[6450-01-P]

DEPARTMENT OF ENERGY

10 CFR Part 431

EERE-2017-BT-STD-0032

RIN 1904-AE07

Energy Conservation Program: Energy Conservation Standards for Evaporatively-Cooled Commercial Package Air Conditioners and Water-Cooled Commercial Package Air Conditioners

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

ACTION: Notice of proposed determination and request for comment.

SUMMARY: The Energy Policy and Conservation Act ("EPCA"), as amended, prescribes energy conservation standards for various consumer products and certain commercial and industrial equipment, including evaporatively-cooled commercial package air conditioners and water-cooled commercial package air conditioners (referred to as evaporatively-cooled commercial unitary air conditioners ("ECUACs") and water-cooled commercial unitary air conditioners ("WCUACs") in this document). EPCA also requires the U.S. Department of Energy ("DOE") to periodically determine whether more stringent, amended standards would result in significant additional conservation of energy, be technologically feasible, and be economically justified. In this notice of proposed determination ("NOPD"), DOE has tentatively determined that the standards

for small (cooling capacity less than 135,000 Btu/h), large (cooling capacity greater than or equal to 135,000 and less than 240,000 Btu/h), and very large (cooling capacity greater than or equal to 240,000 and less than 760,000 Btu/h) ECUACs and WCUACs do not need to be amended, and DOE requests comment on this proposed determination and the associated analyses and results.

DATES: *Meeting*: DOE will hold a webinar on Thursday, October 1, 2020, from 10:00 a.m. to 3:00 p.m. See section V, "Public Participation," for webinar registration information, participant instructions, and information about the capabilities available to webinar participants.

Comments: Written comments and information are requested and will be accepted on or before [**INSERT DATE 75 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***].

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-2017-BT-STD-0032 and/or regulatory information number (RIN) 1904-AE07, by any of the following methods:

1) *Federal eRulemaking Portal*: *http://www.regulations.gov*. Follow the instructions for submitting comments.

2) *Email*: *WCandECUAC2017STD0032@ee.doe.gov*. Include the docket number EERE-2017-BT-STD-0032 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 telefacsimiles (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, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

The docket web page can be found at *http://www.regulations.gov/#!docketDetail;D=EERE-2017-BT-STD-0032*. The docket web page contains instructions on how to access all documents, including public comments, in the docket. See section V, "Public Participation," for information on how to submit comments through *http://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT:

Ms. Catherine Rivest, 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) 586-7335. Email: *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: (202) 586-9496. Email: *Peter.Cochran@hq.doe.gov*.

For further information on how to submit a comment, or review other public comments and the docket contact the Appliance and Equipment Standards Program staff at (202) 586-6636 or by email: *ApplianceStandardsQuestions@ee.doe.gov*.

SUPPLEMENTARY INFORMATION:

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I. Synopsis of the Proposed Determination

Title III, Part C[1] of EPCA[2] established the Energy Conservation Program for Certain Industrial Equipment, which sets forth a variety of provisions designed to improve energy efficiency. (42 U.S.C. 6311-6317, as codified) This equipment includes ECUACs and WCUACs, the subject of this NOPD. (42 U.S.C. 6311(1)(B)-(D))

DOE is issuing this NOPD pursuant to EPCA's requirement that every six years DOE evaluate the energy conservation standards for certain commercial equipment, including ECUACs and WCUACs, and publish either a notice of determination that the standards do not need to be amended, or a notice of proposed rulemaking ("NOPR") that includes new proposed energy conservation standards (proceeding to a final rule, as appropriate). (42 U.S.C. 6313(a)(6)(C)(i))

For this proposed determination, DOE analyzed ECUACs and WCUACs subject to standards specified in 10 CFR 431.97. Based on the analysis and comments received, DOE proposes that the standards for ECUACs and WCUACs do not need to be amended, because there is not clear and convincing evidence that amended standards would result in significant additional conservation of energy. (42 U.S.C. 6313(a)(6)(A)(ii))

[1] For editorial reasons, upon codification in the U.S. Code, Part C was redesignated Part A-1.
[2] All references to EPCA in this document refer to the statute as amended through America's Water Infrastructure Act of 2018, Public Law 115–270 (Oct. 23, 2018).

II. Introduction

The following section briefly discusses the statutory authority underlying this proposed determination, as well as the historical background relevant to the establishment of standards for ECUACs and WCUACs.

A. Authority

The Energy Policy and Conservation Act, among other things, authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. Title III, Part C of EPCA, added by Public Law 95-619, Title IV, 441(a) (42 U.S.C. 6311–6317, as codified), established the Energy Conservation Program for Certain Industrial Equipment, which sets forth a variety of provisions designed to improve energy efficiency. This equipment includes the ECUACs and WCUACs that are the subject of this NOPD. (42 U.S.C. 6311(1)(B)-(D))

The energy conservation program under EPCA consists essentially of four parts: (1) testing, (2) labeling, (3) the establishment of Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6311), energy conservation standards (42 U.S.C. 6313), test procedures (42 U.S.C. 6314), labeling provisions (42 U.S.C. 6315), and the authority to require information and reports from manufacturers (42 U.S.C. 6316).

Federal energy conservation requirements for covered equipment established under EPCA generally supersede State laws and regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6316(a) and (b); 42 U.S.C. 6297) DOE may, however, grant waivers of Federal preemption in limited instances for particular State laws or regulations, in accordance with the procedures and other provisions set forth under 42 U.S.C. 6316(b)(2)(D).

EPCA contains mandatory energy conservation standards for commercial heating, air-conditioning, and water-heating equipment. (42 U.S.C. 6313(a)) Specifically, the statute sets standards for small, large, and very large commercial package air conditioning and heating equipment, packaged terminal air conditioners (PTACs) and packaged terminal heat pumps (PTHPs), warm-air furnaces, packaged boilers, storage water heaters, instantaneous water heaters, and unfired hot water storage tanks. *Id*. In doing so, EPCA established Federal energy conservation standards that generally correspond to the levels in American Society of Heating, Refrigerating, and Air-Conditioning Engineers ("ASHRAE") Standard 90.1, "Energy Standard for Buildings Except Low-Rise Residential Buildings," in effect on October 24, 1992 (*i.e*., ASHRAE Standard 90.1-1989). ECUACs and WCUACs are covered under EPCA's definition of commercial package air conditioning and heating equipment. (42 U.S.C. 6311(8)) EPCA established initial standards for ECUACs and WCUACs with cooling capacity less than 240,000 Btu/h. (42 U.S.C. 6313(a))

If ASHRAE Standard 90.1 is amended with respect to the standard levels or design requirements applicable under that standard for certain commercial equipment,

including ECUACs and WCUACs, not later than 180 days after the amendment of the standard, DOE must publish in the *Federal Register* for public comment an analysis of the energy savings potential of amended energy efficiency standards. (42 U.S.C. 6313(a)(6)(A)(i)) Within certain exceptions,[3] DOE must adopt amended energy conservation standards at the new efficiency level in ASHRAE Standard 90.1, unless DOE determines that there is clear and convincing evidence to support a determination that the adoption of a more stringent efficiency level as a uniform national standard would produce significant additional energy savings and be technologically feasible and economically justified. (42 U.S.C. 6313(a)(6)(A)(ii))

On February 14, 2020, DOE published an update to appendix A to subpart C of 10 CFR part 430, "Procedures for Use in New or Revised Energy Conservation Standards and Test Procedures for Consumer Products and Commercial/Industrial Equipment" ("Process Rule"). 85 FR 8626. The updated Process Rule[4] codifies in regulation the "clear and convincing" threshold that EPCA requires DOE meet when establishing standards more-stringent than those specified by ASHRAE 90.1. 85 FR 8626, 8704-8708; Section 9(a)(1) of appendix A to subpart C of 10 CFR part 430. DOE will establish more stringent standards only if it can meet the very high bar to demonstrate the "clear and convincing evidence" threshold, which only exists where the specific facts and data made available to DOE demonstrate that there is no substantial doubt that a standard more stringent than that contained in the ASHRAE Standard 90.1 amendment is

[3] DOE cannot adopt an ASHRAE standard that (1) increases energy use or decreases the minimum required energy efficiency. (42 U.S.C. 6313(a)(6)(B)(iii))

[4] As updated, the Process Rule explicitly applies to the evaluation of ASHRAE equipment under 42 U.S.C. 6313(a)(6). 85 FR 8626, 8704-8708; Sections 2 and 9 of appendix A to subpart C of 10 CFR part 430.

permitted because it would result in a significant additional amount of energy savings, is technologically feasible and economically justified. *Id.*; Section 9(b) of appendix A to subpart C of 10 CFR part 430.

DOE also established a significance threshold for energy savings in the updated Process Rule. Specifically, DOE established a two-step approach that considers both an absolute site energy savings threshold value (over a 30-year period) of 0.3 quadrillion Btu ("quads") and a percentage threshold value of a 10 percent reduction in the covered product or equipment's energy use. *Id.;* Section 6(a) of appendix A to subpart C of 10 CFR part 430. DOE first evaluates the projected energy savings from a potential maximum technologically feasible ("max-tech") standard against the 0.3 quads of site energy threshold. *Id.;* Section 6(b)(2) of appendix A to subpart C of 10 CFR part 430. If the 0.3 quad-threshold is not met or exceeded, DOE then compares the max-tech savings to the total energy usage of the covered equipment to calculate a percentage reduction in energy usage. *Id.*; Section 6(b)(3) of appendix A to subpart C of 10 CFR part 430. If this comparison does not yield a reduction in site energy use of at least 10 percent over a 30-year period, DOE proposes that no significant energy savings would likely result from setting new or amended standards. *Id.*; Section 6(b)(4) of appendix A to subpart C of 10 CFR part 430. If either one of these thresholds is reached, DOE will conduct analyses to ascertain whether a standard can be prescribed that produces the maximum improvement in energy efficiency that is both technologically feasible and economically justified and still constitutes significant energy savings at the level determined to be economically justified. *Id.*; Section 6(b)(5) of appendix A to subpart C of 10 CFR part 430. The two-step approach allows DOE to ascertain whether a potential standard considered satisfies

EPCA's significant energy savings requirements in 42 U.S.C. 6313(a)(6)(A) to ensure that DOE avoids setting a standard that "will not result in significant conservation of energy." 85 FR 8626, 8655.

To determine whether a standard is economically justified, EPCA requires that DOE determine whether the benefits of the standard exceed its burdens by considering, to the greatest extent practicable, the following seven factors:

1) The economic impact of the standard on the manufacturers and consumers of the affected products;

2) The savings in operating costs throughout the estimated average life of the product compared to any increases in the initial cost, or maintenance expenses;

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

4) Any lessening of the utility or the performance of the 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 of Energy ("Secretary") considers relevant.

(42 U.S.C. 6313(a)(6)(B)(ii))(I)-(VII)

If DOE decides to adopt as a uniform national standard the efficiency levels specified in the amended ASHRAE Standard 90.1, DOE must establish such standard not later than 18 months after publication of the amended industry standard. (42 U.S.C. 6313(a)(6)(A)(ii)(I)) However, if DOE determines, supported by clear and convincing evidence, that a more stringent uniform national standard would result in significant additional conservation of energy and is technologically feasible and economically justified, then DOE must establish the more stringent standard not later than 30 months after publication of the amended ASHRAE Standard 90.1. (42 U.S.C. 6313(a)(6)(A)(ii)(II) and (B)(i))

EPCA also requires that every six years DOE evaluate the energy conservation standards for certain commercial equipment, including ECUACs and WCUACs, and publish either a notice of determination that the standards do not need to be amended, or a NOPR that includes new proposed energy conservation standards (proceeding to a final rule, as appropriate). (42 U.S.C. 6313(a)(6)(C)(i)) EPCA further provides that, not later than three years after the issuance of a final determination not to amend standards, DOE must publish either a notice of determination that standards for the product do not need to be amended, or a NOPR including new proposed energy conservation standards

(proceeding to a final rule, as appropriate). (42 U.S.C. 6313(a)(6)(C)(iii)(II)) DOE must make the analysis on which the determination is based publicly available and provide an opportunity for written comment. (42 U.S.C. 6313(a)(6)(C)(ii)) Further, a determination that more stringent standards would (1) result in significant additional conservation of energy and (2) be both technologically feasible and economically justified must be supported by clear and convincing evidence. (42 U.S.C. 6313(a)(6)(C)(i); 42 U.S.C. 6313(a)(6)(A); 85 FR 8626, 8704-8708; Section 9(c) of appendix A to subpart C of 10 CFR part 430)

DOE is publishing this NOPD pursuant to the six-year review required by EPCA, having initially determined that amended standards for ECUACs and WCUACs would not result in significant additional conservation of energy, be technologically feasible, and be economically justified.

B. Rulemaking History

On October 29, 2010, ASHRAE updated ASHRAE Standard 90.1 with respect to small, large, and very large commercial package air conditioning and heating equipment (*i.e.*, ASHRAE 90.1-2010). With regard to ECUACs and WCUACs, ASHRAE 90.1-2010 updated efficiency levels for certain small (*i.e.*, cooling capacity greater than or equal to 65,000 Btu/h and less than 135,000 Btu/h), large, and very large ECUACs and WCUACs. ASHRAE 90.1-2010 also updated its referenced test procedures for this equipment. ASHRAE 90.1-2010 did not amend the efficiency levels for certain small (*i.e.*, cooling capacity less than 65,000 Btu/h) WCUACs and ECUACs, but did amend the test procedure for this equipment.

In a final rule published May 16, 2012, DOE amended the standards for ECUACs and WCUACs by adopting the energy efficiency ratio ("EER") levels for this equipment established in ASHRAE 90.1-2010. 77 FR 28928 ("May 2012 final rule"). For certain small (*i.e.*, cooling capacity greater than or equal to 65,000 Btu/h and less than 135,000 Btu/h), large, and very large WCUACs and ECUACs, DOE estimated the energy savings potential of standards at the max-tech[5] efficiency levels over those efficiency levels in ASHRAE 90.1-2010 (*i.e.*, energy savings estimates for max-tech levels do not include the energy savings from increasing the Federal standard at the time to the level found in ASHRAE 90.1-2010). 76 FR 25622, 25644–25646 (May 5, 2011). Based on an analysis of two different shipment scenarios (shipments based on historical trends and constant shipments fixed to 2009 shipment levels), DOE estimated that efficiency standards at the max-tech level would result in additional energy savings of between 0.0061 to 0.0102 quads primary energy savings for the six classes of small, large, and very large WCUACs analyzed (76 FR 25622, 25644–25645), representing approximately 4.9 percent to 5.5 percent of estimated WCUAC energy use during the analysis period. DOE estimated that efficiency standards at the max-tech level would result in additional energy savings of between 0.0013 to 0.0021 quads primary energy for the two classes of very large ECUACs analyzed (76 FR 25622, 25646), representing approximately 3.7 percent to 3.9 percent of estimated ECUAC energy use during the analysis period. DOE did not examine certain small WCUACs and ECUACs (*i.e.*, equipment less than 65,000 Btu/h cooling capacity) because the levels in ASHRAE 90.1-2010 for such equipment were not amended. 76 FR 25622, 25631. Additionally, DOE did not assess potential energy

[5] The max-tech level represented the highest efficiency level of equipment available on the market at the time of the analysis.

savings for ECUACs with cooling capacity greater than or equal to 65,000 Btu/h but less than 240,000 Btu/h because it did not find any equipment in this capacity range on the U.S. market. *Id.*

Based on its analysis and the review of the market, DOE determined that it did not have "clear and convincing evidence" that significant additional conservation of energy would result from adoption of more stringent standard levels than those in ASHRAE 90.1-2010 for ECUACs and WCUACs. 77 FR 28928, 28979. DOE did not conduct an economic analysis of standards more stringent than the ASHRAE 90.1-2010 levels for ECUACs and WCUACs because of the conclusion that more stringent standards would result in minimal energy savings. *Id.*

Since ASHRAE 90.1-2010 was published, ASHRAE 90.1 has undergone three revisions. On October 9, 2013, ASHRAE published ASHRAE 90.1-2013; on October 26, 2016, ASHRAE published ASHRAE 90.1-2016; and on October 24, 2019, ASHRAE published ASHRAE 90.1-2019. In none of these publications did ASHRAE amend minimum EER levels for small, large, and very large WCUACs or ECUACs; therefore, DOE was not triggered to examine amended standards for this equipment under 42 U.S.C. 6313(a)(6)(A). As a result, the current Federal standards for ECUACs and WCUACs are those set forth in the May 2012 final rule and codified in Table 1 of 10 CFR 431.97. These standards and their compliance dates are provided in Table II.1 of this NOPD.

Table II.1 Federal Energy Conservation Standards for Water-Cooled and Evaporatively-Cooled Commercial Package Air-Conditioning and Heating Equipment

Equipment Type	Cooling Capacity (Btu/h)	Heating Type	Minimum EER	Compliance Date
Small Water-Cooled	<65,000	All	12.1	October 29, 2003
Small Water-Cooled	≥65,000 and <135,000	No Heating or Electric Resistance Heating	12.1	June 1, 2013
		All Other Types of Heating	11.9	June 1, 2013
Large Water-Cooled	≥135,000 and <240,000	No Heating or Electric Resistance Heating	12.5	June 1, 2014
		All Other Types of Heating	12.3	June 1, 2014
Very Large Water-Cooled	≥240,000 and <760,000	No Heating or Electric Resistance Heating	12.4	June 1, 2014
		All Other Types of Heating	12.2	June 1, 2014
Small Evaporatively-Cooled	<65,000	All	12.1	October 29, 2003
Small Evaporatively-Cooled	≥65,000 and <135,000	No Heating or Electric Resistance Heating	12.1	June 1, 2013
		All Other Types of Heating	11.9	June 1, 2013
Large Evaporatively-Cooled	≥135,000 and <240,000	No Heating or Electric Resistance Heating	12.0	June 1, 2014
		All Other Types of Heating	11.8	June 1, 2014
Very Large Evaporatively-Cooled	≥240,000 and <760,000	No Heating or Electric Resistance Heating	11.9	June 1, 2014
		All Other Types of Heating	11.7	June 1, 2014

On July 29, 2019, DOE published a request for information ("RFI") to collect information and data to consider amendments to DOE's energy conservation standards for ECUACs and WCUACs. 84 FR 36480 ("July 2019 ECS RFI"). In the July 2019 ECS RFI, DOE solicited information to help determine whether amended standards for ECUACs and WCUACs would result in significant additional conservation of energy and whether such standards would be technologically feasible and economically justified. 84 FR 36480, 36483. DOE specifically sought information and data on whether the market

size and shipment data used in the May 2012 final rule reflect the current market size and shipments of WCUACs and ECUACs; the range of efficiency levels currently on the market for each equipment class of ECUACs and WCUACs; the integrated energy efficiency ratio ("IEER") metric and weighting factors and its applicability to the average use cycles of ECUACs and WCUACs; the share of ECUAC and WCUAC models on the market that are currently rated for both EER and IEER; and any information regarding the regulatory burden amended standards might impose on manufacturers. 84 FR 36480.

DOE received several comments from interested parties in response to the publication of the July 2019 ECS RFI. Table II.2 lists the commenters, their abbreviated names used throughout this NOPD, and organization type. Discussion of the relevant comments provided by these organizations and DOE's responses are provided in the appropriate sections of this document.

Table II.2 Interested Parties that Provided Comment on the July 2019 ECS RFI

Name	Abbreviation	Organization Type
Trane	Trane	Manufacturer
Air-Conditioning, Heating, and Refrigeration Institute	AHRI	Industry Representative
California Investor Owned Utilities (Pacific Gas and Electric Company, San Diego Gas and Electric, and California Edison)	CA IOUs	Utilities
Appliance Standards Awareness Project; Natural Resources Defense Council	ASAP and NRDC	Efficiency/Environmental Advocates

III. Discussion and Rationale

DOE developed this proposed determination after considering comments, data, and information from interested parties that represent a variety of interests. This notice addresses issues raised by these commenters.

A. General Comments

CA IOUs expressed general support for analyzing updated energy conservation standards for ECUACs and WCUACs. (CA IOUs, No. 6 at p. 4) ASAP and NRDC commented that DOE should analyze the potential for energy savings from amended standards for ECUACs and WCUACs, and in particular for "large" and "very large" WCUACs. (ASAP and NRDC, No. 7 at p. 1) CA IOUs recommended that DOE complete the test procedure rulemaking prior to initiating any energy conservation standards rulemaking to provide an opportunity for stakeholders to understand the test procedure on which equipment is being rated before analyzing more stringent energy conservation standards. (CA IOUs, No. 6 at p. 3) As stated and explained further in the subsequent sections, DOE is not proposing more stringent standards for WCUACs or ECUACs. CA IOUs also suggested consolidating any energy conservation standards rulemaking for ECUACs and WCUACs with that of water-source heat pumps ("WSHPs"). (CA IOUs, No. 6 at p.4) CA IOUs stated given the technical similarities among ECUACs, WCUACs, and WSHPs, and the limited shipments of this equipment, DOE should consolidate the rulemakings for all three equipment categories as a means to reduce regulatory burden for industry and DOE. *Id.* While these equipment categories may share some technical similarities, WSHPs are subject to different test procedures and

standards than those of ECUACs and WCUACs. Furthermore, the WSHP market is about 100 times larger than the ECUAC and WCUAC market combined, with about 200,000 shipments annually. (Docket EERE-2014-BT-STD-0015-0043 at p. 133) For these reasons, DOE has not consolidated the evaluation of ECUAC and WCUAC energy conservation standards with that of WSHPs.

Trane commented generally about the cumulative regulatory burden that manufacturers face, stressing that increased Federal efficiency standards for air-cooled commercial unitary air conditioners ("ACUACs") and commercial warm air furnaces ("CWAFs") as well as alternative refrigerant requirements would make testing and product development for ECUACs and WCUACs particularly burdensome. (Trane, No. 4 at p. 3) Again, as discussed in the following sections, DOE is not proposing to amend standards for ECUACs or WCUACs.

B. Market Analysis

For this proposed determination, DOE conducted a review of the current market for ECUACs and WCUACs, including equipment literature, the AHRI Directory of Certified Product Performance ("AHRI Directory"),[6] and the DOE Compliance Certification Management System ("CCMS") database.[7] DOE also considered market data and stakeholder comments received in response to the July 2019 ECS RFI, the

[6] The AHRI Directory for unitary large equipment can be found at *https://www.ahridirectory.org/Search/SearchHome*. AHRI's certification program does not currently include ECUACs of any cooling capacities or WCUACs with cooling capacity greater than 250,000 Btu/h.
[7] Data from the DOE CCMS database used in the July 2019 ECS RFI was accessed on April 1, 2019. Updated data for this document was accessed on December 16, 2019. This database can be found at *http://www.regulations.doe.gov/certification-data/*.

analysis performed in the previous standards rulemaking for ECUACs and WCUACs, and the energy savings potential for amended standards determined in the May 2012 final rule. The following sub-sections discuss DOE's analysis of the current market for ECUACs and WCUACs, relevant analyses and results from the May 2012 final rule, including shipments estimates, and comments received in response to the July 2019 ECS RFI.

1. Shipments Estimates

As part of the previous standards rulemaking for ECUACs and WCUACs, AHRI provided historical shipments data from 1989 to 2009 for WCUACs by cooling capacity range. (Docket No. EERE-2011-BT-STD-0029-0005 at pp. 54-55) This previously submitted historical data showed strongly decreasing shipments for certain small (*i.e.*, 65,000 to 134,900 Btu/h cooling capacity), large (*i.e.*, 135,000 to 249,000 Btu/h cooling capacity), and very large (*i.e.*, 250,000 Btu/h and over cooling capacity) WCUACs from 1989 to 2009. DOE developed shipments projections for the two smaller equipment classes using an exponential curve fit to the available historical data. Because the historical trends showed a steep decline in shipments for these classes, the shipment projections resulted in very few shipments by the end of the 30-year analysis period. 76 FR 25622, 25642. For very large WCUACs, the decline in shipments was less definitive, although a linear fit of the available 21 years of shipment data showed gradually declining shipments. For each of the WCUAC equipment classes analyzed, DOE used the historical shipments data to analyze two shipment scenarios: (1) based on historical trends of declining shipments described earlier in this paragraph, and (2) based on shipments remaining constant at 2009 levels. DOE analyzed the energy savings potential

by equipment class for both scenarios to provide a range of energy savings estimates. 76 FR 25622, 25641-25642.

In the May 2012 final rule analysis, DOE did not identify any models of certain small (*i.e.*, greater than 65,000 Btu/h but less than 135,000 Btu/h cooling capacity) or large ECUACs, and thus DOE assumed no shipments for these equipment classes. 76 FR 25622, 25639. DOE identified multiple models of very large ECUACs, but because no shipments data were available for ECUACs, DOE developed shipment estimates based on the ratio of the number of identified models of very large ECUACs (9) to the number of models of very large WCUACs (35). 76 FR 25622, 25642.

In the July 2019 ECS RFI, DOE presented the shipment estimates relied on in the May 2012 final rule, noting that average shipments of ECUACs and WCUACs with cooling capacity greater than or equal to 65,000 Btu/h were previously estimated to be less than 1,000 for each equipment class and noted that such equipment is only a small fraction of shipments of the commercial unitary air conditioner ("CUAC") market. 84 FR 36480, 36484. In development of the present evaluation, DOE searched for, but was unable to identify, publicly available sources of shipments of ECUACs and WCUACs. In the July 2019 ECS RFI, DOE presented a model count of the available models certified in the CCMS database and preliminarily finding that the number of models of ECUACs and WCUACs currently on the market is significantly less than the number of ACUAC models on the market for all capacity ranges, suggesting that the current market for ECUACs and WCUACs is much smaller than the present-day market for ACUACs. 84 FR 36480, 36484-36485.

In the July 2019 ECS RFI, DOE requested comment on whether the shipments estimates for WCUACs and ECUACs analyzed in the May 2012 final rule are representative of the current market. DOE also requested data on historical and recent shipments for each of the equipment classes of WCUACs and ECUACs, including for units with cooling capacity less than 65,000 Btu/h. DOE requested feedback on whether the historical decline in shipments for WCUACs that was found in the May 2012 final rule analysis still applies for the current WCUAC market, and specifically, information on market forces that are expected to influence future WCUAC and ECUAC shipment trends, and whether there is any information to suggest a growing or declining ECUAC market. 84 FR 36480, 36484–36485.

In response to the July 2019 ECS RFI, Trane agreed with DOE's assessment that the WCUAC and ECUAC market is a fraction of all CUAC shipments, and that the historical data from the last rulemaking is generally representative of the WCUAC market. (Trane, No. 4 at p. 1) Trane stated that it may be prudent to add more recent shipping history to the analysis to determine if it changes any assumptions as this market is tied specifically to multi-floor office building construction. *Id.* AHRI also stated most WCUAC products are linked to multi-floor office buildings. (AHRI, No. 5 at p. 2) AHRI further stated that DOE's WCUAC shipment estimates from the May 2012 final rule do not reflect the current market trend. (AHRI, No. 5 at p. 2) Trane and AHRI commented that estimates developed for the May 2012 final rule were based on shipment analysis data through 2009, which was at a point of a very large downturn in the market due to the great recession. (Trane, No. 4 at p. 1; AHRI, No. 5 at p. 2). AHRI stated that for this reason, and the fact that shipments are linked to investment in the commercial

building sector, DOE's 30-year shipment prediction models are not based on representative data and do not reflect reasonable assumptions. (AHRI, No. 5 at p. 2) Trane commented that the market has since rebounded and grown to more typical historical levels. (Trane, No. 4 at p. 1) Trane and CA IOUs recommended adding more recent WCUAC shipments history to the analysis, with the CA IOUs stating that the data did not break out shipments by cooling type or geographic locations of where shipments are sold. (Trane, No. 4 at p. 1; CA IOUs, No. 6 at p. 3) Trane recommended the shipments analysis should reflect the relationship to multi-floor office building construction. (Trane, No. 4 at p. 1) AHRI provided recent data on the current WCUAC market size and trend. (AHRI, No. 5 at p. 5)

Trane stated that the ECUAC market is declining as other manufacturers have exited this market. Trane also stated both the ECUAC and WCUAC markets are small and that it is questionable whether additional analysis would significantly affect conclusions about the market size. (Trane, No. 4 at pp. 1–2) Trane suggested that because of the small market size for this equipment and the significant burden associated with compliance with recent regulations for similar equipment (*i.e.*, ACUACs and CWAFs), if the energy conservation standards for ECUACs and WCUACs were to exceed the requirements in ASHRAE 90.1, manufacturers would consider exiting the market. (Trane, No. 4 at p. 3)

DOE acknowledges the market downturn that occurred in the years at the end of the range of historical shipments used in the May 2012 final rule. DOE incorporated the additional shipments data from AHRI to develop revised shipment projections using the

same model specification as used for the May 2012 final rule. Table III.1 presents the historical shipments for WCUACs from the May 2012 final rule (1984–2009) along with historical shipments in the following years as provided by AHRI (2010–2018). As shown in Table III.1 for the small and large WCUACs, shipments starting in 2009 are lower than in prior years. The very large WCUAC shipments fell in the years immediately following 2008, and while the shipments have rebounded, they did not rebound to the highest shipment levels seen previously.

Table III.1 Historical Shipments Data for WCUACs

Year*	Small AC Water-cooled (< 64.9 kBtu/h)	Small AC Water-cooled (65 to 134.9 kBtu/h)	Large AC Water-Cooled (135 to 249 kBtu/h)	Very Large AC Water-Cooled (≥ 250 kBtu/h)
1989		1437	793	1622
1990		1503	779	1211
1991		1107	621	908
1992		1068	537	720
1993		985	520	668
1994		922	504	815
1995		1121	493	805
1996		1217	652	1020
1997		989	522	1216
1998		795	623	1886
1999		874	477	898
2000		1478	1621	1170
2001		606	409	762
2002		502	355	1227
2003		390	287	740
2004		447	291	711
2005		177	188	861
2006		316	278	1231
2007		359	317	1231
2008		282	311	1390
2009	91	152	182	585
2010	119	139	186	531
2011	84	209	180	609
2012	95	230	137	624
2013	59	198	164	751
2014	54	216	114	829
2015	52	137	147	770
2016	44	105	154	946
2017	45	62	128	985
2018	39	106	108	844

*Data for 1989–2009 from the May 2012 Final Rule. This data does not include WCUACs with cooling capacity less than 65,000 Btu/h because this class was not included in that rulemaking. Data for 2009–2018 provided by AHRI in response to the July 2019 ECS RFI.

Similar to the approach in the May 2012 final rule, for this analysis DOE developed two shipment projections; one based on historical trends and one that held shipments constant at the 2018 shipment level (referred to as "2019 trend" and "2019 constant", respectively). The 2019 trend and 2019 constant projections are compared to projections from the May 2012 final rule that were based on the historical trends and

fixed at the level of the 2009 shipments (referred to as "2012 trend" and "2012 constant", respectively). This comparison is shown in Table III.2 of this document.

DOE was unable to identify shipments data for the ECUAC equipment classes and none were provided by the stakeholders. As was the approach used in the May 2012 final rule for the present analysis, shipment projections were developed by scaling the WCUAC shipment projections using a ratio of unique model counts for each equipment class (see section III.B.3 of this document). For the small (cooling capacity less than 65,000 Btu/h) ECUAC class of products, the shipment projection was further adjusted by a factor of 0.5 to better reflect the approximate size of the market in the mid-2000s.[8]

AHRI commented that WCUACs are typically sold as part of a large project (*i.e.*, a multi-tenant, multi-story office building). (AHRI, No. 5 at p. 4) To account for shipments being a function of large office construction, DOE also developed a third projection for the very large WCUAC equipment class, using a regression analysis with historical data and projections of large office existing floor space and large office additions as the variables (referred to as "2019 regression" in Table III.2 of this document).

Table III.2 Comparison of Shipments for WCUACs and ECUACs by Equipment Class

	2018	2020	2025	2030	2035	2040	2045
Small WCUAC, <65,000 Btu/h							
2012 trend	--	--	--	--	--	--	--

[8] Pacific Gas and Electric Company; Emerging Technologies Program, Application Assessment Report # 0605. Evaluation of the Freus Residential Evaporative Condenser System in PG&E Service Territory. *https://www.etcc-ca.com/sites/default/files/OLD/images/stories/pdf/ETCC_Report_464.pdf* accessed December 18, 2019.

	2018	2020	2025	2030	2035	2040	2045
2012 constant (=2009)	--	--	--	--	--	--	--
2019 trend	39	33	18	10	6	3	2
2019 constant (=2018)	39	39	39	39	39	39	39
Small WCUAC, ≥65,000 and <135,000 Btu/h							
2012 trend	93	76	46	28	17	10	6
2012 constant (=2009)	152	152	152	152	152	152	152
2019 trend	106	87	52	32	19	11	7
2019 constant (=2018)	106	106	106	106	106	106	106
Large WCUAC, ≥135,000 and <240,000 Btu/h							
2012 trend	132	117	87	64	47	35	26
2012 constant (=2009)	182	182	182	182	182	182	182
2019 trend	108	110	78	55	39	28	20
2019 constant (=2018)	108	108	108	108	108	108	108
Very Large WCUAC, ≥240,000 and ≤760,000 Btu/h							
2012 trend	953	944	923	903	882	861	840
2012 constant (=2009)	585	585	585	585	585	585	585
2019 trend	844	777	721	664	608	551	495
2019 constant (=2018)	844	844	844	844	844	844	844
2019 regression	844	1000	929	927	865	844	828
Small ECUAC, <65,000 Btu/h							
2012 trend	--	--	--	--	--	--	--
2012 constant (=2009)	--	--	--	--	--	--	--
2019 trend	156	132	72	40	24	12	8
2019 constant (=2018)	156	156	156	156	156	156	156
Very Large ECUAC, ≥240,000 and ≤760,000 Btu/h							
2012 trend	245	243	238	232	227	221	216
2012 constant (=2009)	150	150	150	150	150	150	150
2019 trend	14	13	12	11	10	9	9
2019 constant (=2018)	14	14	14	14	14	14	14
2019 regression	14	17	16	16	14	14	14

In the May 2012 final rule, DOE did not analyze small ECUACs and WCUACs with cooling capacity less than 65,000 Btu/h. For the July 2019 ECS RFI, DOE identified a single manufacturer of ECUACs in this capacity range, and the models offered are single-phase equipment and appear to be predominantly marketed for residential applications in regions of the United States with hot and dry climates, suggesting that there are few if any shipments in other regions of the United States. 84 FR 36480, 36485. DOE identified only two distinct product lines of WCUACs with

cooling capacity less than 65,000 Btu/h, and DOE's examination of manufacturer literature for these WCUACs suggested that these models do not comprise a significant share of the market for air conditioners in residential or commercial applications. *Id.*

In response to the July 2019 ECS RFI, AHRI provided shipment data for WCUACs with cooling capacity less than 65,000 Btu/h. (AHRI, No. 5 at p. 5) Based on the shipments data, DOE's analysis points to declining future shipments for WCUACs and ECUACs with cooling capacity less than 65,000 Btu/h.

The projected trends from the May 2012 final rule and those based on the updated data both generally show declines in shipments for small (≥65,000 and <135,000 Btu/h), large and very large WCUACs, and very large ECUACs. The shipment levels under the 2019 constant projections are lower than the 2012 constant projections for small (≥65,000 and <135,000 Btu/h) and large WCUACs and very large ECUACs. The 2019 constant projections for very large WCUACs are higher than the 2012 constant projections (but lower than the 2012 trend projections). The 2019 regression projections for very large WCUACs and ECUACs show a more stable level of shipments over the analysis period than the 2019 trend models, but are lower than the 2012 trend projection.

As DOE did not analyze ECUACs and WCUACs with cooling capacity less than 65,000 Btu/h for the May 2012 final rule, no comparisons to the current projections are possible. The current trended shipments projections for the small (cooling capacity less than 65,000 Btu/h) equipment classes reach 10 or fewer shipments by 2045.

2. Model Counts

For the July 2019 ECS RFI, DOE conducted a review of the current market for WCUACs and ECUACs, based on models included in the DOE CCMS database.[7] 84 FR 36480, 36484. DOE also compared the number of ECUAC and WCUAC models to the number of ACUAC models listed in DOE's CCMS database.

In the July 2019 ECS RFI, DOE requested comment on the size of the current market for ECUACs and WCUACs, as compared to the market for ACUACs. 84 FR 36480, 36485. Trane commented that DOE's analysis clearly shows that the market for ECUACs and WCUACs is much smaller than the market for ACUACs. Trane further stated that ECUACs and WCUACs differ from ACUACs in that shipments of ECUACs and WCUACs are somewhat regionalized in the United States due to their more niche applications. (Trane, No. 4 at p. 2)

Table III.3 shows the number of models listed within the DOE CCMS database that DOE identified for each class of ACUACs, ECUACs, and WCUACs.[7]

Table III.3 Model Counts for ECUACs, WCUACs, and ACUACs

Cooling Capacity Range *Btu/h*	Number of Models		
	ECUAC	WCUAC	ACUAC
<65,000	11	9	2,748*
≥65,000 and <135,000	0	47	2,274
≥135,000 and <240,000	0	34	2,194
≥240,000 and <760,000	15	363	4,817

* This <65,000 Btu/h air-cooled model count includes only basic models of three-phase air-cooled commercial air conditioners with cooling capacity less than 65,000 Btu/h.

As shown in Table III.3, the number of ECUAC and WCUAC models currently on the market is substantially less than the number of ACUAC models on the market for all capacity ranges. This is consistent with the relationship between model counts identified in the May 2012 final rule, further suggesting that the current market for ECUACs and WCUACs is much smaller than the market for ACUACs.

3. Current Market Efficiency Distributions

For the July 2019 ECS RFI, DOE examined the efficiency ratings of ECUACs and WCUACs currently on the market. DOE requested comment on the range of efficiency levels for each equipment class of ECUACs and WCUACs currently on the market and on whether efficiency levels above the current baseline standard are achievable for equipment across all cooling capacity ranges. 84 FR 36480, 36485.

In response to the July 2019 ECS RFI, ASAP and NRDC encouraged DOE to analyze energy savings potential from amended standards for both ECUACs and WCUACs, particularly those of large and very large WCUACs. They stated that the efficiency distribution for WCUACs presented in the July 2019 ECS RFI illustrates that the average and maximum EERs of WCUACs on the market are significantly higher than the current standard. (ASAP and NRDC, No. 7 at pp. 1–2) They stated that this shows there is a wide availability of models that exceed the standard across all covered capacity ranges. (ASAP and NRDC, No. 7 at p. 1)

AHRI recommended that DOE not change the baseline standard for WCUACs. (AHRI, No. 5 at p. 2) AHRI also commented that a significant part of WCUAC

shipments are moving towards replacement installations in renovated buildings, specifically in mechanical rooms of office buildings, which constrains the size and thus the potential for increased EER performance. (AHRI, No. 5 at p. 2) AHRI also stated the potential improvements in EER ratings are limited for WCUACs based on existing technology. (AHRI, No. 5 at p. 2) Trane also stated that WCUACs are typically only available from a manufacturer in one efficiency tier, and are therefore not offered as part of "standard" or "high efficiency" model lines. Trane also commented that the WCUAC EER data from the CCMS Database presented in the July 2019 ECS RFI is representative of what is currently available today in the market. (Trane, No. 4 at p. 2) With respect to ECUACs, Trane stated that the market is primarily for replacement purposes and that because of this, ECUACs face size constraints similar to WCUACs despite being installed outdoors, which limits the potential for increased EER levels. (Trane, No. 4 at p. 2)

In response to comments, DOE updated the estimated energy savings and percent of no-new-standards energy consumption for 30 years of shipments (2020-2049) using the 2012 final rule model and input assumptions, but updated the shipment projections to reflect more recent information outlined in sections above. DOE also updated efficiency distributions to reflect the current market and **Error! Reference source not found.**

presents the summary of statistics by equipment category and capacity range of equipment for unique models[9] from DOE's CCMS Database[7].

Table III.4 Current Market Efficiency Distributions for WCUACs and ECUACs

Cooling Capacity Range *Btu/h*	Number of Unique Models	Average Cooling Capacity *Btu/h*	EER			Current Federal EER Standard Level*
			Minimum	Average	Maximum	
Water-Cooled Air Conditioners						
<65,000	1	58,000	12.2	12.2	12.2	12.1
≥65,000 and <135,000	23	99,478	12.1	12.8	15.3	12.1
≥135,000 and <240,000	15	175,600	13.5	14.6	16.3	12.5
≥240,000 and <760,000	234	493,556	12.5	13.8	16.1	12.4
Evaporatively-Cooled Air Conditioners						
<65,000	8	37,950	13.2	15	16.0	12.1
≥65,000 and <135,000	0	N/A	N/A	N/A	N/A	N/A
≥135,000 and <240,000	0	N/A	N/A	N/A	N/A	N/A
≥240,000 and <760,000	4	442,750	11.8	12.7	13.4	11.7

* For all capacity ranges except very large evaporatively-cooled air conditioners, the Federal EER standard listed is for "no heat or electric heat" class. For the very large evaporatively-cooled air conditioner class, the Federal EER standard listed is the "all other types of heating" class.

Savings were estimated based on the forecasted shipments labeled 2019 trend, 2019 constant, and 2019 regression. For the savings estimates labeled 2019 regression, as noted in Section III.B.1 of this NOPD, a regression projection was only developed for the very large equipment class.

[9] The count of unique models excludes basic models that appear to be duplicates – *i.e.*, basic models sharing the same manufacturer and certified cooling capacity and EER ratings. For basic models that had multiple individual models certified with different capacities and different EER ratings, the individual models were considered to be unique models.

As mentioned in section II.B of this NOPD, the cumulative site energy savings are calculated using the max-tech level, which is the highest value of efficiency in DOE's CCMS Database within each capacity range of ECUACs and WCUACs (*i.e.*, <65,000 Btu/h, 65,000-135,000 Btu/h, 135,000-240,000 Btu/h, and 240,000-760,000 Btu/h). However, for very large WCUACs, consideration of the highest efficiency value in DOE's CCMS database may not be appropriate for evaluating potential amendments to the energy conservation standards.

The very large WCUAC equipment class represents a wide range of cooling capacities (≥240,000 and <760,000 Btu/h). For the very large WCUAC class, there is only one individual model rated at the highest level of 16.1 EER, and that individual model is part of a larger model line with many other offerings, all of which have EER ratings significantly lower than 16.1. As explained in the following discussion, DOE's examination of this model line indicates that the individual model in question is an outlier among: (1) models in the product line rated within the same basic model (and at approximately the same capacity as) the individual model in question; as well as (2) models in the product line rated at capacities across the capacity range of the very large equipment class. This individual model rated at 16.1 EER is within a basic model for which all other individual models (with similar technology options and approximately the same cooling capacity as the model rated at 16.1 EER) have an EER rating of 15 or lower. Within this product line, the model numbers certified in DOE's CCMS Database indicate that among individual models rated as part of the same basic model, the differences in these models' rated efficiencies depend on fan diameter and number of fan blades. This unique model (rated at 16.1 EER) shows a relationship between technology

options and rated efficiency that appears inconsistent with all other models of the product line. Specifically, there are two options for number of fan blades, and all other individual models in the basic model except for the model rated at 16.1 EER show that for the same fan diameter, the model with the higher number of fan blades has a lower EER rating. It is unclear why a higher number of fan blades results in a higher EER rating for only this specific individual model.

Moreover, there are basic models within this product line rated at a wide range of capacities across the very large WCUAC class that have the same combination of technology options that distinguish the individual model rated at 16.1 EER. However, the EER ratings for all of these models are significantly lower than 16.1, between 13.5-14.5. It is not clear why this combination of technology options results in a higher efficiency at only one rated capacity; and this discrepancy suggests that a 16.1 EER level may not be achievable with these technology options at other capacities within the very large WCUAC equipment class. Therefore, DOE considered the model rated at 16.1 to be an outlier. As such, DOE calculated the energy savings from potential amended standards for very large WCUACs using the next highest level that was achievable across the range of capacities (*i.e.*, an EER of 15).

The estimated energy savings, which vary by shipment scenario and equipment class, are presented in **Error! Reference source not found.** of this NOPD. Selecting the minimum and maximum estimated savings level for each equipment class resulted in a range of total estimated site energy savings for the WCUAC classes of between 0.0030 quads (8.5 percent of estimated site energy use) and 0.0046 quads (8.6 percent of

estimated site energy use), and for the ECUAC classes of 0.00006 quads (6.2 percent of estimated site energy use) and 0.00011 quads (6.0 percent of estimated site energy use) during the analysis period. For all equipment classes, the resulting estimated savings ranged between 0.0031 quads (8.5 percent of estimated site energy consumption) and 0.0047 quads (8.5 percent of estimated site energy consumption) during the analysis period.

Table III.5 Estimated National Site Energy Savings and Percent Energy Reductions for WCUACs and ECUACs at the Max-Tech Level

Cooling Capacity Range *Btu/h*	Cumulative Site National Energy Savings (quads)*			Reduction in National Site Energy Consumption (percent)
	Trend	Constant	Regression	
WCUACs				
<65,000	0.00000	0.00000	--	0.0
≥65,000 and <135,000	0.00005	0.00019	--	13.3
≥135,000 and <240,000	0.00011	0.00025	--	10.1
≥240,000 and <760,000	0.00287	0.00395	0.00413	8.4
ECUACs				
<65,000	0.00001	0.00004		5.3
≥65,000 and <135,000	N/A	N/A	N/A	N/A
≥135,000 and <240,000	N/A	N/A	N/A	N/A
≥240,000 and <760,000	0.00005	0.00006	0.00007	6.5

* Cumulative national energy savings are measured over the lifetime of ECUACs and WCUACs purchased in the 30-year analysis period (2020-2049).

For the May 2012 final rule analysis, DOE did not incorporate changing trends in shipments by efficiency over time in the no-new-standards case, and the updated energy savings estimates presented in **Error! Reference source not found.** of this NOPD also use a constant efficiency distribution of shipments over time. DOE does not have data on efficiency trends for WCUAC and ECUACs and seeks comment on efficiency trends specific to this equipment.

C. Energy Efficiency Descriptors

The current energy efficiency descriptor for the ECUAC and WCUAC Federal standards is EER. 10 CFR 431.97. ASHRAE 90.1 specifies both EER and IEER minimum efficiency levels. The EER metric represents the efficiency of the equipment operating at full load. The IEER metric factors in the efficiency of operating at part loads of 75 percent, 50 percent, and 25 percent of capacity as well as the efficiency at full load. The IEER metric weights the full- and part-load efficiencies based on the average amount of time operating at each loading point. Additionally, IEER incorporates reduced condenser temperatures (*i.e.*, reduced entering water temperature for WCUACs and reduced outdoor air dry-bulb and wet-bulb temperatures for ECUACs) to reflect the representative ambient conditions for part-load operation in the field. ASHRAE 90.1 has included minimum efficiency levels for ECUACs and WCUACs in terms of both EER and IEER since 2010. In the July 2019 ECS RFI, DOE requested comment on the representativeness of IEER for WCUACs and ECUACs, and more specifically that of ECUACs with cooling capacity less than 65,000 Btu/h, and the burden that IEER testing may impose on manufacturers. 84 FR 36480, 36486-36487.

In response to the July 2019 ECS RFI, Trane and AHRI generally supported adopting the IEER metric for the Federal standards for WCUACs. (Trane, No. 4 at p. 2; AHRI No. 5 at p. 3) Trane also supported adopting the IEER metric for Federal standards for ECUACs. Trane further stated that WCUACs and ECUACs are space constrained, which significantly limits the ability to develop products with any further increase in full load efficiency, and that a part load metric therefore provides many more opportunities to increase efficiency performance without requiring physically larger units. (Trane, No. 4 at p. 2) ASAP and NRDC stated that it would make sense to move to a part-load metric for ECUACs and WCUACs to better represent field performance and reflect the efficiency benefits of technologies that improve part-load performance, and encouraged DOE to investigate appropriate test points and weighting factors that could be used for a part-load metric for ECUACs and WCUACs. (ASAP and NRDC, No. 7 at p. 2) CA IOUs recommended that DOE maintain the current performance metric of EER. (CA IOUs, No. 6 at p. 1) CA IOUs expressed general support for including part-load conditions in an integrated metric, but strongly recommended that DOE not adopt IEER as it is currently specified in the industry standards. (CA IOUs, No. 6 at p. 3)

As discussed in the following subsections, DOE is not proposing to change the metric for the ECUAC and WCUAC energy conservation standards.

1. Representativeness of IEER for ECUACs and WCUACs

As previously mentioned, IEER includes lower condenser temperatures for part-load tests. Table III.6 shows the IEER test conditions for ECUACs and WCUACs specified in AHRI Standard 340/360-2019, "Performance Rating of Commercial and

Industrial Unitary Air-conditioning and Heat Pump Equipment" ("AHRI 340/360-2019").[10]

Table III.6 IEER Test Conditions for Water-Cooled and Evaporatively-Cooled Air Conditioners from AHRI 340/360-2019

	Water-Cooled	Evaporatively-Cooled		
Percent Load	**Entering Water Temperature °F**	**Entering Air Dry-Bulb Temperature °F**	**Entering Air Wet-Bulb Temperature °F**	**Makeup Water Temperature °F**
100%	85.0	95.0	75.0	85.0
75%	73.5	81.5	66.2	81.5
50%	62.0	68.0	57.5	68.0
25%	55.0	65.0	52.8	65.0

Performance of equipment at each of the four IEER testing conditions are combined in a weighted average to determine the IEER rating. The following equation shows the weighting factors for each testing condition.

$$IEER = (0.020 \cdot A) + (0.617 \cdot B) + (0.238 \cdot C) + (0.125 \cdot D)$$

Where (see Table III.6 for condenser temperature for all four test points):

A = EER, Btu/W·h, at 100 percent capacity at standard rating conditions

B = EER, Btu/W·h, at 75 percent capacity and reduced condenser temperature

C = EER, Btu/W·h, at 50 percent capacity and reduced condenser temperature

D = EER, Btu/W·h, at 25 percent capacity and reduced condenser temperature.

[10] AHRI 340/360-2019 is the industry test procedure referenced in ASHRAE 90.1-2019 for testing CUACs with cooling capacity greater than or equal to 65,000 Btu/h.

The intent of this weighted average across a range of condenser temperatures is to produce an IEER rating that is more representative of outdoor conditions that air conditioners face for much of the year, rather than just the peak temperature experienced in most climates for only a small minority of operating hours.

In the July 2019 ECS RFI, DOE requested comment on whether the weighting factors and IEER metric are an appropriate representation of average use cycles for ECUACs and WCUACs. 84 FR 36480, 36486. DOE also sought comment on the extent to which ECUACs and/or WCUACs are installed in hot and dry climates as compared to other climates as well as the types of building that represent the primary markets for all equipment classes of ECUACs and WCUACs. *Id.*

Trane stated that IEER is more representative of the applied energy efficiency performance of WCUACs and ECUACs than EER, which is only representative of full load operation, and that the current IEER test conditions and weightings in the industry standards are representative of typical applications and average use cycles for WCUACs and ECUACs. (Trane, No. 4 at p. 2) AHRI supported adopting IEER for WCUACs as defined by AHRI Standard 340/360 and AHRI Standard 210/240, "Performance Rating of Unitary Air-conditioning & Air-source Heat Pump Equipment".[11] (AHRI, No. 5 at p. 3)

[11] AHRI 210/240 is an industry test procedure for testing CUACs with cooling capacity less than 65,000 Btu/h.

Trane stated that WCUACs are installed primarily in 6- to 10-story office buildings in large metropolitan areas with varying climates in the Northeast, Southeast, Midwest, and South. (Trane, No. 4 at p. 2) AHRI stated that WCUACs are mostly installed in office buildings, and that IEER was developed, in part, based on operation in such building types, and as such IEER is a representative metric for WCUACs. (AHRI, No. 5 at p. 3) AHRI commented that the small market size prohibits a full study of WCUAC-specific IEER weighting factors. (AHRI, No. 5 at p. 3)

ASAP and NRDC encouraged DOE to investigate appropriate test conditions and weighting factors for IEER for both ECUACs and WCUACs based on the wide range of EER performance for WCUACs (see section III.B.3**Error! Reference source not found.**). (ASAP and NRDC, No. 7 at p. 2) CA IOUs suggested aligning the temperature test points of WCUACs with that of water-cooled variable refrigerant flow equipment. (CA IOUs, No. 6 at p. 3)

CA IOUs recommended that DOE determine the geographic concentration of ECUAC sales to ensure the temperature test conditions and weightings are reflective of their installation locations; CA IOUs provided data on the reference climates for California's 16 climate zones with some of the hottest, driest regions in the country where ECUACs may be installed, emphasizing that the average U.S. climate is not where ECUACs are installed and so the IEER metric based on the average U.S. climate has limited utility. (CA IOUs, No. 6 at p. 2) Trane stated that the IEER weighting factors and test conditions were representative for ECUACs and also stated that ECUACs are installed more frequently in low humidity regions like the West. (Trane, No. 4 at p. 2)

For ECUACs, the weighting factors for IEER may not be representative of typical applications. As suggested by commenters, ECUACs may be disproportionally marketed and sold in relatively hot and dry climates in which there is a larger efficiency benefit to using evaporative condenser cooling. As shown in the IEER equation, the weighting factor for the full-load test point is only 2 percent, so almost all of the IEER rating for ECUACs reflects performance at outdoor air temperatures cooler than what would be typically experienced in hot and dry climates.

Regarding WCUACs, the IEER weighting factors were developed based on an analysis of ACUACs. AHRI's comment indicates that an analysis of IEER weighting factors specific to WCUACs has not been conducted. As such, it is uncertain whether the IEER weighting factors appropriately reflect the average use of WCUACs, and therefore, whether the IEER metric is representative of typical applications for WCUACs.

2. Representativeness of IEER for ECUACs with Cooling Capacity less than 65,000 Btu/h

ASHRAE 90.1-2016 includes IEER efficiency requirements for all classes of ECUACs, including ECUACs with cooling capacity less than 65,000 Btu/h. However, DOE's preliminary analysis of models in this equipment class certified in DOE's CCMS database suggests that these units are primarily marketed for residential applications. In contrast, the IEER metric was developed for commercial applications by analyzing air conditioner energy use in commercial buildings. Therefore, it is not clear whether IEER would be representative of average use cycles for ECUACs with cooling capacity less than 65,000 Btu/h.

Several issues relating to the representativeness of average use cycles for ECUACs less than 65,000 Btu/h and the IEER metric are apparent. One issue is the condenser conditions and weighting factors used for determining IEER. Over one-third of the weighting for determining IEER for ECUACs is based on performance at outdoor air dry-bulb temperatures of 68 °F and 65 °F. While many commercial buildings have substantial cooling loads at these temperatures, residential cooling loads at these temperatures are likely significantly lower. This is due in part to the lower density of people and electronics (both of which generate heat) typically seen in residential buildings as compared to commercial buildings. Also, commercial buildings tend to be larger and thus have lower surface area to volume ratios than low-rise residential buildings, which results in less heat loss through the building envelope per volume of conditioned air in commercial buildings (all other things being equal). Therefore, for residential applications, IEER may overweight cooling at lower outdoor ambient temperatures and underweight cooling at higher ambient temperatures.

Another issue relating to the representativeness of average use cycles for ECUACs less than 65,000 Btu/h and the IEER metric is that the IEER equation for adjusting for cyclic degradation[12] (see equation 4 of AHRI 340/360-2019) assumes continuous operation of the indoor fan when the compressor is not operating. While this may be representative of commercial applications (in which the indoor fan often runs continuously to provide ventilation), the indoor fan presumably does not run continuously

[12] For units that cannot reduce compressor capacity sufficiently to meet a target IEER load fraction during steady-state operation, the cyclic degradation adjustment in AHRI 340/360-2019 quantifies the reduced efficiency that would be seen in field applications from compressor cycling at part-load conditions.

in many residential applications because most residential air conditioning systems are not installed to provide ventilation.

In the July 2019 ECS RFI, DOE requested comment on whether the IEER metric is representative of the average use cycle for ECUACs with cooling capacity less than 65,000 Btu/h. Specifically, DOE sought feedback on whether the outdoor air dry-bulb and wet-bulb temperatures and IEER weighting factors from AHRI 340/360-2019 are representative for this equipment class. DOE also sought comment on whether this equipment class of ECUACs is typically installed residentially or commercially and whether the indoor fan runs continuously in the field. 84 FR 36480, 36487. DOE received no comments regarding this issue.

3. Burden of IEER Testing

IEER requires at least four tests whereas EER requires a single test. In the July 2019 ECS RFI, DOE requested comment on the share of ECUAC and WCUAC models that rate with both EER and IEER. For those models that are not already rated for IEER, DOE requested comment on the extent to which IEER would impose testing and certification burden on manufacturers. 84 FR 36480, 36487.

AHRI indicated that all its members that manufacture WCUACs already rate most products with both EER and IEER because IEER is required for ASHRAE 90.1 compliance. (AHRI, No. 5 at p. 3) Trane stated that although it rates all its WCUAC and ECUAC equipment with EER and IEER, it would need to do some design work and testing in order to comply with a newly-instated Federal IEER standard. (Trane, No. 4 at

p. 2) Trane stated that this burden might be reduced by adopting the test conditions and definition for IEER in ASHRAE 90.1. *Id.*

AHRI urged DOE to delay implementation of a new WCUAC metric until after 2023 to reduce the cumulative regulatory burden for manufacturers that make several types of air-conditioning equipment covered by DOE. (AHRI, No. 5 at p. 3) AHRI requested clarification on the estimated implementation timeline if IEER were to be adopted for WCUACs, and on whether the timeline would be similar to the timeline and compliance date for the May 2012 final rule. (*Id*., at p. 4)

Of the models listed in the CCMS database[7], 62 out of 115 WCUAC basic models did not have any online product literature demonstrating that they are rated with IEER. For ECUACs, 8 out of 12 basic models listed in the CCMS database[7] also did not have any online product literature with IEER ratings. This suggests that many WCUAC and ECUAC models would need to be retested in order to comply with Federal IEER standards.

4. Maintaining the EER Metric

DOE is not proposing to adopt standards in terms of IEER for WCUACs and ECUACs. As discussed, it is unclear whether the IEER weighting factors are representative of typical installations of WCUACs. It is even less clear whether the weighting factors and test conditions of IEER as currently calculated under the industry standard are appropriately representative of the average use of ECUACs, including ECUACs with a cooling capacity less than 65,000 Btu/h. In addition, a survey of the

market indicates that a number of basic models of WCUACs and ECUACs do not currently rate to IEER. Complying with Federal standards in terms of IEER for WCUACs and ECUACs would require additional testing and certification, and given the small market, may be unduly burdensome.

D. Proposed Determination

DOE proposes that the energy conservation standards for WCUACs and ECUACs do not need to be amended, having initially determined that it lacks "clear and convincing" evidence that amended standards would result in significant additional conservation of energy. EPCA specifies that for any commercial and industrial equipment addressed under 42 U.S.C. 6313(a)(6)(A)(i), including WCUACs and ECUACs, DOE may prescribe an energy conservation standard more stringent than the level for such equipment in ASHRAE Standard 90.1 only if "clear and convincing evidence" shows that a more stringent standard would result in significant additional conservation of energy and is technologically feasible and economically justified. (42 U.S.C. 6313(a)(6)(C)(i); 42 U.S.C. 6313(a)(6)(A)(ii)(II)) As discussed, the "clear and convincing" threshold is a very high bar. ASHRAE not acting to amend the minimum efficiency levels in Standard 90.1, as in the present case for the classes of WCUACs and ECUACs evaluated in this document, is tantamount to a decision that the existing Federal standards, which align with the minimum levels in Standard 90.1, remain in place and requires clear and convincing evidence for DOE to determine otherwise. 85 FR 8626, 8704-8708; Section 9(c) of appendix A to subpart C of 10 CFR part 430.

In considering more stringent efficiency levels for WCUACs and ECUACs than those specified by the current ASHRAE Standard 90.1, DOE evaluated the significance of their potential energy savings as well as the specific facts and data made available to DOE.

As stated in section II.A of this NOPD, the Process Rule establishes a two-step process for determining the significance of energy savings using an absolute and percentage threshold. *Id.*; Section 6 of appendix A to subpart C of 10 CFR part 430. DOE first evaluates whether standards at the max-tech level would result in a minimum site-energy savings of 0.3 quads over a 30-year period. *Id.*; Section 6(b)(2) of appendix A to subpart C of 10 CFR part 430. If the 0.3 quads threshold is not met, DOE then evaluates whether energy savings at the max-tech level represent at least 10 percent of the total energy usage of the covered equipment over a 30-year period. *Id.*; Section 6(b)(3) of appendix A to subpart C of 10 CFR part 430. If the percentage threshold is not met by a showing of clear and convincing evidence, DOE proposes to determine that no significant energy savings would likely result from setting amended standards. *Id.*; Section 6(b)(4) of appendix A to subpart C of 10 CFR part 430.

An analysis of updated shipments data and a review of the CCMS database and the AHRI Directory indicate that WCUACs and ECUACs continue to be a minor portion of total commercial air-cooled shipments with total combined shipments of less than 1,300 units in 2018. The shipments of very large WCUACs may be cyclical, linked to investment in commercial buildings, but the shipment projections also suggest that shipments may be continuing to decline.

Using updated shipments and efficiency ratings from the CCMS database, DOE estimated that amended standards at current max-tech levels would result in additional site energy savings of between 0.00006 quads (6.2 percent of estimated site energy use) and 0.00011 quads (6.0 percent of estimated site energy use) for the ECUAC classes during the analysis period.[13] Neither the estimated absolute savings nor the estimated percentage savings meet the applicable significance thresholds. Therefore, DOE has tentatively determined that no significant energy savings would likely result from setting amended standards for ECUACs.

For WCUACs, DOE estimated the additional energy savings based on the max-tech levels for small and large WCUACs, which were determined by identifying the highest efficiency ratings in the DOE CCMS Database. For very large WCUACs DOE initially determined that there is substantial doubt as to the appropriateness of using the highest efficiency reported in the DOE CCMS Database as the max-tech level. As discussed, there is a substantial question of whether the combination of technologies used to achieve the highest reported level for very large WCUACs is practicable for basic models across the capacity range of that equipment class. As such, DOE has initially determined that an energy savings calculation that would rely on the highest reported efficiency for very large WCUACs would not meet the "clear and convincing evidence" threshold required by EPCA. Instead DOE analyzed the next most efficient level

[13] The range of site energy savings for ECUACs was determined using the resulting minimum and maximum estimated energy savings by shipment projection scenario at the equipment class level (presented in **Error! Reference source not found.** of this NOPD).

reported in the DOE CCMS Database for very large WCUACs, which did not raise similar concerns, as the max-tech level for very large WCUACs.

Using this next highest efficiency level for very large WCUACs, DOE calculated that amended standards would result in additional site energy savings of between 0.0030 quads (8.5 percent of estimated site energy use) and 0.0046 quads (8.6 percent of estimated site energy use) for all WCUAC classes during the analysis period.[14] Neither the estimated absolute savings nor the estimated percentage savings meet the applicable significance thresholds. Therefore, DOE has tentatively determined that no significant energy savings would likely result from setting amended standards for WCUACs.

DOE requests comment and data on its tentative determinations regarding the energy savings from amended standards for ECUACs and WCUACs.

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Orders 12866 and 13563

This proposed determination is not a "significant regulatory actions" under section 3(f) of Executive Order 12866, Regulatory Planning and Review, 58 FR 51735 (Oct. 4, 1993). Accordingly, this action was not subject to review under the Executive

[14] The range of site energy savings for WCUACs was determined using the resulting minimum and maximum estimated energy savings by shipment projection scenario at the equipment class level (presented in **Error! Reference source not found.** of this NOPD).

Order by the Office of Information and Regulatory Affairs ("OIRA") in the Office of Management and Budget.

B. Review Under Executive Orders 13771 and 13777

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.

Additionally, on February 24, 2017, the President issued E.O. 13777, "Enforcing the Regulatory Reform Agenda." E.O. 13777 required the head of each agency to designate an agency official as its Regulatory Reform Officer ("RRO"). Each RRO oversees the implementation of regulatory reform initiatives and policies to ensure that agencies effectively carry out regulatory reforms, consistent with applicable law. Further, E.O. 13777 requires the establishment of a regulatory task force at each agency. The regulatory task force is required to make recommendations to the agency head regarding the repeal, replacement, or modification of existing regulations, consistent with applicable law. At a minimum, each regulatory reform task force must attempt to identify regulations that:

1) Eliminate jobs, or inhibit job creation;

2) Are outdated, unnecessary, or ineffective;

3) Impose costs that exceed benefits;

4) Create a serious inconsistency or otherwise interfere with regulatory reform initiatives and policies;

5) Are inconsistent with the requirements of Information Quality Act, or the guidance issued pursuant to that Act, in particular those regulations that rely in whole or in part on data, information, or methods that are not publicly available or that are insufficiently transparent to meet the standard for reproducibility; or

6) Derive from or implement Executive Orders or other Presidential directives that have been subsequently rescinded or substantially modified.

DOE initially concludes that this determination is consistent with the directives set forth in these executive orders.

As discussed in this document, DOE is proposing not to amend energy conservation standards for WCUACs and ECUACs. Therefore, if finalized as proposed, this determination is expected to be an E.O. 13771 other action.

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 its procedures and policies available on the Office of the General Counsel's website (*http://energy.gov/gc/office-general-counsel*).

DOE reviewed this proposed determination under the provisions of the Regulatory Flexibility Act and the policies and procedures published on February 19, 2003. Because DOE is proposing not to amend standards for ECUACs and WCUACs, if adopted, the determination would not amend any energy conservation standards. On the basis of the foregoing, DOE certifies that the proposed determination, if adopted, would have no significant economic impact on a substantial number of small entities. Accordingly, DOE has not prepared an IRFA for this proposed determination. DOE will transmit this 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

Manufacturers of ECUACs and WCUACs must certify to DOE that their equipment complies with any applicable energy conservation standards. In certifying compliance, manufacturers must test their equipment according to the DOE test procedures for ECUACs and WCUACs, 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 ECUACs and WCUACs. 76 FR 12422 (March 7, 2011); 80 FR 5099 (Jan. 30, 2015). 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

DOE is analyzing this proposed action in accordance with the National Environmental Policy Act ("NEPA") and DOE's NEPA implementing regulations (10

CFR part 1021). DOE's regulations include a categorical exclusion for actions that are interpretations or rulings with respect to existing regulations. 10 CFR part 1021, Subpart D, Appendix A4. DOE anticipates that this action qualifies for categorical exclusion A4 because it is an interpretation or ruling in regard to an existing regulation and otherwise meets the requirements for application of a categorical exclusion. See 10 CFR 1021.410. DOE will complete its NEPA review before issuing the final action.

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. DOE has examined this proposed determination and has tentatively determined that it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. 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. 5316(a) and (b); 42 U.S.C. 6297) Therefore, 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, (3) provide a clear legal standard for affected conduct rather than a general standard, and (4) promote simplification and burden reduction. 61 FR 4729 (Feb. 7, 1996). Regarding the review required by section 3(a), 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 NOPD 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. Pub. L. 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. DOE's policy statement is also available at *http://energy.gov/sites/prod/files/gcprod/documents/umra_97.pdf*. This proposed determination contains neither an intergovernmental mandate, nor is it expected to require expenditure of $100 million or more in one year by the private sector. As a result, the analytical requirements of UMRA 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 (Pub. L. 105-277) requires Federal agencies to issue a Family Policymaking Assessment

for any rule that may affect family well-being. This proposed determination 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

Pursuant to Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights," 53 FR 8859 (March 15, 1988), DOE has determined that this proposed determination 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 NOPD 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 on energy supply, distribution, and use.

Because this proposed determination does not propose amended energy conservation standards for ECUACs and WCUACs, it is not a significant energy action, nor has it been designated as such by the Administrator at OIRA. Accordingly, DOE has not prepared a Statement of Energy Effects.

M. Information Quality

On December 16, 2004, OMB, in consultation with the Office of Science and Technology Policy ("OSTP"), issued its Final Information Quality Bulletin for Peer Review ("the Bulletin"). 70 FR 2664 (Jan. 14, 2005). The Bulletin establishes that certain scientific information shall be peer reviewed by qualified specialists before it is disseminated by the Federal Government, including influential scientific information related to agency regulatory actions. The purpose of the bulletin is to enhance the quality and credibility of the Government's scientific information. Under the Bulletin, the energy conservation standards rulemaking analyses are "influential scientific

information," which the Bulletin defines as "scientific information the agency reasonably can determine will have, or does have, a clear and substantial impact on important public policies or private sector decisions." *Id.* at 70 FR 2667.

In response to OMB's Bulletin, DOE conducted formal peer reviews of the energy conservation standards development process and the analyses that are typically used and has prepared a report describing that peer review.[15] Generation of this report involved a rigorous, formal, and documented evaluation using objective criteria and qualified and independent reviewers to make a judgment as to the technical/scientific/business merit, the actual or anticipated results, and the productivity and management effectiveness of programs and/or projects. DOE has determined that the peer-reviewed analytical process continues to reflect current practice, and the Department followed that process for developing energy conservation standards in the case of the present rulemaking.

V. Public Participation

A. Participation in the Webinar

The time and date of the webinar are listed in the **DATES** section at the beginning of this document. Webinar registration information, participant instructions, and information about the capabilities available to webinar participants will be published on DOE's website:

[15] "Energy Conservation Standards Rulemaking Peer Review Report." 2007. Available at *http://energy.gov/eere/buildings/downloads/energy-conservation-standards-rulemaking-peer-review-report-0*.

https://www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=3. Participants are responsible for ensuring their systems are compatible with the webinar software.

B. Submission of Comments

DOE will accept comments, data, and information regarding this proposed rulemaking no later than the date provided in the **DATES** section at the beginning of this proposed rule. Interested parties may submit comments, data, and other information on using any of the methods described in the **ADDRESSES** section at the beginning of this document.

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 itself 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. Otherwise, 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 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 in 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 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 telefacsimiles (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, that are written in English, and that are 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. Pursuant 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 energy conservation standards. DOE actively encourages the participation and interaction of the public during the comment period in each stage of the rulemaking process. Interactions with and between members of the public provide a balanced discussion of the issues and assist DOE in the rulemaking process. Anyone who wishes to be added to the DOE mailing list to receive future notices and information about this process or would like to request a public meeting should contact Appliance and Equipment Standards Program staff at (202) 586-6636 or via e-mail at *ApplianceStandardsQuestions@ee.doe.gov*.

VI. Approval of the Office of the Secretary

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

This document of the Department of Energy was signed on August 21, 2020, by Daniel R Simmons, 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 August 21, 2020.

Daniel R.
X Simmons

Digitally signed by Daniel R. Simmons
Date: 2020.08.21 13:45:22 -04'00'

Daniel R Simmons
Assistant Secretary for Energy Efficiency
and Renewable Energy