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## DEPARTMENT OF ENERGY

### 10 CFR Part 430

[Docket No. EERE-2008-BT-TP-0020]

RIN 1904-AB89

#### Energy Conservation Program for Consumer Products: Test Procedures for Residential Furnaces and Boilers (Standby Mode and Off Mode)

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

**ACTION:** Final rule.

**SUMMARY:** The U.S. Department of Energy (DOE) is amending its test procedures for residential furnaces and boilers to include provisions for measuring standby mode and off mode energy consumption, as required by the Energy Independence and Security Act of 2007 (EISA 2007). These test procedure amendments are primarily based on and incorporate by reference provisions of the International Electrotechnical Commission (IEC) Standard 62301, "Household electrical appliances—Measurement of standby power." This final rule adds new calculations to determine the annual energy consumption associated with standby mode and off mode measured power, and it modifies the existing energy consumption equations to integrate standby mode and off mode energy consumption into the calculation of overall annual energy consumption of these products. This final rule also adopts a number of definitions for key terms.

**DATES:** This rule is effective November 19, 2010. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register on November 19, 2010.

**ADDRESSES:** You may review copies of all materials related to this rulemaking at the U.S. Department of Energy,

Resource Room of the Building Technologies Program, 950 L'Enfant Plaza, SW., Suite 600, Washington, DC (202) 586-2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Please call Ms. Brenda Edwards at the above telephone number for additional information regarding visiting the Resource Room.

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Mr. Eric Stas, U.S. Department of Energy, Office of the General Counsel, GC-71, 1000 Independence Avenue, SW., Washington, DC 20585. Telephone: (202) 586-9507. E-mail: [Eric.Stas@hq.doe.gov](mailto:Eric.Stas@hq.doe.gov).

**SUPPLEMENTARY INFORMATION:** This final rule incorporates by reference the following standard into part 430.

- International Electrotechnical Commission (IEC) Standard 62301 ("IEC 62301"), Household electrical appliances—Measurement of standby power (first edition, June 2005).

Copies of IEC Standard 62301 can be purchased from the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, (212) 642-4936, or <http://webstore.iec.ch>.

You can also view copies of this standards at the U.S. Department of Energy, Resource Room of the Building Technologies Program, 950 L'Enfant Plaza, SW., 6th Floor, Washington, DC 20024, (202) 586-2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

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#### I. Background and Authority

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. Part A<sup>1</sup> of Title III (42 U.S.C. 6291-6309) establishes the "Energy Conservation Program for Consumer Products Other Than Automobiles," including residential furnaces and boilers (all of which are referenced below as "covered products").<sup>2</sup> (42 U.S.C. 6291(1)-(2) and 6292(a)(5))

Under the Act, this program consists essentially of three parts: (1) Testing; (2) labeling; and (3) establishing Federal energy conservation standards. The testing requirements consist of test procedures that manufacturers of covered products must use as the basis for certifying to DOE that their products comply with applicable energy conservation standards adopted under EPCA and for representing the efficiency of those products. Similarly, DOE must use these test procedures to determine whether the products comply with standards adopted under EPCA. Under 42 U.S.C. 6293, EPCA sets forth criteria and procedures for DOE's adoption and amendment of such test procedures. EPCA provides that "[a]ny test procedures prescribed or amended

<sup>1</sup> This part was originally titled Part B. It was redesignated Part A in the United States Code for editorial reasons.

<sup>2</sup> All references to EPCA refer to the statute as amended through the Energy Independence and Security Act of 2007, Public Law 110-140.

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, as determined by the Secretary [of Energy], 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, with a comment period no less than 60 or more than 270 days. (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))

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA 2007), Public Law 110–140, was enacted. The EISA 2007 amendments to EPCA, in relevant part, require DOE to amend the test procedures for all covered products to include measures of standby mode and off mode energy consumption. Specifically, section 310 of EISA 2007 provides definitions of “active mode,” “standby mode,” and “off mode” (42 U.S.C. 6295(gg)(1)(A)); however, the statute permits DOE to amend these definitions in the context of a given product (42 U.S.C. 6295(gg)(1)(B)). The legislation requires integration of such energy consumption “into the overall energy efficiency, energy consumption, or other energy descriptor for each covered product, unless the Secretary determines that—

(i) The current test procedures for a covered product already fully account and incorporate the standby and off mode energy consumption of the covered product; or

(ii) Such an integrated test procedure is technically infeasible for a particular covered product, in which case the Secretary shall prescribe a separate standby mode and off mode energy use test procedure for the covered product, if technically feasible.” (42 U.S.C. 6295(gg)(2)(A))

Under the statutory provisions introduced by EISA 2007, any such amendment must consider the most current versions of International

Electrotechnical Commission (IEC) Standard 62301, *Household electrical appliances—Measurement of standby power*, (First Edition 2005–06) and IEC Standard 62087, *Methods of measurement for the power consumption of audio, video, and related equipment* (Second Edition, 2008–09).<sup>3</sup> *Id.* For residential furnaces and boilers, the statute directed DOE to prescribe any such amendment to the test procedures by September 30, 2009. (42 U.S.C. 6295(gg)(2)(B)(iv))

DOE’s current test procedure for residential furnaces and boilers is found at 10 CFR part 430, subpart B, appendix N, *Uniform Test Method for Measuring the Energy Consumption of Furnaces and Boilers*. DOE established its test procedures for furnaces and boilers in a final rule published in the **Federal Register** on May 12, 1997. 62 FR 26140. This procedure establishes a means for determining annual energy efficiency and annual energy consumption of gas-fired, oil-fired, and electric furnaces and boilers. It is important to note that gas-fired and oil-fired furnaces and boilers consume both fossil fuel and electricity. Electric furnaces and boilers only consume electricity. In this test procedure, fossil-fuel energy consumption is accounted for comprehensively over a full-year cycle, thereby satisfying EISA 2007 requirements for fossil-fuel standby mode and off mode energy consumption. However, electrical energy consumption in standby mode and off mode is not accounted for in the current test procedure.

Proposed amendments to include electrical energy consumption in standby mode and off mode were published in the **Federal Register** in the July 27, 2009, notice of proposed rulemaking (NPR). 74 FR 36959. DOE’s proposal was presented and explained at a public meeting on August 18, 2009 at DOE headquarters in Washington, DC. DOE invited written comments, data, and information on the NPR and accepted such material through October 13, 2009.

Subsequent to the NPR, DOE issued a Supplemental Notice of Proposed Rulemaking (SNOPR) for the purpose of adding an integrated metric that incorporates standby mode and off mode energy consumption into the statutorily-identified efficiency descriptor, Annual Fuel Utilization Efficiency (AFUE). The SNOPR was published in the **Federal Register** on April 5, 2010. 75 FR 17075. An extension of the comment period was

<sup>3</sup> IEC standards are available for purchase at: <http://www.iec.ch>.

published in the **Federal Register** on April 14, 2010. 75 FR 19296. The comment period closed on April 27, 2010.

## II. Summary of the Final Rule

In this final rule, DOE is amending the current test procedure for furnaces and boilers in order to implement recent amendments to EPCA pertaining to measurement of standby mode and off mode energy consumption. As an initial matter, DOE has concluded that the existing test procedures already fully account for and incorporate the standby mode and off mode fossil-fuel energy consumption of gas-fired and oil-fired furnaces and boilers. Accordingly, for the fossil-fuel aspect of these units, no further action is required. (42 U.S.C. 6295(gg)(2)(A)(i)) However, to address electrical standby mode and off mode energy use, today’s amendments incorporate by reference into the DOE test procedures, the International Electrotechnical Commission’s (IEC) Standard 62301, *Household electrical appliances—Measurement of standby power* (First Edition 2005–06), as well as language to clarify application of this standard for measuring standby mode and off mode power consumption for furnaces and boilers.<sup>4</sup>

In addition, the amendments add new calculations to determine annual energy consumption associated with electrical standby mode and off mode measured power. The amendments modify existing energy consumption equations to integrate electrical standby mode and off mode energy consumption into the calculation of overall annual energy consumption of these products. Finally, the final rule also adopts definitions for a number of key terms.

Since the time of the NPR and public hearing, DOE proposed that one additional test procedure change is needed to carry out the purposes of EISA 2007. Specifically, it was thought necessary to add an integrated metric that incorporates standby mode and off mode energy consumption into the statutorily-identified efficiency descriptor, AFUE. For the reasons discussed below, after considering public comments, DOE has determined that the proposed test procedure change

<sup>4</sup> 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. However, IEC Standard 62087 does not include measurement of the power consumption of appliances such as furnaces and boilers. Therefore, DOE has determined that IEC Standard 62087 is not applicable to this rulemaking.

for an integrated metric is not technically feasible.

Today's amendments are essentially as proposed in the July 27, 2009 NOPR. 74 FR 36959. DOE has provided further clarification in this final rule on how to implement the IEC Standard 62301 standard, as a result of public comments. These comments and clarifications are discussed fully below.

As provided by EPCA, amendments to the test procedure to measure standby mode and off mode energy consumption shall not be used to determine compliance with previously established standards. (42 U.S.C. 6295(gg)(2)(C)) Furthermore, EPCA requires DOE to determine whether a proposed test procedure amendment would alter the measured efficiency of a product, and require adjustment of the existing standards. (42 U.S.C. 6293(e)) However, the inclusion of standby mode and off mode test methods in this final rule will not affect a manufacturer's ability to demonstrate compliance with the current energy conservation standards for residential furnaces and boilers. The new test procedure provisions clearly state that the standby mode and off mode test need not be performed to determine compliance with the current energy conservation standards for furnaces and boilers, because the standards do not comprehensively account for all standby mode and off mode energy consumption.

Today's final rule, which include provisions for measuring standby mode and off mode, will become effective in terms of adoption into the Code of Federal Regulations (CFR), 30 days after the date of publication in the **Federal Register**. Manufacturers will be required to use this test procedure's standby mode provisions to demonstrate compliance with any future energy conservation standards for residential furnaces and boilers as of the compliance date of a final rule establishing amended energy conservation standards for furnaces and boilers that fully address standby mode and off mode energy consumption. The introductory note to 10 CFR part 430, subpart B, appendix N reads as follows: "The procedures and calculations that refer to standby mode and off mode energy consumption, (*i.e.*, sections 8.6 and 10.9 of this appendix N) need not be performed to determine compliance with energy conservation standards for furnaces and boilers at this time. However, any representation related to standby mode and off mode energy consumption of these products made after April 18, 2011 must be based upon results generated under this test procedure, consistent with the

requirements of 42 U.S.C. 6293(c)(2). After July 1, 2010, any adopted energy conservation standard shall address standby mode and off mode energy consumption, and upon the compliance date for such standards, compliance with the applicable provisions of this test procedure will also be required." The quoted language will be removed in the rulemaking to amend the energy conservation standards for residential furnaces and boilers which must also address standby mode and off mode energy consumption. A statement has also been added to the introductory note to clarify that any representations pertaining to standby mode and off mode energy consumption that are made after a date 180 days after publication of the test procedure final rule in the **Federal Register** must be based upon testing under the relevant provisions of this test procedure. Although this is a statutory requirement under 42 U.S.C. 6293(c), DOE has concluded that it would be useful to explicitly state this requirement in DOE's regulations.

### III. Discussion

In the July 27, 2009 NOPR and at the subsequent August 18, 2009 public meeting, DOE sought input from interested parties on the proposed amendments to the DOE test procedure for furnaces and boilers to address standby mode and off mode energy use. Three written comments were received from the Air-Conditioning, Heating and Refrigeration Institute (AHRI), the People's Republic of China (China), and Energy Kinetics, Inc. Two comments were generally supportive of the proposed amendments but asked for clarification and specific modifications on how to implement the IEC Standard 62301 in light of some possible conflicts with the existing test procedure's specifications. (AHRI, No. 08 at pp. 1–2; China, No. 09 at p. 3.) A third comment asked for consideration of a completely new test procedure for boilers (Energy Kinetics, No. 3 at pp. 1–3). This third comment is not directly related to the purpose of these amendments that are the basis for this test procedure rulemaking to address measurement of standby mode and off mode energy consumption, but it is discussed separately below.

In general, DOE has retained the approach to measurement of standby mode and off mode presented in the July 2009 NOPR with certain modifications based upon public comment input, so for further details, please consult that document. 74 FR 36959 (July 27, 2009). DOE notes that numerous comments were received on

the supplemental proposal of an integrated AFUE (AFUE<sub>i</sub>), the overwhelming majority of which opposed adoption of the proposed integrated metric. These comments and the overall discussion of the regulating metric for this product are discussed below. However, to summarize here, based upon a careful examination of these public comments, DOE has concluded that an integrated metric (AFUE<sub>i</sub>) is not technically feasible, because the standby mode and off mode energy usage, when measured, is essentially lost in practical terms due to the fact that manufacturers' ratings of AFUE are presented to the nearest whole number. Consequently, DOE has decided to withdraw its AFUE<sub>i</sub> proposal.

#### A. Possible Conflicts Between IEC Standard 62301 and Existing Test Procedures

The AHRI comments recommended that the existing test procedure's provisions<sup>5</sup> should be used whenever there is a possible conflict with IEC Standard 62301. Specifically, AHRI suggested that because the additional proposed measurements will be taken in the course of the overall conduct of the existing test procedure, ambient temperature, test voltage and frequency, and instrument accuracy should be the same as is currently specified in the furnace and boiler test procedure. (AHRI, No. 3 at p. 1) The comment from China pointed out the same possible conflicts but only asked for clarification. (China, No. 09 at p. 3)

DOE has further analyzed the various provisions of both the existing test procedure and IEC Standard 62301 and has concluded that some of the provisions of IEC Standard 62301 could represent either a conflict or unnecessary burden. Accordingly, DOE believes some additional clarification is necessary in this final rule. The following discussion outlines, parameter by parameter, where the existing procedures are to apply and where the IEC procedures are to apply.

On the matter of ambient temperature, DOE agrees with AHRI that the existing test procedure specification should be used. Ambient temperature is an important measurement within the existing test procedure and has bearing

<sup>5</sup> The existing provisions are found at Title 10 part 430, subpart B, appendix N, which incorporates by reference sections of the American National Standards Institute (ANSI)/American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 103—1993, "Method of Testing for Annual Fuel Utilization Efficiency of Residential Central Furnaces and Boilers."

on the overall efficiency determination of the appliance. Considerable effort is required to maintain a reasonably uniform ambient temperature in the testing facility during actual testing of furnaces and boilers. This is because there is considerable heat being produced by the operation of the appliance during testing. The existing provisions require a determination of average ambient temperature by taking multiple measurements at various locations around the appliance; the air for combustion and draft relief must not differ by more than 5 °F from the average ambient temperature, and the average ambient temperature must remain in a specified range during all tests (section 8.5, *Room Ambient Temperature*, of the ASHRAE 103—1993). In contrast, IEC Standard 62301 only specifies an ambient temperature requirement of (23 +/- 5) °C (section 4.2, *Test room*, of IEC Standard 62301). DOE believes this limited specification in IEC Standard 62301 is indicative that ambient temperature is not likely to have a significant effect on the measurement of standby mode and off mode wattage, provided that a reasonable range of temperature is maintained. Since an ambient temperature within a reasonable range is all that is required under IEC Standard 62301, and given that an increased testing burden may result from adoption of the slightly different IEC Standard 62301 ambient temperature provision, DOE has concluded that the existing, more detailed specification of ambient temperature is appropriate for the standby mode and off mode wattage measurements. In this final rule, DOE is explicitly clarifying the ambient temperature requirement in its regulations at 10 CFR part 430, subpart B, appendix N, sections 8.6.1 and 8.6.2.

On the matter of voltage and frequency, section 4.3, *Power supply*, of IEC Standard 62301 states that “where the IEC standard is referenced by an external standard or regulation that specifies a test voltage and frequency, the test voltage and frequency so defined shall be used for all tests.” The DOE test procedures for residential furnaces and boilers would be considered such an external standard, except that the DOE test procedure only specifies voltage and not frequency. Accordingly, it is not clear that this deference to the existing test procedures should automatically apply.

IEC Standard 62301 specifies the test voltage and frequency of the country for which the measurement is being determined (e.g., 115V, 60Hz for North America). IEC Standard 62301 specifies that the tested voltage and frequency

should be within 1 percent of these values. As noted above, in the existing test procedure, there is no specification of frequency, but throughout the United States, 60 Hz is the frequency of the distributed electrical power. Therefore, there is no possible conflict regarding frequency, so DOE has determined that the 60Hz specification should apply. The voltage specification in the existing test procedure is expressed as “within 1% of nameplate voltage.” Typically, nameplate voltage would be either 115V or 120V. Therefore, the difference in testing voltage possible is either non-existent or very small, especially considering the same specified tolerance. In view of this small possible difference in the voltage specification and the general deference given to external standards, DOE has clarified in this final rule that the existing test procedure’s specification for voltage shall apply to the standby mode and off mode measurements. In this final rule, DOE is explicitly clarifying the frequency and voltage requirements in its regulations at 10 CFR part 430, subpart B, appendix N, sections 8.6.1 and 8.6.2.

On the issue of measurement accuracy, DOE continues to believe, as stated in the NOPR, that the relevant IEC Standard 62301 provisions are reasonable and appropriate for the low wattage levels expected for furnaces and boilers in standby mode and off mode and should not pose a significant burden to the furnace and boiler industry or the associated testing industry. 74 FR 36959, 36966 (July 27, 2009). It is noted that these measurement accuracy provisions discussed here only apply to the new measurement requirements for standby mode and off mode added by this final rule. This final rule does not affect the existing test procedures’ accuracy provision which applies for the active mode measurements. AHRI in its comment recommended that the existing test procedure provisions on measurement accuracy should be used for all electrical measurements including the newly proposed measurements. The accuracy provision in the existing test procedure states “the error shall be no greater than 1%” (section 6.10, *Energy Flow Rate*, of ASHRAE Standard 103—1993). In contrast, IEC Standard 62301’s accuracy provision states “measurements \* \* \* shall be made with an uncertainty of less than or equal to 2% at the 95% confidence level” (section 4.5, *Power measurement accuracy*, of IEC Standard 62301). In addition, section 5 of IEC Standard 62301 outlines measurement

procedures that clarify how stability is to be addressed in the testing (section 5, *Measurements*, of IEC Standard 62301). AHRI stated that the “95% confidence” provision implies repeated measurements and is not consistent with any other measurements taken in the course of conducting testing under the residential furnace and boiler test procedure. (AHRI, No. 3 at p. 1). In follow-up comments, AHRI provided detailed recommendations that maintain the instrument accuracy specification of the existing test procedure (i.e., no greater than 1-percent error). Also included in the AHRI detailed recommendations is an added stability measurement procedure that involves multiple measurements similar to what is outlined in section 5 of the IEC Standard 62301 procedures (AHRI, No. 11 at pp. 3–4). AHRI did not provide any data as to the potential for increased cost, time, or other burden that might result from adopting the IEC accuracy provisions in total.

In response, DOE believes the IEC accuracy provisions, including the “95% confidence” format, are consistent with how instrument and measurement accuracy are specified in the present day, whereas the existing test procedure provision format is consistent with how instrument and measurement accuracy were specified at the time the test procedures were first developed. In addition, in this case, DOE does not believe the IEC provision is more stringent or burdensome than the existing provision. Taken together, DOE does not view the AHRI comments as providing a reason to depart from the IEC measurement accuracy provision. DOE had decided to retain its proposed approach to measurement accuracy, because the IEC accuracy provision is consistent with how present day instrument and measurement procedures are specified, should not represent a significant increase in testing burden, and will provide the additional benefit of measurement consistency across DOE product types. This latter point is of interest to DOE in the context of energy conservation standards where the analysis and consideration of regulating standby mode and off mode energy consumption would be served by a consistent measurement basis across product types.

In summary, DOE has revisited the IEC Standard 62301 provisions in order to address the comments received and has, for the reasons stated above, decided to require existing test procedure specifications to govern ambient temperature and voltage during the standby mode and off mode tests.

However, also for reasons stated above, DOE is requiring use of IEC Standard 62301 as the governing standard for standby mode and off mode instrument and measurement accuracy.

#### B. Alternate Test Procedure for Boilers

The comments from Energy Kinetics presented what it believes to be a myriad of shortcomings of the existing DOE test procedures as applied to boilers. The dominant point made in the comment is to suggest that an input/output method of test, in lieu of the current test procedure's flue loss method of test, would be more appropriate for boilers.<sup>6</sup> However, the commenter did not recommend any specific alternate test method. (Energy Kinetics, No. 3 pp. 1–3, specifically points 1.0, 2.0, 4.0, and 6.0) Although generally outside the scope of the present rulemaking to address standby mode and off mode energy use, DOE is aware of the developments and possible advantages of input/output methods and is appreciative of the efforts made by the commenter in presenting these issues from their perspective. Conceptually, DOE sees merit in a number of points made in the comments. Specifically, DOE believes any time a more complete or more comprehensive analysis is suggested, its potential for use in a test procedure should be given serious consideration. However, it is DOE's view at this time that the input/output methodology has not progressed to the point that it can be considered for addition or substitution directly into DOE regulations. Specifically, DOE is not aware of an agreed upon representative average use simulation or model, utilizing input/output method of test, which might meet the statutory requirements for a DOE test procedure. The statute requires that "*any test procedure prescribed or amended \* \* \* shall be reasonably designed to produce test results which measure energy efficiency \* \* \* 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) (emphasis added)) The commenter has not offered such a

<sup>6</sup> Flue loss method of test involves measurement of the actual energy loss occurring in the exiting flue passage. Annual efficiency is determined as 100 percent minus the on-period and off-period flue losses and other appropriate losses (e.g., jacket losses for outdoor units and air infiltration losses for indoor units). Input/output method of test involves direct measurement of the useful output of the unit. For hot water boilers this output would be the heat content of the circulating water. Under the input/output method of test, annual efficiency would be inferred by some combination of laboratory simulation or mathematical modeling utilizing these heat measurements.

procedure for consideration. Nonetheless, DOE acknowledges that this is an important issue, and, accordingly, DOE will monitor the efforts of ASHRAE and others in developing improved testing methods.

#### C. Additional Issues Raised by Energy Kinetics

Within the overall suggestion to consider a different test procedure for boilers, the Energy Kinetics comments raised issues regarding the existing DOE boiler test procedure that are not necessarily related to the test methodology issue discussed above. Although these issues may have some relevance to the test methodology issue, they are independent enough to merit separate discussion.

First, Energy Kinetics suggested in its comments that the treatment of jacket losses in the existing test procedure is inappropriate for boilers. (Energy Kinetics, No. 03 pp. 1–3, specifically points 4.4, 4.5, 5.0, and 5.1). Key to this interpretation is the commenter's belief that the heat energy from the boiler jacket should not be credited as useful heat to the home. This belief would be true for boilers installed outdoors but not true for boiler installed indoors. For uniformity purposes, the existing test procedure minimizes the number of ratings to just two; indoor ratings for boilers that are not weatherized and outdoor ratings for boilers that are weatherized. (10 CFR part 430, subpart B, appendix N, section 10.1) Indoor ratings (i.e., non-weatherized) assume all jacket heat is useful heat, and outdoor ratings (i.e., weatherized) assume all jacket heat is an energy loss. These existing provisions provide a uniform basis of comparison for indoor installed boilers that is reasonably representative without requiring a separate test to determine and added calculations to deduct (or partially deduct) jacket loss. Also, these existing provisions provide a uniform basis of comparison for outdoor installed boilers where a full jacket loss deduction is appropriate. It is interesting to note, a full deduction of jacket loss for indoor boilers, although inappropriate, would easily be accommodated in an input/output test methodology since, in that methodology, only the heat content of the circulating water is credited as useful heat. In effect, this limit on only crediting circulating water heat results in a full deduction of any jacket loss. This fact supports the commenter's preference for a full jacket loss deduction for all boilers.

In consideration of all of the above, DOE believes the points Energy Kinetics raised are outside of the scope of this

rulemaking and does not see the need to delay this final rule for the purposes of reconsidering the existing provisions on jacket loss. DOE believes that a better path would be to consider this issue as part of a more comprehensive future rulemaking to consider updates to the residential furnaces and boilers test procedure.

The Energy Kinetics comment also identified two areas where it believes the test procedures should be expanded: (1) Use of advanced controls, and (2) the combination of water heating and space conditioning functions. (Energy Kinetics, No. 03 pp. 1–3, specifically points 2.0, 4.6, and 5.2) These are issues of which DOE is aware and which are currently under study within the test procedure support community. As with the jacket loss issue, DOE believes this issue is out of scope and does not see the need to delay this final rule for the purposes of addressing these complicated issues at this time. Again, DOE believes that a better path would be to consider these issues as part of a more comprehensive future rulemaking to consider updates to the residential furnace and boilers test procedure.

Finally, Energy Kinetics stated that a separate metric should be developed to provide information on the relative difference in energy efficiency across different distribution systems (e.g. ducted distribution systems vs. hydronic systems). (Energy Kinetics, No. 03 p. 2, specifically points 7.0, 7.1, and 7.2.) In response, DOE notes that the test procedure's focus is the testing and differentiation of energy performance of the manufactured product. Annual energy consumption estimates reflect a uniform application of representative values that result in an energy or monetary value of a given manufactured product's performance, all for the purposes of comparison. One could argue that the test procedure's annual energy consumption estimates are inaccurate because of this lack of distribution efficiency consideration. However, one could also argue that the test procedure provides for a means to uniformly test and compare all boilers regardless of effects of actual distribution systems. In any event, the issue is outside of the scope of this rulemaking and will not be considered further or resolved here. Once again, DOE believes that a better path would be to consider this issue as part of a more comprehensive future rulemaking to consider updates to the residential furnaces and boilers test procedure.

*D. Need for an Integrated Annual Fuel Utilization Efficiency (AFUE<sub>i</sub>)*

Subsequent to publication of the July 2009 NOPR and the related public hearing, DOE proposed one additional test procedure change that it tentatively determined is needed to carry out the purposes of EISA 2007. Specifically, DOE proposed to add an integrated metric that incorporates standby mode and off mode energy consumption into the statutorily-identified efficiency descriptor, AFUE. Key to DOE's tentative determination is the specification of AFUE as the required energy efficiency descriptor for furnaces in the statute. (42 U.S.C. 6291(22)). EISA 2007 requires, if technically feasible, integration of standby mode and off mode energy consumption into the overall energy efficiency, energy consumption, or other energy descriptor. (42 U.S.C. 6295(gg)(2)(A)) The July 2009 NOPR proposed accomplishing this integration by incorporating standby mode and off mode energy consumption into the energy consumption equations and other energy descriptors. It was thought at the time of the proposal that this extent of integration was sufficient to satisfy the requirements of EISA 2007. However, because of the specific identification of AFUE as the efficiency descriptor for furnaces in the statute, DOE interpreted EISA 2007 as requiring, if technically feasible, an integrated AFUE that reflects standby mode and off mode energy consumption for both fossil fuel and electricity. DOE reasoned that this approach would also allow for a smooth transition to the EISA 2007 requirement that all energy conservation standards adopted after July 1, 2010 must account for standby mode and off mode energy consumption. (42 U.S.C. 6295(gg)(3)(A))

As noted above, this matter was the subject of an SNOPR published in the **Federal Register** on April 5, 2010. 75 FR 17075.

Numerous comments opposed both the need for AFUE<sub>i</sub> and the possibility of regulating by AFUE<sub>i</sub>. In sum, these comments suggested that DOE has misinterpreted the statute in terms of requiring the integration of standby mode and off mode energy consumption into the AFUE metric and further that regulating by AFUE<sub>i</sub> would be counter to the intent of EISA 2007, so the separate standard form of regulation, as contemplated by EISA 2007, should be pursued instead. Commenters overwhelmingly opposed DOE's proposed integrated AFUE<sub>i</sub> metric, as presented in the SNOPR.

On the first point, Lennox, AHRI, and American Council for an Energy-Efficient Economy (ACEEE) all asserted that in their reading of the EISA 2007 statute, the requirement to integrate standby mode and off mode energy consumption into the AFUE metric is not mandated. (Lennox, No. 20 at p. 3; AHRI, No. 08 at p. 2; ACEEE, No. 18 at p. 3) These commenters believe DOE is given latitude in the statute to integrate if it chooses and that there is no mandate that DOE must integrate the standby and off mode consumption into the AFUE descriptor. Other commenters pointed out the mathematical inconsistencies associated with adding consumption values within an efficiency descriptor. (Carrier No. 17 at p. 3; AHRI, No. 16 at p. 2) In support of this inconsistency argument, ACEEE stated that the proposed approach for AFUE<sub>i</sub> is counter to DOE's own position taken in its test procedure final rule for fluorescent lamp ballasts. 74 FR 54445 (Oct. 22, 2009). In the technical support document (TSD) for that rulemaking, DOE stated, "Because BEF [ballast efficiency factor] is a measure of efficiency and standby mode power is a measure of energy consumption, DOE does not believe it is feasible to incorporate a measure of standby mode energy use into the BEF metric." (ACEEE, No. 18 at p. 2) In contrast, comments from the American Gas Association (AGA) and the American Public Gas Association (APGA) were supportive of the integrating concept. However, while these entities support the proposal for AFUE<sub>i</sub>, they argued that the included conversion factor transposing the point-of-use electrical energy into an expression of Btu provides only a partial picture of the total energy use of these products. AGA and APGA stated that it would be more appropriate to convert measured site energy to source energy to capture transmission losses. Accordingly, AGA and APGA recommended that the proposed integrated metric should be adjusted for a full-fuel-cycle measure of energy consumption and encouraged further integration of electricity consumption utilizing the full fuel cycle into the regulatory process. (AGA, No. 19, at pp. 1-3; APGA, No. 23 at pp. 1-2)

Further objection to AFUE<sub>i</sub> was expressed in the comments if in fact DOE uses AFUE<sub>i</sub> as the basis of regulation. Specifically, it was argued that because of the relatively small magnitude of the standby mode and off mode loss, the results for AFUE<sub>i</sub> are not materially different enough from the existing test procedure's AFUE to allow

for effective differentiation and regulation, and, therefore, integration is not feasible. (ACEEE, No. 18 at p. 4) Earthjustice asserted that the rounding allowed in the test procedure and the associated sampling provisions would "swallow" the effect of standby mode and off mode. (Earthjustice, No. 21 at pp. 3-4) Trane further argued that the integrated AFUE would have the perverse effect of making larger-capacity furnaces inappropriately appear to be slightly more efficient than smaller furnaces. This is because the magnitude of standby mode and off mode energy consumption could be the same across a given manufacturer's models of different capacities. The result, in that case, is a smaller adjustment in terms of efficiency percentage for larger furnaces, even though the potential energy savings by reducing standby mode and off mode energy consumption is the same. (Trane, No. 14 at p. 3)

Key to the opposition to AFUE<sub>i</sub> as the regulating metric is the distinction made in the statute as to "technically feasible" with regard to test procedure integration, and "feasible" with regard to a single new or amended standard. (42 U.S.C. 6295(gg)(2)(A) and (3)) Specifically, objecting comments maintain that the AFUE<sub>i</sub> provides an ineffective basis for regulation, and, therefore, it makes it infeasible to carry out the intent of EISA 2007. These commenters reasoned that a separate metric such as that provided in the original NOPR, specifically E<sub>SO</sub> or the measured wattage, would be a feasible basis of regulation.

In consideration of the above, DOE reexamined the applicable provisions of EPCA regarding standby mode and off mode energy consumption. Specifically, EPCA requires that the test procedures for all covered products be amended to include standby mode and off mode energy consumption by integrating such energy consumption into the overall energy efficiency, energy consumption, or other energy descriptor for each covered product, unless the Secretary determines that: (1) The current test procedures for a covered product already fully account for and incorporate the standby mode and off mode energy consumption of the covered product; or (2) such an integrated test procedure is technically infeasible for a particular covered product, in which case, the Secretary shall prescribe a separate standby mode and off mode energy use test procedure for that covered product, if technically feasible. (42 U.S.C. 6295(gg)(2)(A))

To examine the commenters' claim that an integrated AFUE metric (AFUE<sub>i</sub>) is infeasible, DOE further investigated

the magnitude of the standby mode and off mode electrical use for residential furnaces. DOE conducted testing of various commercially-available residential furnaces that span a range of efficiencies, input capacities, and manufacturers, and found that the standby mode and off mode electrical rate of consumption ranges from 2 to 10 watts, depending on the residential furnace's features. A typical residential furnace uses approximately 7 watts of electrical standby mode and off mode power. Some common components contributing to the electrical standby mode and off mode energy consumption include the interruptible igniter, the control board for the furnace, and any additional controls used in the furnace blower-motor assembly. When the hours that the furnace spends in standby mode and off mode are considered, standby mode and off mode power consumption of 7 watts results in a total of approximately 55 kilowatt hours of electrical use annually per furnace. The total annual fossil fuel energy use for a typical furnace with an input capacity of 80,000 Btu/h is at least 400 times greater than the electrical standby mode and off mode energy consumption, depending on the operating conditions of the furnace. Thus, when the electrical consumption in standby mode and off mode is added to the fossil fuel energy consumption in all modes of operation in the AFUE<sub>i</sub> equation, as proposed in the SNOFR, the standby mode and off mode electrical consumption would have an insignificant impact on the value of AFUE<sub>i</sub>. Using the approximations described above, the standby mode and off mode electrical consumption would be 1/400th or 0.25 percent of the fossil fuel energy consumption. Currently, the Federal energy conservation standards and manufacturers' ratings of AFUE are presented to the nearest whole number. Consequently, given rounding conventions, standby mode and off mode would be likely to effect a change in the standard level for furnaces and boilers in only rare cases, if an integrated AFUE metric were adopted.

After considering the comments on the SNOFR, DOE has determined that it is technically infeasible to integrate the standby mode and off mode energy use with active mode energy use for furnaces because the standby mode and off mode energy usage, when measured, is essentially lost in practical terms due to the fact that manufacturers' ratings of AFUE are presented to the nearest whole number.

In light of the comments and DOE's re-examination explained above, DOE is abandoning its supplemental proposal

to integrate the standby mode and off mode electrical energy consumption into the AFUE descriptor for residential furnaces. Instead, DOE is adopting amendments to the residential furnaces and boilers test procedure to separately measure the electrical power consumption of those products in standby mode and off mode (*i.e.*, P<sub>SB</sub> and P<sub>OFF</sub>) as specified in its original NOPR. 74 FR 36959, 36970–71 (July 27, 2009). In addition, DOE is adopting the calculations as specified in its original NOPR, which allow the electrical power consumption to be translated into an annualized energy consumption value based on the hours the furnace spends operating in standby mode and off mode (*i.e.*, E<sub>SO</sub>). *Id.* This approach would allow for the measurement of standby mode and off mode electrical consumption of different furnace and boiler products. Although the magnitude of energy savings may be small for a given unit, it could be substantial when aggregated across the full range of covered products over the 30-year analysis period. DOE plans to further address the standby mode and off mode electrical consumption of residential furnaces through the use of one of these separate energy descriptors in the current standards rulemaking. For additional information, see [http://www1.eere.energy.gov/buildings/appliance\\_standards/residential/furnaces\\_boilers.html](http://www1.eere.energy.gov/buildings/appliance_standards/residential/furnaces_boilers.html).

#### *E. Other Comments Received on the Supplemental Notice of Proposed Rulemaking*

Comments were received in response to the SNOFR that were not related to the subject of the SNOFR but rather were related to aspects of the original NOPR. Although these comments are outside of the narrowed focus of the SNOFR, DOE did not want to unnecessarily limit the opportunity for public comment and is addressing these comments here. These additional comments objected to the integration and accounting of standby mode and off mode energy consumption as presented in the July 2009 NOPR. Specifically, Carrier, Rheem, and AHRI argued that the annual accounting of electricity energy consumption, as expressed in the test procedure's descriptor E<sub>AE</sub>, should not include the addition of standby mode and off mode energy consumption, because E<sub>AE</sub> without such addition is currently being used by the industry, and to change this value now would unnecessarily burden manufacturers. (Carrier, No. 17 at p. 3; Rheem, No. 15 at pp. 8–9; AHRI, No. 16 at pp. 4–5) The E<sub>AE</sub> descriptor is the annual electrical energy consumption of

furnaces and boilers. This annual consumption descriptor has always been a part of the test procedures for furnaces and boilers, and it is used to obtain a representative annual operating cost for furnaces and boilers. For fossil-fueled furnaces and boilers, the annual operating cost is the sum of the annual electrical operating cost plus the annual fossil fuel cost. The July 2009 NOPR proposed to modify this descriptor by adding the additional electrical consumption represented by the newly-added standby mode and off mode energy consumption. No comments were received objecting to this addition to E<sub>AE</sub> at the time of the original NOPR. However, in response to the SNOFR, these commenters now report that E<sub>AE</sub> without the addition of standby mode and off mode energy consumption is being used currently to identify electrically efficient furnaces and also to identify efficient furnace fans for the purposes of tax credits. Adding standby mode and off mode energy consumption to the E<sub>AE</sub> term is problematic because it would change the meaning of the existing rebate and tax credit criterion based on E<sub>AE</sub>. In response, DOE does not see the need to withdraw the proposed modification of E<sub>AE</sub> for the convenience of current programs using the unmodified E<sub>AE</sub> descriptor. Rather, DOE believes that the modified descriptor is both consistent with the directives in EISA 2007 and also provides a more complete basis for product comparison. Accordingly, DOE is adopting the proposed modification to E<sub>AE</sub> as part of this final rule.

A second objection was received regarding the proposed E<sub>SO</sub> descriptor. E<sub>SO</sub> is the annual sum of standby mode and off mode electrical energy consumption. Trane and Rheem objected to the accounting or hourly assignments proposed for the E<sub>SO</sub> descriptor, because such accounting is inaccurate in their view. In the proposed amendments, electric standby mode is defined as the off period during the heating season, and off mode is defined as the entire non-heating season. These definitions allow for the use of the hourly assignments already in the test procedures. Taken together, these proposed assignments would provide a full year's accounting of the energy consumption. Trane argued that there is some overstatement of E<sub>SO</sub> because some of the off period for one of the electrical components (*i.e.*, circulating fan) is actually in active mode because of the possible active cooling load hours utilizing this same fan. Rheem argued the opposite point, because in Rheem's view, the proposed

E<sub>SO</sub> assignments understate the actual standby mode energy consumption; Rheem reasoned that some electronic losses are constant, and an annual consumption approximation of the wattage times a full year of 8760 hours would be more appropriate. As one can see, there is no perfect resolution to this accounting problem. Accordingly, DOE finds the proposed accounting in the NOPR to be reasonably accurate and appropriate for the integration necessary to implement the relevant provisions of EISA 2007. Accordingly, DOE has decided to retain the accounting methodology associated with E<sub>SO</sub> for this final rule.

#### IV. Effect of Test Procedure Revisions on Compliance With Standards

In amending a test procedure, section 323(e) of EPCA directs DOE to determine to what extent, if any, the test procedure would alter the measured energy efficiency of the covered product. If the amended test procedure alters the measured efficiency, the Secretary must amend the applicable energy conservation standard to the extent the amended test procedure changes the energy efficiency of products that minimally comply with the existing standard. (42 U.S.C. 6293(e)) The current energy conservation standard for furnaces and boilers is based on a metric, AFUE, which is not effected by the inclusion of electrical standby mode and off mode energy consumption. As explained below, this final rule has no effect on the current energy conservation standard.

As provided by EPCA, amendments to the test procedures to include standby mode and off mode energy consumption shall not be used to determine compliance with previously established standards. (42 U.S.C. 6295(gg)(2)(C)) The inclusion of a standby mode and off mode test method in this final rule will not affect a manufacturer's ability to demonstrate compliance with the existing energy conservation standards for residential furnaces and boilers. The standby mode and off mode tests need not be performed to determine compliance with the current energy conservation standards for furnaces and boilers because the current standards do not comprehensively account for electrical standby mode and off mode energy consumption.

Today's final rule, which includes provisions for measuring standby mode and off mode energy consumption, will become effective, in terms of adoption into the Code of Federal Regulations (CFR), 30 days after the date of publication in the **Federal Register**.

Manufacturers will be required to use this test procedure's standby mode and off mode provisions to demonstrate compliance with any future energy conservation standards for residential furnaces and boilers that address standby mode and off mode energy consumption. The introductory sentence to 10 CFR part 430, subpart B, appendix N, reads as follows: "The procedures and calculations that refer to standby mode and off mode energy consumption (*i.e.*, sections 8.6 and 10.9 of this appendix N) need not be performed to determine compliance with energy conservation standards for furnaces and boilers at this time." The above statement will be removed as part of a future rulemaking to amend the energy conservation standards for residential furnaces and boilers to account for standby mode and off mode energy consumption, and compliance with the applicable test procedure provisions will be required on the compliance date of those amended energy conservation standards. A statement has also been added to the introductory note to appendix N to clarify that any representations pertaining to standby mode and off mode energy consumption of these products that are made on or after a date 180 days after the date of publication of this test procedure final rule in the **Federal Register** must be based upon results generated under this test procedure, consistent with the requirements of 42 U.S.C. 6293(c)(2). Although this is a statutory requirement under 42 U.S.C. 6293(c), DOE has concluded that it would be useful to explicitly state this requirement in DOE's regulations.

#### V. Compliance With Other EPCA Requirements

EPCA requires that new or amended 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 and shall not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(3)) For the reasons that follow, DOE has determined that the incorporation of IEC Standard 62301, along with the modifications and additional calculations described above, satisfy this requirement.

As noted above, the test procedure incorporates by reference provisions from IEC Standard 62301 for the measurement of standby mode and off mode energy consumption. IEC Standard 62301 is widely accepted and used internationally to measure electric

power in standby mode and off mode. Based on its analysis of IEC Standard 62301, DOE has determined that the test methods and equipment that the amendments require for measuring standby mode and off mode power do not differ substantially from the test methods and equipment in the current DOE test procedure for furnaces and boilers. Therefore, testing of furnaces and boilers pursuant to today's final rule will not require any significant investment in test facilities or new equipment. For these reasons, DOE does not believe that the standby mode and off mode test procedure provisions will add significant costs.

#### VI. Procedural Issues and Regulatory Review

##### A. Review Under Executive Order 12866

Today's regulatory action is not a "significant regulatory action" under section 3(f) of Executive Order 12866, "Regulatory Planning and Review." 58 FR 51735 (Oct. 4, 1993). Accordingly, this regulatory action was not subject to review under that 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.*, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996) requires preparation of an initial regulatory flexibility analysis 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. A regulatory flexibility analysis examines the impact of the rule on small entities and considers alternative ways of reducing negative effects. Also, 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 Web site at <http://www.gc.doe.gov>.

Today's final rule adopts test procedure provisions to measure standby mode and off mode energy consumption of residential furnaces and boilers, generally through the incorporation by reference of IEC

Standard 62301 and the modifications and additional calculations described in detail in the July 2009 NOPR. DOE reviewed today's final rule under the provisions of the Regulatory Flexibility Act and the policies and procedures published on February 19, 2003. For the reasons explained in the July 2009 NOPR, DOE certified that the proposed rule would not have a significant impact on a substantial number of small entities. 74 FR 36959, 36967 (July 27, 2009).

As noted above, the test procedure incorporates by reference provisions from IEC Standard 62301 for the measurement of standby mode and off mode energy consumption. IEC Standard 62301 is widely accepted and used internationally to measure electric power in standby mode and off mode. Based on its analysis of IEC Standard 62301, DOE determined that the test methods and equipment that the amendments require for measuring standby mode and off mode power do not differ substantially from the test methods and equipment in the current DOE test procedure for furnaces and boilers. Therefore, testing of furnaces and boilers pursuant to today's final rule will not require any significant investment in test facilities or new equipment. For these reasons, DOE does not believe that the standby mode and off mode test procedure provisions will add significant costs.

The Small Business Administration (SBA) considers an entity to be a small business if, together with its affiliates, it employs fewer than a threshold number of workers specified in 13 CFR part 121, which relies on size standards and codes established by the North American Industry Classification System (NAICS). The threshold number for NAICS classification 333415, which applies to Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing (including residential furnaces and boilers), is 750 employees.<sup>7</sup> DOE reviewed the Air-Conditioning, Heating, and Refrigeration Institute's Directory of Certified Product Performance for Residential Furnaces and Boilers (2009),<sup>8</sup> the ENERGY STAR Product Databases for Gas and Oil Furnaces (May 15, 2009),<sup>9</sup> the California

Energy Commission's Appliance Database for Residential Furnaces and Boilers,<sup>10</sup> and the Consortium for Energy Efficiency's Qualifying Furnace and Boiler List (April 2, 2009).<sup>11</sup> From this review, DOE found that there are approximately 25 small businesses within the furnace and boiler industry. Even though there are a significant number of small businesses within the furnace and boiler industry, DOE has concluded that the test procedure amendments contained in this final rule would not represent a substantial burden to any manufacturer, including small manufacturers, as explained above.

Accordingly, DOE has not prepared a regulatory flexibility analysis for this rulemaking. DOE's certification and supporting statement of factual basis was provided to the Chief Counsel for Advocacy of the SBA for review under 5 U.S.C. 605(b). DOE did not receive any comments regarding a significant economic impact on any small entities. Thus, DOE reaffirms and certifies that this rule will have no significant economic impact on a substantial number of small entities.

#### C. Review Under the Paperwork Reduction Act of 1995

Today's final rule imposes no new information or recordkeeping requirements. Accordingly, OMB clearance is not required under the Paperwork Reduction Act. (44 U.S.C. 3501 *et seq.*)

#### D. Review Under the National Environmental Policy Act of 1969

DOE is establishing a final rule to amend the test procedure for residential furnaces and boilers to address measurement of the standby mode and off mode energy consumption of these products. DOE has determined that this final rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (Pub. L. 91–190, codified at 42 U.S.C. 4321 *et seq.*), and DOE's implementing regulations at 10 CFR part 1021. Specifically, this final rule, which adopts an industry standard for measurement of standby mode and off mode energy consumption, amends an existing rule without changing its

environmental effect, and, therefore, is covered by Categorical Exclusion A5 found in 10 CFR part 1021, subpart D, appendix A. Today's final rule would not affect the amount, quality, or distribution of energy usage, and, therefore, would not result in any environmental impacts.<sup>12</sup> Accordingly, neither an environmental assessment nor an environmental impact statement is required.

#### E. Review Under Executive Order 13132

Executive Order 13132, "Federalism," imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. 64 FR 43255 (August 10, 1999). 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 that it will follow in developing such regulations. 65 FR 13735. DOE has examined this final rule and 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 today's proposed rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) Therefore, Executive Order 13132 requires no further action.

#### 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

<sup>12</sup> Categorical Exclusion A5 provides: "Rulemaking interpreting or amending an existing rule or regulation that does not change the environmental effect of the rule or regulation being amended."

<sup>7</sup> U.S. Small Business Administration, Table of Small Business Size Standards, August 22, 2008, available at: [http://www.sba.gov/idc/groups/public/documents/sba\\_homepage/serv\\_sstd\\_tablepdf.pdf](http://www.sba.gov/idc/groups/public/documents/sba_homepage/serv_sstd_tablepdf.pdf).

<sup>8</sup> The Air-Conditioning, Heating and Refrigeration Institute, Directory of Certified Product Performance, June 2009, available at: <http://www.ahridirectory.org/ahridirectory/pages/home.aspx>.

<sup>9</sup> The U.S. Environmental Protection Agency and the U.S. Department of Commerce, ENERGY STAR

Furnaces—Product Databases for Gas and Oil Furnaces, May 15, 2009: [http://www.energystar.gov/index.cfm?c=furnaces.pr\\_furnaces](http://www.energystar.gov/index.cfm?c=furnaces.pr_furnaces).

<sup>10</sup> The California Energy Commission, Appliance Database for Residential Furnaces and Boilers, 2009: <http://www.appliances.energy.ca.gov/QuickSearch.aspx>.

<sup>11</sup> Consortium of Energy Efficiency, Qualifying Furnace and Boiler List, April 2, 2009: <http://www.ceedirectory.org/ceedirectory/pages/cee/ceeDirectoryInfo.aspx>.

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. 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 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 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) (Pub. L. 104–4, codified at 2 U.S.C. 1501 *et seq.*) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. For regulatory actions likely to result in a rule that may cause expenditures 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) and (b)) Section 204 of 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.” UMRA also requires an agency plan for giving notice and opportunity for timely input to small governments that may be potentially affected before establishing any requirement 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. (This policy is also available at <http://www.gc.doe.gov>.) Today’s final rule, which modifies the current test procedures for residential furnaces and boilers, contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure by State, local, and Tribal governments, or by the private sector, of \$100 million or more in any year. Accordingly, no further assessment or analysis is required under the Unfunded Mandates Reform Act of 1995.

#### *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 to amend DOE test procedures 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.

#### *I. 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 final rule would not result in any takings that might require compensation under the Fifth Amendment to the United States Constitution.

#### *J. Review Under the Treasury and General Government Appropriations Act, 2001*

The Treasury and General Government Appropriations Act, 2001 (Pub. L. 106–554, codified at 44 U.S.C. 3516 note) provides for 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 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 proposed 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 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. Today’s final rule is not a significant regulatory action under Executive Order 12866 or any successor order; would not have a significant adverse effect on the supply, distribution, or use of energy; and has not been designated by the Administrator of OIRA as a significant energy action. Therefore, DOE has determined that this rule is not a significant energy action. Accordingly, DOE has not prepared a Statement of Energy Effects for this rulemaking.

#### *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 *et seq.*), DOE must comply with all laws applicable to the former Federal Energy Administration, including section 32 of the Federal Energy Administration Act of 1974 (Pub. L. 93–275), as amended by the Federal Energy Administration Authorization Act of 1977 (Pub. L. 95–70). (15 U.S.C. 788) Section 32 provides that where a proposed rule authorizes or requires use of commercial standards, the notice of proposed 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 Federal Trade Commission (FTC) concerning the impact of commercial or industry standards on competition.

Certain of the amendments and revisions in this final rule incorporate testing methods contained in the following commercial standard, the International Electrotechnical Commission (IEC) Standard 62301, “Household electrical appliances—Measurement of standby power” (First Edition 2005–06). As stated in the July 2009 NOPR, DOE has evaluated this

standard and is unable to conclude whether it fully complies with the requirements of section 32(b) of the Federal Energy Administration Act (*i.e.*, that it was developed in a manner that fully provides for public participation, comment, and review). 74 FR 36959, 36968 (July 27, 2009). DOE has consulted with the Attorney General and the Chairman of the FTC concerning the impact on competition of requiring manufacturers to use the test methods contained in this standard, and neither recommended against incorporation of this standard.

**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. 801(2).

**VII. Approval of the Office of the Secretary**

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

**List of Subjects in 10 CFR Part 430**

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

Issued in Washington, DC, on August 20, 2010.

**Cathy Zoi,**

*Assistant Secretary, Energy Efficiency and Renewable Energy.*

■ For the reasons stated in the preamble, DOE is amending part 430 of chapter II of title 10 of the Code of Federal Regulations, to read as set forth below:

**PART 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS**

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

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

■ 2. Section 430.3 is amended by adding new paragraph (l)(1), and adding and reserving paragraph (l)(2), to read as follows:

**§ 430.3 Materials incorporated by reference.**

\* \* \* \* \*

(l) \* \* \*

(1) International Electrotechnical Commission (IEC) Standard 62301 ("IEC 62301"), *Household electrical appliances—Measurement of standby*

*power* (first edition, June 2005), IBR approved for Appendix N to Subpart B. (2) [Reserved].

\* \* \* \* \*

■ 3. Appendix N to subpart B of part 430 is amended as follows:

■ a. Adding a note after the heading.

■ b. In section 2.0 *Definitions*, by redesignating sections 2.1, 2.2, 2.3, and 2.4 as sections 2.2, 2.3, 2.9, and 2.5 respectively; and adding new sections 2.1, 2.4, 2.6, 2.7, and 2.8.

■ c. In section 8.0 *Test procedure*, by adding new sections 8.6, 8.6.1, and 8.6.2.

■ d. In section 9.0 *Nomenclature*, by adding three new text items at the end of the section.

■ e. In section 10.0 *Calculation of derived results from test measurements*, by:

■ i. Revising sections 10.2.3, 10.2.3.1, 10.2.3.2, 10.3, 10.5.2, 10.5.3; and

■ ii. Adding new section 10.9.

The additions and revisions read as follows:

**Appendix N to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Furnaces and Boilers**

**Note:** The procedures and calculations that refer to standby mode and off mode energy consumption (*i.e.*, sections 8.6 and 10.9 of this appendix N) need not be performed to determine compliance with energy conservation standards for furnaces and boilers at this time. However, any representation related to standby mode and off mode energy consumption of these products made after April 18, 2011 must be based upon results generated under this test procedure, consistent with the requirements of 42 U.S.C. 6293(c)(2). After July 1, 2010, any adopted energy conservation standard shall address standby mode and off mode energy consumption, and upon the compliance date for such standards, compliance with the applicable provisions of this test procedure will be required.

\* \* \* \* \*

**2.0 Definitions**

2.1 *Active mode* means the condition during the heating season in which the furnace or boiler is connected to the power source, and either the burner, electric resistance elements, or any electrical auxiliaries such as blowers or pumps, are activated.

\* \* \* \* \*

2.4 *IEC 62301* means the test standard published by the International Electrotechnical Commission (IEC), titled "Household electrical appliances—Measurement of standby power," Publication 62301 (First Edition 2005–06). (incorporated by reference, see § 430.3)

\* \* \* \* \*

2.6 *Off mode* means the condition during the non-heating season in which the furnace or boiler is connected to the power source, and neither the burner, electric resistance elements, nor any electrical auxiliaries such as blowers or pumps, are activated.

2.7 *Seasonal off switch* means the switch on the furnace or boiler that, when activated, results in a measurable change in energy consumption between the standby and off modes.

2.8 *Standby mode* means the condition during the heating season in which the furnace or boiler is connected to the power source, and neither the burner, electric resistance elements, nor any electrical auxiliaries such as blowers or pumps, are activated.

\* \* \* \* \*

**8.0 Test Procedure**

\* \* \* \* \*

8.6 *Measurement of electrical standby and off mode power.*

8.6.1 *Standby power measurement.*

With all electrical auxiliaries of the furnace or boiler not activated, measure the standby power ( $P_{SB}$ ) in accordance with the procedures in IEC 62301 (incorporated by reference, see § 430.3), except that section 8.5 *Room Ambient Temperature* of ASHRAE 103—1993 (incorporated by reference, see § 430.3) and the voltage provision of section 8.2.1.4 *Electrical Supply* of ASHRAE 103—1993 shall apply in lieu of the corresponding provisions of IEC 62301 at section 4.2 *Test room* and the voltage specification of section 4.3 *Power supply*. Frequency shall be 60Hz. Clarifying further, IEC 62301 section 4.5 *Power measurement accuracy* and section 5 *Measurements* shall apply in lieu of section 6.10 *Energy Flow Rate* of ASHRAE 103—1993. Measure the wattage so that all possible standby mode wattage for the entire appliance is recorded, not just the standby mode wattage of a single auxiliary.

8.6.2 *Off mode power measurement.*

If the unit is equipped with a seasonal off switch or there is an expected difference between off mode power and standby mode power, measure off mode power ( $P_{OFF}$ ) in accordance with the standby power procedures in IEC 62301 (incorporated by reference, see § 430.3), except that section 8.5 *Room Ambient Temperature* of ASHRAE 103—1993 (incorporated by reference, see § 430.3) and the voltage provision of section 8.2.1.4 *Electrical Supply* of ASHRAE 103—1993 shall apply in lieu of the corresponding provisions of IEC 62301 at section 4.2 *Test room* and the voltage specification of section 4.3 *Power supply*. Frequency shall be 60Hz. Clarifying further, IEC 62301 section 4.5

Power measurement accuracy and section 5 *Measurements* shall apply for this measurement in lieu of section 6.10 *Energy Flow Rate* of ASHRAE 103—1993. Measure the wattage so that all possible off mode wattage for the entire appliance is recorded, not just the off mode wattage of a single auxiliary. If there is no expected difference in off mode power and standby mode power, let  $P_{OFF} = P_{SB}$ , in which case no separate measurement of off mode power is necessary.

**9.0 Nomenclature**

\* \* \* \* \*  
 $E_{SO}$  = Average annual electric standby mode and off mode energy consumption, in kilowatt-hours  
 $P_{OFF}$  = Furnace or boiler off mode power, in watts  
 $P_{SB}$  = Furnace or boiler standby mode power, in watts

**10.0 Calculation of Derived Results From Test Measurements**

\* \* \* \* \*  
 10.2.3 *Average annual auxiliary electrical energy consumption for gas or oil-fueled furnaces or boilers.* For furnaces and boilers equipped with single-stage controls, the average annual auxiliary electrical consumption ( $E_{AE}$ ) is expressed in kilowatt-hours and defined as:

$E_{AE} = BOH_{SS}(y_P PE + y_{IG} PE_{IG} + y BE)$   
 +  $E_{SO}$   
 Where:  
 $BOH_{SS}$  = as defined in 10.2.1 of this appendix  
 $PE$  = as defined in 10.2.1 of this appendix  
 $y_P$  = as defined in 10.2.1 of this appendix  
 $y_{IG}$  = as defined in 10.2.1 of this appendix  
 $PE_{IG}$  = as defined in 10.2.1 of this appendix  
 $y$  = as defined in 10.2.1 of this appendix  
 $BE$  = as defined in 10.2.1 of this appendix  
 $E_{SO}$  = as defined in 10.9 of this appendix.

10.2.3.1 For furnaces or boilers equipped with two-stage controls,  $E_{AE}$  is defined as:

$E_{AE} = BOH_R (y_P PE_R + y_{IG} PE_{IG} + y BE_R)$   
 +  $BOH_H (y_P PE_H + y_{IG} PE_{IG} + y BE_H)$   
 +  $E_{SO}$

Where:  
 $BOH_R$  = as defined in 10.2.1.2 of this appendix  
 $y_P$  = as defined in 10.2.1 of this appendix  
 $PE_R$  = as defined in 9.1.2.2 and measured at the reduced fuel input rate of ANSI/ASHRAE Standard 103—1993, (incorporated by reference, see § 430.3)  
 $y_{IG}$  = as defined in 10.2.1 of this appendix  
 $PE_{IG}$  = as defined in 10.2.1 of this appendix  
 $y$  = as defined in 10.2.1 of this appendix  
 $BE_R$  = as defined in 9.1.2.2 of ANSI/ASHRAE Standard 103—1993, (incorporated by reference, see § 430.3) measured at the reduced fuel input rate  
 $BOH_H$  = as defined in 10.2.1.3 of this appendix  
 $PE_H$  = as defined in 9.1.2.2 of ANSI/ASHRAE Standard 103—1993, (incorporated by

reference, see § 430.3) measured at the maximum fuel input rate  
 $BE_H$  = as defined in 9.1.2.2 of ANSI/ASHRAE Standard 103—1993, (incorporated by reference, see § 430.3) measured at the maximum fuel input rate  
 $E_{SO}$  = as defined in 10.9 of this appendix.

10.2.3.2 For furnaces or boilers equipped with step-modulating controls,  $E_{AE}$  is defined as:

$E_{AE} = BOH_R (y_P PE_R + y_{IG} PE_{IG} + y BE_R)$   
 +  $BOH_M (y_P PE_H + y_{IG} PE_{IG} + y BE_H)$   
 +  $E_{SO}$

Where:  
 $BOH_R$  = as defined in 10.2.1.2 of this appendix  
 $y_P$  = as defined in 10.2.1 of this appendix  
 $PE_R$  = as defined in 9.1.2.2 of ANSI/ASHRAE Standard 103—1993, (incorporated by reference, see § 430.3), measured at the reduced fuel input rate  
 $y_{IG}$  = as defined in 10.2.1 of this appendix  
 $PE_{IG}$  = as defined in 10.2.1 of this appendix  
 $y$  = as defined in 10.2.1 of this appendix  
 $BE_R$  = as defined in 9.1.2.2 of ANSI/ASHRAE Standard 103—1993, (incorporated by reference, see § 430.3) measured at the reduced fuel input rate  
 $BOH_M$  = as defined in 10.2.1.4 of this appendix  
 $PE_H$  = as defined in 9.1.2.2 of ANSI/ASHRAE Standard 103—1993, (incorporated by reference, see § 430.3) measured at the maximum fuel input rate  
 $BE_H$  = as defined in 9.1.2.2 of ANSI/ASHRAE Standard 103—1993, (incorporated by reference, see § 430.3) measured at the maximum fuel input rate  
 $E_{SO}$  = as defined in 10.9 of this appendix.

10.3 *Average annual electric energy consumption for electric furnaces or boilers.*

$E_E = 100(2,080)(0.77)DHR/(3.412 AFUE)$   
 +  $E_{SO}$

Where:  
 100 = to express a percent as a decimal  
 2,080 = as specified in 10.2.1 of this appendix  
 0.77 = as specified in 10.2.1 of this appendix  
 DHR = as defined in 10.2.1 of this appendix  
 3.412 = conversion to express energy in terms of watt-hours instead of Btu  
 AFUE = as defined in 11.1 of ANSI/ASHRAE Standard 103—1993 (incorporated by reference, see § 430.3), in percent, and calculated on the basis of: ICS installation, for non-weatherized warm air furnaces; indoor installation, for non-weatherized boilers; or outdoor installation, for furnaces and boilers that are weatherized.  
 $E_{SO}$  = as defined in 10.9 of this appendix.

\* \* \* \* \*  
 10.5.2 *Average annual auxiliary electrical energy consumption for gas or oil-fueled furnaces and boilers located in a different geographic region of the United States and in buildings with different design heating requirements.* For gas or oil-fueled furnaces and boilers, the average annual auxiliary electrical energy consumption for a

specific geographic region and a specific typical design heating requirement ( $E_{AER}$ ) is expressed in kilowatt-hours and defined as:

$E_{AER} = (E_{AE} - E_{SO})(HLH/2080) + E_{SOR}$

Where:  
 $E_{AE}$  = as defined in 10.2.3 of this appendix  
 $E_{SO}$  = as defined in 10.9 of this appendix  
 HLH = as defined in 10.5.1 of this appendix  
 2,080 = as specified in 10.2.1 of this appendix  
 $E_{SOR}$  = as specified in 10.5.3 of this appendix.

10.5.3 *Average annual electric energy consumption for electric furnaces and boilers located in a different geographic region of the United States and in buildings with different design heating requirements.* For electric furnaces and boilers, the average annual electric energy consumption for a specific geographic region and a specific typical design heating requirement ( $E_{ER}$ ) is expressed in kilowatt-hours and defined as:

$E_{ER} = 100(0.77) DHR HLH/(3.412 AFUE)$   
 +  $E_{SOR}$

Where:  
 100 = as specified in 10.3 of this appendix  
 0.77 = as specified in 10.2.1 of this appendix  
 DHR = as defined in 10.2.1 of this appendix  
 HLH = as defined in 10.5.1 of this appendix  
 3.412 = as specified in 10.3 of this appendix  
 AFUE = as defined in 10.3 of this appendix  
 $E_{SOR} = E_{SO}$  as defined in 10.9 of this appendix, except that in the equation for  $E_{SO}$ , the term BOH is multiplied by the expression (HLH/2080) to get the appropriate regional accounting of standby mode and off mode loss.

\* \* \* \* \*  
 10.9 *Average annual electrical standby mode and off mode energy consumption.* Calculate the annual electrical standby mode and off mode energy consumption ( $E_{SO}$ ) in kilowatt-hours, defined as:

$E_{SO} = ((P_{SB} * (4160 - BOH)) + (P_{OFF} * 4600)) * K$

Where:  
 $P_{SB}$  = furnace or boiler standby mode power, in watts, as measured in Section 8.6  
 4,160 = average heating season hours per year  
 $P_{OFF}$  = furnace or boiler off mode power, in watts, as measured in Section 8.6  
 4,600 = average non-heating season hours per year  
 $K = 0.001$  kWh/Wh, conversion factor for watt-hours to kilowatt-hours  
 $BOH$  = total burner operating hours as calculated in section 10.2 for gas or oil-fueled furnaces or boilers. Where for gas or oil-fueled furnaces and boilers equipped with single-stage controls,  $BOH = BOH_{SS}$ ; for gas or oil-fueled furnaces and boilers equipped with two-stage controls,  $BOH = (BOH_R + BOH_H)$ ; and for gas or oil-fueled furnaces and boilers equipped with step-modulating controls,  $BOH = (BOH_R + BOH_M)$ . For

electric furnaces and boilers, BOH = 100(2080)(0.77)DHR/(E<sub>in</sub> 3.412)(AFUE))

Where:

100 = to express a percent as a decimal

2,080 = as specified in 10.2.1 of this appendix

0.77 = as specified in 10.2.1 of this appendix

DHR = as defined in 10.2.1 of this appendix

3.412 = conversion to express energy in terms of Kbtu instead of kilowatt-hours

AFUE = as defined in 11.1 of ANSI/ASHRAE Standard 103—1993 (incorporated by reference, see § 430.3) in percent

E<sub>in</sub> = Steady-state electric rated power, in kilowatts, from section 9.3 of ANSI/ASHRAE Standard 103—1993 (incorporated by reference, see § 430.3).

[FR Doc. 2010-26369 Filed 10-19-10; 8:45 am]

BILLING CODE 6450-01-P

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2010-1036; Directorate Identifier 2009-NM-247-AD; Amendment 39-16480; AD 2010-22-01]

RIN 2120-AA64

#### Airworthiness Directives; The Boeing Company Model 767-200, -300, and -300F Series Airplanes

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are superseding an existing airworthiness directive (AD) for the products listed above. That AD currently requires repetitive inspections for fatigue cracking and corrosion of the upper link fuse pin of the nacelle struts, and related investigative and corrective actions if necessary. The existing AD also provides terminating action for the repetitive inspections. This AD revises certain criteria for the terminating action. This AD was prompted by two reports of cracked upper link fuse pins. We are issuing this AD to prevent fatigue cracking or corrosion of the upper link fuse pin, which could result in failure of the fuse pin and consequent reduced structural integrity of the nacelle strut and possible separation of the strut and engine from the airplane during flight.

**DATES:** This AD is effective November 4, 2010.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 4, 2010.

The Director of the Federal Register approved the incorporation by reference

of a certain other publication listed in this AD as of November 5, 2009 (74 FR 50692, October 1, 2009).

We must receive comments on this AD by December 6, 2010.

**ADDRESSES:** You may send comments by any of the following methods:

- **Federal eRulemaking Portal:** Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- **Fax:** 202-493-2251.

- **Mail:** U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

- **Hand Delivery:** U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; e-mail [me.boecom@boeing.com](mailto:me.boecom@boeing.com); Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

#### Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Berhane Alazar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6577; fax (425) 917-6590.

#### SUPPLEMENTARY INFORMATION:

##### Discussion

On September 18, 2009, we issued AD 2009-20-09, Amendment 39-16032 (74 FR 50692, October 1, 2009), for certain Model 767-200, -300, and -300F series

airplanes. That AD requires repetitive inspections for fatigue cracking and corrosion of the upper link fuse pin of the nacelle struts, and related investigative and corrective actions if necessary. That AD also provides terminating action for the repetitive inspections. That AD resulted from two reports of cracked upper link fuse pins. We issued that AD to prevent fatigue cracking or corrosion of the upper link fuse pin, which could result in failure of the fuse pin and consequent reduced structural integrity of the nacelle strut and possible separation of the strut and engine from the airplane during flight.

#### Actions Since Existing AD Was Issued

We have learned that paragraph (h) of AD 2009-20-09 incorrectly identifies the pin replacement as acceptable for compliance with the optional strut modification specified in paragraph (g) of that AD. Rather, replacing the pin terminates only the repetitive inspections of the pins as required by paragraph (g) of this AD; replacing the pin does not terminate the requirement for the strut modification. We have removed credit for replacement of the fuse pins with new fuse pins from paragraph (h) of the existing AD (specified as paragraph (i) in this AD) because it is not a terminating action. We have added new paragraph (j) in this AD to specify that replacement of the fuse pins terminates the repetitive inspection requirements of paragraph (g) of this AD, and the strut modification is still required.

We have also revised paragraph (b) of this AD to clarify that certain requirements of this AD terminate certain requirements of AD 2000-19-09, Amendment 39-11910 (65 FR 58641, October 2, 2000), and AD 2004-16-12, Amendment 39-13768 (69 FR 51002, August 17, 2004).

#### Explanation of Additional Paragraph in the AD

We have added a new paragraph (d) to this AD to provide the Air Transport Association (ATA) of America subject code 54: Nacelles/Pylons. This code is added to make this AD parallel with other new AD actions. We have reidentified subsequent paragraphs accordingly.

#### FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.