHAM stated that its member data do not indicate that consumers are choosing to wash their dishes by hand because of perceived longer cycle times. (*Id.* at p. 5) AHAM further commented that consumers are satisfied with current cycle times, choosing to rely on their dishwashers regularly. (*Id.* at p. 6)

In the November 2024 Proposed Withdrawal, DOE tentatively concluded that any consumer handwashing or pre-washing is unlikely to have been the result of past or current standards. Further, the amended test procedure at appendix C2 requires test samples to meet a cleaning index threshold consistent with consumer expectations. Accordingly, in the November 2024 Proposed Withdrawal, DOE stated that it did not expect increased handwashing or pre-washing (above levels resulting from consumer preferences or misunderstandings) in the future. 89 FR 88661, 88678.

In the November 2024 Proposed Withdrawal, DOE also noted that the 2020 Michigan study cited by AHAM discussed the role of behavioral barriers in explaining why certain consumers may be reluctant to switch from handwashing to machine washing, as these consumers believe handwashing outperforms machine washing in terms of resource consumption and cleaning performance. Likewise, in the November 2024 Proposed Withdrawal, DOE noted that findings from the University of Bonn and

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<sup>31</sup> Gabriela Y Porras *et al.* 2020. *A Guide to Household Manual and Machine Dishwashing Through a Life Cycle Perspective*. Environmental Research Communications. 2 021004.

the Impulse Reach national survey<sup>32, 33</sup> also suggest that the primary factor contributing to consumers handwashing dishes is not the dishwasher cycle duration, but rather a misconception by consumers that dishwashers require more energy and water than handwashing. 89 FR 88661, 88678.

In response to the November 2024 Proposed Withdrawal, CEI asserted that AHAM and Whirlpool's comment in the April 2024 Dishwashers Direct Final Rule that "energy conservation standards beyond EL 1 will cause rebound consumer behavior, such as running the dishwasher more than once to reach the desired cleanliness, re-rinsing dishes before placing them in the dishwasher, or handwashing, all of which undercut projected energy and water savings" (89 FR 31398, 31435), contradicts AHAM's comment in response to the March 2024 RFI that "consumers are satisfied with current cycle times" and that "consumers are choosing to wash their dishes by hand because of perceived longer cycle times." (CEI, No. 18 at p. 4).

DOE notes that while AHAM and Whirlpool had previously commented in response to a NOPR published on May 19, 2023 (88 FR 32514) that energy conservation standards beyond EL 1 would cause rebound consumer behavior, they were also signatories to a Joint Agreement<sup>34</sup> submitted to DOE later, on September 25, 2023, that recommended dishwasher standards that exceeded the EL 1 as proposed in the May 2023

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<sup>32</sup> Berkholz, P., V. Kobersky, and R. Stamminger. 2011. "Comparative analysis of global consumer behaviour in the context of different manual dishwashing methods." *International Journal of Consumer Studies*, 37(1), 46–58. [doi.org/10.1111/j.1470-6431.2011.01051.x](https://doi.org/10.1111/j.1470-6431.2011.01051.x).

<sup>33</sup> Wolf, A. 2011. "Consumers: Dishwashers Second to Kids in Noise." *Twice: This Week in Consumer Electronics*, 26(18), 64. [www.twice.com/product/consumers-dishwashers-second-kids-noise-37554](http://www.twice.com/product/consumers-dishwashers-second-kids-noise-37554).

<sup>34</sup> This document is available in the docket at: [www.regulations.gov/comment/EERE-2019-BT-STD-0039-0055](http://www.regulations.gov/comment/EERE-2019-BT-STD-0039-0055).



NOPR. The dishwasher standards recommended in the Joint Agreement were adopted in the April 2024 Dishwashers Direct Final Rule.

In response to the November 2024 Proposed Withdrawal, CEI commented that AHAM did not provide its survey questions or scope, which CEI asserted makes AHAM's survey data unreliable. CEI further stated that AHAM asked only if people were "satisfied" with current cycle times, not whether consumers would prefer a faster cycle time. (CEI, No. 18 at p. 5)

DOE notes that the AHAM survey data are proprietary and DOE is not able to assess the methodology used for AHAM's estimate of consumer satisfaction with cycle times.

CEI also commented that the 2020 University of Michigan study cited by AHAM showed that 67 percent of consumers pre-wash their dishes, which CEI asserted demonstrates a lack of confidence in the performance of dishwashers. CEI further commented the study cited by AHAM that consumers handwash dishes due to low consumer knowledge were specifically talking about countries other than the United States, and CEI stated that DOE should not use studies that talk about other countries when making claims about the United States. (CEI, No. 18 at p. 4)

DOE disagrees with CEI's assessment that the 2020 University of Michigan study demonstrated a lack of consumer confidence in dishwasher performance. The 2020 University of Michigan study focused on consumer behavior in using a dishwasher and

did not assess participant confidence in dishwasher performance. The authors of the study also note that pre-rinsing was not necessary to achieve acceptable cleaning performance. Although DOE agrees caution is needed in interpreting results from outside of the United States in the context of U.S. dishwasher usage, the results of such studies are still useful in understanding overall consumer perceptions of dishwashers. DOE notes that the 2020 University of Michigan study focuses on U.S. dishwasher users. Additionally, the Berkholz (2011) study includes U.S. participants and provides results by global region.

CEI commented that the Fifth Circuit opined that the lack of a short-cycle product class not only violates the law and harms consumers but also undercuts the energy and water efficiency goals of DOE's program because the longer cycle times and reduced cleaning performance of currently available models encourage some consumers to "use more energy and more water to preclean, reclean, or handwash their stuff before, after, or in lieu of using DOE-regulated appliances." (CEI, No. 18 at p. 6)

CEI asserted that DOE continues to ignore handwashing that occurs due to long cycle times. (*Id.* at p. 4) CEI also claimed that DOE's conclusion "that any consumer handwashing or pre-washing is unlikely to have been the result of past or current standards" is false and without substantial evidence. (*Id.* at p. 5)

DOE disagrees with CEI's assertion that efficiency standards have conclusively led to dishwasher users using more energy and water to pre-clean, re-clean, or handwash dishes as a result of longer cycle times. As noted in the November 2024 Proposed Withdrawal, the available research on dishwasher consumer behavior attributes

handwashing and pre-washing dishes to a misconception that dishwashers require more energy and water than handwashing. In the absence of data demonstrating a causal relationship between efficiency standards and handwashing behavior, DOE maintains its position that previous or current standards have not influenced handwashing or pre-washing behavior.

ASAP *et al.* stated that there is no evidence that energy conservation standards have resulted in increased energy and water use as stated by the Fifth Circuit, noting that there is no evidence that standards have resulted in consumers running multiple cycles on the same load or that energy and water use have increased as a result of improved efficiency. ASAP *et al.* noted that data from RECS<sup>35</sup> and the Water Research Foundation<sup>36</sup> have shown that the average number of cycles per year for dishwashers, along with dishwasher water use, have declined with improved efficiency. ASAP *et al.* also agreed with DOE's tentative conclusion that any handwashing or prewashing is unlikely to have been the result of past or current standards. (ASAP *et al.*, No. 21 at pp. 3–4)

CEI asserted that DOE's analysis in the December 2016 Dishwashers Final Determination TSD regarding shipment declines under new standards presents a flawed view because DOE states it "assumed that those consumers who forego buying a dishwasher because of the higher purchase price would then wash their dishes by hand,"

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<sup>35</sup> U.S. Department of Energy-Energy Information Administration, Residential Energy Consumption Survey, <https://www.eia.gov/consumption/residential/index.php>.

<sup>36</sup> Available at [committee.iso.org/files/live/users/aj/bc/fe/tc282contributor%40iso.org/files/Residential%20End%20Use%20of%20Water](https://www.iso.org/files/live/users/aj/bc/fe/tc282contributor%40iso.org/files/Residential%20End%20Use%20of%20Water) (Last accessed on December 11, 2024)

but, when comparing standards, DOE states, "it would be inappropriate to count energy savings that result from shipments that decline because of higher efficiency cases," without explaining why it would be inappropriate to count the increased water and energy use that will occur from delayed purchases due to more stringent standards. CEI opined that DOE ignored handwashing due to price and cycle time as inappropriate to consider, which CEI characterized as arbitrary and capricious. (CEI, No. 18 at pp. 6–7)

DOE affirms that its methodology for calculating energy and water savings in the December 2016 Dishwashers Final Determination and the April 2024 Dishwashers Direct Final Rule accounts for increased handwashing for households that choose not to purchase a standards-compliant dishwasher due to a price increase associated with a standard. DOE's statement that it does not "count energy savings that result from shipments that decline because of higher efficiency cases" refers specifically to the reduction in energy and water consumption of dishwasher stock in a standards case with fewer shipments compared to the no-new-standards case. DOE does not include reductions in energy and water savings from reduced product stock in estimates of benefits attributed to a standard. DOE does, however, reduce the energy savings in standards cases to account for households that choose to handwash dishes instead of purchasing a standards-compliant unit in the standards case. *See* section 10.3.2 of chapter 10 of the December 2016 Dishwasher Final Determination TSD<sup>37</sup> and section 10.4.2 of

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<sup>37</sup> This document is available in the docket at: [www.regulations.gov/document/EERE-2014-BT-STD-0021-0029](http://www.regulations.gov/document/EERE-2014-BT-STD-0021-0029).

chapter 10 of the April 2024 Dishwasher Direct Final Rule TSD for additional details on DOE's methodology.<sup>38</sup>

CEI also reiterated its survey data, submitted in support of the March 2018 Petition, saying that it was a representative sample of public opinion, in which 82 percent of the people found a dishwasher that cleans in less than 1 hour to be useful; 49 percent of people always or often handwash dishes because the dishwasher takes too long; and 36 percent sometimes do so. CEI commented that 14 percent of people never handwash dishes and opined that it is likely these are the people who complain about dishwasher noise level and their opinion should not govern what the standard should be, according to CEI. (CEI, No. 18 at pp. 4–5)

AWE commented that the survey results from CEI are unreliable given the lack of information from the State AGs of MT *et al.* and CEI on the methodology of the survey necessary for assessing the meaning, significance, reliability, or accuracy of the asserted survey results. AWE noted that information on how the survey was conducted; how participants were selected; whether the survey was online, by phone, or in paper; the extent to which participants responded and how non-responses were handled in data analysis; and how the survey questions were designed was not provided by the State AGs of MT *et al.* or CEI. (AWE, No. 20 at pp. 4–5)

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<sup>38</sup> This document is available in the docket at: [www.regulations.gov/document/EERE-2019-BT-STD-0039-0061](http://www.regulations.gov/document/EERE-2019-BT-STD-0039-0061).

DOE agrees with AWE's assertion that it is challenging to interpret the results of CEI's survey due to a lack of information on the survey methodology and techniques used to construct its sample. Although described as a representative sample of public opinion, it is not clear if their sample includes households that do not currently own a dishwasher and how these households would have been handled in the data analysis. Additionally, it is unclear whether CEI performed any weighting analysis to make its raw sample representative of the U.S. population or the U.S. population of dishwasher owners. Regardless, even taking the CEI survey results at face value, there is no evidence provided indicating that standards have impacted consumer behavior towards handwashing dishes. As noted in the November 2024 Proposed Withdrawal, a 2020 study by the University of Michigan discussed the role of behavioral barriers in explaining why certain consumers may be reluctant to switch from handwashing to machine washing, as these consumers believe handwashing outperforms machine washing in terms of resource consumption and cleaning performance. With regards to CEI's survey result indicating 82 percent of respondents would find a dishwasher that cleans in less than 1 hour to be useful, DOE emphasizes that manufacturers already provide quick cycles in current models to meet this preference. As demonstrated in section II.A.2 of this document, it is also technologically feasible to design a short-cycle feature for dishwashers while meeting current standards.

With regard to the portion of consumers who report their dishwasher does not clean well or they run the dishwasher multiple times to get dishes clean, DOE noted in January 2023 TP Final Rule that the cleaning performance at the completion of a dishwasher cycle influences how a consumer uses the product. DOE acknowledged that if

the cleanliness of the dishware after completion of a cleaning cycle does not meet consumer expectations, consumers may alter their use of the dishwasher by selecting a different cycle type that consumes more energy and water, operating the selected cycle type multiple times, or prewashing the dishware items. DOE recognized the need to ensure that the cycle type tested in the DOE test procedure is representative of consumer use as the dishwasher market continuously evolves to higher levels of efficiency. DOE therefore established a new cleaning performance threshold in the newly established appendix C2 test procedure that represents what constitutes “completely washing” a full load of normally soiled dishes (*i.e.*, a threshold below which the dishwasher would not meet consumer expectations of cleanability). 88 FR 3234, 3250–3267. Under appendix C2, a dishwasher must meet the cleaning performance threshold at all tested soil loads, and thus consumer expectations of cleanability. In the November 2024 Proposed Withdrawal, DOE noted that to the extent that any individual dishwashers on the market have not met consumer expectations for cleanability, such historical performance issues should be remedied moving forward, as the test procedure at appendix C2 ensures that any dishwasher tested for certification will have a valid energy and water representation only if the dishwasher also meets or exceeds a minimum level of cleaning performance. 89 FR 88661, 88678.

AWE noted that in the survey data provided by CEI, 18 percent of respondents purchased dishwashers well before the compliance date of the current standard (*i.e.*, 2013). AWE further noted that CEI’s survey results stating that 33 percent of respondents were dissatisfied with the cleaning performance of their dishwashers could be indicative that the majority of those respondents had older dishwashers whose performance may

have degraded over time. AWE commented that the AGs of MT *et al.* and CEI gave no basis for concluding that current dishwashers, compliant with existing standards, fail to clean dishes adequately. (AWE, No. 20 at p. 5)

CEI stated that dishwasher standards have compromised dishwasher quality in several ways, including poorer cleaning performance, reduced reliability, and cycle length. (CEI, No. 18 at pp. 2–3)

As discussed in section II.A.3.a of this document, data has shown that minimum cycle times have not increased due to standards. Further, as discussed in section II.A.2 and elsewhere in this document, DOE has identified a dishwasher basic model that meets the current standard while providing the short-cycle feature; that is, it is technologically feasible to design a dishwasher that provides a cycle time of 60 minutes or less, while achieving a cleaning index of at least 70 on each of the three soil loads specified in the DOE test procedure, and while meeting the current standard. As evidenced by the availability of a dishwasher with this feature currently on the market, designing such a dishwasher does not necessitate compromises to cleaning performance or cycle length.

Additionally, DOE does not have any evidence that dishwasher standards have reduced reliability. In fact, as noted in the November 2024 Proposed Withdrawal, DOE has not found any evidence of average product lifetime being correlated with any specific higher-efficiency design options or efficiency levels. Among the dishwasher standards rulemakings conducted over the course of the last 30 years, the data sources that DOE uses to derive estimates of average product lifetime have not provided any indication of a



substantial change in lifetime during this time period. In fact, the data suggest that current product lifetimes are actually longer than the lifetime estimates used in 1991.

Specifically, DOE's estimates of average lifetime for dishwashers have been as follows: 12.6 years in the May 1991 Final Rule, 12.3 years in the 2007 Advance Notice of Proposed Rulemaking, 15.4 years in the May 2012 Direct Final Rule, 15.2 years in the December 2016 Final Determination, and 15.2 years in the April 2024 Dishwashers Direct Final Rule. 56 FR 22250, 22276 (May 14, 1991); 72 FR 64432, 64435 (Nov. 15, 2007); 77 FR 31918, 31933 (May 30, 2012); 81 FR 90072, 90088 (Dec. 13, 2016); 89 FR 31398, 31430. 89 FR 88661, 88675. The lifetime data over the past 33 years shows that standards have not compromised dishwasher reliability.

CEI commented that, while DOE has established a minimum cleaning performance requirement, it should allow manufacturers to exceed the minimum threshold because consumers desire dishwashers that provide excellent cleaning performance. (CEI, No. 18 at p. 4)

The minimum cleaning index threshold specified in the DOE test procedure at appendix C2 is exactly that; a *minimum* threshold. Manufacturers are free to design dishwashers with cleaning performance that exceeds this threshold.

In conclusion, the weight of the evidence available supports the determination that increased re-washing, handwashing, or pre-washing (above levels resulting from consumer preferences or misunderstandings) are unlikely to result in the future as a result of standards; nor does DOE expect any negative impact to cleaning performance or cycle

length of dishwashers. Available data from RECS and the Water Foundation show that the average number of cycles for dishwashers has declined over time, indicating households have not needed to run multiple cycles on the same load. The DOE test procedure at appendix C2 requires test samples to meet a cleaning index threshold consistent with consumer expectations, which would ensure a consumer-acceptable level of cleaning performance. Finally, as noted elsewhere in this document, it is technologically feasible to provide the short-cycle feature on dishwashers. Therefore, DOE also does not expect any impact to cycle length.

#### b. Residential Clothes Washers

In the November 2024 Proposed Withdrawal, DOE recognized that RCW manufacturers design RCWs to achieve many different performance requirements (*e.g.*, cleaning performance, rinsing performance, noise, efficiency, cycle time). Manufacturers also provide multiple cycle types to meet different consumer needs (*e.g.*, normal, heavy, light, quick, delicates). However, DOE reiterates that multiple top-loading RCW models currently on the market provide a cycle time of less than 30 minutes, and multiple front-loading RCW models provide a cycle time of less than 45 minutes, all of which meet the current standards—demonstrating that current standards do not require manufacturers to trade off cycle time with energy and water use. 89 FR 88661, 88678–88679.

ASAP *et al.* stated that there is no evidence that energy conservation standards have resulted in increased energy and water use as stated by the Fifth Circuit, noting that there is no evidence that standards have resulted in consumers running multiple cycles on the same load or that energy and water use have increased as a result of improved

efficiency. ASAP *et al.* noted that data from RECS and the Water Research Foundation has shown that average number of cycles per year for RCWs along with RCW water use has declined with improved efficiency. ASAP *et al.* also agreed with DOE's tentative conclusion that any handwashing or prewashing is unlikely to have been the result of past or current standards. (ASAP *et al.*, No. 21 at pp. 3–4)

DOE agrees with ASAP's assessment that available nationally representative data from RECS and the Water Research Foundation show that the average numbers of cycles for RCWs has declined over time, indicating that households have not needed to run multiple cycles on the same load as a result of past or current standards.

Although DOE's current RCW test procedures do not include a measure of cleaning performance, DOE does consider multiple aspects of clothes washer performance as it evaluates potential energy and water conservation standards for RCWs to ensure that no lessening of the utility or performance of the product is likely to result from an amended standard. For example, in support of the NOPR preceding the March 2024 RCW Direct Final Rule, DOE conducted extensive testing to evaluate any potential impacts of amended standards on of several performance characteristics including cycle time, hot wash water temperature, soil and stain removal, and mechanical action.<sup>39</sup> 88 FR 26511 (May 1, 2023).

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<sup>39</sup> DOE published the results of this testing in a report available at [www.regulations.gov/document/EERE-2017-BT-STD-0014-0059](http://www.regulations.gov/document/EERE-2017-BT-STD-0014-0059).

Even though DOE’s analyses conducted as part the standards rulemaking process have demonstrated that performance can be maintained under the current standards for RCWs, DOE has previously discussed, for example in the June 2022 TP Final Rule, that the cleaning performance at the completion of a wash cycle could influence how a consumer uses the product. If the cleanliness of the clothing after completion of a wash cycle were to not meet consumer expectations, consumers could be expected to alter their use of the clothes washer. For example, consumers could alter the use of the product by choosing cycle modifiers to enhance the performance of the selected cycle; selecting an alternate cycle that consumes more energy and water to provide a higher level of cleaning; operating the selected cycle multiple times; or pre-treating (*e.g.*, pre-soaking in water) clothing items before loading into the clothes washer to achieve an acceptable level of cleaning. 87 FR 33316, 33352.

As discussed, the dishwasher test procedure defines a cleaning performance threshold that represents what constitutes “completely washing” a full load of normally soiled dishes (*i.e.*, a threshold below which the dishwasher would not meet consumer expectations of cleanability). However, the current RCW test procedures do not define what constitutes “washing” up to a full load of normally soiled cotton clothing (*i.e.*, the cleaning performance). In the June 2022 TP Final Rule, DOE discussed its consideration of adding a cleaning performance metric to its RCW test procedures, but ultimately DOE was unable to make a determination whether existing test procedures for determining cleaning performance would produce results for DOE’s purposes that are representative of an average use cycle, as required by EPCA. Furthermore, DOE was unable to assess whether the additional burden resulting from these additional tests would be outweighed

by the benefits of incorporating these tests. Therefore, DOE did not include a measure of cleaning performance in the RCW test procedures in the June 2022 TP Final Rule. 87 FR 33316, 33352.

DOE continues, however, to evaluate the potential benefits and burdens of incorporating a measure of performance into its RCW test procedures, akin to the cleaning performance threshold incorporated into the appendix C2 test procedure for dishwashers. Any such amendments to the RCW test procedures would be considered in a separate rulemaking.

#### c. Consumer Clothes Dryers

In the November 2024 Proposed Withdrawal, DOE recognized that consumer clothes dryer manufacturers design consumer clothes dryers to achieve many different performance requirements (*e.g.*, drying performance, noise, efficiency, cycle time). Manufacturers also provide multiple cycle types to meet different consumer needs (*e.g.*, normal, heavy, light, quick, delicates). However, DOE reiterates that multiple clothes dryer models currently on the market provide a cycle time of less than 30 minutes, all of which meet the current standards—demonstrating that current standards do not require manufacturers to trade off cycle time with energy use. 89 FR 88661, 88679.

ASAP *et al.* stated that there is no evidence that energy conservation standards have resulted in increased energy use as stated by the Fifth Circuit, noting that there is no evidence that standards have resulted in consumers running multiple cycles on the same load or that energy use has increased as a result of improved efficiency. ASAP *et al.*

noted that data from RECS has shown that average number of cycles per year for consumer clothes dryers has declined with improved efficiency. (ASAP *et al.*, No. 21 at pp. 3–4)

DOE agrees with ASAP’s assessment that available nationally representative data from RECS shows that the average numbers of cycles for consumer clothes dryers has declined over time indicating households have not needed to run multiple cycles on the same load.

Similar to dishwashers, for consumer clothes dryers DOE noted in the test procedure final rule published on October 8, 2021, that drying performance at the completion of a clothes dryer cycle may influence how a consumer uses the product. 86 FR 56608. DOE acknowledged that if the dryness of the clothes after completion of a during cycle does not meet consumer expectations, consumers may alter their use of their consumer clothes dryer by selecting a different cycle type that consumes more energy, or operating the selected cycle type multiple times. DOE recognized the need to ensure that the cycle type tested in the DOE test procedure is representative of consumer use as the consumer clothes dryer market continuously evolves to higher levels of efficiency. DOE therefore established a 2-percent final moisture content dryness threshold in the appendix D2 test procedure that was shown to be representative of the consumer-acceptable dryness level after completion of a drying cycle. 86 FR 56608, 56627–56628. Under appendix D2, a consumer clothes dryer must achieve this dryness threshold in order for the tested cycle to be considered valid for certifying compliance with the applicable standard.

To the extent that any individual consumer clothes dryers on the market have not met consumer expectations for dryness, such historical performance issues should be remedied moving forward, as the test procedure at appendix D2 ensures that any consumer clothes dryer tested for certification will have a valid energy and water representation only if the consumer clothes dryer meets or exceeds this threshold of dryness performance.

### **III. Conclusions**

In conclusion, and for the reasons discussed in the preceding sections of this document, DOE has determined that a short-cycle feature does not justify separate product classes with separate standards under 42 U.S.C. 6295(q) for dishwashers, RCWs, and consumer clothes dryers. Therefore, products with short-cycle features remain subject to the currently applicable standards as specified in 10 CFR 430.32(f), (g), and (h), respectively.

### **IV. Procedural Issues and Regulatory Review**

DOE has concluded that the determinations made pursuant to the various procedural requirements applicable to the January 2022 Final Rule remain unchanged for this confirmation of that rule. These determinations are set forth in the January 2022 Final Rule. 87 FR 2673, 2686–2688.

## **V. Approval of the Office of the Secretary**

The Secretary of Energy has approved publication of this final confirmation of withdrawal.



## Signing Authority

This document of the Department of Energy was signed on December 19, 2024, by Jeffrey Marootian, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, DC, on December 19, 2024

Jeffrey M.  
Marootian

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Jeffrey M. Marootian  
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Jeffrey Marootian  
Principal Deputy Assistant Secretary for Energy Efficiency and Renewable  
Energy  
U.S. Department of Energy