[6450-01-P]

DEPARTMENT OF ENERGY

10 CFR Part 430

[EERE-2020-BT-STD-0001]

RIN 1904-AE86

Energy Conservation Program: Energy Conservation Standards for Clothes Washers and Clothes Dryers

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

ACTION: Notice of proposed rulemaking.

SUMMARY: The Energy Policy and Conservation Act, as amended ("EPCA"), prescribes energy conservation standards for various consumer products and certain commercial and industrial equipment, including residential clothes washers and consumer clothes dryers. In this notice of proposed rulemaking ("NOPR"), the Department of Energy (DOE) proposes to establish separate product classes for top-loading residential clothes washers and consumer clothes dryers that offer cycle times for a normal cycle of less than 30 minutes, and for front-loading residential clothes washers that offer cycle times for a normal cycle of less than 45 minutes. DOE would consider appropriate energy and water efficiency standards for such product classes, if adopted, in separate rulemakings.

DATES: Written comments, data, and information regarding this NOPR will be accepted on or before [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***].

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at *http://www.regulations.gov*. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE-2020-BT-STD-0001, by any of the following methods:

1) *Federal eRulemaking Portal*: *http://www.regulations.gov*. Follow the instructions for submitting comments.
2) *Email*: *ConsumerWashersDryers2020STD0001@ee.doe.gov*. Include the docket number EERE-2017-BT-STD-0001 in the subject line of the message.
3) *Postal Mail*: Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, Mailstop EE-5B, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 287-1445. If possible, please submit all items on a compact disc ("CD"), in which case it is not necessary to include printed copies.
4) *Hand Delivery/Courier*: Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, 950 L'Enfant Plaza, SW., 6th Floor, Washington, DC, 20024. Telephone: (202) 287-1445. If possible, please submit all items on a CD, in which case it is not necessary to include printed copies.

No telefacsimilies ("faxes") will be accepted. For detailed instructions on submitting comments and additional information on the rulemaking process, see section V of this document.

Docket: The docket for this activity, which includes *Federal Register* notices, comments, and other supporting documents/materials, is available for review at *http://www.regulations.gov*.

All documents in the docket are listed in the *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 web page can be found at *http://www.regulations.gov/#!docketDetail;D=EERE-2020-BT-STD-0001*. The docket web page contains instructions on how to access all documents, including public comments, in the docket. See section V for information on how to submit comments through *http://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Mr. Bryan Berringer, 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. Email: *ApplianceStandardsQuestions@ee.doe.gov*.

Ms. Jennifer Tiedeman, U.S. Department of Energy, Office of the General Counsel, GC-33, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 287-6111. Email: *Jennifer.Tiedeman@hq.doe.gov*.

For further information on how to submit a comment, review other public comments and the docket, or participate in the public meeting, contact the Appliance and Equipment Standards Program staff at (202) 287-1445 or by email: *ApplianceStandardsQuestions@ee.doe.gov*.

SUPPLEMENTARY INFORMATION:

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I. Background

A. Consumer (Residential) Clothes Washers and Clothes Dryers

The Energy Policy and Conservation Act, as amended ("EPCA"),[1] authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317) Title III, Part B of EPCA established the Energy

[1] All references to EPCA in this document refer to the statute in its current form, as amended through America's Water Infrastructure Act of 2018, Public Law 115-270 (Oct. 23, 2018).

Conservation Program for Consumer Products Other Than Automobiles. These products include consumer (residential) clothes washers and clothes dryers, the subject of this document. (42 U.S.C. 6292(a)(7) and (8)) EPCA prescribed energy conservation standards for these products, and directed DOE to conduct a series of rulemakings to determine whether to amend these standards. (42 U.S.C. 6295(g)(2), (3), and (4)(A) and (B))

DOE completed the additional rulemakings for residential clothes washers with the publication of a direct final rule on May 31, 2012 ("May 2012 final rule"). 77 FR 32308. DOE completed the additional rulemakings for consumer clothes dryers by publishing a direct final rule on April 21, 2011, which amended the energy conservation standards for consumer clothes dryers. 76 FR 22454; 76 FR 52852 (Aug. 24, 2011).

EPCA directs that when prescribing an energy conservation standard for a type (or class) of a covered product, DOE must specify—

[A] Level of energy use or efficiency higher or lower 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 covered products within such a 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 such performance-related feature which other products within such type (or class) do not have and such feature justifies a higher or lower standard from that which applies (or will apply) to other products within such type.

In making a determination concerning whether a performance-related feature justifies the establishment of a higher or lower standard, DOE must consider such factors as the utility to the consumer of such a feature, and such other factors as DOE deems appropriate. (42 U.S.C. 6295(q)(1))

The current energy conservation standards establish four product classes for residential clothes washers by distinguishing between products on the basis of both clothing container capacity and axis of loading. 10 CFR 430.32(g)(4). A *standard* clothes washer has a clothing container capacity greater than or equal to 1.6 cubic feet (ft^3), while a *compact* clothes washer has a clothing container capacity less than 1.6 ft^3. Axis of loading is differentiated by *top-loading* or *front-loading*. *Id.*

For consumer clothes dryers, the current energy conservation standards define six product classes, differentiated by the following characteristics: fuel source (*electric* or *gas*), venting configuration (*vented* or *ventless*), drum capacity (*standard* (greater than or equal to 4.4 ft^3) or *compact* (less than 4.4 ft^3)), integration with a clothes washer (*combination washer-dryer*), and for electric compact clothes dryers, voltage (*120 V* or *240 V*). 10 CFR 430.32(h)(3).

B. Cycle Time Considerations for Appliance Standards

On March 21, 2018, the Competitive Enterprise Institute ("CEI") petitioned DOE to initiate a rulemaking to define a new product class under 42 U.S.C. 6295(q) for residential dishwashers.[2] The new product class would cover dishwashers with a cycle time for a normal cycle of less than one hour from washing through drying. CEI stated that dishwasher cycle times have become dramatically longer under existing DOE energy conservation standards, and that consumer satisfaction/utility has dropped as a result of these longer cycle times. CEI also provided data regarding the increase in dishwasher cycle time, including data that correlated increased cycle time with DOE's adoption of amended efficiency standards for dishwashers.

Based upon its evaluation of the CEI petition and consideration of the public comments received in response to the notice of petition published in the *Federal Register* on April 24, 2018 (83 FR 17768), DOE granted the petition for rulemaking and proposed a dishwasher product class with a cycle time for the normal cycle of less than one hour. 84 FR 33869 (July 16, 2019). In that proposed rule DOE reiterated its prior conclusion with respect to commercial clothes washers that "the longer average cycle time of front-loading machines warrants consideration of separate [product] classes." 79 FR 74492, 74498 (Sept. 15, 2014). Further, DOE stated its position that, similar to commercial clothes washers, cycle time for dishwashers is a performance-related feature for purposes of 6295(q) that justifies a higher or lower standard than that applicable to other dishwasher product classes.

[2] The petition for rulemaking, attachments, and data submitted by CEI are available in docket number EERE–2018–BT–STD–0005 at *http://www.regulations.gov*.

Consumer use of residential clothes washers and consumer clothes dryers is similar to that of residential dishwashers (*i.e.*, the products provide consumer utility over discrete cycles with programmed cycle times, and consumers run these cycles multiple times per week on average). In Section II of this NOPR, DOE presents cycle time data that DOE has gathered in support of its proposal to establish separate product classes for residential clothes washers and consumer clothes dryers to preserve a performance-related feature of both residential clothes washers and consumer clothes dryers (i.e., the consumer utility of a short cycle time).

II. General Discussion

A. Legal Authority

Consistent with the analysis presented in the proposed rulemaking to establish a new dishwasher product class (84 FR 33869, 33871-33873; July 16, 2019), DOE has concluded it has legal authority pursuant to 42 U.S.C. 6295(q) to establish separate product classes for residential clothes washers and consumer clothes dryers.

As explained in the dishwasher NOPR, DOE has taken the view in numerous prior rulemakings (cited and discussed in this paragraph and the next few paragraphs) that consumer utility is an aspect of the product that is accessible to the layperson and based on user operation, rather than performing a theoretical function. This interpretation has been implemented in DOE's previous determinations of utility through the value the particular feature brings to the consumer, rather than through analyzing more complicated design features or costs that anyone, including the consumer, manufacturer, installer, or utility companies may bear. DOE has determined that this approach is consistent with EPCA's requirement for a separate and

extensive analysis of economic justification for the adoption of any new or amended energy conservation standard. *See, e.g.,* discussion in DOE's proposed rule and supplemental proposed rule to establish amended energy conservation standards for furnaces at 80 FR 13120, 13137 (Mar. 12, 2015); 81 FR 65720, 65752–65755 (Sept. 23, 2016). Under this approach, DOE determined that the window in an oven door was a "feature" justifying a different standard.[3] Similarly, DOE also determined that consumers may value other features such as the ability to self-clean,[4] size,[5] and configuration.[6] In contrast, DOE determined that water heaters using electric resistance technology did not merit a product class separate from water heaters using heat pump technology.[7] In both heat-pump and electric storage water heaters, the same utility to the consumer (*i.e.*, hot water) was provided by units using different technology.

In a rulemaking to amend standards applicable to commercial clothes washers, DOE determined that the "axis of loading" constituted a feature that justified separate product classes for top-loading and front-loading clothes washers. DOE also determined that "the longer average cycle time of front-loading machines warrants consideration of separate [product] classes." *See* final rule to amend standards at 79 FR 74492, 74498 (Sept. 15, 2014). DOE stated that a split in preference between top-loaders and front-loaders would not indicate consumer indifference to the axis of loading, but rather that a certain percentage of the market expresses a preference for (*i.e.*, derives utility from) the top-loading configuration. DOE further noted that separation of clothes washer product classes by location of access is similar in nature to the

[3] 63 FR 48038, 48041 (Sept. 8, 1998).
[4] 73 FR 62034, 62048 (Oct. 17, 2008) (separating standard and self-cleaning ovens into different product classes).
[5] 77 FR 32037, 32319 (May 31, 2012) (creating a separate product class for compact front-loading residential clothes washers).
[6] 75 FR 59469 (Sept. 27, 2010) (creating a separate product class for refrigerators with bottom-mounted freezers).
[7] 74 FR 65852, 65871 (Dec. 11, 2009).

product classes for residential refrigerator-freezers, which include separate product classes based on the access of location of the freezer compartment (*e.g.*, top-mounted, side-mounted, and bottom-mounted). The location of the freezer compartment on these products provides no additional performance-related utility other than consumer preference. In other words, the location of access itself provides distinct consumer utility. *Id*. at 79 FR 74499. DOE also reasoned that top-loading residential clothes washers are available with the same efficiency levels, control panel features, and price points as front-loading residential clothes washers, and that given these equivalencies, purchase of top-loaders indicates a preference among certain consumers for the top-loading configuration, *i.e.*, the top-loading configuration provides utility to those customers preferring one configuration over another, with all other product attributes being equal. *Id*.

DOE acknowledged that its determination of what constitutes a performance-related feature justifying a different standard could change depending on the technology and the consumer, and that as a result, certain products may entirely disappear from the market due to shifting consumer demand. DOE determines such value on a case-by-case basis through its own research as well as public comments received, the same approach that DOE employs in all other parts of its energy conservation standards rulemaking. *See* proposed rule to amend standards for residential furnaces at 80 FR 13120, 13138 (Mar. 12, 2015).

DOE applied this same approach to cycle time for dishwashers in the product class NOPR. 84 FR 33869, 33872 (July 16, 2019). Consumer use of residential clothes washers and consumer clothes dryers is similar to that of residential 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 petition regarding dishwashers is also relevant to residential clothes washers and consumer clothes dryers. More importantly, DOE previously determined in the context of residential clothes washers that cycle time warrants consideration of separate classes. *See* final standards rule at 77 FR 32308, 32319 (May 31, 2012).

DOE understands that a consumer's perception of the utility provided by a clothes washer encompasses multiple aspects of performance such as: stain removal (*i.e.*, "cleaning performance"), solid particle removal, rinsing effectiveness, fabric gentleness, cycle time, noise, vibration, and others. A clothes washer's overall performance is a balance among all of these interdependent attributes, and each manufacturer chooses how to balance these aspects of performance. Furthermore, achieving better performance in one attribute may require a tradeoff with one or more other attributes. Similar tradeoffs may exist among the performance attributes of clothes dryers as well, such as dryness, fabric gentleness, wrinkle removal, and cycle time.

Recognizing the interdependence of these multiple aspects of performance in clothes washers and clothes dryers, manufacturers are currently offering models implementing a range of clothes washer and clothes dryer performance characteristics. DOE presumes that the shortest possible cycle times currently available on the market represent the models for which manufacturers have prioritized cycle time while maintaining adequate performance across the other performance aspects. These models must also meet the applicable energy and water conservation standard. Based on this presumption, the current energy conservation standards may be precluding manufacturers from bringing models to the market with substantially shorter cycle times. Offering products with shorter cycle times (which would provide greater consumer

utility for that aspect of performance) would require more per-cycle energy and/or water use than would be permitted under the current standards in order to maintain the same level of performance in other areas (*e.g.*, cleaning, noise, *etc.*).

Accordingly, DOE proposes to establish separate product classes for residential clothes washers and consumer clothes dryers based on the cycle time required for a normal cycle to wash and dry, respectively, clothing loads. DOE concludes that cycle time for residential clothes washers and clothes dryers is a performance-related feature for purposes of 42 U.S.C. 6295(q) that justifies a higher or lower standard than that applicable to other product classes of residential clothes washers and clothes dryers.

Based on the data presented in section II.B, DOE proposes to establish separate product classes for top-loading residential clothes washers with an average cycle time of less than 30 minutes when conducting the DOE clothes washer test procedure at 10 CFR part 430, subpart B, appendix J2 ("Appendix J2"). DOE also proposes to establish separate product classes for front-loading residential clothes washers with an average cycle time of less than 45 minutes when conducting the same DOE test procedure. For consumer clothes dryers, DOE proposes separate product classes for clothes dryers with a cycle time of less than 30 minutes when conducting the DOE clothes dryer test procedure at 10 CFR part 430, subpart B, appendix D2 ("Appendix D2"). DOE seeks comment on other appropriate time frames that it could consider in developing the final rule.

DOE makes clear that if it were to finalize this proposal and thereby establish separate product classes for residential clothes washers and consumer clothes dryers, no energy efficiency

standards yet apply to such products. DOE would need to undertake rulemaking pursuant to the procedures established in EPCA and the methodology required by its procedures codified at appendix A to subpart C of 10 CFR part 430. Accordingly, DOE proposes to establish product classes based on cycle time as follows:

(1) Top-loading, standard-size clothes washers with an average cycle time of less than 30 minutes and front-loading, standard-size clothes washers with an average cycle time of less than 45 minutes; and

(2) Vented, electric standard-size clothes dryers and vented gas clothes dryers with a test cycle time of less than 30 minutes.

Such products would not be subject to the applicable DOE test procedure or energy conservation standards, unless and until DOE were to complete appropriate rulemaking to establish applicable test procedures and energy conservation standards.

B. Cycle Time Data

DOE gathered data on cycle times for a range of residential clothes washers and consumer clothes dryers, with test units representing the most popular product classes for each product. This document provides a high-level summary of this data. DOE is also including a separate technical appendix in the docket of this rulemaking that includes a more detailed presentation of the data.[8]

[8] The technical appendix is available in the docket for this rulemaking at *https://www.regulations.gov*.

1. Residential Clothes Washers

For residential clothes washers, the top-loading standard-size and front-loading standard-size product classes combined represent over 95 percent of models currently available on the market. DOE does not have data regarding the current distribution of shipments by product class; however, in DOE's experience, model-based distributions provide a close approximation of shipments-based distributions for residential laundry products. DOE's Compliance Certification Database[9] contains 501 unique basic models of residential clothes washers. The number of unique basic models in each product class (including the corresponding percentage of the total 501 models) are as follows:

- Top-Loading, Standard-Size: 293 (58.5 percent)
- Front-Loading, Standard-Size: 187 (37.3 percent)
- Top-Loading, Compact: 20 (4.0 percent)
- Front-Loading, Compact: 1 (0.2 percent)

DOE evaluated the cycle times of a representative sample of units within the top-loading standard-size and front-loading standard-size product classes. For the top-loading standard-size product class, DOE tested 23 units representing 10 brands across 7 manufacturers. For the front-loading standard-size product class, DOE tested 20 units representing 14 brands across 12 manufacturers. The technical appendix provides additional details of the technical attributes of each of the units evaluated.

[9] DOE's Compliance Certification Database is available at *https://www.regulations.doe.gov/compliance-certification-database*. Last accessed March 12, 2020.

To evaluate the cycle time of each unit, DOE analyzed test data from performing the Appendix J2 test procedure once in its entirety for each unit. Appendix J2 is the DOE test procedure required to demonstrate compliance with the current energy conservation standards. The Appendix J2 procedure requires testing a complete set of wash/rinse temperature selections and load sizes; the specific temperatures and load sizes required for testing are defined in the test procedure and are based on the user-selectable options and features available on the model.[10] In general, testing is performed using the "normal" cycle (*i.e.*, wash program), which is defined as the wash program recommended for normal, regular, or typical use for washing up to a full load of normally-soiled cotton clothing. For clothes washers with manual water fill control systems (in which the user physically selects the water fill level), Appendix J2 requires testing each available temperature selection using two load sizes: minimum and maximum. For clothes washers with automatic water fill control systems (*i.e.*, "load-sensing"), Appendix J2 requires testing each available temperature selection using three load sizes: minimum, average, and maximum.[11] Among the top-loading standard-size units that DOE evaluated, 5 models have a manual water fill control system, 14 models have an automatic water fill control system, and 4 models have both manual and automatic water fill systems. All 20 front-loading standard-size units that DOE evaluated have an automatic water fill control system. DOE is not aware of any front-loading models on the market with a manual water fill control system. The DOE test procedure specifies usage factors for the various tested temperature selections and load sizes, to

[10] Sections 2.12 and 2.8 of Appendix J2 specify the wash/rinse temperatures and load sizes required for testing, respectively.

[11] Section 2.8 of Appendix J2 specifies the number of load sizes to use based on the model's water fill control system. Table 5.1 of Appendix J2 specifies the weight of each load size to be used for testing, based on the measured capacity of the unit.

combine the results of all the required wash cycles when calculating the integrated modified energy factor ("IMEF") rating and integrated water factor ("IWF") rating.[12]

Clothes washers offer a variety of wash temperature selections (*e.g.*, Cold, Cool, Warm, Hot, Extra Hot/Sanitize, *etc.*). Typically, clothes washer models offer between three and five wash temperatures that are available for the consumer to choose when selecting the "normal" cycle. As described, each temperature selection required for testing is tested using the two or three different load sizes, depending on the type of water fill control, as part of the Appendix J2 test procedure.

As an example, consider a representative load-sensing clothes washer with four available wash temperatures in the normal cycle (*e.g.*, Cold, Cool, Warm, Hot). On such a model, conducting Appendix J2 once in its entirety would require performing 12 individual test cycles (*i.e.*, running test cycles on all four temperature settings with each of the three load sizes), the results of which would be combined in a weighted average to produce the IMEF and IWF values.

For each unit in its test sample, DOE evaluated cycle time using the complete set of wash cycle configurations (combinations of wash/rinse temperature settings and load sizes) required by the DOE test procedure. The technical appendix provides additional details of the wash cycle configurations for each unit. The number of wash cycle configurations ranged from 9 (for a

[12] Table 4.1.1 of Appendix J2 defines the "temperature use factors," which are the consumer usage factors applied to the temperature selections; and Table 4.1.3 of Appendix J2 defines the "load usage factors", which are the consumer usage factors applied to the load sizes. These usage factors are based on based on surveys and other data reflecting consumer usage patterns.

manual water fill unit with three temperature selections, each tested with two load sizes) to 21 (for a load-sensing unit with seven temperature selections, each tested with three load sizes). Appendix J2 does not include provisions for determining a single cycle time metric for residential clothes washers. To evaluate overall cycle times for model-to-model comparisons, DOE considered three distinct methods for representing the cycle time of each individual unit:

1. The arithmetic average of the individual cycle times for each wash cycle configuration conducted as part of the Appendix J2 test procedure.
2. The weighted average of the individual cycle times for each wash cycle configuration conducted as part of the Appendix J2 test procedure, using the temperature use factors and load usage factors as defined by Appendix J2 for the weighting.
3. The median cycle time of the complete set of wash cycle configurations conducted as part of the Appendix J2 test procedure.

The data presented below show the results using each of these three methods. The technical appendix includes tables that provide, for each unit evaluated, the individual cycle times for each wash cycle configuration conducted as part of the Appendix J2 test procedure that were used as the basis of this analysis. For the purpose of this evaluation, DOE considered individual cycle time as the time required to complete the entire active washing mode (washing, soaking, tumbling, agitating, rinsing, and/or removing water from the load), not including any continuous status display, intermittent tumbling, or air circulation following operation in active washing mode. DOE recognizes that the cycle times associated with specific wash/rinse temperature combinations, load sizes, or other cycle configurations could also provide useful comparisons across models.

DOE testing indicates that for a given model, the cycle time of any individual wash cycle may be dependent upon the options that are selected for the wash cycle and the size of the load being washed. For example, an Extra Hot/Sanitize temperature selection typically has a longer cycle time than other lower-temperature selections because of the need to heat the water internally to high temperatures, and for the clothes to remain heated for a sufficient amount of time to achieve sanitization. As another example, for load-sensing clothes washers, cleaning a large load size will typically result in a longer cycle time than a small load size. DOE testing suggests, however, that the difference in cycle times as a result of these different selections for a given model (other than for an Extra Hot/Sanitize temperature selection) is typically less than the range in cycle times among different models on the market.

Table II.1 and Table II.2 of this document provide the cycle time (determined using each of the three methods described above) for the top-loading standard-size and front-loading standard-size residential clothes washer test units, respectively. The data include each unit's IMEF and IWF rating, as measured under Appendix J2. Figure II.1 and Figure II.2 present the same data graphically, showing cycle time with respect to each unit's IMEF rating for each of the three methods described above. For the IMEF rating, a higher value indicates more efficient energy performance. For the IWF rating, a lower value indicates more efficient water performance. (See the technical appendix for additional details of the technical attributes of each of the units evaluated.)

Table II.1 Calculated Cycle Time for Top-Loading, Standard-Size Residential Clothes Washers

Test Unit	Rated IMEF (cu.ft./kWh/cycle)	Rated IWF (gal/cycle/cu.ft.)	Cycle Time (min)		
			Method 1: Arithmetic Average	Method 2: Weighted Average	Method 3: Median
1	1.57	6.5	41	43	42
2	1.57	6.5	45	50	45
3	1.57	6.5	50	58	51
4	1.57	6.5	64	74	65
5	1.57	6.5	59	61	55
6	1.57	6.5	45	45	44
7	1.57	6.5	40	41	41
8	1.57	6.5	38	38	38
9	1.57	6.5	47	46	46
10	1.71	4.7	40	45	35
11	1.57	6.5	29	29	29
12	1.57	6.5	56	57	57
13	1.57	6.5	55	56	56
14	1.57	6.5	47	54	47
15	2.06	3.8	66	66	66
16	2.38	3.7	66	67	60
17	1.57	6.5	27	28	28
18	1.57	6.5	27	27	27
19	1.57	6.5	42	43	43
20	1.57	6.5	42	43	42
21	1.57	6.5	51	52	52
22	1.57	6.5	50	51	50
23	1.57	6.5	50	51	49

Table II.2 Calculated Cycle Time for Front-Loading, Standard-Size Residential Clothes Washers

Test Unit	Rated IMEF (cu.ft./kWh/cycle)	Rated IWF (gal/cycle/cu.ft.)	Cycle Time (min)		
			Method 1: Arithmetic Average	Method 2: Weighted Average	Method 3: Median
1	2.49	3.5	58	55	56
2	2.22	3.7	69	66	66
3	2.76	3.2	47	47	47
4	2.09	2.8	75	71	70
5	1.86	3.4	68	68	68
6	2.07	4.2	67	59	57
7	2.40	3.7	50	39	35
8	1.85	4.7	78	79	79
9	1.84	4.7	52	54	55
10	1.85	4.6	54	53	53
11	1.85	4.7	77	77	78
12	1.87	4.5	48	48	48
13	2.80	3.0	57	49	49
14	3.00	2.9	68	69	65
15	2.38	3.7	45	45	45
16	1.84	4.6	48	49	46
17	1.85	4.6	77	77	78
18	1.84	4.7	90	78	79
19	1.84	4.7	47	46	43
20	2.38	3.7	59	58	50

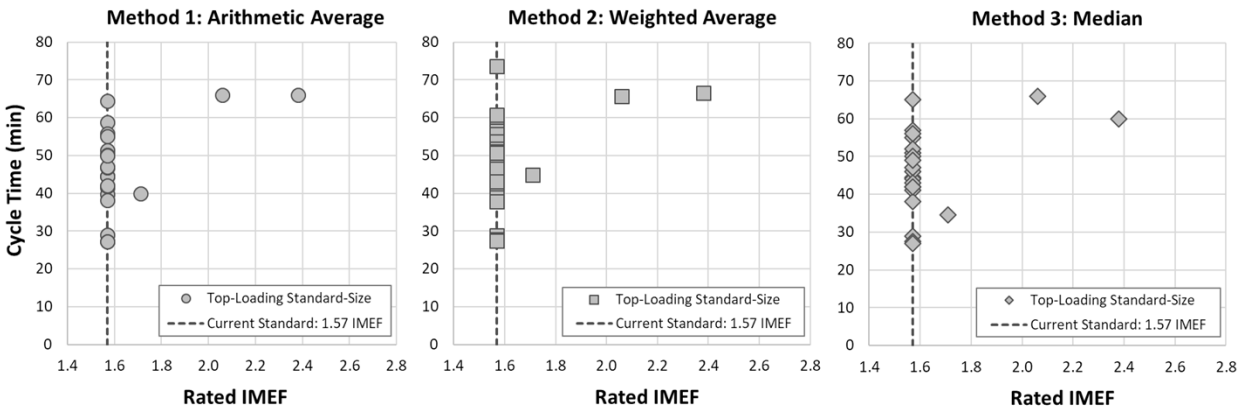

Figure II.1 Calculated Cycle Time for Top-Loading, Standard-Size Residential Clothes Washers

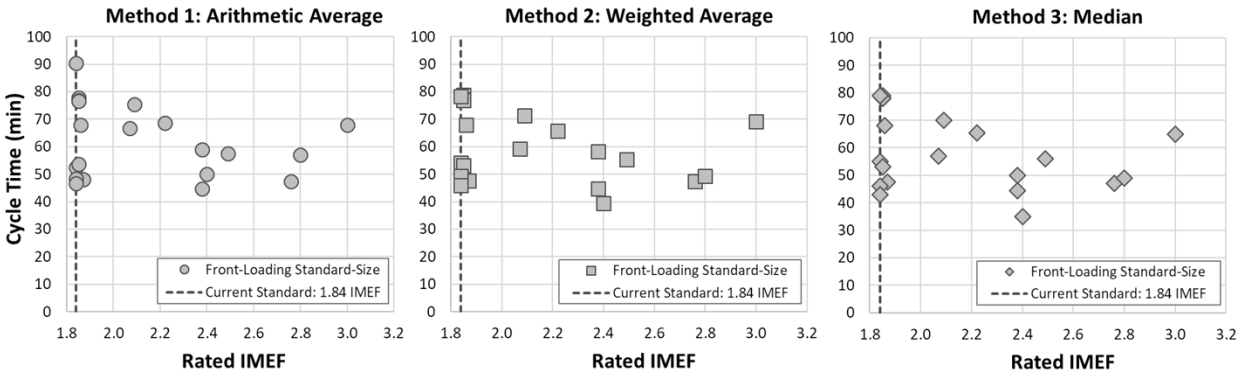

Figure II.2 Calculated Cycle Time for Front-Loading, Standard-Size Residential Clothes Washers

2. Consumer Clothes Dryers

For consumer clothes dryers, the vented electric standard-size and vented gas product classes combined represent over 89 percent of models currently available on the market. DOE does not have data regarding the current distribution of shipments by product class; however, in DOE's experience, model-based distributions provide a close approximation of shipments-based

distributions for residential laundry products. DOE's Compliance Certification Database contains 686 unique basic models of residential clothes dryers. The number of unique basic models in each product class (including the corresponding percentage of the total 686 models) are as follows:

- Vented Electric, Standard-Size: 353 (51.5 percent)
- Vented Gas: 261 (38.0 percent)
- Vented Electric, Compact (120V): 22 (3.2 percent)
- Vented Electric, Compact (240V): 20 (2.9 percent)
- Ventless Electric, Compact (240V): 12 (1.7 percent)
- Ventless Electric, Combination Washer-Dryer: 18 (2.6 percent)

DOE evaluated the cycle times of a representative sample of units within the vented electric standard-size and vented gas product classes. For the vented electric standard-size product class, DOE tested 6 units representing 4 brands across 4 manufacturers. In addition, DOE evaluated cycle time data from the ENERGY STAR product database[13] for an additional 245 vented electric standard-size units representing 14 brands across 7 manufacturers. For the vented gas product class, DOE tested 8 units representing 4 brands across 4 manufacturers. In addition, DOE evaluated cycle time data from the ENERGY STAR product database for an additional 110 vented gas units representing 9 brands across 5 manufacturers. In total, DOE evaluated the cycle times of units representing over 50 percent of residential clothes dryer basic

[13] Manufacturers must report cycle time as tested under Appendix D2 when seeking ENERGY STAR qualification for a consumer clothes dryer basic model. ENERGY STAR product database for clothes dryers is available at *https://www.energystar.gov/productfinder/product/certified-clothes-dryers/results*. Last accessed January 22, 2020.

models. The technical appendix provides additional details of the technical attributes of each of the units evaluated.

To evaluate the cycle time of each tested unit, DOE analyzed data from performing the Appendix D2 test procedure. Appendix D2 is currently optional for demonstrating compliance with the current DOE energy conservation standards, but is used for demonstrating compliance with ENERGY STAR criteria. Appendix D2 specifies that clothes dryers with automatic cycle termination be operated using the "normal" program (or the cycle recommended by the manufacturer for drying cotton or linen clothes in the absence of a normal program) until the completion of the cycle, as indicated to the consumer. Where it is possible for the drying temperature and dryness level to be selected independently of the program, the maximum drying temperature setting is used with the "normal" or "medium" dryness level (or the mid-point between the minimum and maximum settings). Section 3.3.2 of Appendix D2.

In contrast, Appendix D1 does not provide data that can be used to determine a "cycle time" as experienced by the consumer. Performing the Appendix D1 test procedure requires operating the dryer on a timed dry cycle set to the maximum time available, artificially stopping the drying cycle when the moisture content of the load is between 2.0 and 5.5 percent of the bone-dry weight of the cloth, normalizing the measured energy to represent a standardized moisture content removal of 53.5 percent, and applying a field use factor to calculate the representative per-cycle energy use. Because Appendix D1 requires manually stopping operation at a specified moisture content, normalizing, and applying a field use factor, the length of time that a clothes dryer is operated during an Appendix D1 test does not necessarily

correspond to the length of time that a consumer would operate the clothes dryers (in contrast to the calculated energy use, which *is* representative of the energy use experienced by the consumer).[14]

The sample of models tested by DOE were certified to DOE using Appendix D1, but tested by DOE using Appendix D2 for the purpose of determining cycle time in this analysis. All of the models analyzed from the ENERGY STAR database were certified to ENERGY STAR using Appendix D2. All of the models in DOE's test sample provide automatic cycle termination capability.

Under Appendix D2, the combined energy factor ("CEF") rating is based on the energy consumption of a single test cycle.[15] The cycle time evaluated by DOE represents the total cycle time as tested under Appendix D2, excluding any wrinkle prevention mode that continuously or intermittently tumbles the clothes dryer drum after the clothes dryer indicates to the user that the cycle has finished. Table II.3 and Table II.4 provide the Appendix D2 cycle time data for the vented electric standard-size and vented gas clothes dryers tested by DOE, respectively.[16] The technical appendix includes the additional cycle time data evaluated for the models certified in

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[14] Appendix D1 does not provide data that can be used to determine a "cycle time" because the drying cycle is artificially terminated. The artificially terminated cycle has a field use factor applied to calculate representative energy consumption. Appendix D2 provides representative energy use and a corresponding cycle time, because the cycle is run from start to completion without being artificially terminated.

[15] For automatic termination control dryers, Appendix D2 requires that if the clothes dryer is equipped with a mode that continuously or intermittently tumbles the load after the indicating the cycle has finished (*i.e.*, wrinkle prevention mode) that is activated by default in the as-shipped position or if the manufacturer's instructions specify that the mode be activated for normal use, the cycle is considered complete after the end of wrinkle prevention mode. If at the end of the test cycle, the final moisture content is greater than 2 percent, then the results for that test cycle are discarded and the test is rerun with the highest dryness level setting.

[16] For both vented electric standard and vented gas clothes dryers, baseline units with CEF values near the current energy conservation standard level are typically certified to DOE using Appendix D1. The presented cycle times, however, are those measured by DOE when the units were tested to Appendix D2.

the ENERGY STAR database. Figure II.3 and Figure II.4 present the same data graphically, including the additional cycle time data from the ENERGY STAR product database.[17]

Table II.3 Measured Cycle Time for Vented Electric Standard-Size Clothes Dryers Using Appendix D2

Test Unit	Rated CEF (lbs/kWh)	Cycle Time (min)
1	3.73	40
2	3.73	62
3	3.73	67
4	3.74	39
5	3.74	36
6	3.73	45

Table II.4 Measured Cycle Time for Vented Gas Clothes Dryers Using Appendix D2

Test Unit	Rated CEF (lbs/kWh)	Cycle Time (min)
1	3.30	89
2	3.30	78
3	3.31	36
4	3.31	35
5	3.30	63
6	3.30	54
7	3.30	33
8	3.30	51

[17] The technical appendix tables, available at *http://www.regulations.gov* include the ENERGY STAR data. This data is not included in this document due to the very large number of models included.

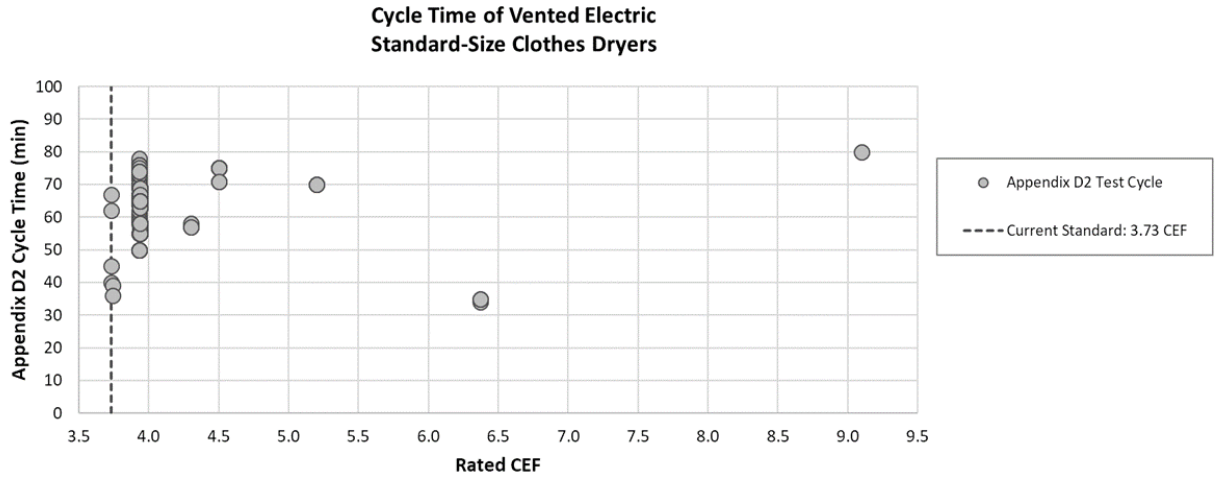

Figure II.3 DOE Cycle Time Data for Vented Electric Standard-Size Clothes Dryers Using Appendix D2

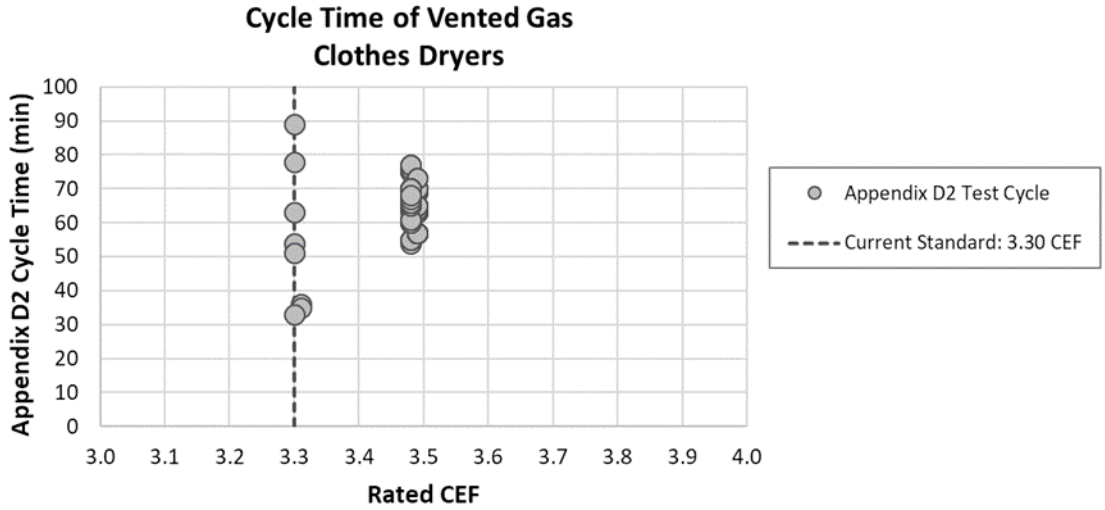

Figure II.4 DOE Cycle Time Data for Vented Gas Clothes Dryers Using Appendix D2

The data presented in this NOPR demonstrate a wide range of cycle times among the clothes dryer models within each product class. Because these cycle times correspond to the "normal" program on each model, the differences among them may be due to the characteristics of the heating element/burner control scheme used by the normal cycle; the effectiveness of the automatic termination control system in sensing the moisture content of the load and ending the drying cycle when the specified final moisture content is reached, without significant over-drying; or other factors.

C. Separate Short-Cycle Product Classes

1. Residential Clothes Washers

For residential clothes washers, DOE's data indicate that for standard-size top-loading units on the market, the shortest available cycle time when tested under Appendix J2 (the currently applicable test procedure) is approximately 30 minutes. The data also indicate that for standard-size front-loading units on the market, the shortest available cycle time when tested under Appendix J2 is approximately 45 minutes. This distinction demonstrates that front-loading clothes washers, which are generally more efficient than top-loading clothes washers, inherently require additional time to wash a load of clothes. Front-loading clothes washers typically use less water, and thus less water heating energy, than comparably-sized top-loading clothes washers due to the tumbling action in front-loading units, but the lower mechanical cleaning action of this tumbling as compared to the agitation in top-loading units can result in relatively longer cycle times to achieve similar cleaning performance. DOE seeks to preserve the utility of a short cycle time for both top-loading and front-loading clothes washers in this NOPR.

Appendix J2 specifies multiple test cycles with varying temperature selections and load sizes to be run as part of the energy test cycle. Because different residential clothes washers may have a differing number of wash and rinse temperature selections required to be tested as part of the energy test cycle in Appendix J2, and because cycles conducted on the same machine at different wash/rinse temperature selections may have differing cycle times, DOE proposes in this NOPR that the cycle time for a particular residential clothes washer model would be considered to be the average of the individual cycle times for each test cycle conducted as part of the energy test cycle specified in Appendix J2. This corresponds to "Method 1" described in section II.B.1

of this document. DOE is also proposing that each individual cycle time would be based on the time required to complete the entire active washing mode (which includes washing, soaking, tumbling, agitating, rinsing, and/or removing water from the load), not including any continuous status display, intermittent tumbling, or air circulation following operation in active washing mode. This approach would also provide information to the consumer about an average cycle time across all of the cycles that are representative of consumer usage, consistent with the energy and water consumption information provided in the Integrated Modified Energy Factor ("IMEF") and Integrated Water Factor ("IWF") metrics, respectively, that are the bases of the current energy conservation standards for residential clothes washers.

Issue 1: DOE requests comment on the analysis used to determine cycle time for residential clothes washers, including whether calculating an average value across all test cycles (Method 1) is appropriate.

Issue 2: DOE also seeks comment on whether, alternatively, a different method for calculating cycle time should be used, such as the weighted-average method (Method 2 described in section II.B.1 of this document) or the median method (Method 3); or any other method that would be appropriate.

DOE is aware that some clothes washers provide, in addition to the normal cycle,[18] a setting that provides a shorter cycle time. While clothes washers may offer reduced-time cycle

[18] Section 1.25 of Appendix J2 defines Normal cycle as 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 IMEF or MEF value.

options, such cycles are not recommended by the manufacturer for normal, regular, or typical use for washing up to a full load of normally-soiled cotton clothing (as DOE currently defines the normal cycle). Such cycles are not the product's "normal cycle" and would not be measured as part of the Appendix J2 test because Appendix J2 specifies performing testing on the normal cycle.

DOE presumes that certain manufacturers are currently implementing the shortest possible cycle times that enable a clothes washer to achieve satisfactory cleaning performance (and other aspects of clothes washer performance) while meeting the applicable energy and water conservation standards. Based on this presumption, the current energy conservation standards may be precluding manufacturers from bringing models to the market with substantially shorter cycle times. DOE's data suggest that standard-size residential clothes washers may not be able to comply with current energy and water conservation standards for residential top-loading clothes washers with cycle times substantively less than 30 minutes and front-loading clothes washers with cycle times substantively less than 45 minutes. To allow manufacturers the opportunity to innovate and develop products that would provide consumers the utility of such shorter cycle times, DOE proposes in this NOPR to establish separate product classes for top-loading standard-size residential clothes washers with average cycle times less than 30 minutes and front-loading standard-size residential clothes washers with average cycle times less than 45 minutes.

Issue 3: DOE seeks comment on its proposal to establish separate product classes for top-loading standard-size residential clothes washers with average cycle times less than 30

minutes, including whether the 30-minute threshold average cycle time is appropriate or whether DOE should consider a different average cycle time for the final rule.

Issue 4: DOE also seeks comment on its proposal to establish separate product classes for front-loading standard-size residential clothes washers with average cycle times less than 45 minutes, including whether the 45-minute threshold average cycle time is appropriate or whether DOE should consider a different average cycle time for the final rule.

DOE is not proposing to establish cycle-time based product classes for top-loading compact and front-loading compact residential clothes washers because compact-size units are niche products that represent less than 4 percent of residential clothes washer models on the market.[19] DOE could consider, however, whether the 30-minute, 45-minute or some other product class distinction related to cycle time should also apply the compact product classes.

Issue 5: DOE seeks comment on whether the 30-minute product class distinction should apply to both standard and compact residential clothes washers, and whether that would include both top-loading and front-loading configurations.

[19] Based on DOE's Compliance Certification Database for residential clothes washers, top-loading compact and front-loading compact product classes combined represent 32 models out of a total of 816 certified basic models. *https://www.regulations.doe.gov/certification-data/CCMS-4-Clothes_Washers.html#q=Product_Group_s%3A%22Clothes%20Washers%22*. Last accessed January 6, 2020.

2. Consumer Clothes Dryers

For consumer clothes dryers, DOE's data indicate that for both vented electric standard-size and vented gas units, the shortest available cycle time when tested under Appendix D2 is approximately 30 minutes.

As described, during Appendix D2 testing, consumer clothes dryers equipped with automatic cycle termination are operated using representative cycle settings (specifically, the "normal" program, or the cycle recommended by the manufacturer for drying cotton or linen clothes; with the maximum drying temperature and "normal" or "medium" dryness level, if either setting can be selected independent of the "normal" program) to completion of the cycle, with the cycle deemed valid if the final moisture content of the load is no greater than 2 percent.

As stated, manufacturers are not required to use Appendix D2 at this time to demonstrate compliance with current energy conservation standards. However, manufacturers must use Appendix D2 in order to qualify a consumer clothes dryer for ENERGY STAR labeling, and manufacturers must use a single test procedure (Appendix D1 or Appendix D2) for all representations of energy use, including certification of compliance with applicable energy conservation standards. Therefore, all ENERGY STAR-qualified consumer clothes dryers are already being tested according to Appendix D2.

Issue 6: DOE seeks comment on its use of Appendix D2 to determine the cycle time of a clothes dryer.

DOE's data indicate 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. Thus, assuming certain manufacturers are currently implementing the shortest possible cycle times that enable a clothes dryer to achieve satisfactory drying performance (and other aspects of clothes dryer performance) while meeting the applicable energy conservation standards, the standards may preclude manufacturers from offering consumers clothes dryers that provide the utility of cycle times shorter than 30 minutes. For these reasons, DOE proposes in this NOPR to establish separate product classes for vented electric standard-size and vented gas clothes dryers with cycle times less than 30 minutes.

Issue 7: DOE seeks comment on its proposal to establish separate product classes for vented electric standard-size vented gas clothes dryers with cycle times less than 30 minutes, including whether the 30-minute threshold cycle time is appropriate or whether DOE should consider a different value for the final rule.

Because compact consumer clothes dryers and combination washer-dryers are niche products that represent a relatively low percentage of models on the market,[20] DOE is not proposing to establish short-cycle product classes for vented electric compact (120 V or 240 V),

[20] Based on DOE's Compliance Certification Database for consumer clothes dryers, vented electric compact (120 V or 240 V), ventless electric compact (240 V), and ventless electric combination washer-dryer product classes collectively represent 95 models out of a total of 1,086 certified basic models. *https://www.regulations.doe.gov/certification-data/CCMS-4-Clothes_Dryers_-_Appendix_D1.html#q=Product_Group_s%3A%22Clothes%20Dryers%20-%20Appendix%20D1%22* (Appendix D1 models) and *https://www.regulations.doe.gov/certification-data/CCMS-4-Clothes_Dryers_-_Appendix_D2.html#q=Product_Group_s%3A%22Clothes%20Dryers%20-%20Appendix%20D2%22* (Appendix D2 models) Last accessed January 6, 2020

ventless electric compact (240 V), and ventless electric combination washer-dryer products. DOE seeks comment on whether to establish separate product classes for ventless or compact electric units that offer a short cycle, and if so, an appropriate length for such a product class.

Issue 8: DOE seeks comment on whether the 30-minute product class distinction should apply only to vented electric standard-size and vented gas product classes, or whether shorter cycle times should be considered for all consumer clothes dryer product classes.

Issue 9: DOE further seeks comment on appropriate cycle times for any short-cycle vented electric, ventless electric, and ventless combination washer-dryer product classes.

D. EPCA's Anti-Backsliding Provision

In any rulemaking to establish standards for a separate product class, DOE must consider EPCA's general prohibition against prescribing amended standards that increases the maximum allowable energy use, or, in the case of showerheads, faucets, water closets, or urinals, water use, or decreases the minimum required energy efficiency, of a covered product. (42 U.S.C. 6295(o)(1); the "anti-backsliding provision") As explained in the proposed rule that would grant a petition for rulemaking to establish a new dishwasher product class, the anti-backsliding provision must be read in conjunction with the product class authority in 42 U.S.C. 6295(q), and does not prohibit the establishment of product classes as proposed in this document. (84 FR 33869, 33871-33873; July 16, 2019) DOE presents the substance of that explanation in the paragraphs that follow.

Section 6295(q) directs DOE to specify "a level of energy use or efficiency higher or lower than that which applies (or would apply) for such type or class…" if the Secretary

determines that covered products within such group consume a different type of energy or have a capacity or other performance-related feature that justifies "a higher or lower standard from that which applies (or will apply) to other products within such type (or class)." (42 U.S.C. 6295(q)) EPCA explicitly acknowledges, therefore, that product features may arise that require designation of a product class with a standard lower than that applicable to other product classes for that covered product.

Specifically, by using the present tense, "a higher or lower standard than that which applies," EPCA authorizes DOE to reduce the stringency of the standard currently applicable to the products covered under the newly established separate product class. The applicability of this provision to current standards is further evidenced by the additional reference to standards that are not yet applicable (*i.e.*, standards that "would apply" or "will apply"). If 42 U.S.C. 6295(q)(1) were to operate only in instances in which standards have not yet been established, there would be no need to separately indicate the applicability to future standards. Nor would there be any purpose to calling out the potential for higher or lower standards, because there would not be any standards against which to measure that potential. In this manner, 42 U.S.C. 6295(q) authorizes DOE to reduce the stringency of a currently applicable standard upon making the determinations required by 42 U.S.C. 6295(q).

This reading of the statutory text recognizes that section 6295(q) of EPCA cannot be read to prohibit DOE from establishing standards that allow for technological advances or product features that could yield significant consumer benefits while providing additional functionality (*i.e.*, consumer utility) to the consumer. DOE relied on this concept when, in 2011, DOE established separate energy conservation standards for ventless clothes dryers, reasoning that the

"unique utility" presented by the ability to have a clothes dryer in a living area where vents are impossible to install (*i.e.*, a high-rise apartment) merited the establishment of a separate product class. 76 FR 22454, 22485 (Apr. 21, 2011). Another example of this that DOE is beginning to explore is network connectivity of covered products. See DOE's Smart Products RFI at 83 FR 46886 (Sept. 18, 2018). Network connectivity is a technology that has only recently begun to appear on the market. Moreover, it clearly has a desirable consumer utility and is a fast-growing feature of new models of covered products. However, network connectivity comes with attendant energy use. EPCA's anti-backsliding provision cannot be read to prohibit DOE from establishing standards that allow for covered products to be connected to a network simply because standards for those products were established prior to the time that network connectivity was even contemplated, and thereby eliminating the ability to implement this consumer-desired option. Similarly, for residential clothes washers and consumer clothes dryers, 42 U.S.C. 6295(q) authorizes DOE to establish standards for product features that provide consumer utility, such as shorter cycle times.

This interpretation is consistent with DOE's previous recognition of the importance of technological advances that could yield significant consumer benefits in the form of lower energy costs while providing the same functionality to the consumer. 80 FR 13120, 13138 (Mar. 12, 2015); 81 FR 65720, 65752 (Sept. 23, 2016). In the proposed and supplemental proposed rule to establish standards for residential furnaces, DOE stated that tying the concept of feature to a specific technology would effectively "lock-in" the currently existing technology as the ceiling for product efficiency and eliminate DOE's ability to address such technological advances. *Id*.

Further, EPCA's anti-backsliding provision is limited in its applicability with regard to water use to four specified products, *i.e.*, showerheads, faucets, water closets, or urinals. DOE's existing energy conservation standards for residential clothes washers include both energy and water use components. As residential clothes washers are not one of the products listed in the anti-backsliding provision with respect to water use, EPCA does not prohibit DOE from specifying a maximum amount of water use for residential clothes washers that is greater than the existing standard without regard to whether DOE were to establish separate product classes for residential clothes washers as proposed in this proposed rule.

Finally, DOE recognizes that 42 U.S.C. 6295(o)(4) prohibits DOE from establishing standards that would result in the unavailability 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 at the time of the Secretary's finding. Section 6295(q) of EPCA authorizes DOE to set standards that recognize new technologies and product features, or in this case, features that are no longer available in the market. This reading of the statute is consistent with DOE's previous acknowledgment that its determination of what constitutes a performance-related feature justifying a different standard could change depending on the technology and the consumer utility, and that as a result, certain products may disappear from (or reappear in) the market entirely due to shifting consumer demand. This reading is also consistent with DOE's statements that DOE determines this value on a case-by-case basis through its own research as well as public comments received. (80 FR 13120, 13138, Mar. 12, 2015). In addition, once DOE makes a determination that a certain product attribute is a feature, DOE cannot later set a standard that would eliminate that feature.

III. Conclusion

DOE has concluded that it has legal authority to establish separate short-cycle product classes for residential clothes washers and consumer clothes dryers pursuant to 42 U.S.C. 6295(q). DOE proposes to establish separate product classes for top-loading standard-size and front-loading standard-size residential clothes washers with cycle times of less than 30 and 45 minutes, respectively, and for vented electric standard-size and vented gas clothes dryers with a cycle time of less than 30 minutes. DOE will consider test procedures and energy conservation standards in separate rulemakings, should such product classes be established.

DOE also proposes to update the requirements for the residential clothes washer and consumer clothes dryer standards at 10 CFR 430.32(g)(4) and (h)(3), respectively. The current requirements for both products include tables that specify the applicable energy conservation standards. DOE proposes to add new paragraphs following each table showing the current requirements to specify that top-loading standard-size and front-loading standard-size residential clothes washers with an average cycle time of less than 30 and 45 minutes, respectively, are not currently subject to energy or water conservation standards, and that vented electric standard-size and vented gas clothes dryers with a cycle time of less than 30 minutes are not currently subject to energy conservation standards.

As noted, DOE seeks comment on other potential time limits or utilities to delineate the separate product classes, as well as whether short-cycle product classes should be established for other product classes of residential clothes washers and consumer clothes dryers. Should DOE finalize separate product classes, DOE would then evaluate energy and water consumption limits

to determine standards for each product class that provide for the maximum energy efficiency that is technologically feasible and economically justified, and will result in a significant conservation of energy. (42 U.S.C. 6295(o)(2)(A)) DOE will provide additional opportunity for comment on any proposed energy conservation standards for short-cycle residential clothes washers and consumer clothes dryers.

IV. Request for Comments, Data, and Information

In this rulemaking, DOE proposes to establish separate product classes for top-loading standard-size and front-loading standard-size residential clothes washers with cycle times of less than 30 and 45 minutes, respectively, and vented electric standard-size and vented gas consumer clothes dryers with a cycle time of less than 30 minutes. To inform its consideration of the proposal and any future energy conservation standards for such residential clothes washers and consumer clothes dryers, DOE requests additional data on the following:

Issue 10: DOE requests data on the cycle times of cycles with various wash and rinse temperature selections and load sizes for residential clothes washers (both standard size and compact).

Issue 11: DOE requests data on the cycle time of consumer clothes dryers (standard size and compact, vented and ventless, 120 V and 240 V, and combination washer-dryer configurations) currently on the market.

Issue 12: DOE requests comment on whether any current technologies are available that could provide a wash cycle (for residential clothes washers) or a dry cycle (for consumer

clothes dryers) in less than 30 minutes, and that would allow the product to comply with the applicable current energy conservation standards.

As noted, in addition to the normal cycle, some clothes washers provide a cycle that provides a shorter cycle time. To better understand the extent of the utility that a short cycle would potentially provide consumers, DOE requests comment and data on the following:

Issue 13: For each current residential clothes washer product class, DOE seeks data and information on consumer use of reduced-time cycles as a percentage of individual residential clothes washer use; the cycle time of the reduced-time cycles selected; and the cycle time of the "normal" cycle of that clothes washer.

Issue 14: DOE seeks data and information on how residential clothes washers with "express" or "quick wash" cycles operate and how those cycles compare to a "normal cycle" with regard to cleaning clothing.

Issue 15: DOE requests information on the operating demands on consumers that may favor shorter cycle times for both residential clothes washers and consumer clothes dryers.

In analyzing the feasibility of potential energy conservation standards, DOE uses information about existing and past technology options and prototype designs to help identify technologies that manufacturers could use to meet and/or exceed a given set of energy conservation standards under consideration.

Issue 16: DOE seeks information on technologies currently used or that could be used to achieve cycles with reduced time. Specifically, DOE is interested in information regarding expected market adoption and any concerns with incorporating such technologies into products (*e.g.*, impacts on consumer utility; potential safety concerns; manufacturing, production, implementation issues, *etc.*).

Issue 17: DOE seeks input on the costs associated with incorporating particular technologies and/or design options to achieve cycles with reduced time.

Issue 18: DOE seeks information on the range of efficiencies or performance characteristics associated with each technology option that could be used to achieve cycles with reduced time.

Issue 19: DOE requests information on the investments necessary to incorporate specific technologies and design options that could be used to achieve cycles with reduced time, including, but not limited to, costs related to new or modified tooling (if any), materials, engineering and development efforts to implement each design option, and manufacturing or production impacts.

Issue 20: DOE requests comment on any impacts to small businesses that may occur as a result of this proposal.

DOE has identified a variety of issues on which it seeks input in this rulemaking to establish separate product classes and the appropriate energy conservation standards for such product classes, should they be established. Additionally, DOE welcomes comments on other issues relevant to the conduct of this rulemaking that may not specifically be identified in this document. In particular, DOE notes that under Executive Order 13771, "Reducing Regulation

and Controlling Regulatory Costs," Executive Branch agencies such as DOE are directed to manage the costs associated with the imposition of expenditures required to comply with Federal regulations. See 82 FR 9339 (Feb. 3, 2017). Consistent with that Executive Order, DOE encourages the public to provide input on measures that DOE could take to lower the cost of its energy conservation standards rulemakings, recordkeeping and reporting requirements, and compliance and certification requirements applicable to residential clothes washers and clothes dryers, while remaining consistent with the requirements of EPCA.

V. Submission of Comments

DOE invites all interested parties to submit in writing by [**INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***], comments and information on matters addressed in this document and on other matters relevant to DOE's consideration of a separate product classes for top-loading, standard-size residential clothes washers with an average cycle time of less than 30 minutes when conducting the test procedure at Appendix J2; for front-loading, standard-size residential clothes washers with an average cycle time of less than 45 minutes when conducting the test procedure at Appendix J2; and vented electric standard-size clothes dryers and vented gas clothes dryers with a cycle time of less than 30 minutes when conducting the test procedure in Appendix D2. DOE also seeks comment on potential energy conservations standards for such classes of residential clothes washers and consumer clothes dryers, should they be established. After the close of the comment period, DOE will review the public comments received and begin collecting data and conducting the analyses necessary to consider appropriate energy conservation standard levels.

Submitting comments via http://www.regulations.gov. The *http://www.regulations.gov* web page will require you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Following this instruction, persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to *http://www.regulations.gov* information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information ("CBI")). Comments submitted through *http://www.regulations.gov* cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section.

DOE processes submissions made through *http://www.regulations.gov* before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that *http://www.regulations.gov* provides after you have successfully uploaded your comment.

Submitting comments via email, hand delivery/courier, or postal mail. Comments and documents submitted via email, hand delivery/courier, or postal mail also will be posted to *http://www.regulations.gov*. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information on a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. If you submit via postal mail or hand delivery/courier, please provide all items on a CD, if feasible, in which case it is not necessary to submit printed copies. No faxes will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, written in English and free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information. According to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email, postal mail, or hand delivery/courier two well-marked copies: one copy of the document marked confidential including all the information believed to be confidential, and one copy of the document marked "non-confidential" with the information believed to be confidential deleted. Submit these documents via email or on a CD, if feasible. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

DOE considers public participation to be a very important part of the process for developing test procedures and energy conservation standards. DOE actively encourages the participation and interaction of the public during the comment period in each stage of this process. Interactions with and between members of the public provide a balanced discussion of the issues and assist DOE in the process. Anyone who wishes to be added to the DOE mailing list to receive future notices and information about this process should contact Appliance and

Equipment Standards Program staff at (202) 287-1445 or via e-mail at *ApplianceStandardsQuestions@ee.doe.gov*.

VI. Procedural Issues and Regulatory Review

A. Review Under Executive Orders 12866 "Regulatory Planning and Review"

This proposed rule is a "significant regulatory action" under the criteria set out in section 3(f) of Executive Order 12866, "Regulatory Planning and Review." 58 FR 51735 (October 4, 1993). Accordingly, this action was subject to review by the Office of Information and Regulatory Affairs ("OIRA") in the Office of Management and Budget ("OMB").

B. Review Under Executive Order 13771

On January 30, 2017, the President issued Executive Order ("E.O.") 13771, "Reducing Regulation and Controlling Regulatory Costs." E.O. 13771 stated the policy of the executive branch is to be prudent and financially responsible in the expenditure of funds, from both public and private sources. E.O. 13771 stated it is essential to manage the costs associated with the governmental imposition of private expenditures required to comply with Federal regulations.

DOE has determined that this proposed rule is a deregulatory action. This proposed rule, if adopted, would establish separate product classes for short-cycle residential clothes washers and consumer clothes dryers. Manufacturers could design and manufacture new products in this product class to meet consumer demand. DOE also seeks data to assist its determination of the appropriate standard levels for such product classes in subsequent rulemakings.

C. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.) requires preparation of an initial regulatory flexibility analysis ("IRFA") for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, "Proper Consideration of Small Entities in Agency Rulemaking," 67 FR 53461 (Aug. 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the rulemaking process. 68 FR 7990. DOE has made these procedures and policies available on the Office of the General Counsel's website (*http://energy.gov/gc/office-general-counsel*).

DOE reviewed this proposed rule under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003. DOE has tentatively concluded that this proposed rule will not have a significant impact on a substantial number of small entities. The factual basis for this determination is as follows:

The Small Business Administration (''SBA'') considers a business entity to be a small business, if, together with its affiliates, it employs less than a threshold number of workers or earns less than the average annual receipts specified in 13 CFR part 121. The threshold values set forth in these regulations use size standards and codes established by the North American Industry Classification System (''NAICS'') that are available at: *https://www.sba.gov/document/support—tablesize-standards.* The threshold number for NAICS classification code 335220, major household appliance manufacturing, which includes clothes dryer and clothes washer manufacturers, is 1,500 employees. Manufacturers must certify

compliance of their products to DOE prior to distributing them in commerce. Because no small manufacturers have certified to DOE in 2019 or 2020, DOE does not believe that there are any small manufacturers of these products. In addition, this rulemaking proposes to establish product classes for residential clothes washers and consumer clothes dryers with cycle times less than 30 minutes. Appropriate standard levels would be established in subsequent rulemakings. As a result, DOE certifies that the proposed rule would not have a significant impact on a substantial number of small entities. DOE will transmit the certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review under 5 U.S.C. 605(b).

D. Review Under the Paperwork Reduction Act

This rulemaking, which proposes to establish product classes for residential clothes washers and consumer clothes dryers with cycle times less than 30 minutes, but does not establish standards or new testing requirements that would be required for testing such products, imposes no new information or record keeping requirements. Accordingly, Office of Management and Budget clearance is not required under the Paperwork Reduction Act. (44 U.S.C. 3501 *et seq.*)

Manufacturers of covered products generally must certify to DOE that their products comply with any applicable energy conservation standards. To certify compliance, manufacturers must first obtain test data for their products according to the DOE test procedures, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including residential clothes washers and consumer clothes dryers. (*See generally* 10 CFR part 429). The collection-of-information requirement for the certification and

recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act ("PRA"). This requirement has been approved by OMB under OMB control number 1910-1400. Public reporting burden for the certification is estimated to average 35 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

E. Review Under the National Environmental Policy Act of 1969

In this proposed rule, DOE proposes to establish product classes for residential clothes washers and consumer clothes dryers with cycle times less than 30 minutes. DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and DOE's implementing regulations at 10 CFR part 1021. Specifically, this proposed rule would only establish new product classes for residential clothes washers and consumer clothes dryers and, therefore, would not result in any environmental impacts. Thus, this rulemaking is covered by Categorical Exclusion A5 under 10 CFR part 1021, subpart D, which applies to any rulemaking that interprets or amends an existing rule without changing the environmental effect of that rule. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

F. Review Under Executive Order 13132

Executive Order 13132, "Federalism," 64 FR 43255 (Aug. 10, 1999), imposes certain requirements on Federal agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of this proposed rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297) No further action is required by Executive Order 13132.

G. Review Under Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, "Civil Justice Reform," imposes on Federal agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity, (2) write regulations to minimize litigation, and (3) provide a clear legal standard for affected conduct rather than a general standard and promote simplification and burden reduction. 61 FR 4729 (Feb. 7, 1996). Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect, if any, (2) clearly specifies any effect on existing Federal

law or regulation, (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction, (4) specifies the retroactive effect, if any, (5) adequately defines key terms, and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this proposed rule meets the relevant standards of Executive Order 12988.

H. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 ("UMRA") requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. Public Law 104-4, sec. 201 (codified at 2 U.S.C. 1531). For a proposed regulatory action likely to result in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed "significant intergovernmental mandate," and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect them. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA (62 FR 12820) (also available at *http://www.gc.doe.gov*). This proposed rule

contains neither an intergovernmental mandate nor a mandate that may result in the expenditure of $100 million or more in any year, so these requirements under the Unfunded Mandates Reform Act do not apply.

I. Review Under the Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Public Law 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This proposed rule would not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

J. Review Under Executive Order 12630

The Department has determined, under Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights," 53 FR 8859 (March 15, 1988), that this proposed rule would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

K. Review Under the Treasury and General Government Appropriations Act, 2001

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516, note) provides for Federal agencies to review most disseminations of information to the public under information quality guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE's guidelines were published at 67 FR 62446 (Oct. 7, 2002). DOE has reviewed this

proposed rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

L. Review Under Executive Order 13211

Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use," 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OIRA at OMB, a Statement of Energy Effects for any proposed significant energy action. A "significant energy action" is defined as any action by an agency that promulgates or is expected to lead to promulgation of a final rule, and that (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy, or (3) is designated by the Administrator of OIRA as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits for energy supply, distribution, and use. This proposed rule, which would establish product classes for residential clothes washers and consumer clothes dryers with cycle times less than 30 minutes, would not have a significant adverse effect on the supply, distribution, or use of energy and, therefore, is not a significant energy action. Accordingly, DOE has not prepared a Statement of Energy Effects on this proposed rule.

VII. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this notice of proposed rulemaking.

List of Subjects in 10 CFR Part 430

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Incorporation by reference, Intergovernmental relations, Small businesses.

Signing Authority

This document of the Department of Energy was signed on July 16, 2020, by Daniel R Simmons Assistant Secretary for Energy Efficiency, 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 July 16, 2020

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Treena V. Garrett
Federal Register Liaison Officer,
U.S. Department of Energy

For the reasons set forth in the preamble, DOE proposes to amend part 430 of chapter II, subchapter D, of title 10 of the Code of Federal Regulations, as set forth below:

PART 430 - ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

1. The authority citation for part 430 continues to read as follows:

Authority: 42 U.S.C. 6291-6309; 28 U.S.C. 2461 note.

2. Section 430.32 is amended by revising paragraphs (g)(4) and (h)(3) to read as follows:

§430.32 Energy and water conservation standards and their compliance dates.

* * * * *

(g) * * *

(4)(i) Except as provided in paragraph (g)(4)(ii) of this section, clothes washers manufactured on or after January 1, 2018, shall have an Integrated Modified Energy Factor no less than, and an Integrated Water Factor no greater than:

Product class	Integrated modified energy factor (cu.ft./kWh/cycle)	Integrated water factor (gal/cycle/cu.ft.)
i. Top-loading, Compact (less than 1.6 ft3 capacity)	1.15	12.0
ii. Top-loading, Standard (1.6 ft3 or greater capacity)	1.57	6.5
iii. Front-loading, Compact (less than 1.6 ft3 capacity)	1.13	8.3
iv. Front-loading, Standard (1.6 ft3 or greater capacity)	1.84	4.7

(ii) Top-loading, standard clothes washers with an average cycle time of less than 30 minutes and front-loading, standard clothes washers with an average cycle time of less than 45 minutes are not currently subject to energy or water conservation standards.

(h) * * *

(3)(i) Except as provided in paragraph (h)(3)(ii) of this section, clothes dryers manufactured on or after January 1, 2015, shall have a combined energy factor no less than:

Product class	Combined energy factor (lbs/kWh)
i. Vented Electric, Standard (4.4 ft3 or greater capacity)	3.73
ii. Vented Electric, Compact (120V) (less than 4.4 ft3 capacity)	3.61
iii. Vented Electric, Compact (240V) (less than 4.4 ft3 capacity)	3.27
iv. Vented Gas	3.30
v. Ventless Electric, Compact (240V) (less than 4.4 ft3 capacity)	2.55
vi. Ventless Electric, Combination Washer-Dryer	2.08

(ii) Vented, electric standard clothes dryers and vented gas clothes dryers with a cycle time of less than 30 minutes, when tested according to appendix D2 in subpart B of this part, are not currently subject to energy conservation standards.

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