



[6450-01-P]

DEPARTMENT OF ENERGY

10 CFR Parts 429 and 430

[Docket No. EERE-2008-BT-TP-0011]

RIN: 1904-AB78

Energy Conservation Program: Test Procedures for Microwave Ovens

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

ACTION: Final rule.

SUMMARY: On November 23, 2011, the U.S. Department of Energy (DOE) issued a supplemental notice of proposed rulemaking (SNOPR) to amend the test procedures for microwave ovens. That SNOPR proposed amendments to the DOE test procedure to incorporate provisions from the International Electrotechnical Commission (IEC) Standard 62301, “Household electrical appliances–Measurement of standby power,” Edition 2.0 2011-01 (IEC Standard 62301 (Second Edition)). DOE published a second SNOPR on May 16, 2012, proposing additional provisions for measuring the standby mode and off mode energy use of products that combine a microwave oven with other appliance functionality, as well as minor technical clarifications. Those proposed rulemakings serve as the basis for today’s action. DOE is issuing a final rule amending the DOE test procedure to incorporate by reference the proposed provisions from IEC Standard 62301 (Second Edition) and the technical clarifications. DOE is

not amending the test procedure at this time to measure the energy consumption of products that combine microwave ovens with other appliance functionality, but may consider such amendments in a future rulemaking.

DATES: The effective date of this rule is **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The final rule changes will be mandatory for representations of the energy efficiency of microwave ovens starting **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

The incorporation by reference of a publication listed in this rule was approved by the Director of the Federal Register on December 17, 2012.

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

A link to the docket web page can be found at:

<http://www.regulations.gov/#!docketDetail;dct=FR%252BPR%252BN%252BO%252BSR;rpp=25;po=0;D=EERE-2008-BT-TP-0011>. This web page will contain a link to the docket for this notice on the [regulations.gov](http://www.regulations.gov) site. The [regulations.gov](http://www.regulations.gov) web page will contain simple instructions on how to access all documents, including public comments, in the docket.

For further information on how to review the docket, contact Ms. Brenda Edwards at (202) 586-2945 or by email: Brenda.Edwards@ee.doe.gov.

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I. Authority and Background

Title III of the Energy Policy and Conservation Act (42 U.S.C. 6291, et seq.; “EPCA” or, “the Act”) sets forth a variety of provisions designed to improve energy efficiency. (All references to EPCA refer to the statute as amended through the Energy Independence and Security Act of 2007 (EISA 2007), Pub. L. 110-140 (Dec. 19, 2007)). Part B of title III, which for editorial reasons was redesignated as Part A upon incorporation into the U.S. Code (42 U.S.C. 6291–6309), establishes the “Energy Conservation Program for Consumer Products Other Than Automobiles.” These include microwave ovens, the subject of today’s notice. (42 U.S.C. 6291(1)–(2) and 6292(a)(10))

Under EPCA, this program consists essentially of four parts: (1) testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. The testing requirements consist of test procedures that manufacturers of covered products must use (1) as the basis for certifying to DOE that their products comply with the applicable energy conservation standards adopted under EPCA, and (2) for making representations about the

efficiency of those products. Similarly, DOE must use these test requirements to determine whether the products comply with any relevant standards promulgated under EPCA.

General Test Procedure Rulemaking Process

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

In addition, if DOE determines that a test procedure amendment is warranted, it must publish proposed test procedures and offer the public an opportunity to present oral and written comments on them. (42 U.S.C. 6293(b)(2)) Finally, in any rulemaking to amend a test procedure, DOE must determine to what extent, if any, the proposed test procedure would alter the measured energy efficiency of any covered product as determined under the existing test procedure. (42 U.S.C. 6293(e)(1)) If DOE determines that the amended test procedure would alter the measured efficiency of a covered product, DOE must amend the applicable energy conservation standard accordingly. (42 U.S.C. 6293(e)(2))

EISA 2007 amended EPCA to require DOE to amend its test procedures for all covered products to integrate measures of standby mode and off mode energy consumption into the overall energy efficiency, energy consumption, or other energy descriptor, unless the current test procedure already incorporates the standby mode and off mode energy consumption, or if such

integration is technically infeasible. If an integrated test procedure is technically infeasible, DOE must prescribe a separate standby mode and off mode energy use test procedure for the covered product, if a separate test is technically feasible. (42 U.S.C. 6295(gg)(2)(A)) Any such amendment must consider the most current versions of IEC Standard 62301, “Household electrical appliances – Measurement of standby power,” and IEC Standard 62087, “Methods of measurement for the power consumption of audio, video, and related equipment.”¹ Id. At the time of the enactment of EISA 2007, the most current versions of these standards were IEC Standard 62301 (First Edition 2005-06) and IEC Standard 62087 (Second Edition 2008-09).

DOE Microwave Oven Test Procedure

DOE’s test procedure for microwave ovens is codified at appendix I to subpart B of Title 10 of the Code of Federal Regulations (CFR). The test procedure was established in an October 3, 1997 final rule that addressed active mode energy use only. 62 FR 51976.

To address standby mode and off mode energy use, DOE published a notice of proposed rulemaking (NPR) on October 17, 2008 (hereafter referred to as the October 2008 TP NPR), in which it proposed incorporating provisions from IEC Standard 62301 (First Edition) into the DOE active mode test procedure, as well as language to clarify application of these provisions for measuring standby mode and off mode power in microwave ovens. 73 FR 62134. DOE held a public meeting on November 14, 2008, to hear oral comments on and solicit information relevant to the October 2008 TP NPR. Interested parties remarked upon, among other things,

¹ EISA 2007 directs DOE to also consider IEC Standard 62087 when amending its test procedures to include standby mode and off mode energy consumption. See 42 U.S.C. 6295(gg)(2)(A). However, IEC Standard 62087 addresses the methods of measuring the power consumption of audio, video, and related equipment. Accordingly, the narrow scope of this particular IEC standard reduces its relevance to today’s final rule.

harmonization of standards and test procedures with those of other countries and international agencies. In particular, commenters urged DOE to consider IEC Standard 62301 (Second Edition) (or “Second Edition”), which was in the process of being drafted.

EPCA requires DOE to consider the most recent version of IEC Standard 62301. (42 U.S.C. 6295(gg)(2)(A)) After the October 2008 TP NOPR was published, DOE determined that it would consider the revised version of IEC Standard 62301, (i.e., IEC Standard 62301 (Second Edition)), in the microwave oven test procedure rulemaking. DOE anticipated, based on review of drafts of the updated IEC Standard 62301, that the revisions could include different mode definitions. The revised version was expected in July 2009. IEC Standard 62301 (Second Edition) was not published, however, until January 27, 2011.

In order to ensure that DOE could establish test procedures for standby mode and off mode by March 31, 2011, as required by the EISA 2007 amendments to EPCA, DOE published an SNOPR on July 22, 2010 (hereafter referred to as the July 2010 TP SNOPR) proposing mode definitions based on those in the then current draft version of IEC Standard 62301 (Second Edition), designated as IEC Standard 62301 Second Edition, Committee Draft for Vote (IEC Standard 62301 (CDV)). 75 FR 42612, 42620–23 (July 22, 2010). DOE stated that it believed that those most recent mode definitions represented the best definitions available for the analysis in support of this rulemaking. 75 FR 42612, 42621. DOE held a public meeting on September 16, 2010, to hear oral comments on and solicit information relevant to the July 2010 TP SNOPR. Interested parties remarked upon, among other things, covered products, incorporation of IEC Standard 62301 (First Edition), mode definitions, and testing procedures. On October 29, 2010,

the IEC released a finalized draft version of IEC Standard 62301 (Second Edition), IEC Standard 62301 (FDIS).

On March 9, 2011, DOE published an interim final rule (hereafter referred to as the March 2011 Interim Final Rule) amending the test procedures for microwave ovens. 76 FR 12825. The March 2011 Interim Final Rule incorporated by reference specific clauses from IEC Standard 62301 (First Edition) regarding test conditions and testing procedures for measuring the average standby mode and average off mode power consumption into the microwave oven test procedure. DOE also incorporated into the microwave oven test procedure definitions of “active mode,” “standby mode,” and “off mode” based on the definitions provided in IEC Standard 62301 (FDIS). DOE further adopted language to clarify the application of clauses from IEC Standard 62301 (First Edition) for measuring standby mode and off mode power in the March 2011 Interim Final rule. Specifically, DOE defined the test duration for cases in which the measured power is not stable (i.e., varies over a cycle), recognizing that the power consumption of microwave oven displays can vary based on the displayed clock time. 76 FR 12825, 12828.

The amendments adopted in the March 2011 Interim Final Rule became effective on April 8, 2011. However, DOE noted that in order to ensure that the amended test procedure adequately addresses the EISA 2007 requirement to consider the most recent version of IEC Standard 62301, and recognizing that the IEC issued IEC Standard 62301 (Second Edition) in January of 2011, DOE issued the microwave oven test procedure as an interim final rule and offered an additional 180-day comment period to consider whether any changes should be made to the interim final rule in light of publication of IEC Standard 62301 (Second Edition). DOE

stated that it would consider these comments and, to the extent necessary, publish a final rulemaking incorporating any changes. 76 FR 12825, 12830–31. In response to the March 2011 Interim Final Rule, interested parties commented that, among other things, DOE should incorporate by reference IEC Standard 62301 (Second Edition) for optimal international harmonization, to give clarity and consistency to the regulated community and to decrease the testing burden.

Based upon the public comment, DOE decided to further analyze IEC Standard 62301 (Second Edition). DOE reviewed this latest version of the IEC standard and believes that it improves some measurements of standby mode and off mode energy use. Accordingly, DOE published a second SNOPR on November 23, 2011 (hereafter referred to as the November 2011 TP SNOPR), proposing to incorporate certain provisions of IEC Standard 62301 (Second Edition), along with clarifying language, into the DOE test procedures for microwave ovens adopted in the March 2011 Interim Final Rule. In addition, DOE proposed in the November 2011 TP SNOPR to make minor editorial changes in 10 CFR part 430, subpart B, appendix I, section 2.2.1.1 to aid the reader by presenting the electrical supply voltages consistently for microwave ovens and conventional cooking products, and also in section 1.12 to clarify the alternative use of metric units for various measurements and calculations in the conventional cooking products test procedure. 76 FR 72331 (Nov. 23, 2011).

In the course of reviewing comments on the November 2011 TP SNOPR, DOE determined that an additional SNOPR would be necessary before moving to a final rule. DOE subsequently published the additional SNOPR on May 16, 2012 (hereafter referred to as the May

2012 TP SNO PR), to address comments received on the November 2011 TP SNO PR regarding coverage of additional microwave oven product types in the DOE test procedure, and in particular, products combining a microwave oven with other appliance functionality. 77 FR 28805. Comments on this topic and other topics received in response to both the November 2011 TP SNO PR and the May 2012 TP SNO PR are addressed in today's final rule.

With respect to today's rulemaking, as noted above, EPCA requires that DOE determine whether a test procedure amendment would alter the measured efficiency of a product, thereby requiring adjustment of existing standards. (42 U.S.C. 6293(e)) Because there are currently no Federal energy conservation standards for microwave ovens (including standards for energy use in the standby and off modes), no determination is needed under these circumstances. DOE is conducting a concurrent rulemaking process to consider standby and off mode energy conservation standards and will utilize the DOE test procedure as amended by today's final rule in developing those standard levels.

Today's rule also fulfills DOE's obligation to periodically review its test procedures under 42 U.S.C. 6293(b)(1)(A). DOE anticipates that its next evaluation of this test procedure will occur in a manner consistent with the timeline set out in this provision.

II. Summary of the Final Rule

The final rule amends the current DOE test procedures for microwave ovens to incorporate by reference certain provisions of IEC Standard 62301 (Second Edition) for measuring standby mode and off mode energy use. As noted in section I of today's final rule, the use of this internationally recognized standard will optimize harmonization for manufacturers,

will give clarity and consistency in the test conduct, and will decrease the testing burden. The current procedures are also being amended to clarify testing requirements for supply voltage and alternative metric units.

In addition, in today's final rule DOE confirms that the microwave oven portion of a combined product is covered under the definition of "microwave oven" at 10 CFR 430.2, and is adding and clarifying definitions of certain combined products which incorporate microwave ovens and conventional cooking products. Due to a lack of data and information at this time, however, DOE is not amending its test procedures in this rule to measure standby mode and off mode energy use for the microwave portion of combined products. DOE may choose to initiate a separate rulemaking at a later date that would address standby and off mode energy use of combined products.

III. Discussion

A. Products Covered by This Test Procedure Rulemaking

DOE defines "microwave oven" as a class of kitchen ranges and ovens which is a household cooking appliance consisting of a compartment designed to cook or heat food by means of microwave energy. 10 CFR 430.2 In the March 2011 Interim Final Rule, DOE determined that this regulatory definition includes all ovens equipped with microwave capability, including convection microwave ovens (i.e., microwave ovens that incorporate convection features and possibly other means of cooking) because they are capable of cooking or heating food by means of microwave energy. 76 FR 12825, 12828–30 (March 9, 2011). In the March 2011 Interim Final Rule, DOE referred to such a product as a "combination oven".

In the May 2012 TP SNOPR, DOE proposed that the regulatory definition of microwave oven also includes all products that combine a microwave oven with other appliance functionality. To aid in distinguishing such other “combined products” from the type of microwave oven that incorporates convection features and any other means of cooking, DOE proposed in the May 2012 TP SNOPR to use the term “convection microwave oven” to more accurately describe the latter, and to provide a definition of convection microwave oven in 10 CFR 430.2. In this definition, DOE would clarify that the microwave capability, convection features, and any other cooking means are incorporated in a single cavity. 77 FR 28805, 28808 (May 16, 2012).

DOE further proposed in the May 2012 TP SNOPR that all products that combine a microwave oven with other appliance functionality would be considered covered products, including microwave/conventional ranges, microwave/conventional ovens, microwave/conventional cooking tops, and other combined products such as microwave/refrigerator-freezer/charging stations. Regarding microwave/conventional ranges, DOE clarified that an appliance need not be free-standing to be covered as a microwave/conventional range. 77 FR 28805, 28808–09 (May 16, 2012). DOE, therefore, proposed in the May 2012 TP SNOPR to add a definition of “microwave/conventional cooking top” in 10 CFR 430.2 to state that it is a class of kitchen ranges and ovens that is a household cooking appliance consisting of a microwave oven and a conventional cooking top. Similarly, DOE proposed in the May 2012 TP SNOPR to add a definition in 10 CFR 430.2 of a “microwave/conventional oven” as a class of kitchen ranges and ovens which is a household cooking appliance consisting of a microwave oven and a conventional oven in separate

compartments. DOE also proposed to clarify in the definition of microwave/conventional range that the microwave oven and conventional oven are incorporated as separate compartments. 77 FR 28805, 28809–10 (May 16, 2012).

Because each of those combined products described previously contains a microwave oven as one of its functional components, DOE proposed that the microwave oven component of these products would meet the statutory requirements as a covered product for the purposes of measuring standby mode and off mode energy use under EPCA. (42 U.S.C. 6295(gg)(2)(B)(vi)) DOE stated that it does not believe that the presence of additional appliance functionality would eliminate the statutory requirement to evaluate standby mode and off mode energy use in the microwave oven component. DOE also tentatively concluded in the May 2012 TP SNOPR that the test procedure should only measure the standby mode and off mode energy use associated with the microwave oven portion of combined products, and for that reason the proposed amendments do not require any determination as to which appliance function of a combined product with a microwave oven component represents the primary usage of the product. 77 FR 28805, 28809–10 (May 16, 2012).

Whirlpool Corporation (Whirlpool) commented in response to the May 2012 TP SNOPR that combined products should not be covered. Whirlpool noted that it produces a microwave/conventional oven in which both cavities are controlled by a single control panel. Whirlpool believes that this product should be regulated according to the primary use of the product, based on total energy consumption, which in this case would be as a conventional oven since their research indicates that the microwave oven cavity uses one-tenth of the energy

annually that the conventional oven cavity does. (Whirlpool, No. 33 at p. 1; Whirlpool, No. 41 at pp. 1–2) The Association of Home Appliance Manufacturers (AHAM) also commented that the primary use of a combined product should determine how the product is regulated, whether that be as a conventional cooking product or a microwave oven. AHAM also stated that both free-standing and built-in ranges that provide microwave oven capability in one compartment and a conventional oven in a separate compartment should not be considered covered products. As a clarification, AHAM proposed that DOE define “combination oven” as “a microwave oven that incorporates means of cooking other than microwave energy, and does not mean free-standing or built-in conventional cooking tops, conventional ovens, or conventional ranges that include microwave ovens in separate cavities.” (AHAM, No. 40 at pp. 2–3)

DOE maintains its determination from the May 2012 TP SNOPR that the microwave oven component is subject to the statutory requirement for measuring standby mode and off mode energy use, and that the added conventional oven functionality, regardless of its annual energy consumption, does not exempt the microwave oven component from this requirement. Therefore, DOE determines for today’s final rule that all products that incorporate microwave ovens with additional appliance functionality are covered products under the microwave oven regulatory definition, but DOE is declining to adopt a test procedure for such products at this time due to a lack of information. DOE also adopts in today’s final rule regulatory definitions of several specific product types that incorporate microwave and conventional cooking functionality, either within a single cavity or in separate cavities, to aid manufacturers in determining which products are the subject of the provisions adopted in today’s final rule. These definitions include the definition of “convection microwave oven” in place of the term

“combination oven”, for those products that incorporate microwave and conventional cooking functionality in a single cavity. In sum, today’s final rule adds the following definitions to 10 CFR 430.2:

- Convection microwave oven means a microwave oven that incorporates convection features and any other means of cooking in a single compartment.
- Microwave/conventional cooking top means a class of kitchen ranges and ovens that is a household cooking appliance consisting of a microwave oven and a conventional cooking top.
- Microwave/conventional oven means a class of kitchen ranges and ovens that is a household cooking appliance consisting of a microwave oven and a conventional oven in separate compartments.

In addition, DOE amends the definition of “microwave/conventional range” in 10 CFR 430.2 as a class of kitchen ranges and ovens that is a household cooking appliance consisting of a microwave oven and a conventional oven in separate compartments and a conventional cooking top. DOE also amends the definition of “microwave oven” to include the use of the term “convection microwave oven” in place of “combination oven.”

AHAM commented that DOE proposed to cover all products that combine microwave oven and other appliance functionality, but did not propose definitions for all of the possible combined products. According to AHAM, such an approach results in uncertainty about coverage for products that are manufactured as microwave ovens only, but later added to other appliances to create a combined product. AHAM noted that this integration may occur when the

microwave oven is no longer in the manufacturer's control. Therefore, AHAM believes that DOE should not cover combined products. Should it do so, AHAM stated that a microwave oven should be classified according to its configuration as produced by the manufacturer, since a manufacturer would have no way of knowing how a stand-alone microwave oven may be later integrated into a combined product. (AHAM, No. 40 at p. 3)

DOE has determined that while combined products are covered products under the statute, it will not be promulgating a test procedure for such products at this time, due to a lack of sufficient data. DOE will clarify its position on this issue at the time of any future rulemaking regarding combined products.

B. Effective Date for the Test Procedure and Date on Which Use of the Test Procedure Will be Required

The effective date of the standby and off mode test procedures for microwave ovens is **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. DOE's amended test procedure regulations codified in 10 CFR part 430, subpart B, appendix I clarify, though, that the procedures and calculations adopted in today's final rule need not be performed to determine compliance with energy conservation standards until compliance with any final rule establishing amended energy conservation standards for microwave ovens in standby mode and off mode is required. However, as of **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, any representations as to the standby mode and off mode energy consumption of the products that are the subject of this rulemaking must be based upon results generated under the applicable

provisions of this amended test procedure. (42 U.S.C. 6293(c)(2)) In the period between **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, any representations as to the standby mode and off mode energy consumption of the products that are the subject of this rulemaking may be based upon results generated under the applicable provisions of either this amended test procedure or the previous test procedure, published at 10 CFR part 430, subpart B, Appendix I as contained in the 10 CFR parts 200 to 499 edition revised as of January 1, 2012.

The Republic of Korea (Korea) stated that if DOE adopted its proposals from the May 2012 TP SNOPR, manufacturers would require approximately 6 months for product development and another 6 months to demonstrate compliance with energy conservation standards and safety requirements. Therefore, Korea requested a compliance date at least a year after publication of the test procedure final rule. (Korea, No. 42, at p. 1) As noted above, use of the amended test procedure established in today's final rule will not be required to demonstrate compliance until the compliance date of any final rule establishing amended microwave oven energy conservation standards. DOE is conducting such a standards rulemaking concurrently with this test procedure rulemaking, and expects that the compliance date of any amended standards will be later than 1 year after the publication of today's final rule.

C. Incorporation of IEC Standard 62301 (Second Edition)

As discussed in section I of today's final rule, EPCA, as amended by EISA 2007, requires that test procedures be amended to include standby mode and off mode energy consumption,

taking into consideration the most current versions of IEC Standards 62301 and 62087. (42 U.S.C. 6295(gg)(2)(A)) DOE adopted certain provisions from IEC Standard 62301 (First Edition) regarding test conditions and testing procedures for measuring the average standby mode and average off mode power consumption in the microwave oven test procedure in the March 2011 Interim Final Rule. DOE also incorporated into the microwave oven test procedure definitions of “active mode,” “standby mode,” and “off mode” based on the definitions provided in IEC Standard 62301 (FDIS), along with clarifying language for clauses incorporated by reference in the March 2011 Interim Final Rule from IEC Standard 62301 (First Edition). Specifically, these provisions measure power consumption of microwave ovens in the case that the measured power is not stable (i.e., varies over a cycle), based on displayed clock time, and DOE defined the test duration in this case. 76 FR 12825, 12828 (Mar. 9, 2011).

Based upon the public comment received on the March 2011 Interim Final Rule, DOE published the November 2011 TP SNOPR, proposing to update its reference to IEC Standard 62301 by incorporating certain provisions of IEC Standard 62301 (Second Edition), along with clarifying language, into the DOE test procedures for microwave ovens adopted in the March 2011 Interim Final Rule.

AHAM and Whirlpool support the incorporation by reference of IEC Standard 62301 (Second Edition) in the microwave oven test procedure. (AHAM, No. 40 at p. 1; Whirlpool, No. 33 at p. 1) AHAM stated that the use of the Second Edition would allow for optimum international harmonization, provide clarity and consistency to manufacturers, and decrease test burden. (AHAM, No. 40 at p. 4)

The suitability of specific clauses from IEC Standard 62301 (Second Edition) regarding testing conditions and methodology for use in DOE's microwave oven test procedure are discussed in the following paragraphs.

Section 4, paragraph 4.4 of the Second Edition revises the power measurement accuracy provisions of the First Edition. A more comprehensive specification of required accuracy is provided in the Second Edition, which depends upon the characteristics of the power being measured. Testers using the Second Edition are required to measure the crest factor and power factor of the input power, and to calculate a maximum current ratio (MCR) (paragraph 4.4.1 of the Second Edition). The Second Edition then specifies calculations to determine the maximum permitted uncertainty in MCR. DOE noted in the November 2011 TP SNOPR, however, that the permitted uncertainty is the same or less stringent than the uncertainty specified in the First Edition, depending on the value of MCR and the power level being measured. DOE determined, however, that this change in the permitted uncertainty maintains sufficient accuracy of measurements under a full range of possible measured power levels without placing undue demands on the instrumentation. These power measurement accuracy requirements were based upon detailed technical submissions to the IEC in the development of IEC Standard 62301 (FDIS), which showed that commonly-used power measurement instruments were unable to meet the original requirements for certain types of loads. Therefore, DOE concluded in the November 2011 TP SNOPR that the incremental testing burden associated with the additional measurements and calculations is offset by the more reasonable requirements for testing equipment, while maintaining measurement accuracy deemed acceptable and practical by voting

members for IEC Standard 62301 (Second Edition). For these reasons, DOE proposed in the November 2011 TP SNO PR to incorporate by reference in 10 CFR part 430, subpart B, appendix I, section 2.9.1.3 the power equipment specifications in section 4, paragraph 4.4 of IEC Standard 62301 (Second Edition). 76 FR 72332, 72339 (Nov. 23, 2011). DOE did not revise this proposal for the May 2012 TP SNO PR, and did not receive any comments on this topic in response to either notice. In today's final rule, DOE adopts these amendments to its microwave oven test procedure.

In the November 2011 TP SNO PR, DOE observed that section 5, paragraph 5.2 of IEC Standard 62301 (Second Edition) maintains the installation and setup procedures incorporated by reference in the microwave oven test procedure in the March 2011 Interim Final Rule from the First Edition. These provisions require that the appliance be prepared and set up in accordance with manufacturer's instructions, and that if no instructions are given, then the factory or "default" settings shall be used, or where there are no indications for such settings, the appliance is tested as supplied. Additionally, IEC Standard 62301 (Second Edition) adds certain clarifications to the installation and setup procedures in section 5, paragraph 5.2 of the First Edition regarding products equipped with a battery recharging circuit for an internal battery, as well as instructions for testing each relevant configuration option identified in the product's instructions for use. DOE stated in the November 2011 TP SNO PR that it is not aware of any microwave oven with an internal battery, or with a recharging circuit for such a battery. DOE also determined that a requirement to separately test each configuration option could substantially increase test burden and potentially conflicts with the requirement within the same section to set up the product in accordance with the instructions for use or, if no such instructions

are available, to use the factory or “default” settings. Therefore, DOE tentatively concluded in the November 2011 TP SNOPR that the portions of the installation instructions in section 5, paragraph 5.2 of IEC Standard 62301 (Second Edition) pertaining to batteries and the requirement for the determination, classification, and testing of all modes associated with every combination of available product configuration options (which may be more numerous than the modes associated with operation at the default settings) are not appropriate for the microwave oven test procedures. Accordingly, DOE proposed in the November 2011 TP SNOPR qualifying language in the test procedure amendments at 10 CFR part 430, subpart B, appendix I, section 2.1.3 to disregard those portions of the installation instructions. Id. DOE maintained this proposal for the May 2012 TP SNOPR. No comments on this topic were submitted to DOE, and for the reasons discussed, DOE is amending the microwave oven test procedure accordingly in today’s final rule.

The Second Edition also contains provisions for the power supply (section 4.3) and power-measuring instruments (section 4.4). Paragraph 4.3.2 requires that the value of the harmonic content of the voltage supply be recorded during the test and reported. As described previously, paragraph 4.4.1 requires the instrument to measure the crest factor and maximum current ratio. Paragraph 4.4.3 requires the instrument to be capable of measuring the average power or integrated total energy consumption over any operator-selected time interval. In the November 2011 TP SNOPR, DOE stated that it is aware of commercially available power measurement instruments that can perform each of these required measurements individually. However, DOE is also aware that certain industry-standard instruments, such as the Yokogawa WT210/WT230 digital power meter and possibly others, are unable to measure harmonic content

or crest factor while measuring average power or total integrated energy consumption. DOE expressed concern that laboratories currently using power-measuring instruments without this capability would be required to purchase, at potentially significant expense, additional power-measuring instruments that are able to perform all these measurements simultaneously. Therefore, DOE proposed in the November 2011 TP SNOPR for 10 CFR part 430, subpart B, appendix I, sections 2.2.1.2 and 2.9.1.3 that if the power-measuring instrument is unable to perform these measurements during the actual test measurement, it would be acceptable to measure the total harmonic content, crest factor, and maximum current ratio immediately before and immediately after the actual test measurement to determine whether the requirements for the power supply and power measurement have been met. 76 FR 72332, 72339–40 (Nov. 23, 2011).

AHAM and Whirlpool support the measurement of the total harmonic content, crest factor, and maximum current ratio before and after the actual test measurement if the power measuring instrument is unable to perform these measurements during the actual test. Whirlpool commented that this provision would prevent manufacturers from being required to purchase more comprehensive and expensive test equipment. (AHAM, No. 40 at p. 4; Whirlpool, No. 33 at p. 2) DOE agrees with these commenters, and in today's final rule amends the microwave oven test procedure to include such a provision in section 2.2.1.2 of appendix I.

The other major changes in the Second Edition related to the measurement of standby mode and off mode power consumption in covered products involve measurement techniques and specification of the stability criteria required to measure that power. The Second Edition contains more detailed techniques to evaluate the stability of the power consumption and to

measure the power consumption for loads with different stability characteristics. According to the Second Edition, the user is given a choice of measurement procedures, including sampling methods, average reading methods, and a direct meter reading method. For the November 2011 TP SNOPR, DOE evaluated these new methods in terms of test burden and improvement in results as compared to those methods adopted in the March 2011 Interim Final Rule, which were based on IEC Standard 62301 (First Edition).

In the March 2011 Interim Final Rule, DOE adopted provisions requiring that microwave oven standby mode and off mode power be measured using section 5, paragraph 5.3 of IEC Standard 62301 (First Edition). DOE also adopted additional specific methodology for microwave ovens in which power varies as a function of the time displayed. In particular, based on DOE's testing, DOE adopted a requirement for these microwave ovens to set the display time to 3:23 and allowing a 10-minute stabilization period prior to a 10-minute measurement period for the display time of 3:33 to 3:42, based on the average power approach of section 5, paragraph 5.3.2(a) of IEC Standard 62301 (First Edition). DOE stated that this method provides a valid measure of standby energy use for those microwave ovens with power consumption varying according to the time displayed on the clock. 76 FR 12825, 12838–40 (Mar. 9, 2011).

For the November 2011 TP SNOPR, DOE analyzed the potential impacts of referencing methodology from IEC Standard 62301 (Second Edition) rather than from the First Edition by comparing the provisions allowed by each under different scenarios of power consumption stability. Based on its analysis, DOE concluded that the use of the Second Edition would improve the accuracy and representativeness of power consumption measurements. DOE also

recognized industry's overwhelming support for the Second Edition and the benefit of harmonizing with international test standards to reduce testing burden on manufacturers that sell products internationally by not requiring multiple test methods to be conducted according to different testing methods in different countries. In the narrow case of microwave ovens with power consumption that varies as a function of the clock time displayed, DOE proposed to maintain the application of clauses from IEC Standard 62301 (First Edition) for measuring standby mode power consumption during a 10-minute test period that were adopted in the March 2011 Interim Final Rule. DOE determined that, in this case, the use of the Second Edition would cause manufacturers to incur significant burden that would not be warranted by any potential improved accuracy of the measurement. 76 FR 72332, 72340–42 (Nov. 23, 2011). DOE did not revise these proposals regarding testing methodology and the use of IEC Standard 62301 in the May 2012 TP SNOPR.

AHAM and Whirlpool agreed with the existing methodology to measure standby power for microwave ovens with power consumption that varies as a function of the time displayed over a period of 10 minutes starting at a clock time of 3:33. Whirlpool, however, objected to a fixed stabilization period of 10 minutes, starting at a clock time of 3:23, prior to the start of the measurement period. Whirlpool commented that the time for the controls to reach the lowest power consumption state may be longer or shorter than 10 minutes for a particular microwave oven, and that manufacturers should be allowed to conduct the test by setting the clock sufficiently far in advance to ensure that the controls have stabilized by the start of the measurement period. (Whirlpool, No. 33 at p. 2) AHAM also stated that some microwave ovens may have a shorter stabilization period than 10 minutes, and for those products, the current

methodology would have a higher test burden than an approach in which the stabilization period is defined as the number of minutes needed for the microwave oven to return to its lowest power consumption state. AHAM objected to DOE's assertion in the November 2011 TP SNOPR that a defined stabilization period would encourage manufacturers to minimize the duration of the stabilization period in their products. According to AHAM, a fixed stabilization period would likely lead to standardization of stabilization periods, and since DOE did not observe any current stabilization periods longer than 10 minutes, manufacturers would be encouraged to increase them up to the maximum of 10 minutes. AHAM agreed, however, that the current 10-minute approach is less burdensome than measuring standby power consumption in this case using IEC Standard 62301 (Second Edition). AHAM further commented that setting the clock time to 3:23 and allowing a 10-minute stabilization period prior to the 10-minute test ensures that the test procedure is repeatable and reproducible, and minimizes test burden by not requiring independent test laboratories to determine the number of minutes needed for the microwave oven to reach its lowest power consumption state. According to AHAM, it is critical in the context of increased enforcement that third-party laboratories be able to conduct the test procedure with as little lab-to-lab variation as possible. AHAM, therefore, supports DOE's proposal to maintain the 10-minute measurement method currently provided in the test procedure. (AHAM, No. 40 at p. 5)

For the reasons discussed above, and in consideration of the comments received supporting the proposals, DOE amends the microwave oven test procedure in today's final rule by incorporating by reference the relevant paragraphs of section 5.3 of IEC Standard 62301 (Second Edition) in 10 CFR part 430, subpart B, appendix I, sections 3.1.4.1 and 3.2.4. The

amendments require the use of the sampling method in section 5.3.2 of the Second Edition for standby mode and off mode power measurements, except in the case of microwave ovens with power consumption that varies as a function of the time displayed. DOE is not amending the substance of the 10-minute test method that is currently provided for these products in the microwave oven test procedure, which reference provisions from IEC Standard 62301 (First Edition). Today's final rule also adopts necessary editorial changes to appendix I to allow for the correct referencing of the Second Edition, including definitions and section numbering.

D. Definitions of “Active Mode,” “Standby Mode,” and “Off Mode”

In the March 2011 Interim Final Rule, DOE adopted a definition of “standby mode” based on the definitions provided in IEC Standard 62301 (FDIS), as follows:

- “Standby mode” is the condition in which an energy-using product is connected to a mains power source and offers one or more of the following user-oriented or protective functions which may persist for an indefinite time:
- a remote switch (including remote control), internal sensor, or timer to facilitate the activation of other modes (including activation or deactivation of active mode);
- and continuous functions, including information or status displays (including clocks) or sensor-based functions. 76 FR 12825, 12834 (Mar. 9, 2011).

DOE also adopted in its amendments to the test procedure the clarification, provided as a note accompanying the definition of standby mode in IEC Standard 62301 (FDIS), that a timer is a continuous clock function (which may or may not be associated with a display) that provides

regularly scheduled tasks (e.g. switching) and that operates on a continuous basis. Id.

DOE also adopted definitions of “off mode” and “active mode” based on the definitions provided in IEC Standard 62301 (FDIS), as follows:

- “Off mode” is the condition in which an energy-using product is connected to a mains power source and is not providing any standby mode or active mode function and where the mode may persist for an indefinite time. An indicator that only shows the user that the product is in the off position is included within the classification of off mode. Id.
- “Active mode(s)” is the condition in which an energy-using product is connected to a mains power source and at least one primary function is activated. Id.

In the November 2011 TP SNOPR, DOE did not propose changing these definitions in light of its proposal to reference the updated version of IEC Standard 62301, because these definitions have the same functional equivalence to those in both IEC Standard 62301 (FDIS) and IEC Standard 62301 (Second Edition). DOE did, however, propose to make non-substantive editorial changes to clarify for the reader the description of the user-oriented or protective functions associated with standby mode operation in the definition of standby mode in 10 CFR part 430, subpart B, appendix I, section 1.13. 76 FR 72332, 72343 (Nov. 23, 2011). DOE did not revise these proposals for mode definitions in the May 2012 TP SNOPR.

DOE did not receive any comments regarding these proposals, and thus amends the microwave oven test procedure in today’s final rule to provide those clarifications in the

definition of standby mode, which is now included as section 1.17 in 10 CFR part 430, subpart B, appendix I.

E. Specifications for the Test Methods and Measurements for Microwave Oven Standby Mode and Off Mode Testing

As discussed in section III.A, DOE has determined that for products combining a microwave oven with other appliance functionality, the compartment incorporating microwave cooking capability would be considered to meet the definition of a microwave oven at 10 CFR 430.2. As a result, DOE proposed in the May 2012 TP SNOPR testing procedures specifically for such combined products. In particular, DOE proposed that the standby mode and off mode power for combined products be measured according to the same methodology proposed in the November 2011 TP SNOPR for microwave ovens; i.e., according to the provisions incorporated from IEC Standard 62301 (Second Edition), except in the case in which standby mode power consumption varies as a function of displayed time. In that case, the standby mode power would be measured for the entire product according to the method outlined in the November 2011 TP SNOPR. To determine the standby mode and off mode power associated with the microwave oven portion only, apportionment factors representing the fractional contribution of the microwave oven portion to the total standby mode and off mode power consumption would be multiplied by the overall standby mode and off mode power measurements. DOE further proposed specific standby mode apportionment factors for products that incorporate microwave ovens and conventional cooking products. The proposed amendments would also allow a manufacturer, upon submission of suitable supporting information to DOE, to use alternate apportionment values for such combined products. Manufacturers of combined products for

which specific apportionment values were not provided in the test procedure would also be required to submit information as to the appropriate values for their products. 77 FR 28805, 28810–12 (May 16, 2012).

AHAM and Whirlpool objected to the method of apportionment factors for measuring standby mode and off mode energy use for combined products, stating that DOE's analysis was based on data derived from an insufficient sample size and to regulate a combined product on that basis would be arbitrary and unreasonable. (AHAM, No. 40 at pp. 1–2, 4; Whirlpool, No. 41 at pp. 1–2) Whirlpool also stated that the standby power of a combined product cannot be logically divided, and that off mode power may apply to one functional component of a combined product but not the other. (Whirlpool, No. 41 at pp. 2–3) AHAM commented that, under the apportionment approach, third-party laboratories would be unable to conduct verification testing, because they would be unable to determine how to divide standby power among the functional components. (AHAM, No. 40 at p. 2) AHAM and Whirlpool further commented that the apportionment method would, in effect, regulate the standby power of the other functional component in addition to the microwave oven portion, which is outside of the scope of this rulemaking and would be unreasonable and arbitrary. (AHAM, No. 40 at p. 3, Whirlpool, No. 41 at p. 2) According to Whirlpool, the conventional cooking component of a combined product would be subject to energy conservation standards, while other conventional cooking products would not, creating an unfair competitive advantage for manufacturers of the unregulated products.

As discussed in section III.A of this notice, DOE has decided not to adopt methodology

in its microwave oven test procedure at this time for measuring the standby mode and off mode energy use of the microwave portion of combined products. Therefore, DOE does not need to further address these comments in today's final rule. DOE may choose to initiate a separate rulemaking at a later date that would address standby and off mode energy use of combined products, at which time such comments could again be raised.

F. Technical Clarifications

DOE proposed in the November 2011 TP SNOPR to make minor editorial changes in 10 CFR part 430, subpart B, appendix I, section 2.2.1.1 to aid the reader by presenting the electrical supply voltages consistently for microwave ovens and conventional cooking products, and also in section 1.12 to clarify the alternative use of metric units for various measurements and calculations in the conventional cooking products test procedure. 76 FR 72331 (Nov. 23, 2011). DOE did not revise this proposal for the May 2012 TP SNOPR, and did not receive any comments regarding these clarifications in response to either notice. Therefore, DOE adopts these clarifications to appendix I in today's final rule, although section 1.12 is now designated as section 1.16.

G. Compliance with Other EPCA Requirements

1. Test Burden

EPCA requires that test procedures shall be reasonably designed to produce test results which measure energy efficiency, energy use, or estimated annual operating cost of a covered product during a representative average use cycle or period of use. Test procedures must also not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(3))

In the March 2011 Interim Final Rule, DOE concluded that the amended test procedure would produce test results that measure the power consumption of covered products during a representative average use cycle as well as annual energy consumption, and that the test procedure would not be unduly burdensome to conduct. 76 FR 12825, 12840 (March 9, 2011).

The amendments to the DOE test procedures proposed in the November 2011 TP SNOPR would be based on an updated version of IEC Standard 62301, specifically IEC Standard 62301 (Second Edition). For the reasons discussed in the November 2011 TP SNOPR, DOE concluded that the proposed amended test procedures would produce test results that measure the standby mode and off mode power consumption during representative use, and that the test procedures would not be unduly burdensome to conduct. 76 FR 72332, 72344–45 (Nov. 23, 2011).

Whirlpool stated that it considers the test burden acceptable. However, Whirlpool added that this is contingent upon its comments on the following topics: (1) the exclusion of all products with multiple cavities, with one cavity having microwave capability and the other having a conventional oven, as covered products, (2) the proposed use of IEC Standard 62301 (Second Edition), (3) the measurement of total harmonic distortion before and/or after the actual test, and (4) the use of a manufacturer-determined stabilization period at the start of standby power testing for microwave ovens with clocks. (Whirlpool, No. 33 at p. 2)

For the reasons discussed in section III.A of this notice, DOE determined in today's final rule to cover all products with a microwave oven component, including products that combine a

microwave oven with other appliance functionality, for the purposes of the microwave oven test procedure. However, DOE is not adopting provisions to measure the standby mode and off mode energy use of the microwave oven portion of combined products at this time.

Today's final rule also adopts amendments to the test procedure that incorporate by reference IEC Standard 62301 (Second Edition) and provisions that allow the measurement of total harmonic distortion before and/or after the actual test, which are in accordance with Whirlpool's comments. The amendments do not, however, include Whirlpool's recommendation that the stabilization period for microwave ovens with power consumption that varies as a function of the time displayed be set according to the time it takes for the product to transition to its lowest power state. DOE determined that a fixed 10-minute stabilization period prior to the start of the 10-minute measurement period for those products will provide clarity to testing laboratories and ensure repeatability and reproducibility, which will outweigh the burden of an additional few minutes of testing time.

DOE concludes that the amended test procedures for microwave ovens will produce test results that measure the standby mode and off mode power consumption during representative use, and that the test procedures will not be unduly burdensome to conduct.

2. Certification Requirements

Sections 6299–6305 of EPCA authorize DOE to enforce compliance with the energy and water conservation standards established for certain consumer products. (42 U.S.C. 6299–6305 (consumer products)) On March 7, 2011, the Department revised, consolidated, and streamlined

its existing certification, compliance, and enforcement regulations for certain consumer products and commercial and industrial equipment covered under EPCA, including microwave ovens. 76 FR 12422. These regulations are codified in 10 CFR 429.23 (conventional cooking tops, conventional ovens, microwave ovens).

The certification requirements for microwave ovens consist of a sampling plan for selection of units for testing and requirements for certification reports. Because there are no existing energy conservation standards for microwave ovens, DOE is not amending the certification reporting requirements for these products. However, because DOE adopts new metrics in today's final rule (standby mode power consumption (P_{SB}) and off mode power consumption (P_{OFF})) for microwave ovens, DOE additionally amends provisions in the sampling plan in 10 CFR 429.23(a)(2)(i) to include P_{SB} and P_{OFF} .

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Order 12866

The Office of Management and Budget has determined that test procedure rulemakings do not constitute "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 Order by the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB).

B. Review under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.) requires preparation of a regulatory flexibility analysis (RFA) 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 (August 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 DOE 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 today’s final rule under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003.

In conducting this review, DOE first determined the potential number of affected small entities. The Small Business Administration (SBA) considers an entity to be a small business if, together with its affiliates, it employs fewer than the threshold number of workers specified in 13 CFR part 121 according to the North American Industry Classification System (NAICS) codes. The SBA’s Table of Size Standards is available at: http://www.sba.gov/idc/groups/public/documents/sba_homepage/serv_sstd_tablepdf.pdf. The threshold number for NAICS classification 335221, Household Cooking Appliance Manufacturers, which includes microwave oven manufacturers, is 750 employees. DOE surveyed the AHAM member directory to identify manufacturers of microwave ovens. In addition, as part of the appliance standards rulemaking, DOE asked interested parties and

AHAM representatives within the microwave oven industry if they were aware of any small business manufacturers. DOE consulted publicly available data, purchased company reports from sources such as Dun & Bradstreet, and contacted manufacturers, where needed, to determine if they meet the SBA's definition of a small business manufacturing facility and have their manufacturing facilities located within the United States. Based on this analysis, DOE estimates that there is one small business which manufactures a product which combines a microwave oven with other appliance functionality. However, because DOE is not amending at this time the test procedures for microwave ovens to include provisions for measuring the standby mode and off mode energy use for the microwave oven portion of such combined products, DOE certifies that today's final rule would not have a significant economic impact on a substantial number of small entities. Accordingly, DOE has not prepared a regulatory flexibility analysis for this rulemaking. DOE will transmit the certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the SBA for review under 5 U.S.C. 605(b).

C. Review Under the Paperwork Reduction Act of 1995

Manufacturers of microwave ovens must certify to DOE that their products comply with any applicable energy conservation standards. In certifying compliance, manufacturers must test their products according to the DOE test procedures for microwave ovens, 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 microwave ovens. (76 FR 12422 (March 7, 2011)). 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 20 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.

D. Review Under the National Environmental Policy Act of 1969

In this final rule, DOE amends its test procedure for microwave ovens. DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and DOE's implementing regulations at 10 CFR part 1021. Specifically, this rule amends an existing rule without affecting the amount, quality or distribution of energy usage, and, therefore, will not result in any environmental impacts. Thus, this rulemaking is covered by Categorical Exclusion A5 under 10 CFR part 1021, subpart D, which applies to any rulemaking that interprets or amends an existing rule without changing the environmental effect of that rule. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

E. Review Under Executive Order 13132

Executive Order 13132, “Federalism,” 64 FR 43255 (August 4, 1999) imposes certain requirements on 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 examined this final rule and determined that it will 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 today’s final rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) No further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

Regarding the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, “Civil Justice Reform,” 61 FR 4729 (Feb. 7, 1996), 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. 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 sections 3(a) and 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 final rule meets the relevant standards of Executive Order 12988.

G. 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. No. 104-4, sec. 201 (codified at 2 U.S.C. 1531). For a regulatory action resulting 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 small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820; also available at <http://energy.gov/gc/office-general-counsel>. DOE examined today’s final rule according to UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure of \$100 million or more in any year, so these requirements do not apply.

H. 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. Today’s final rule will 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.

I. Review Under Executive Order 12630

DOE has determined, under Executive Order 12630, “Governmental Actions and Interference with Constitutionally Protected Property Rights” 53 FR 8859 (March 18, 1988), that this regulation will not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

J. Review Under 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 agencies to review most disseminations of information to the public under 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 today's final rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. 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 OMB, a Statement of Energy Effects for any significant energy action. A "significant energy action" is defined as any action by an agency that promulgated 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 significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use if the regulation is implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

Today's regulatory action is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as a significant energy action by the Administrator of OIRA. Therefore, it is not a significant energy action, and, accordingly, DOE has not prepared a Statement of Energy Effects.

L. Review Under Section 32 of the Federal Energy Administration Act of 1974

Under section 301 of the Department of Energy Organization Act (Pub. L. 95–91; 42 U.S.C. 7101), DOE must comply with section 32 of the Federal Energy Administration Act of 1974, as amended by the Federal Energy Administration Authorization Act of 1977. (15 U.S.C. 788; FEAA) Section 32 essentially provides in relevant part that, where a rule authorizes or requires use of commercial standards, the rulemaking must inform the public of the use and background of such standards. In addition, section 32(c) requires DOE to consult with the Attorney General and the Chairman of the Federal Trade Commission (FTC) concerning the impact of the commercial or industry standards on competition.

The final rule incorporates testing methods contained in the following commercial standards:

1. IEC Standard 62301, “Household electrical appliances – Measurement of standby power,” (First Edition, June 2005).

2. IEC Standard 62301, “Household electrical appliances – Measurement of standby power,” Edition 2.0, 2011-01.

DOE has evaluated these standards and is unable to conclude whether they fully comply with the requirements of section 32(b) of the FEAA, i.e., whether they were developed in a manner that fully provides for public participation, comment, and review. DOE has consulted with the Attorney General and the Chairman of the FTC about the impact on competition of using the methods contained in these standards and has received no comments objecting to their use.

M. Congressional Notification

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of today's rule before its effective date. The report will state that it has been determined that the rule is not a "major rule" as defined by 5 U.S.C. 804(2).

N. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this final rule.

List of Subjects

10 CFR Part 429

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Reporting and recordkeeping requirements.

10 CFR Part 430

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

Issued in Washington, DC, on January 11, 2013.

Kathleen B. Hogan,
Deputy Assistant Secretary for Energy Efficiency,
Energy Efficiency and Renewable Energy.

For the reasons stated in the preamble, DOE amends parts 429 and 430 of Chapter II of Title 10, Code of Federal Regulations as set forth below:

**PART 429 -- CERTIFICATION, COMPLIANCE, AND ENFORCEMENT FOR
CONSUMER PRODUCTS AND COMMERCIAL AND INDUSTRIAL EQUIPMENT**

1. The authority citation for part 429 continues to read as follows:

Authority: 42 U.S.C. 6291–6317.

2. Section 429.23 is amended by revising paragraph (a)(2)(i) introductory text to read as follows:

§ 429.23 Conventional cooking tops, conventional ovens, microwave ovens.

(a) * * *

(2) * * *

(i) Any represented value of estimated annual operating cost, energy consumption, standby mode power consumption, off mode power consumption, or other measure of energy consumption of a basic model for which consumers would favor lower values shall be greater than or equal to the higher of:

* * * * *

PART 430--ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

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

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

4. Section 430.2 is amended by:

- a. Revising the definitions of “Microwave/conventional range” and “Microwave oven”; and
- b. Adding the definitions for “Convection microwave oven”, “Microwave/conventional cooking top”, and “Microwave/conventional oven” in alphabetical order.

The revisions and additions read as follows:

§ 430.2 Definitions.

* * * * *

Convection microwave oven means a microwave oven that incorporates convection features and any other means of cooking in a single compartment.

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Microwave/conventional cooking top means a class of kitchen ranges and ovens that is a household cooking appliance consisting of a microwave oven and a conventional cooking top.

Microwave/conventional oven means a class of kitchen ranges and ovens that is a household cooking appliance consisting of a microwave oven and a conventional oven in separate compartments.

Microwave/conventional range means a class of kitchen ranges and ovens that is a

household cooking appliance consisting of a microwave oven and a conventional oven in separate compartments and a conventional cooking top.

Microwave oven means a class of kitchen ranges and ovens comprised of household cooking appliances consisting of a compartment designed to cook or heat food by means of microwave energy, including microwave ovens with or without thermal elements designed for surface browning of food and convection microwave ovens.

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5. Appendix I to Subpart B of Part 430 is amended:

- a. By revising the note after the heading;
- b. In section 1. Definitions, by revising sections 1.16 and 1.17:
- c. In section 2. Test Conditions, by revising sections 2.1.3, 2.2.1.1, 2.2.1.2, 2.5.2, 2.6, and 2.9.1.3; and
- d. In section 3. Test Methods and Measurements, by revising sections 3.1.4.1, and 3.2.4.

The revisions read as follows:

Appendix I to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Conventional Ranges, Conventional Cooking Tops, Conventional Ovens, and Microwave Ovens

Note: Any representation made after April 29, 2013 related to standby mode and off mode energy consumption of conventional ranges, conventional cooking tops, and conventional ovens, or after [INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] for standby and off mode energy consumption of microwave ovens,

must be based upon results generated under this test procedure.

Any representation related to standby mode and off mode energy consumption of microwave ovens made between **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** may be based upon results generated under this test procedure or upon the test procedure as it appeared at 10 CFR part 430, subpart B, appendix I as contained in the 10 CFR parts 200 to 499 edition revised as of January 1, 2012.

Upon the compliance date(s) of any energy conservation standard(s) for conventional ranges, conventional cooking tops, conventional ovens, and microwave ovens that incorporates standby mode and off mode energy consumption, use of the applicable provisions of this test procedure to demonstrate compliance with the energy conservation standard will also be required.

1. Definitions

* * * * *

1.16 Standard cubic foot (or liter (L)) of gas means that quantity of gas that occupies 1 cubic foot (or alternatively expressed in L) when saturated with water vapor at a temperature of 60 °F (15.6 °C) and a pressure of 30 inches of mercury (101.6 kPa) (density of mercury equals 13.595 grams per cubic centimeter).

1.17 Standby mode means any mode in which a conventional cooking top, conventional oven, conventional range, or microwave oven is connected to a mains power source and offers one or more of the following user-oriented or protective functions which may persist for an indefinite time: (a) facilitation of the activation of other modes (including activation or

deactivation of active mode) by remote switch (including remote control), internal sensor, or timer; (b) provision of continuous functions, including information or status displays (including clocks) or sensor-based functions. A timer is a continuous clock function (which may or may not be associated with a display) that allows for regularly scheduled tasks and that operates on a continuous basis.

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2. Test Conditions

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2.1.3 Microwave ovens. Install the microwave oven in accordance with the manufacturer's instructions and connect to an electrical supply circuit with voltage as specified in section 2.2.1 of this appendix. The microwave oven shall also be installed in accordance with Section 5, Paragraph 5.2 of IEC 62301 (Second Edition) (incorporated by reference; see §430.3), disregarding the provisions regarding batteries and the determination, classification, and testing of relevant modes. A watt meter shall be installed in the circuit and shall be as described in section 2.9.1.3 of this appendix.

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2.2.1.1 Voltage. Maintain the electrical supply to the conventional range, conventional cooking top, and conventional oven being tested at 240/120 volts ± 2 percent except that basic models rated only at 208/120 volts shall be tested at that rating ± 2 percent. For microwave oven testing, maintain the electrical supply to the unit at 240/120 volts ± 1 percent. Maintain the electrical supply frequency for all products at 60 hertz ± 1 percent.

2.2.1.2 Supply voltage waveform. For the standby mode and off mode testing, maintain the electrical supply voltage waveform as indicated in Section 4, Paragraph 4.3.2 of IEC 62301

(Second Edition) (incorporated by reference; see §430.3). For microwave oven standby mode and off mode testing, if the power measuring instrument used for testing is unable to measure and record the total harmonic content during the test measurement period, it is acceptable to measure and record the total harmonic content immediately before and after the test measurement period.

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2.5.2 Standby mode and off mode ambient temperature. For standby mode and off mode testing, maintain room ambient air temperature conditions as specified in Section 4, Paragraph 4.2 of IEC 62301 (Second Edition) (incorporated by reference; see §430.3).

2.6 Normal nonoperating temperature. All areas of the appliance to be tested shall attain the normal nonoperating temperature, as defined in section 1.12 of this appendix, before any testing begins. The equipment for measuring the applicable normal nonoperating temperature shall be as described in sections 2.9.3.1, 2.9.3.2, 2.9.3.3, and 2.9.3.4 of this appendix, as applicable.

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2.9.1.3 Standby mode and off mode watt meter. The watt meter used to measure standby mode and off mode shall meet the requirements specified in Section 4, Paragraph 4.4 of IEC 62301 (Second Edition) (incorporated by reference; see §430.3). For microwave oven standby mode and off mode testing, if the power measuring instrument used for testing is unable to measure and record the crest factor, power factor, or maximum current ratio during the test measurement period, it is acceptable to measure the crest factor, power factor, and maximum current ratio immediately before and after the test measurement period.

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3. Test Methods and Measurements

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3.1.4.1 Microwave oven test standby mode and off mode power. Establish the testing conditions set forth in section 2, Test Conditions, of this appendix. For microwave ovens that drop from a higher power state to a lower power state as discussed in Section 5, Paragraph 5.1, Note 1 of IEC 62301 (Second Edition) (incorporated by reference; see § 430.3), allow sufficient time for the microwave oven to reach the lower power state before proceeding with the test measurement. Follow the test procedure as specified in Section 5, Paragraph 5.3.2 of IEC 62301 (Second Edition). For units in which power varies as a function of displayed time in standby mode, set the clock time to 3:23 and use the average power approach described in Section 5, Paragraph 5.3.2(a) of IEC 62301 (First Edition), but with a single test period of 10 minutes $\pm 0/-2$ sec after an additional stabilization period until the clock time reaches 3:33. If a microwave oven is capable of operation in either standby mode or off mode, as defined in sections 1.17 and 1.13 of this appendix, respectively, or both, test the microwave oven in each mode in which it can operate.

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3.2.4 Microwave oven test standby mode and off mode power. Make measurements as specified in Section 5, Paragraph 5.3 of IEC 62301 Second Edition (incorporated by reference; see §430.3). If the microwave oven is capable of operating in standby mode, as defined in section 1.17 of this appendix, measure the average standby mode power of the microwave oven, P_{SB} , in watts as specified in section 3.1.4.1 of this appendix. If the microwave oven is capable of operating in off mode, as defined in section 1.13 of this appendix, measure the average off mode power of the microwave oven, P_{OM} , as specified in section 3.1.4.1.

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